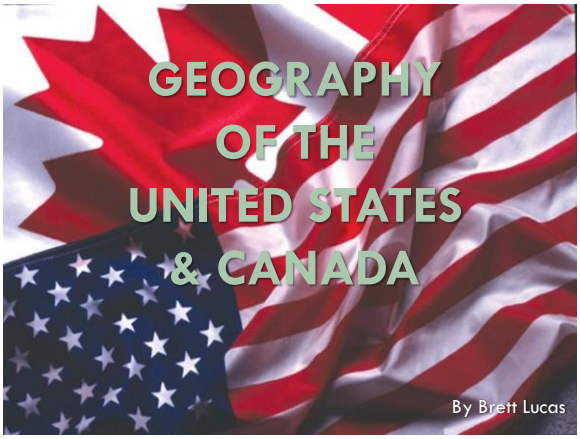
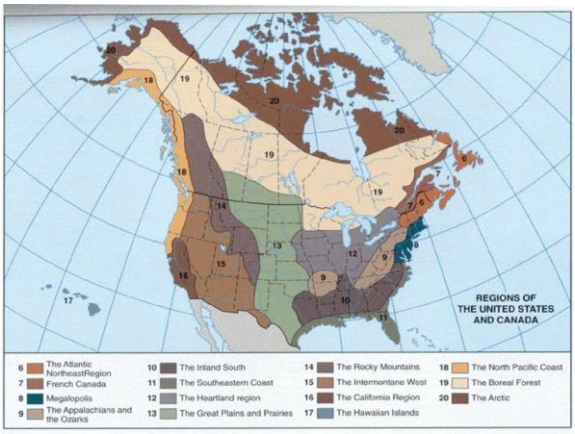
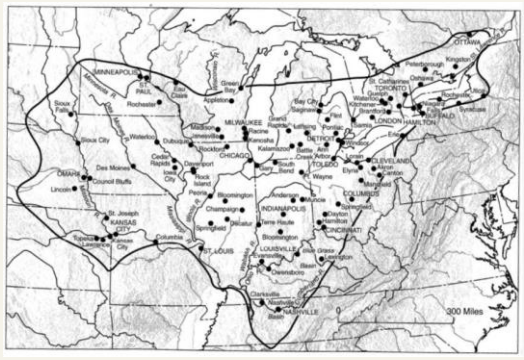


THE HEARTLAND REGION



Setting the Boundaries

- What states and provinces are part of the region?
  - Parts of SD, NE, KS, MN, WI, MI, Ontario, NY, KY, TN, and MO. All of IA, IL, IN, and most of OH
- What regions does it border?
  - Great Plains, Inland South, and Appalachians / Ozarks, Boreal Forest, French Canada, Atlantic Northeast



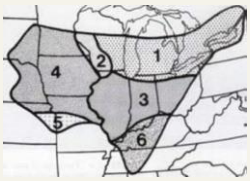
Overview

- Relatively flat area
- Most populated region
- Generally culturally homogeneous: “average” North American
- Agricultural and industrial core areas

Physical Geography

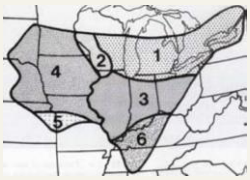
Physical Setting

- Flat to and undulating (rise and fall) landscape.
- Some bluffs.
- Differentiated between glaciated and unglaciated landscapes.
- Glaciers dramatically smoothed landscape, improved soil.



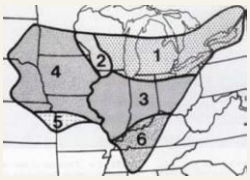
Great Lakes (1)

- Large and small lakes
- Evidence of glaciation.



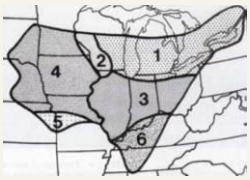
Till Plains(3,4)

- Flat areas with significant glacial sediment deposits
- More time passed since last glacial retreat, so better drained (fewer lakes)



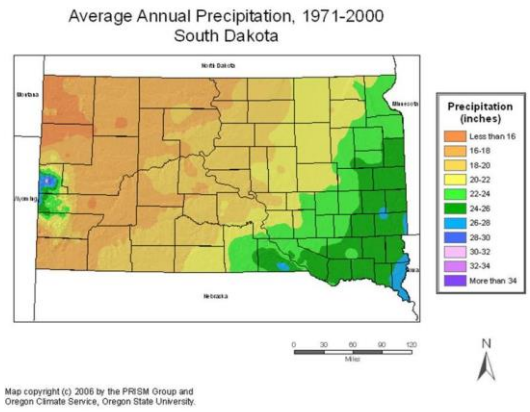
Unglaciated areas (2,5,6)

- Driftless Area (2)
  - Rough terrain
- Osage Plateau (5)
  - Very flat sedimentary rock
- Interior low plateaus (6)
  - Rolling hills
  - River valleys

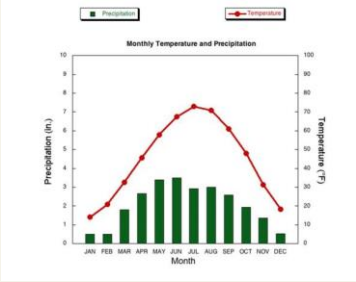


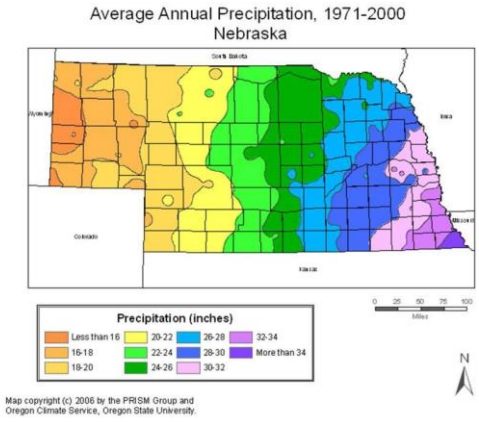
Climate

- Significant seasonal shifts
- Wetter west, drier east
- Snow common, especially north
- Flooding common, especially Mississippi River Valley
- Severe weather, especially in spring

