

# Quadrennial Energy Review

Public Stakeholders Meeting

## Energy Impacts to Freight Transportation Planning

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*Illinois Department of Transportation (IDOT)*

August 8, 2014



# Illinois DOT's Role?

# MAP-21 Requirements for Strategic Freight Planning

1. Strategic Plan how DOTs to meet national freight goals & overview of trends, needs, and issues
2. Freight policies & strategies aimed to guide freight-related decisions and enhance freight mobility & regional collaboration
3. Condition & performance of state freight system including measurements to be used to guide investment decision-making.

# Illinois' Freight Strategy

- Incorporate commodity flow trends & forecasts into **State Freight Plan** with ongoing private industry collaboration (*Energy Independence ... Crude-by-Rail & Crude-by-Barge were non-existent in Illinois' 2012 Freight Plan*)
- Identify chokepoints & bottlenecks in modal networks and seek qualitative analysis to help explain why
- Support ALL freight modes
- Promote modal connections that optimizes modal choice for private sector industry

# STRATEGIC FREIGHT PLANNING

*Local*

*State*

*Regional*

*National*

*North America*

*International*

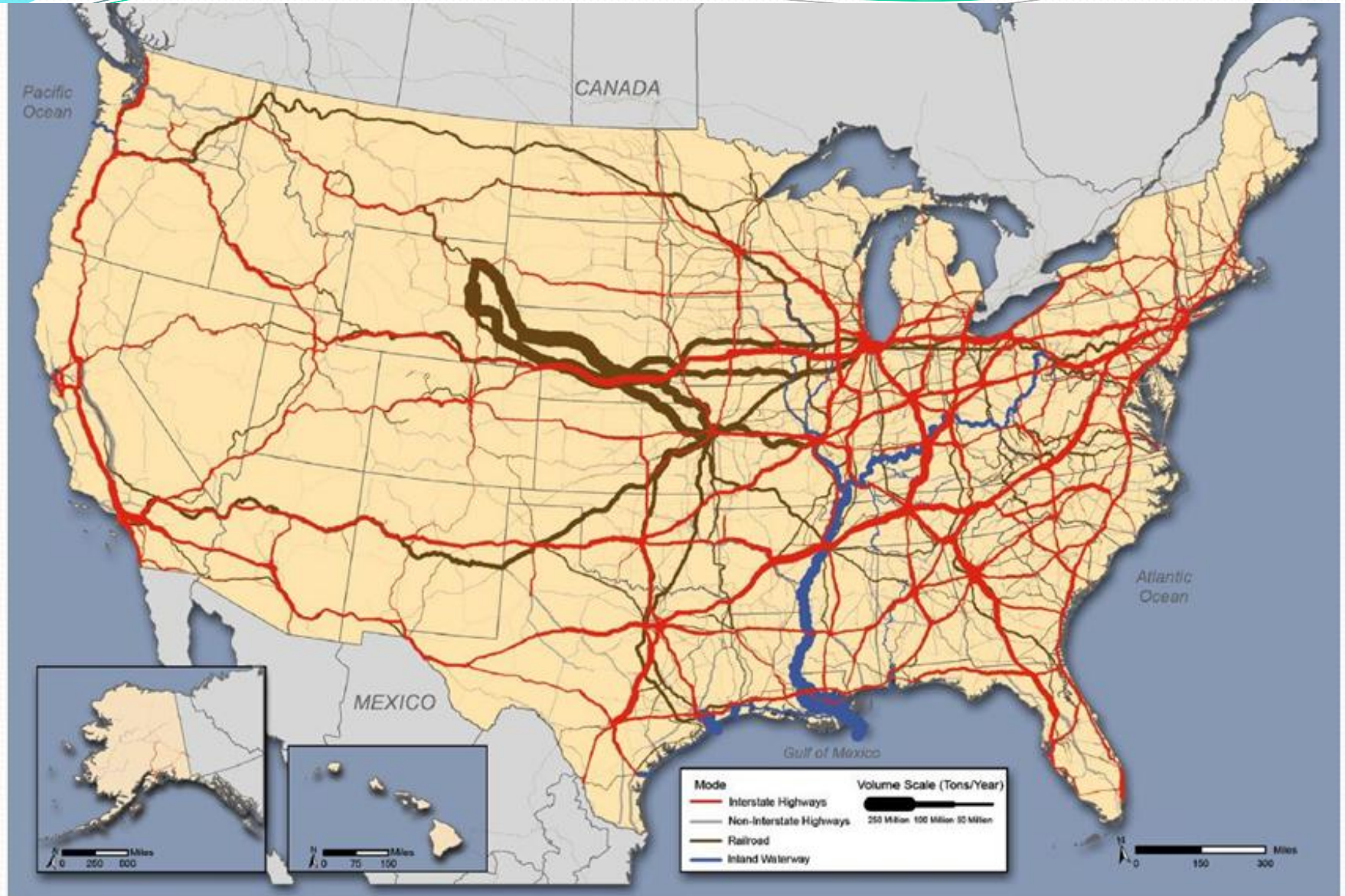
# Coordinate Strategic Planning

- Engage Metropolitan Planning Organizations and private enterprise in **local strategic planning**  
*(Local, local/regional, state, state/regional levels into the National Strategic Freight Plan)*
- Seek **regional collaboration** among midwestern states on harmonization of policy, operations, and jointly support projects of national and regional significance *(ie. CREATE)*
- Encourage U.S.DOT to engage in strategic planning with other federal agencies *(DOE, EPA, USACE, Labor, Agriculture and Commerce, etc.)* to develop **North America Strategic Freight Plan ~ International Freight Strategic Plan**

*Regional Example:*  
**Maritime Collaboration**  
*Council of Great Lakes Governors*

- Agreed to engage state participation in Maritime navigation issues
- Devote staff to develop policies, plans and initiatives
- Define infrastructure needs
- Integrate Maritime into transportation plans
- Engage in federal advocacy
- Support trade promotion
- Seek TIGER Regional Planning Grant

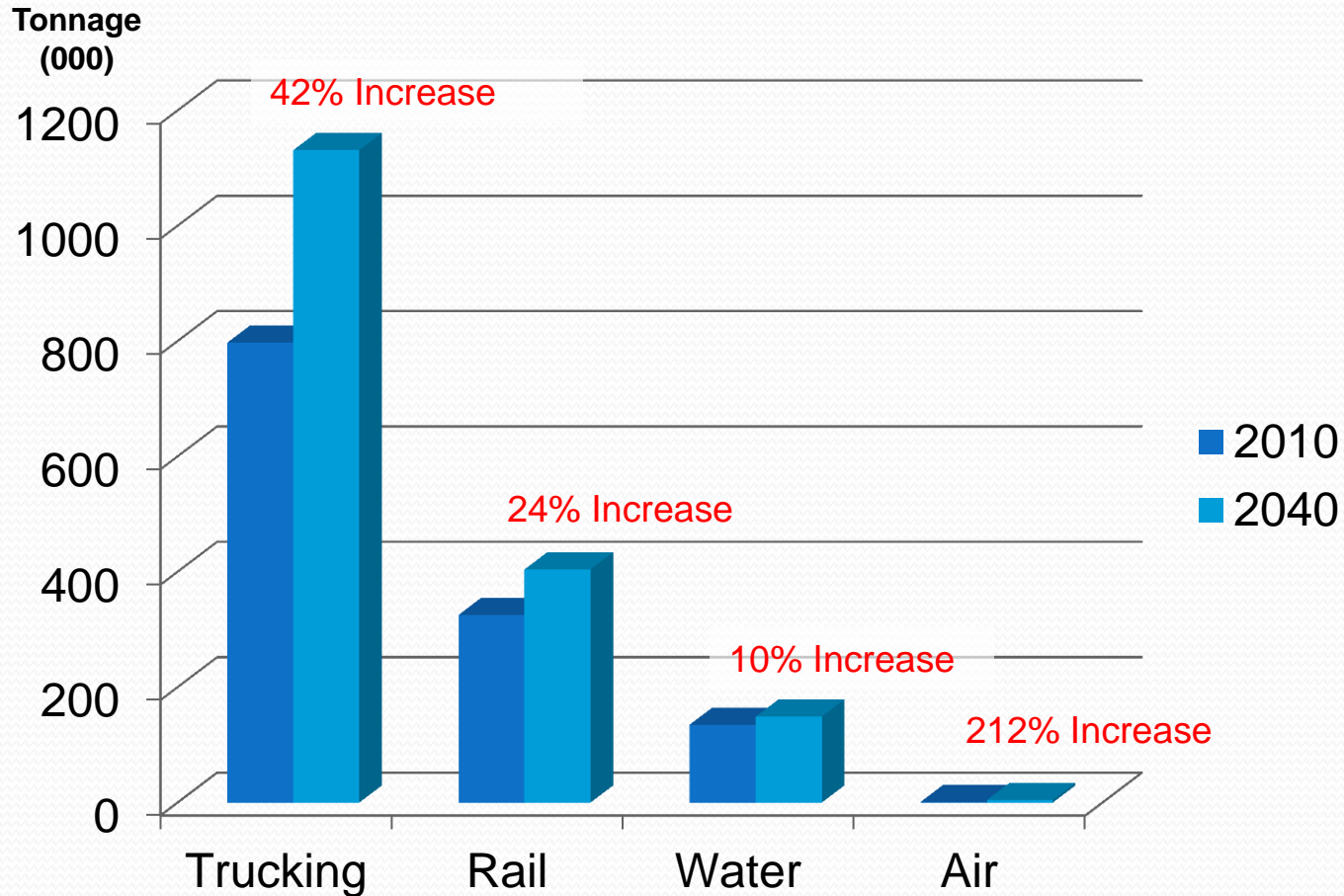
# Tonnage on Highways, Railroads, and Inland Waterways: 2010





