

Disaster Management to Ensure Business Continuity: The New Madrid Earthquake EX

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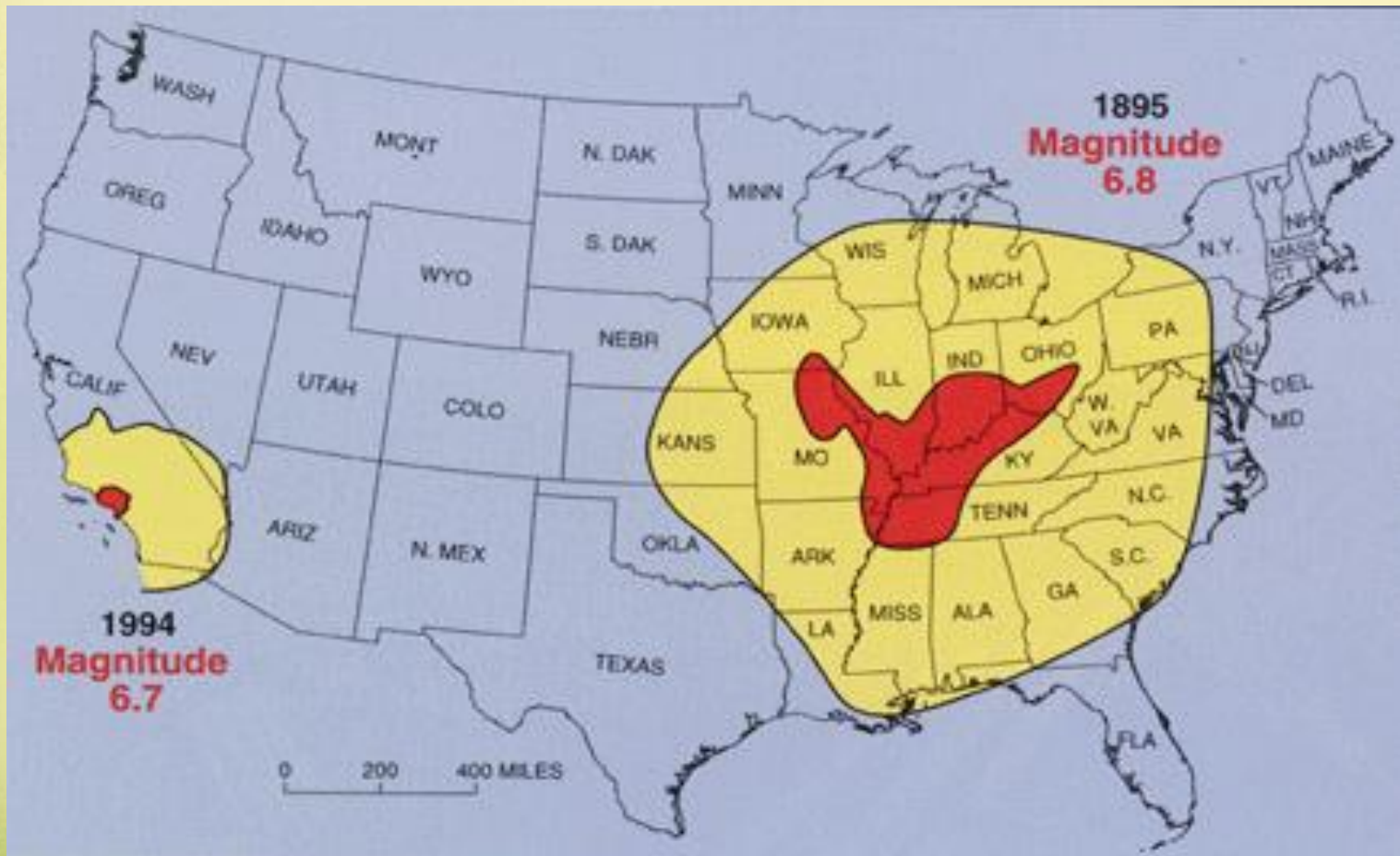
Supply Chain Disruption Causes *Earthquakes*

Scientists estimate that the probability of a magnitude 6 to 7 earthquake in the New Madrid fault zone in the next 50 years is higher than 90%.