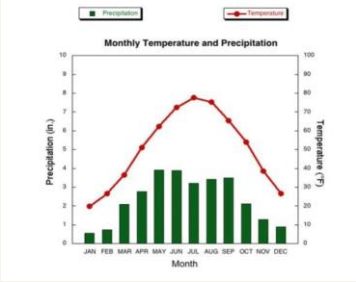


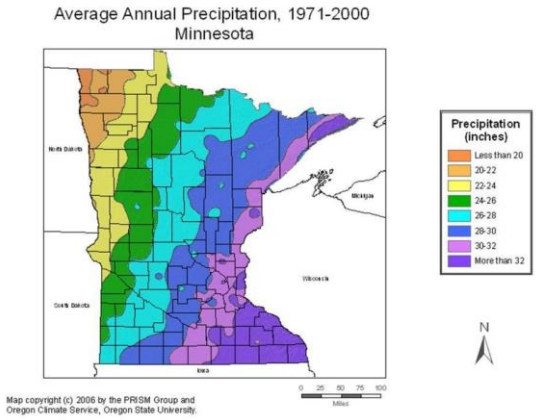
Climograph – Sioux Falls, SD



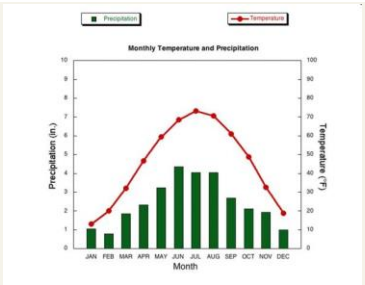


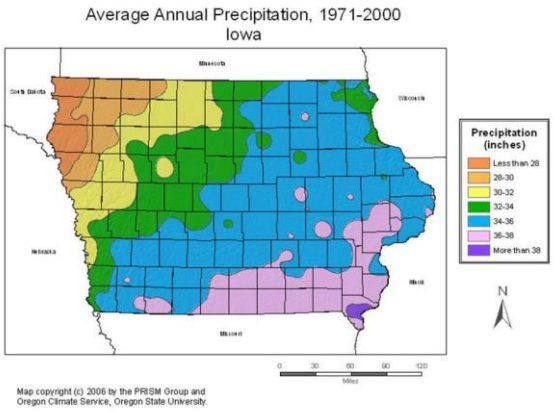
Climograph – Lincoln, NE



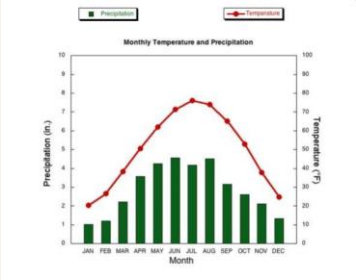


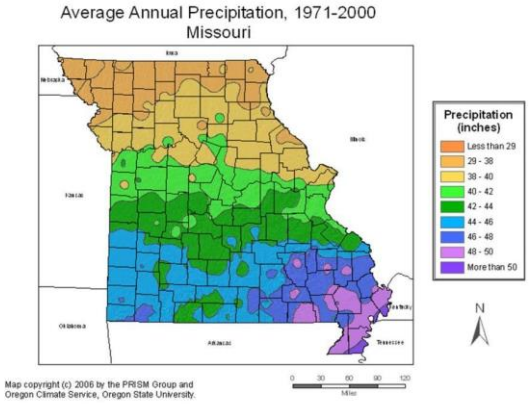
Climograph – Minneapolis, MN



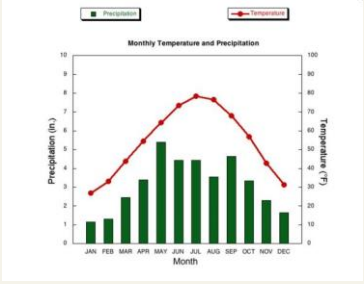


Climograph – Des Moines, IA

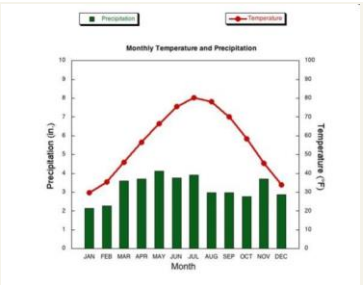


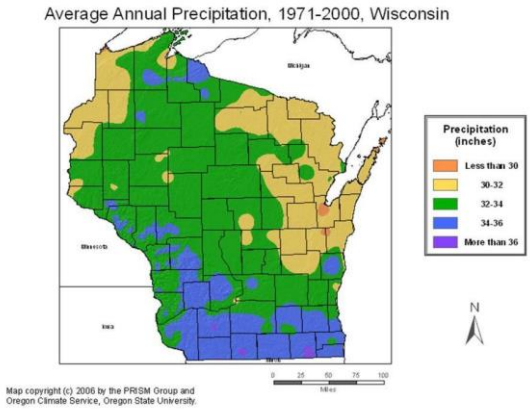


Climograph – Kansas City, MO

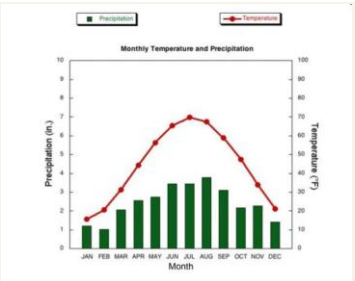


Climograph – St. Louis, MO

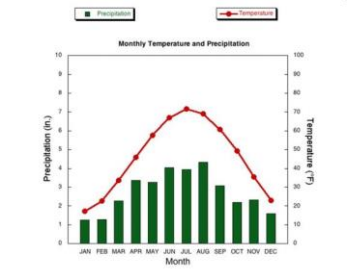


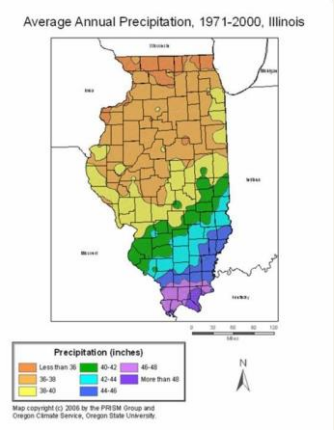


Climograph – Green Bay, WI

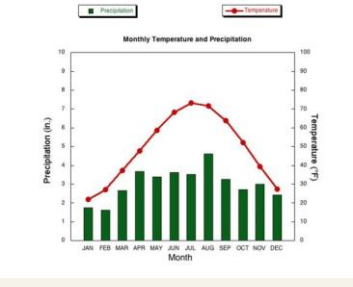


Climograph – Madison, WI

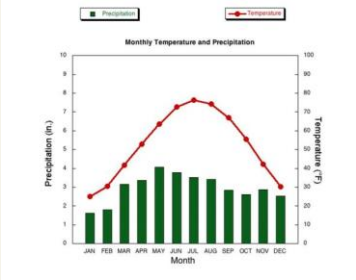


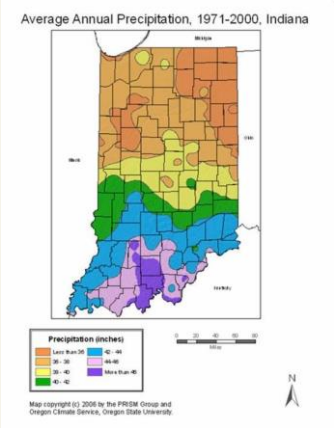


Climograph – Chicago, IL

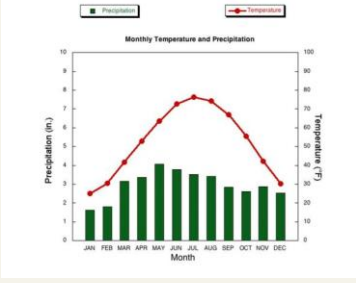


Climograph – Springfield, IL

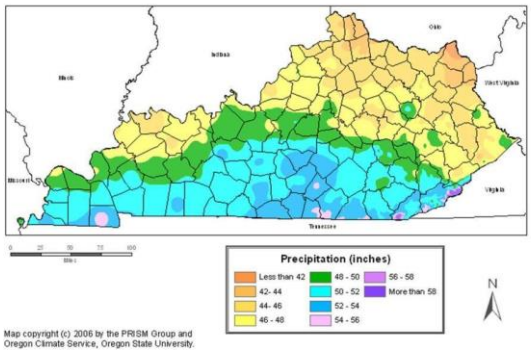




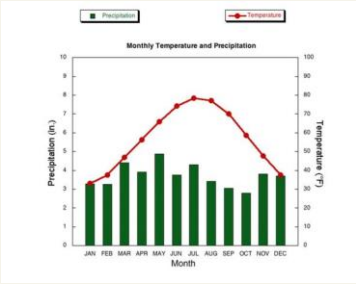
Climograph – Indianapolis, IN



