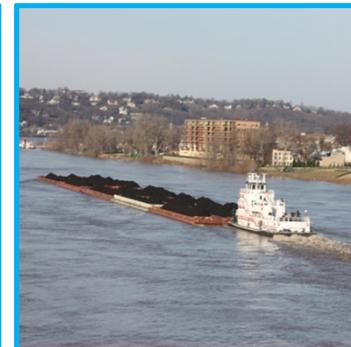




Ohio Statewide Freight Study

Ohio Transportation Engineering Conference

October 30-31, 2012



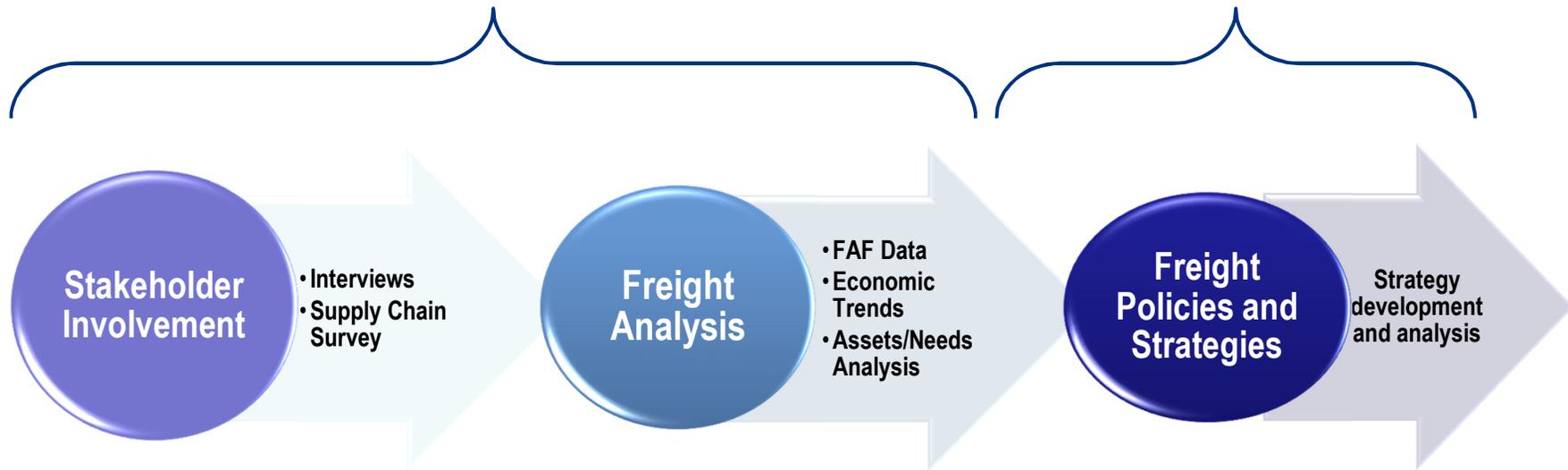
Timeline

Ohio Department of Transportation