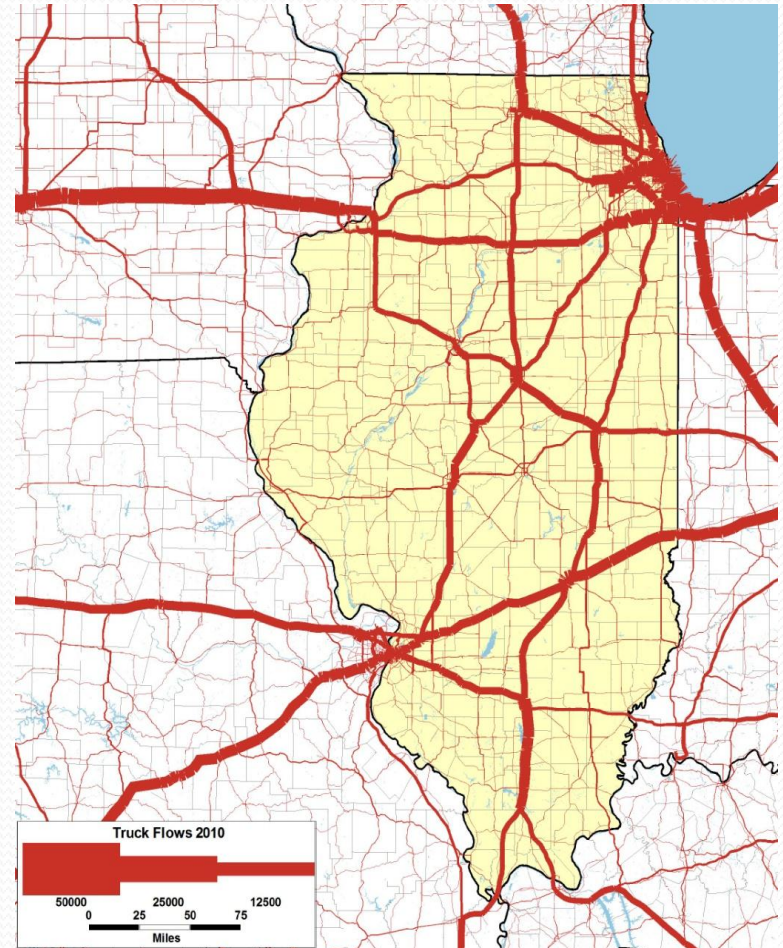
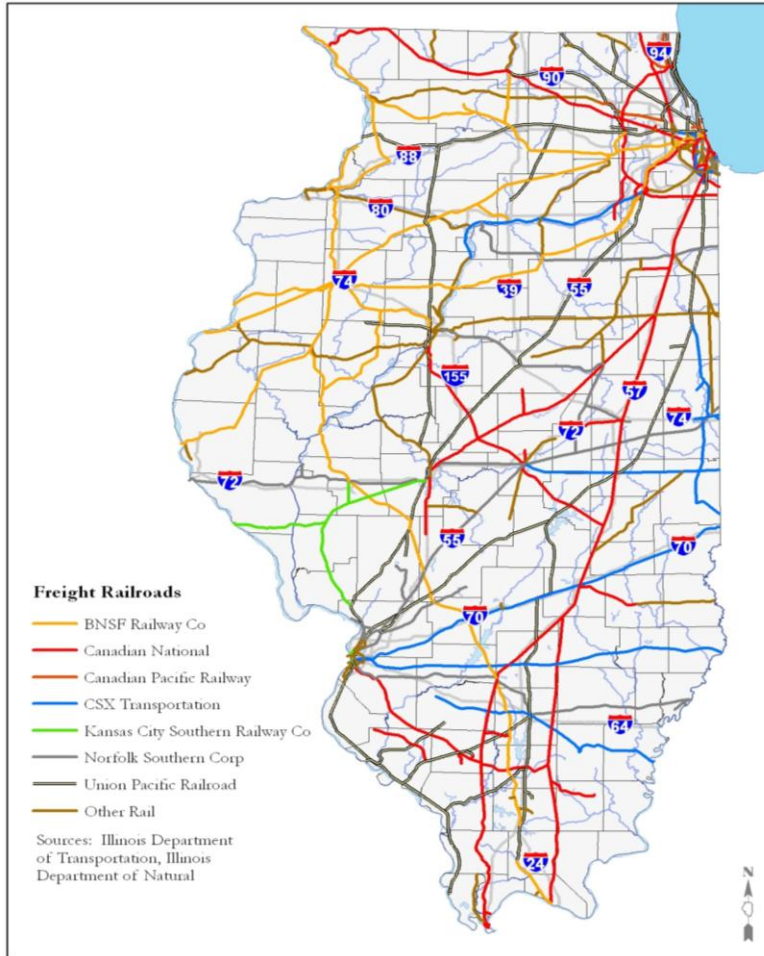
# Illinois Based Freight Tonnage