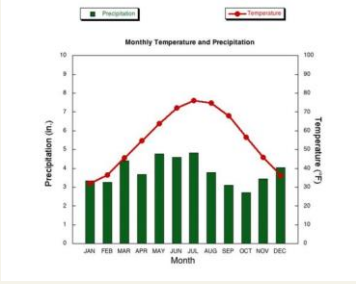
Average Annual Precipitation, 1971-2000, Kentucky

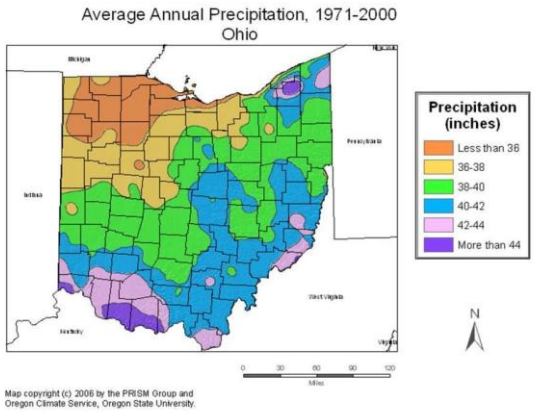


Climograph – Louisville, KY

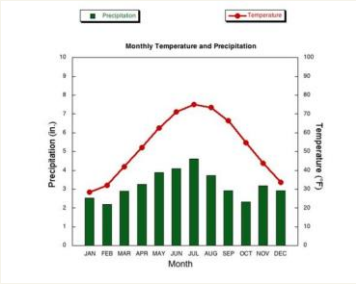


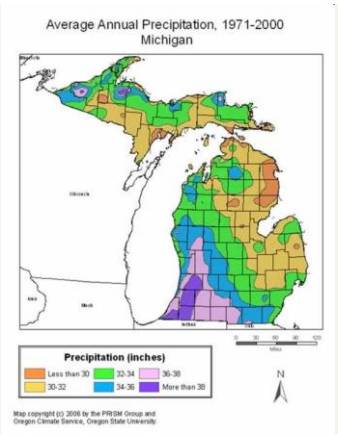
Climograph – Lexington, KY



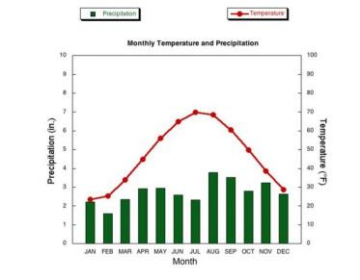


Climograph – Columbus, OH

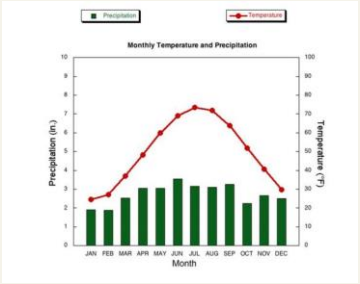


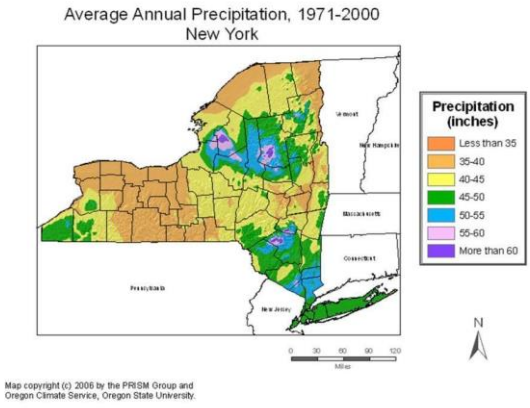


Climograph – Muskegon, MI

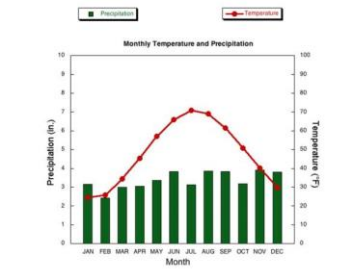


Climograph – Detroit, MI



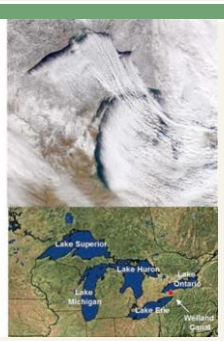


Climograph – Buffalo, NY



Lake Effect Snow

- Lake-effect snow is produced in the winter when cold, Arctic winds move across long expanses of warmer lake water, providing energy and picking up water vapor which freezes and is deposited on the lee shores.



Climate Comparison

	Spokane WA	Buffalo NY	Minneapolis MN	Louisville KY
Jan Temp (F)	33 / 21	30 / 17	20 / 2	41 / 24
Jul Temp (F)	82 / 54	80 / 61	83 / 62	88 / 68
Rainfall	16.5 in.	38 in.	26 in.	44 in.
Snowfall	49 in.	92 in.	49 in.	17 in.