Source: <http://quake.wr.usgs.gov/prepare/factsheets/NewMadrid/>



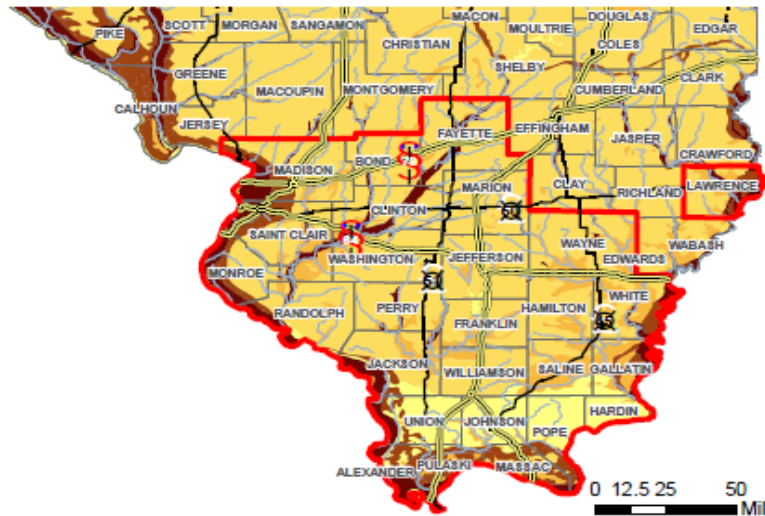
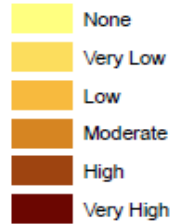
Comparison: the 1895 Charleston, Missouri, earthquake in the New Madrid seismic zone with the 1994 Northridge, California, earthquake. Red indicates area of structural damage, yellow indicated area where shaking was felt.



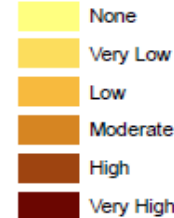
Illinois Liquefaction Susceptibility

New Madrid Seismic Zone: M7.7 Event

Liquefaction Susceptibility in Critical Counties



Impacted Counties Boundary Liquefaction Susceptibility (State)



Major Cities by Population

- 83,105 - 106,000
- 106,001 - 143,000
- " 143,001 - 2,732,000

Roads

- Interstates
- US Routes



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Mid-America Earthquake Center

VirginiaTech

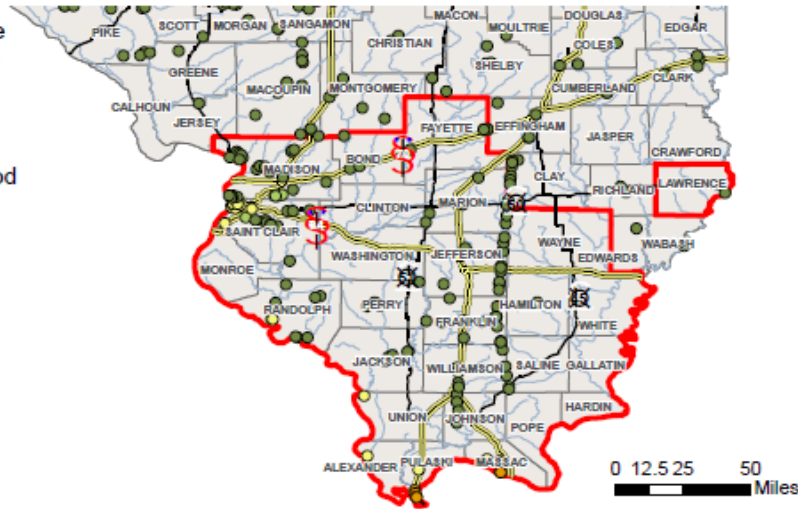
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Illinois Railway Bridge Damage New Madrid Seismic Zone: M7.7 Event

Railway Bridge Damage of Critical Area (Points)

- Highly Unlikely
- Unlikely
- Moderate Likelihood
- Likely
- Certain



Impacted Counties Boundary

Railway Bridge Damage (Surface)

- Highly Unlikely
- Unlikely
- Moderate Likelihood
- Likely
- Certain

Major Cities by Population

- 83,000 - 106,000
- 106,001 - 143,000
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Roads