## 2010 – 2040 Growth by Mode

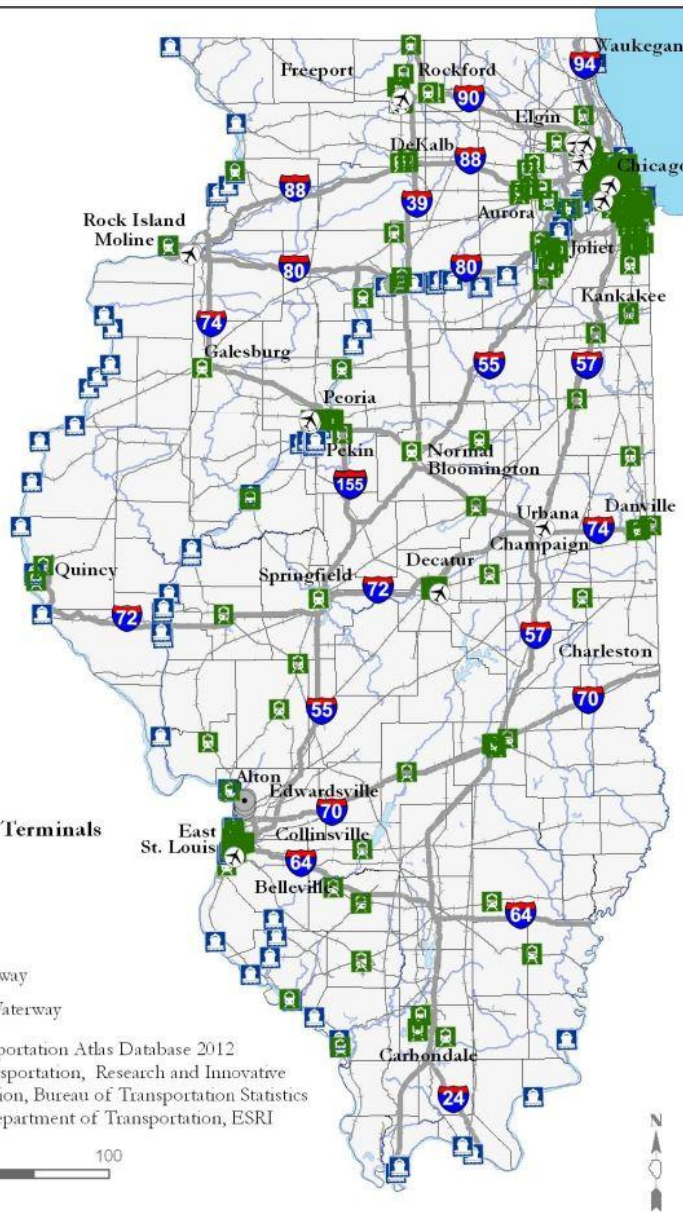


Source: Illinois Freight Mobility Plan (2012)