Landscape

- Prairie originally from Illinois westward
  - Mostly grasses, some smaller trees
- Forests elsewhere
  - Conifers near the northern edge
  - Hardwoods elsewhere

Population & Settlement

Early Settlement

- Native presence 10,000 years
- Fairly spread out, mostly somewhat sedentary
- Mound Builders

St. Paul, MN

French Exploration

- Sought fur trade
- Colonized through St. Lawrence and Mississippi Rivers
- Early settlement around 1700, near Detroit and in Illinois
- St. Louis (1764)

British / American

- Original "Native reserve"
- Late 1780's: American settlement began in earnest

Westward Expansion

- Following the War of 1812, most natives sent west of the Mississippi River.
- Cleveland: 1796, Chicago: 1817, Milwaukee: 1840, Kansas City: 1853.
- Once Great Plains settled, westward migration focused there and much of the boom in this region subsided.

Direct Migration

- To Heartland increased after around 1880
- Many northern and eastern Europeans
  - Minnesota: Scandinavians, Norwegians
  - Milwaukee, Germans
  - Cleveland: Germans, Slovenians

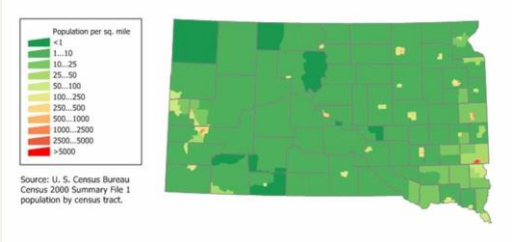
Present Population

- Some urban areas experiencing decent growth
  - Minneapolis/St. Paul (17%), Madison (16%), Indianapolis (16%), Nashville (25%)
- Others not
  - St. Louis (4%), Cleveland (3%), Detroit (5%), Toledo (0%)
- Very rapid growth in Canada
  - Especially around Toronto and Ottawa

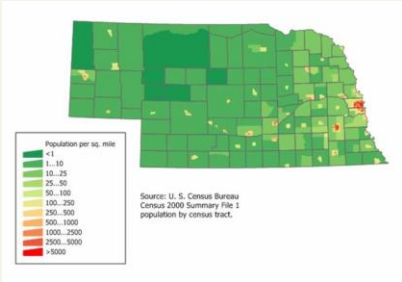
Population Numbers

State/Metro area	2000 (1,000's)	1990 (1,000's)	Change
Ohio	11,353	10,847	+5%
Michigan	9,923	9,295	+7%
Indiana	6,080	5,544	+10%
Illinois	12,419	11,430	+9%
Iowa	2,926	2,776	+5%
Kentucky	4,041	3,685	+10%
Missouri	5,595	5,117	+9%
Wisconsin	5,363	4,891	+10%
Minnesota	4,919	4,375	+12%
Toronto	2,481	2,275	+9%
US & Canada	312,600	276,700	+13%