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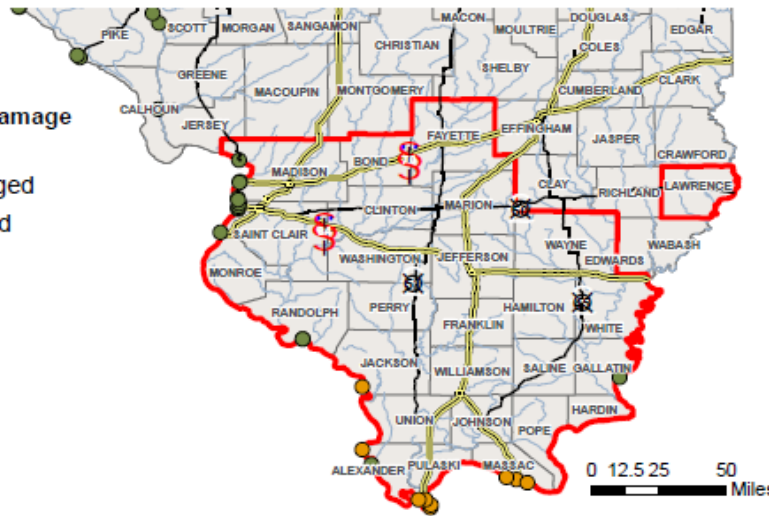
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Illinois Major River Crossings Damage New Madrid Seismic Zone: M7.7 Event

Major River Crossings Damage of Critical Area (Points)

- Unlikely Damaged
- Likely Damaged



Impacted Counties Boundary

Major River Crossings Damage (Surface)

- Unlikely Damaged
- Likely Damaged

Major Cities by Population

- 83,000 - 106,000
- 106,001 - 143,000
- 143,001 - 2,732,000

Roads

- Interstates
- US Routes



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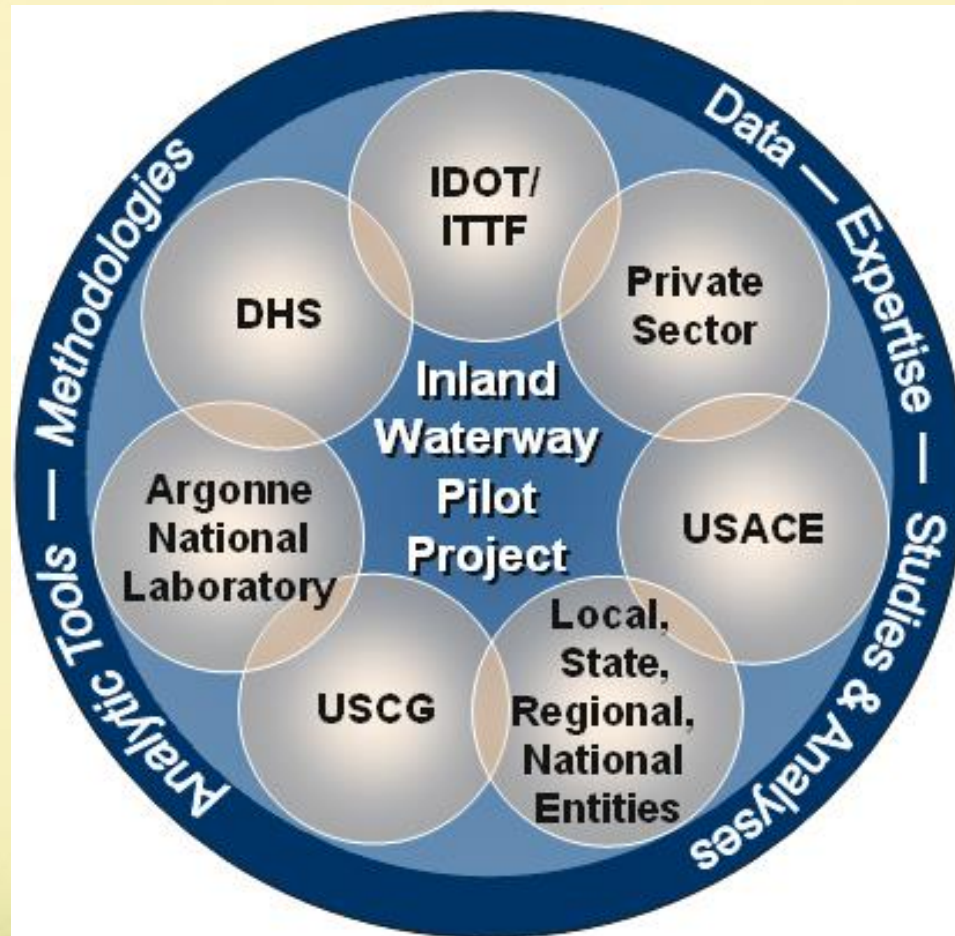
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Fundamental Concepts

- Infrastructure/system interdependencies
- Cascading impacts
- Just-in-time supply systems
- Enterprise risk vs. operational risk

Pilot Project Is a Partnership Among State, Federal, and Private-Sector Organizations



The Nature of the Inland Waterways Risk Assessment Partnership

Understanding the true cascading impact from a catastrophic event on the inland waterway system, and from that analysis, understanding the true scope of the economic impact risk associated with the event, requires that federal, State, local and private sector partners work together in a real partnership to gather, assess and summarize data.