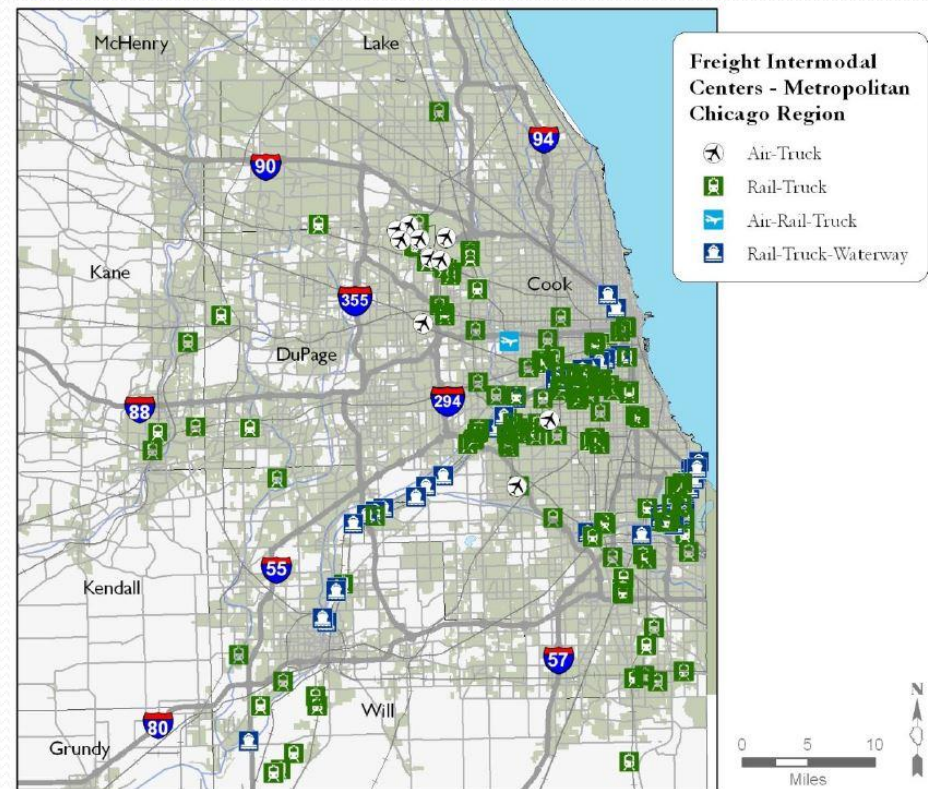
# Illinois' Extensive Rail & Highways Networks



# Illinois Intermodal Freight Facilities and Connectors



*There are 220 intermodal freight facilities in Illinois; most are connections between truck and rail. Over half (130) are located in seven county metropolitan Chicago region.*

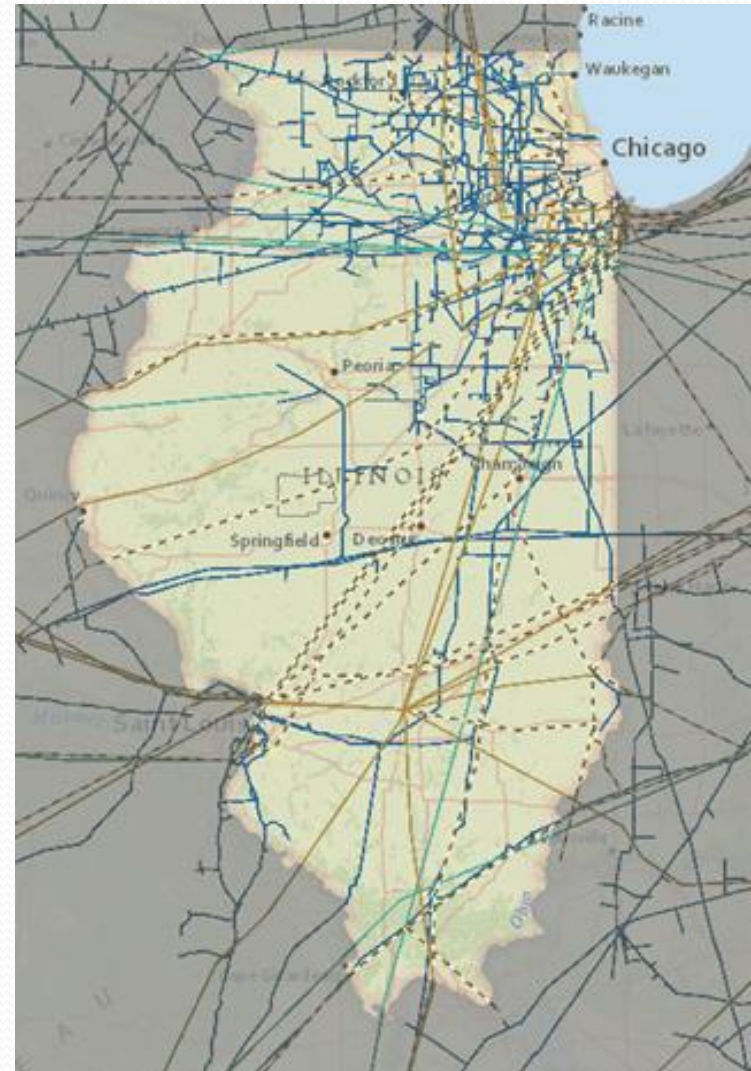


Sources: National Transportation Atlas Database 2010 [US DOT, Research and Innovative Technology Administration, Bureau of Transportation Statistics (RITA/BTS)], IDOT, ESRI