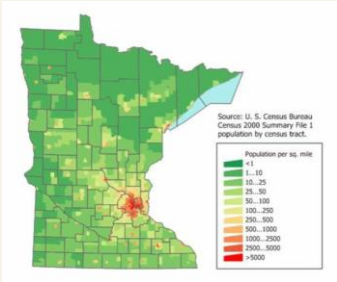
Population Density – SD



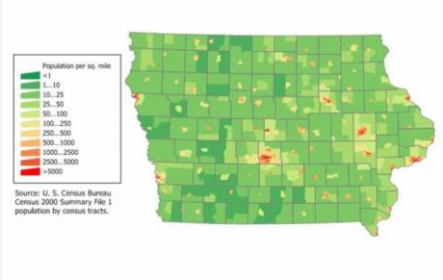
Population Density – NE



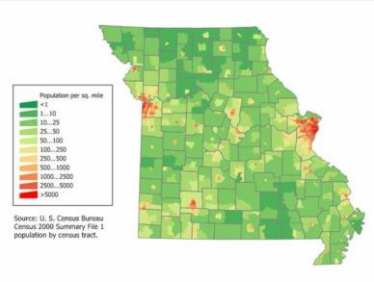
Population Density – MN



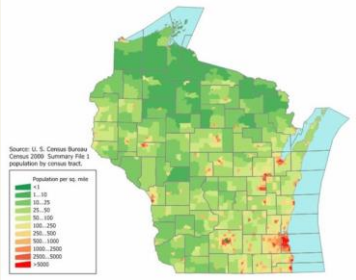
Population Density – IA



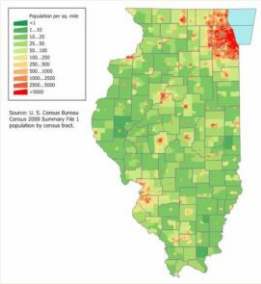
Population Density – MO



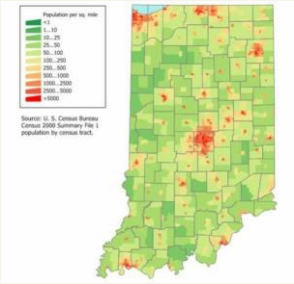
Population Density – WI



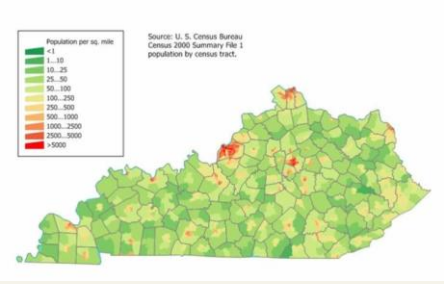
Population Density – IL



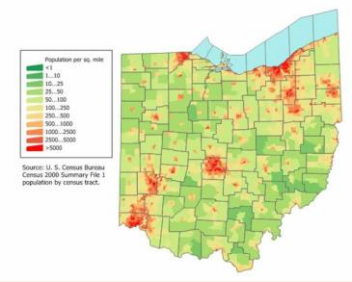
Population Density – IN



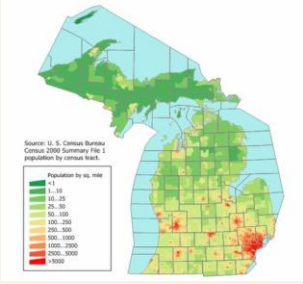
Population Density – KY



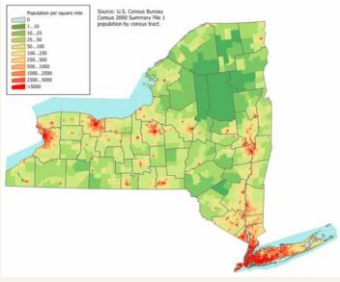
Population Density – OH



Population Density – MI



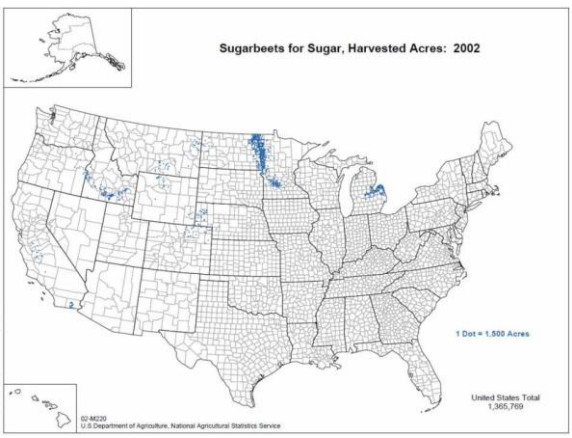
Population Density – NY



Human & Economic Geography

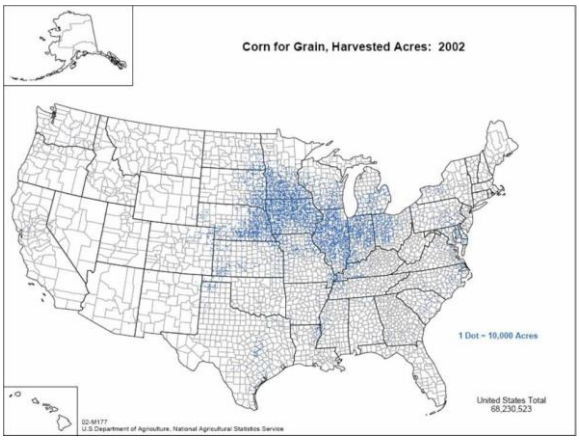
Agriculture

- #1 producer of crops on continent
- Half of US agricultural employment is in the Heartland
- Farm size increasing , farm population decreasing



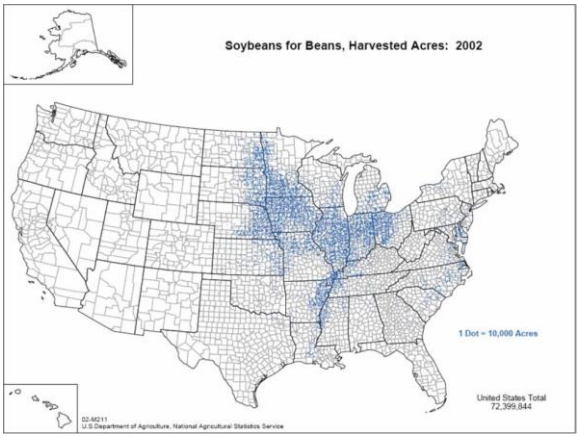
Corn

- Half of the world's output
- Perfect conditions
- Productivity increased over time
  - Genetic and technological improvements means crop rotation not necessary



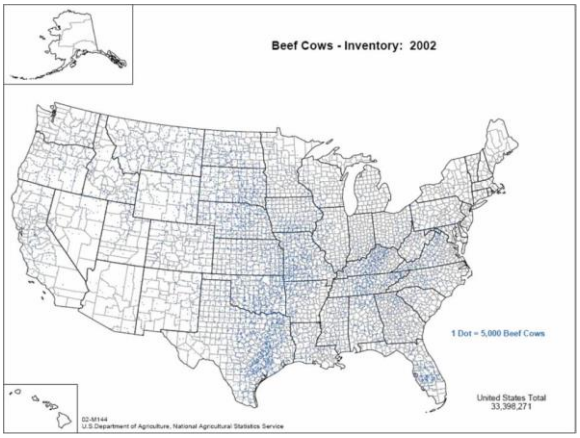
Soybeans

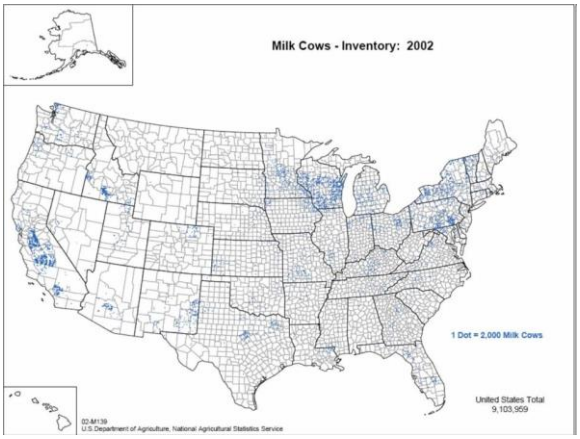
- Almost identical region to corn
- High yield per acre
- Increased dramatically in 20th century
- US now produces 50% of world crop
- All Canadian soybeans are grown north of Lake Erie

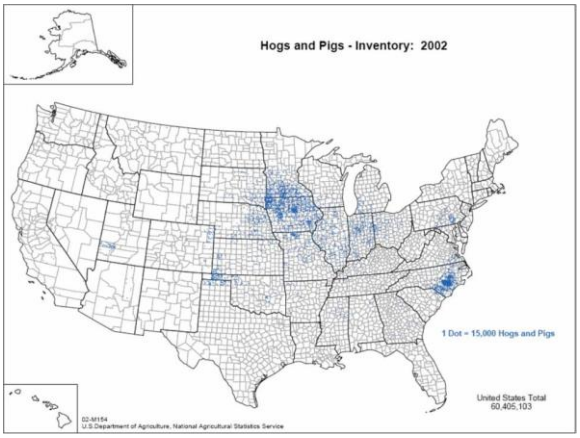


Livestock

- Beef Cattle
  - More in western Heartland, older prairie
- Dairy Cattle
  - Wisconsin, Minnesota, western New York
  - Areas less suited for agriculture
- Hogs
  - Losing importance to southern states





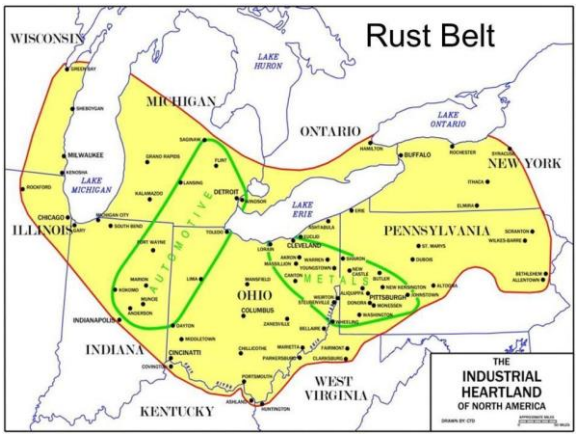


Mineral Industries

- Relatively lesser importance
- Some coal, natural gas, oil
  - Illinois, Kentucky, S. Indiana, parts of Ohio
  - 10% of US coal output
- Limestone
  - Indiana

Manufacturing

- Next to agriculture, mainstay of Heartland
- In severe decline across Midwest
- Most cities with some specialization
  - Cars in Detroit
  - Rubber in Akron
  - Beer in Milwaukee