Standing together to ensure that practical solutions are identified and funded.

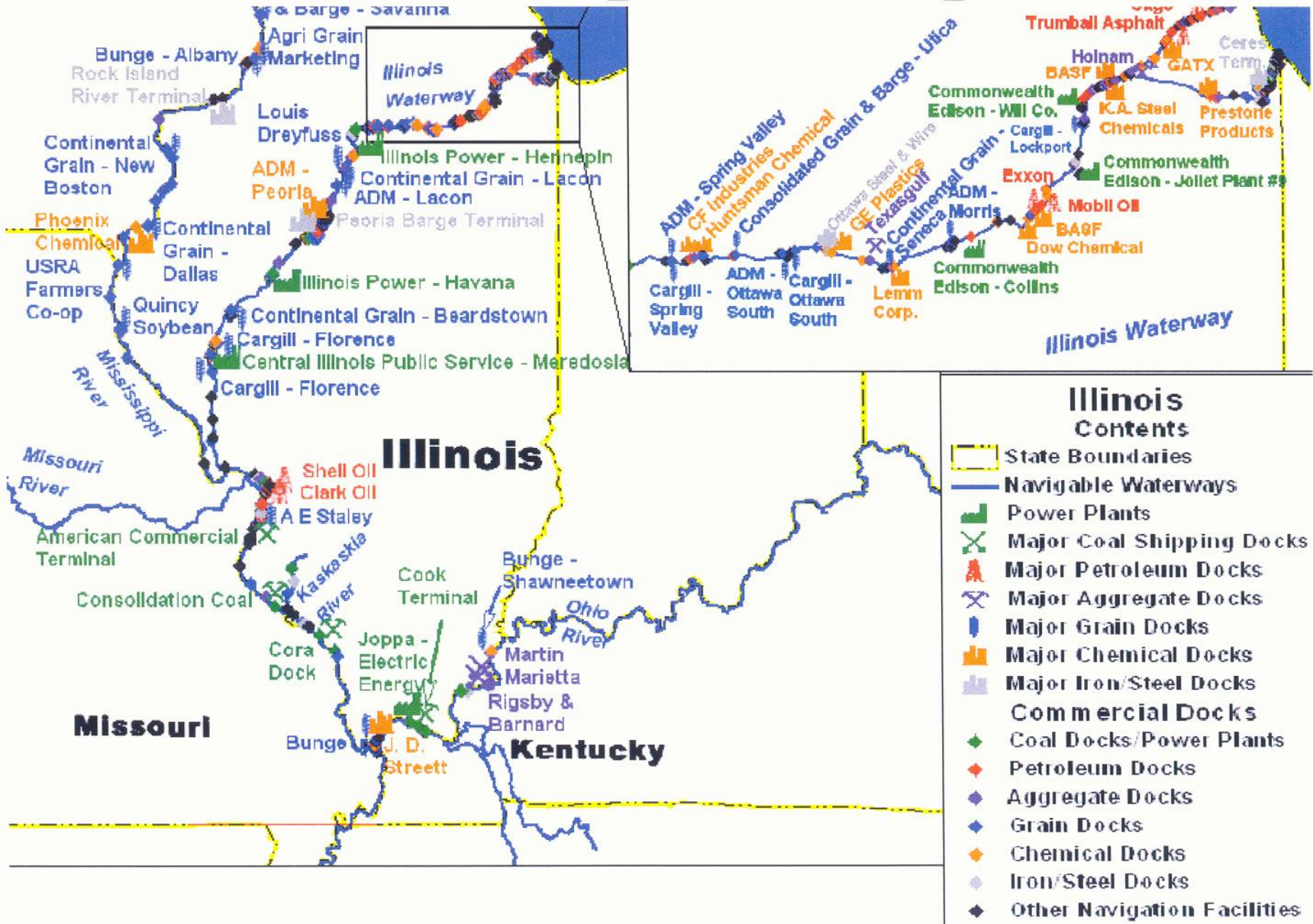
This project is NOT an academic work



Illinois's Rivers, Locks and Dams



364 Manufacturing Facilities, Power Plants, Terminals and Docks Are Located Along Illinois's Navigable Rivers



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