# Freight Movement via Pipelines –

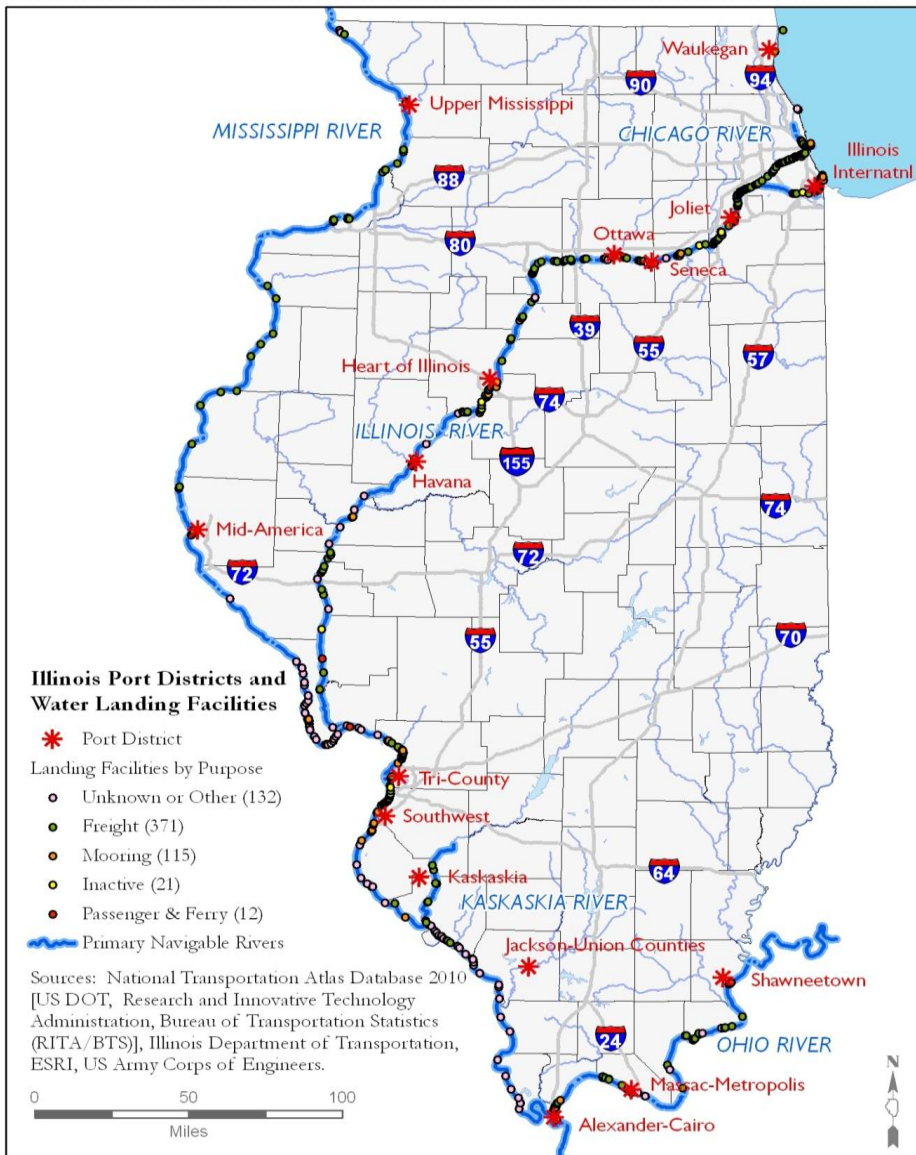
## *New Addition to next Freight Plan*

- 78,360 Total Pipeline Miles
- Commodity Flow
  - 54 % Natural Gas
  - 22 % Refined Products
  - 12 % Crude Oil