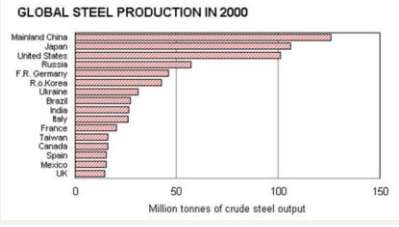
Auto Industry

- Largest employer in the Heartland
  - 22% of Michigan's workforce (44.7B in wages)
  - 11% of Ohio's workforce
  - 10% of Kentucky's workforce
- All top-10 states are in this region, except California, though many jobs moved south
- 90% of Canadian auto jobs are in Ontario (Windsor #1)

Map 1
The New Globalized Auto Plant Corridor: Mexico City to Atlanta

Steel Industry

- 4 of top states: IL, IN, OH and MI
- Hamilton, Ontario, main steel center
- Significant decline due to foreign competition



Rust Belt

US Steel – Gary, IN

GM Transmission Plant – Muncie, IN
Closed in 2006

Rubber/Plastics Industry

- Ohio #1 state (100,000 workers)
- 1/3rd of nations rubber/plastics machinery
- Michigan #3, Illinois #4
- Shift over time from tire manufacturing to specialized rubber / plastics products

Transportation

- Important in original settlement
- Great Lakes/St. Lawrence
- Ohio/Missouri/Mississippi Rivers
- Flat terrain makes transportation easy
- Strategic location near center of country and population base makes region vital

Waterways

- Rivers
  - Made much more navigable with dams/locks.
  - All major cities developed along these rives.
- Canals
  - Built in 19th century as connectors between rivers.
  - Ohio and Erie canal dramatically transformed Ohio's economy.
  - Erie Canal in NY, is the world's most used inland canal.

Erie Canal

Transportation

- Rails
  - Originally connected waterways
  - Took over prominence after Civil War
  - Recent consolidation: mostly for bulk materials (agricultural products, building materials)

Transportation

- Roads
  - Took over for the rails after mid 1900's
  - Earliest Toll Roads in Penn, Ohio, Indiana

Cities

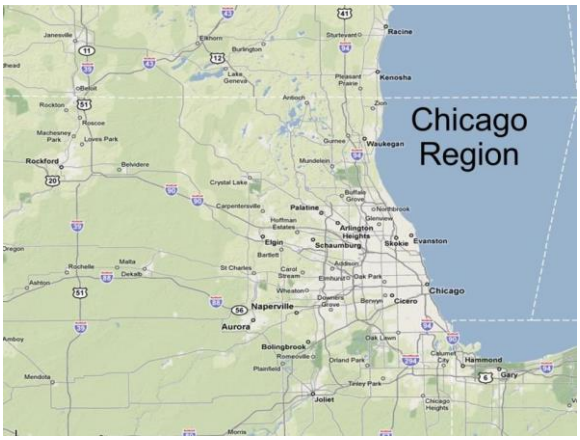
- Many major metropolitan areas
  - 16 with over a million people
- Anchored by Chicago and Toronto
- Second tier of cities that are more regional centers
  - i.e. Cleveland, Detroit, Cincinnati, St. Louis, Kansas City, Minneapolis, Indianapolis
- Third tier cities
  - i.e. Akron, Rochester

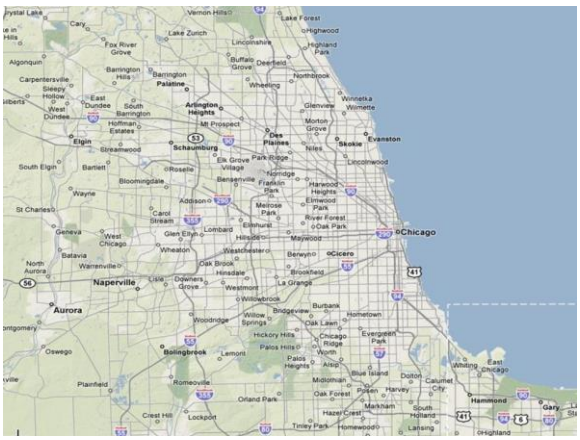
Chicago

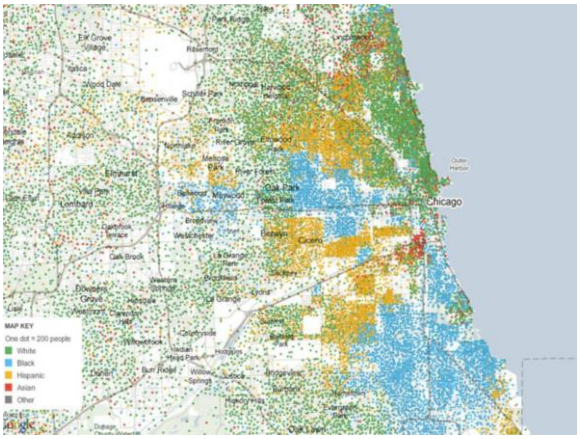
- "Second City"
- Metro area 8 million
- Incorporated in 1833
- Transportation hub
- Second largest manufacturing center, heavy machinery and industry

Chicago Stockyards

- Set up to facilitate transfers between east and west
  - First, live animals
  - Later refrigerated meat
- 475 acres, 130 miles of track
- In 1900, processed 82% of US meat
- Key immigrant job

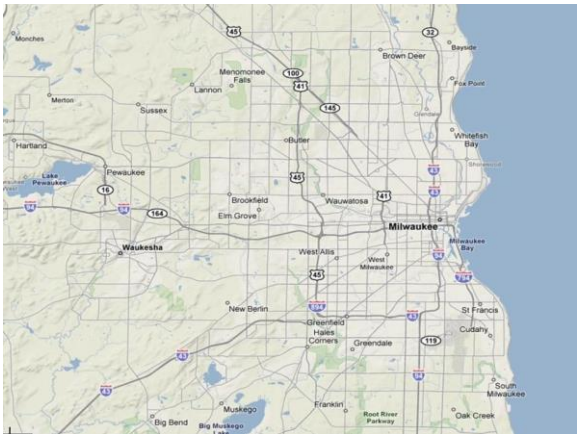


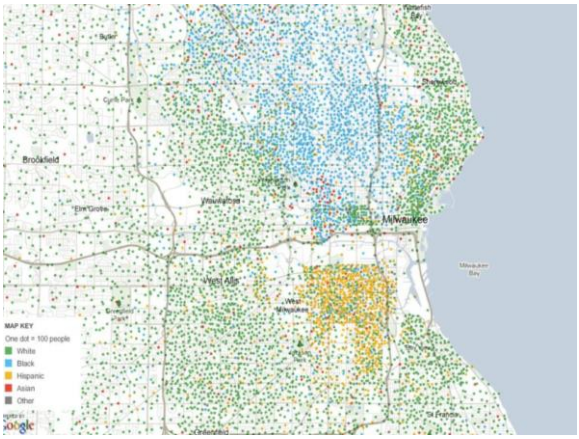




Milwaukee

- The largest city in Wisconsin, and the cultural center for SE Wisconsin.
- Located within Chicago's sphere of influence.
- German &Polish population.
- Milwaukee was once the home to four of the world's largest breweries (Schlitz, Blatz, Pabst, and Miller).
- Health care is the largest growing sector of the economy.