# Illinois Port Districts & Water Landing Facilities

## - 1,095 Miles of Navigable Waterways



### Outbound -2010

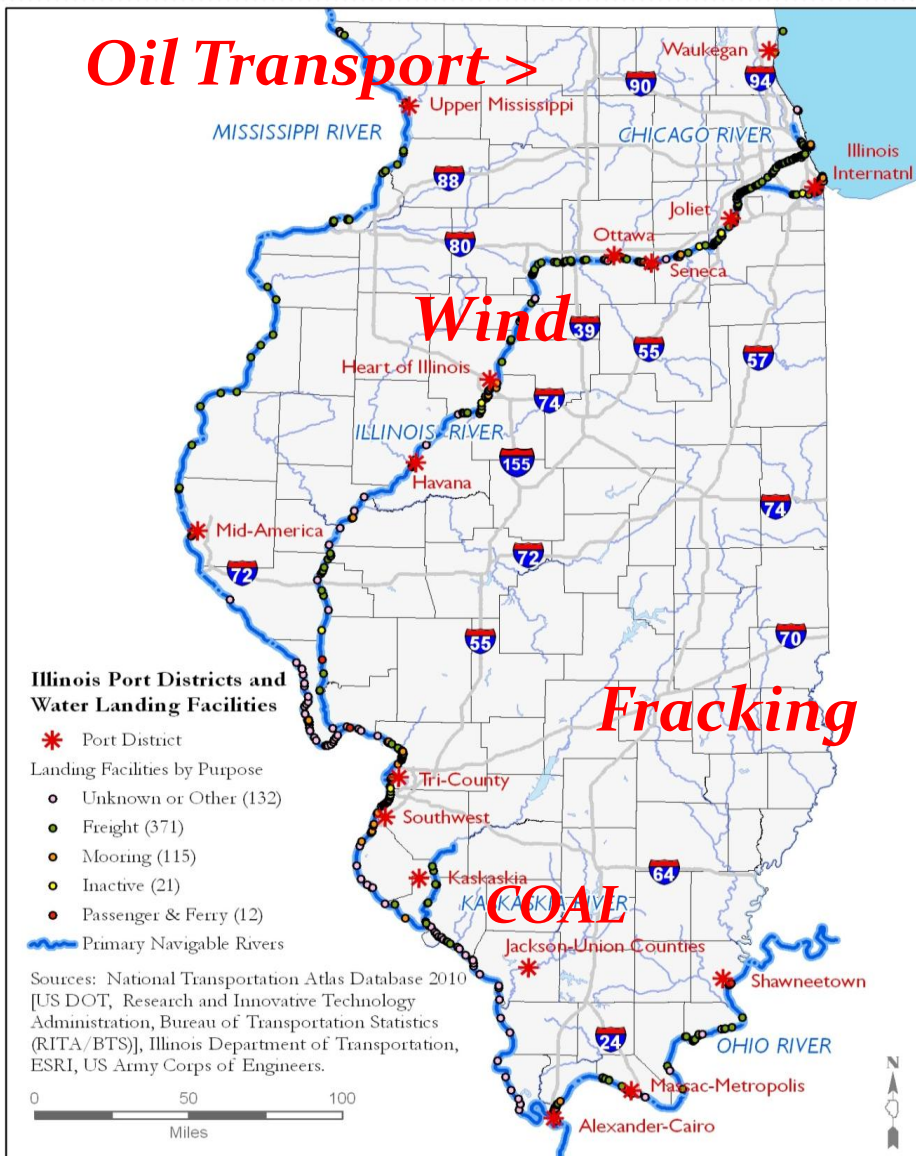
COMMODITY	%	TONNAGE (in millions)
Coal	56	58.4
Agriculture	25	26.2
Petro/Gas	11	11.8
Other	8	7.8
<b>TOTAL</b>	<b>100</b>	<b>104.2</b>