Toronto

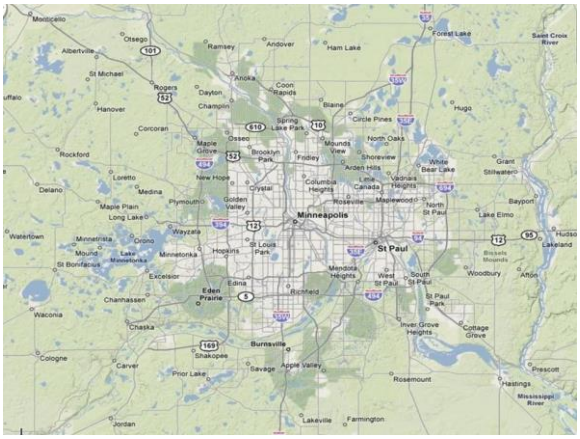
- French settlement 1615
- Torched by US in 1813
- Premier financial and corporate center of Canada
- Over 4.5 million people (15% of Canada)
- Very diversified economy
- Major center within – Canada migration and international migration

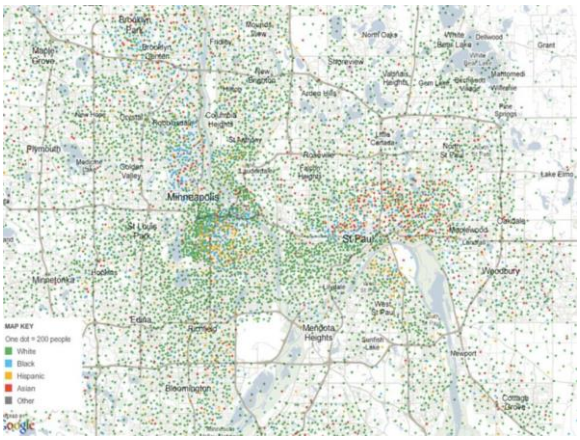
Ottawa

- Capital of Canada
- Ottawa is the second largest city in Ontario
- It was the only settlement of any significant size located right on the border of Canada East and Canada West making it a compromise between the two
- The War of 1812 – at the time, surrounded by a dense forest far from the border
- The gov't owned a parcel of land overlooking the Ottawa River

Minneapolis - St. Paul

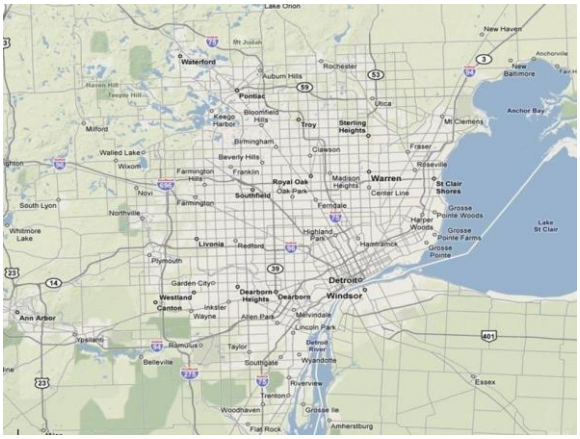
- The 'Twin Cities"
- Diverse cities
  - St. Paul: eastern, historic
  - Minneapolis: western, grid based
- Diversified employment
  - Food: General Mills, Pillsbury
  - Retail: Target, Best Buy, Mall of America
  - Hi-Tech: 3M
- One of the fastest growing regions
- Low unemployment rate

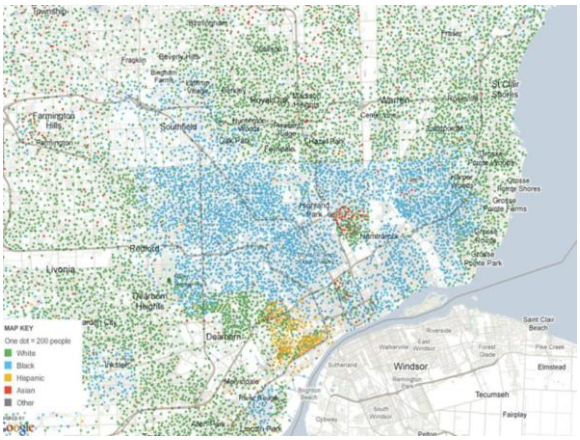




Detroit

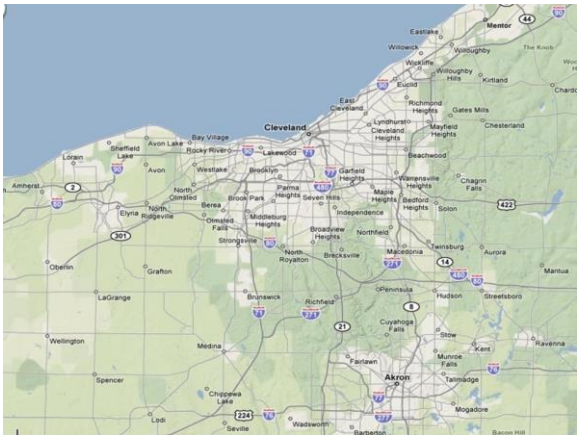
- 3rd largest manufacturing center in the US
- Auto industry
  - Top 3 employers
  - Ford over 60,000 people
- Largest Arab-American community
- City center in decline
  - has lost over 1 million people
- Metro area over 4 million people

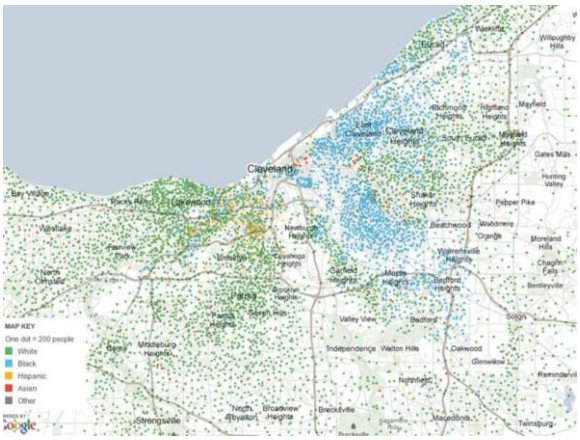




Cleveland

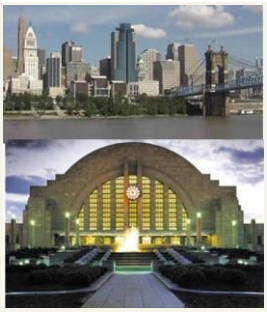
- 2nd largest city in Ohio (Columbus #1)
- It was founded in 1796 near the mouth of the Cuyahoga River
- Became a manufacturing center do to its proximity of canals and railroad lines
- Cleveland is an emerging area for biotechnology and fuel cell research