### Inbound -2010

COMMODITY	%	TONNAGE (in millions)
Stone/Ore	36	6.3
Fertilizer/Chem	20	3.5
Metal Products	14	2.5
Other	30	5.2
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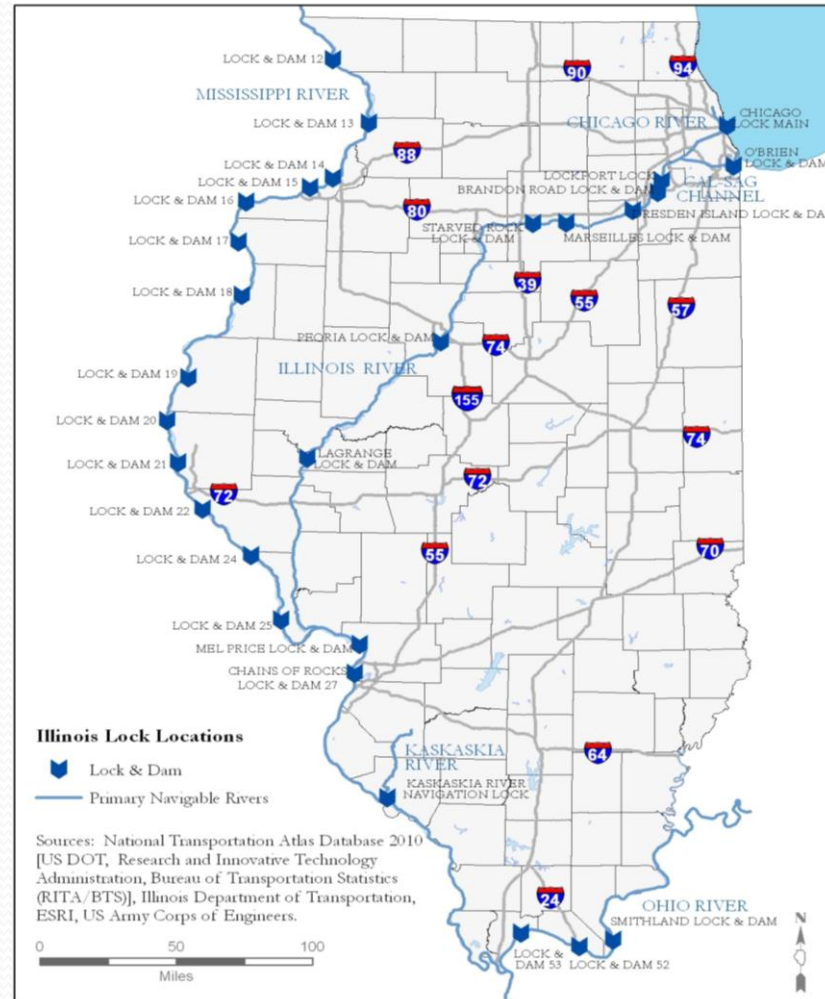
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# Lock & Dams

- Illinois between two great national assets – Great Lakes & Mississippi River
- 5 Locks on Mississippi River & two on Illinois River approved but not yet funded
- **Point of Failure** – A primary concern & its impact to other modes



# Crumbling, decades old technology





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# Value to the Nation

# Navigation

*Our District's 20 locks and dam systems provide value to the nation through enormous transportation benefits*

- Nearly **600 million tons** pass through District's navigation system annually (over 60% of all US grain exports use inland waterways)
- Cost savings for industry is **\$23.74** per ton for traffic moving through Upper Mississippi
- Annual cost savings nears **\$1 Billion**
- It would take an additional 6 million rail cars or 24 million trucks to transport the amount of cargo carried on the nation's inland waterways each year.
- **Barges are safer (X1000), more efficient (X4), and more eco friendly (X10) than trucks**



- Rock Island District, USACE

# USDOT – Maritime Administration MARAD

## New Corridor Designation M-35 Upper Mississippi River



# Barge Renaissance



- Barge industry - “crude by barge phenomenon”
  - $1/3^{\text{rd}}$  of inland waterway fleet moves oil
- 360k oil barrels in 2008 to 2.8 million barrels in 2014
- 40% growth over next 10 years?
- A 30k barrel tank barge = 45 rail tank cars
- Concern of tightening capacity for other commodities  
(*ie. Coal, Grain, Aggregate*)
- How will market dictate modal shift & its impact to local, state and regional networks?
- Port and river terminal development competition, access needs?

# Water Resources Reform & Development Act (WRRDA)

- Harbors Maintenance Trust Fund levels ~ Full use by 2025 (\$1.8 billion/year)
- Olmsted Lock and Dam draw from Inland Waterways Trust Fund at only 15% , free up funds for other locks & dams
- Two pilot programs - Innovative financing (P3) for up to 15 projects & Water Infrastructure Finance and Innovation (WIFIA) loan program

# MAP-21 Reauthorization Proposals

## ***GROW AMERICA ACT - \$10 Billion for Freight Transportation***

- *Multimodal Freight Incentive Program*
- *National Freight Infrastructure Program*
- *Project Delivery Initiatives*
- *State Freight Advisory Committees ~ State Freight Committee Analyses*

## ***U.S. Senate Environment & Public Works Committee***

- *New National Freight Program – State Formula*
- *Projects of National & Regional Significance*
- *New Critical Urban Freight Corridors / Intermodal Connectors*
- *State Freight Committee Requirement*
- *State Freight Investment Strategy ~ Local & MPO's Input*
- *Up to 10% may be used for rail and port facilities*

# Shanghai: 1987 - 2013



# Contact Information

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