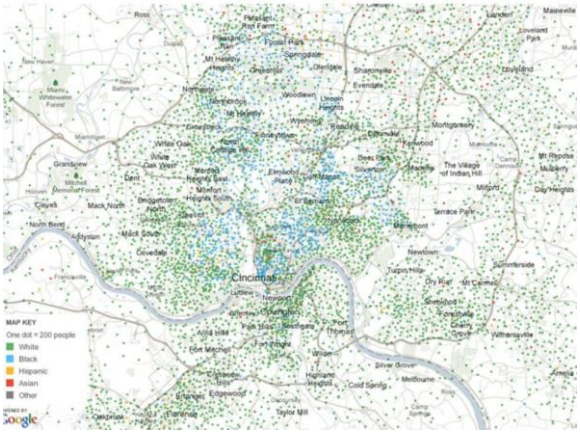




Cincinnati

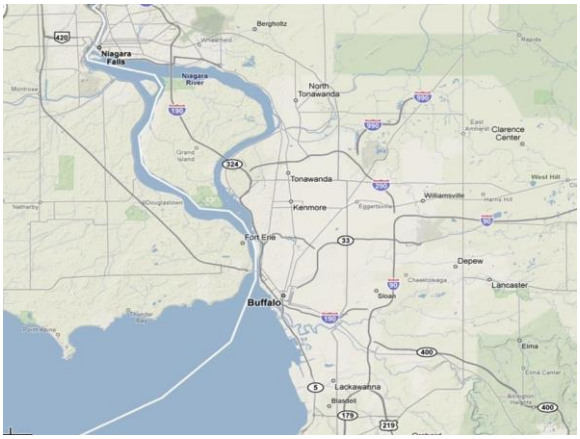
- 3rd largest city in Ohio
- Cincinnati is considered to have been the first major American boomtown
- Before the Civil War, Cincinnati was a border town between the slave and non-slave states
- Cincinnati is home to major corporations such as Procter & Gamble and Kroger

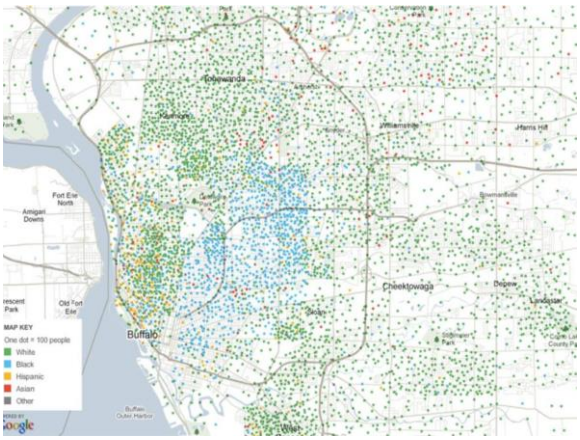




Buffalo

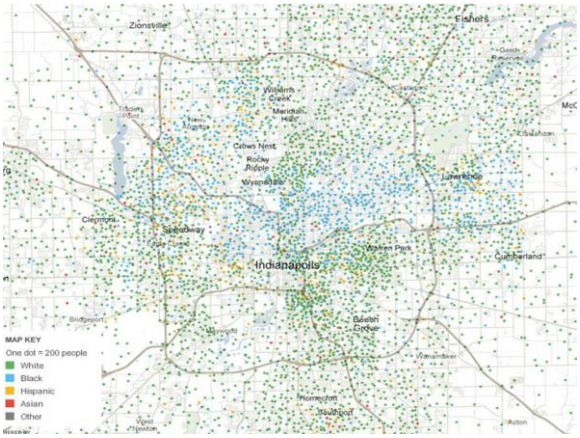
- 2nd largest city in New York State
- Originating around 1789, Buffalo grew quickly around 1825 after the opening of the Erie Canal
- The rerouting of shipping by the St. Lawrence Seaway, and the closing of many steel mills and other heavy industries have also contributed to the decline





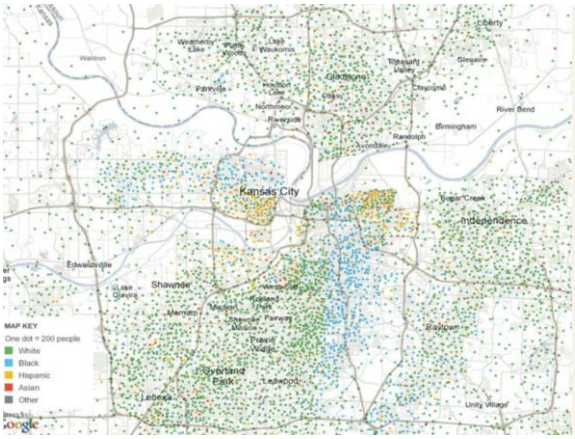
Indianapolis

- Capital and largest city in Indiana
  - Historically - oriented around government and industry (automobile production and manufacturing)
  - Today - much more diversified economy, including education, healthcare, and finance.
- Popular destination for tourists.
- Home of the "Indy 500"



Kansas City

- Largest city in Missouri
- Confluence of the Missouri and Kansas rivers.
- Historically, Kansas City has been the third largest beef capital in the US (behind Chicago and Cincinnati) and home to the second largest rail network.
- Kansas City is most famous for its steak and barbecue.



St. Louis

- Confluence of the Missouri and Mississippi rivers
- Home of the 1904 World's Fair and 1904 Olympic Games
- Home to the world-renowned Saint Louis Symphony Orchestra, founded in 1880, 2nd oldest orchestra in the nation.
- Home of Anheuser-Busch Breweries

Other metro areas over 500,000

- Industrial and financial centers
  - Des Moines, Grand Rapids, Lexington, Louisville, Nashville, Rochester, Sioux Falls, Omaha

Outlook

- Important to the nations
  - Major economic area of Canada
  - Major agricultural and industrial area of the US
- Corporate agriculture
  - Fewer employed in this sector
- Growth in urban areas
  - Some cities flourishing more than others (i.e. Cleveland and Kansas City)