Dec 2011 – Aug 2012

Sept 2012 – Dec 2012

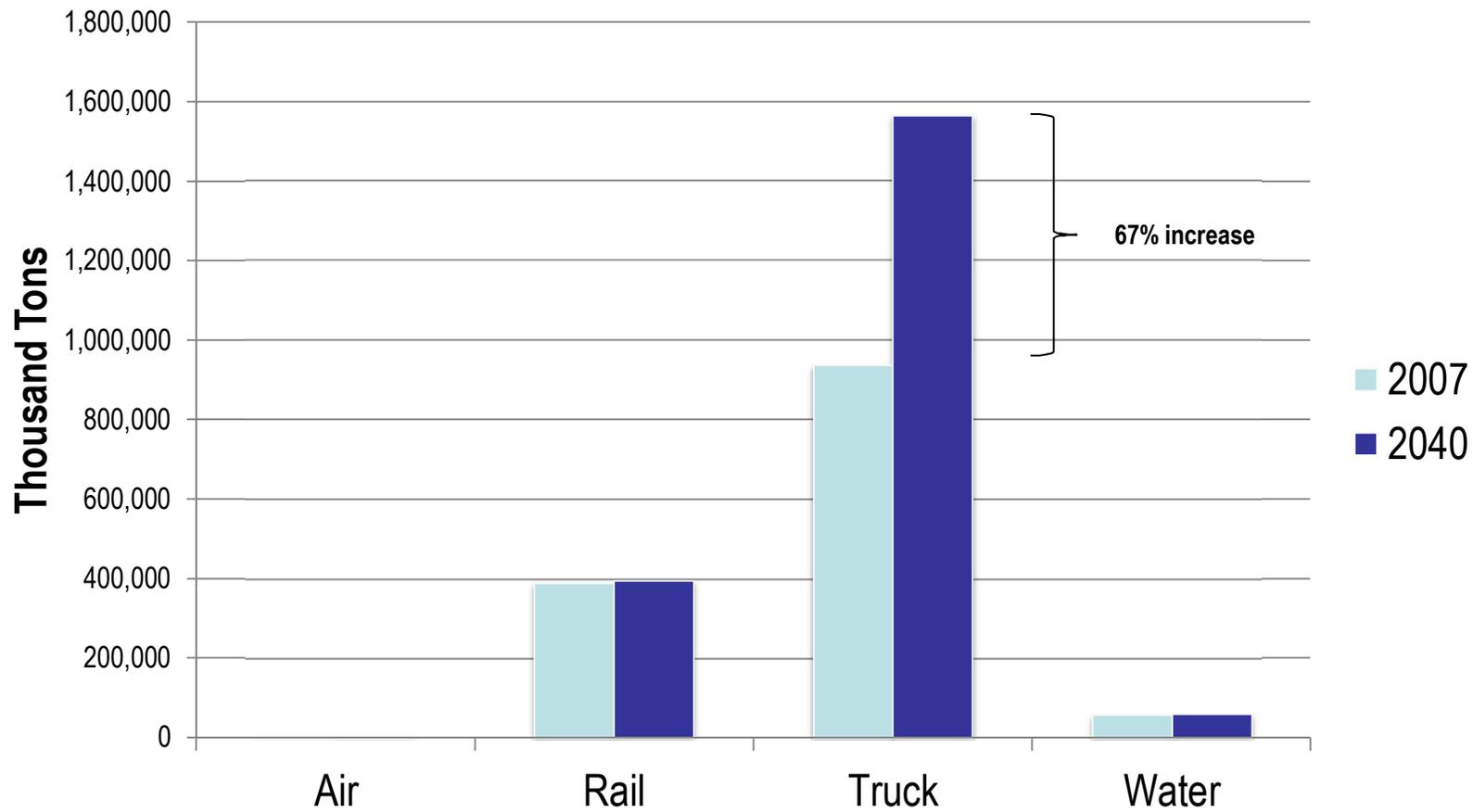


Tonnage Forecast

Ohio Department of Transportation



Freight Flows by Mode, by Weight

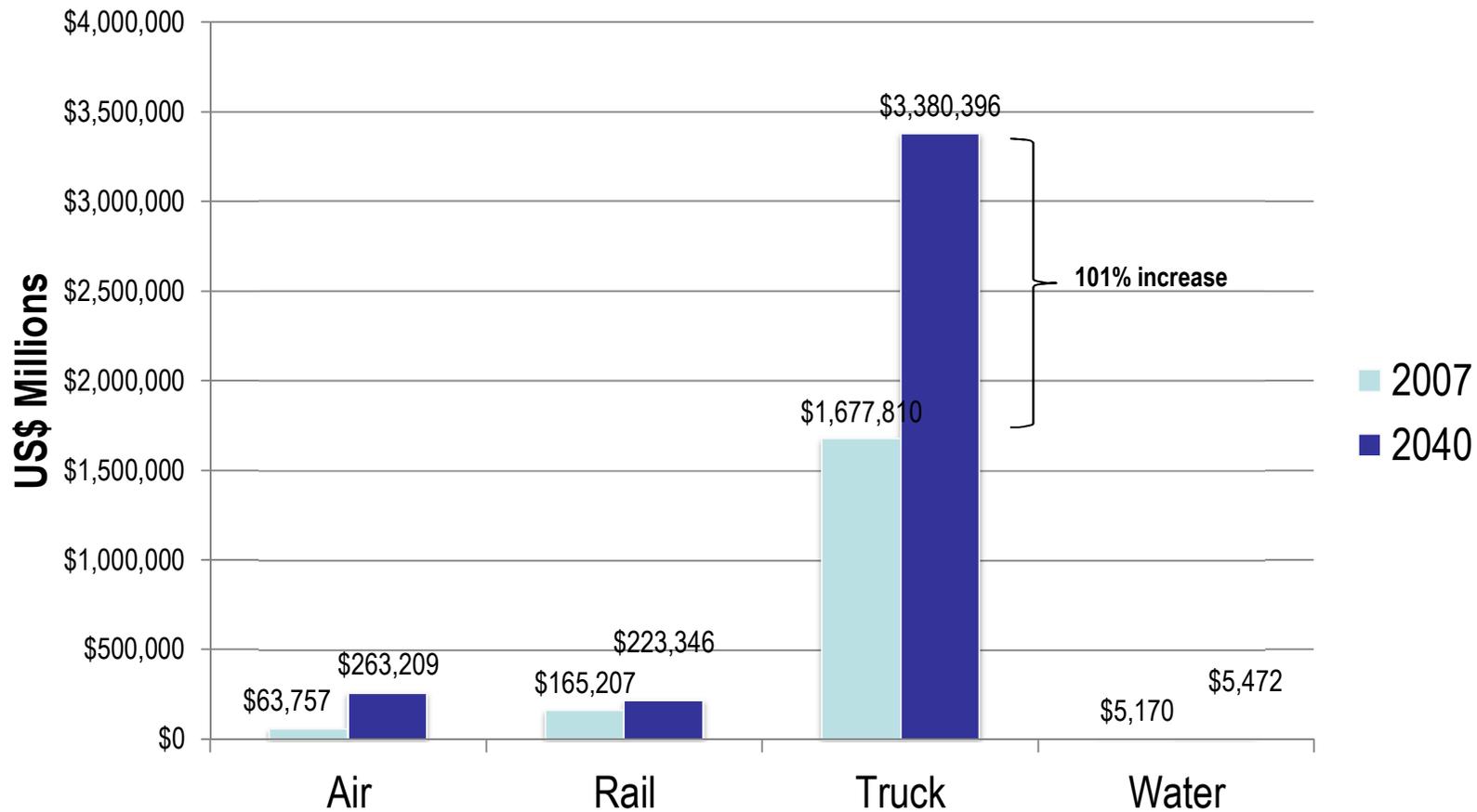


\$Value Forecast

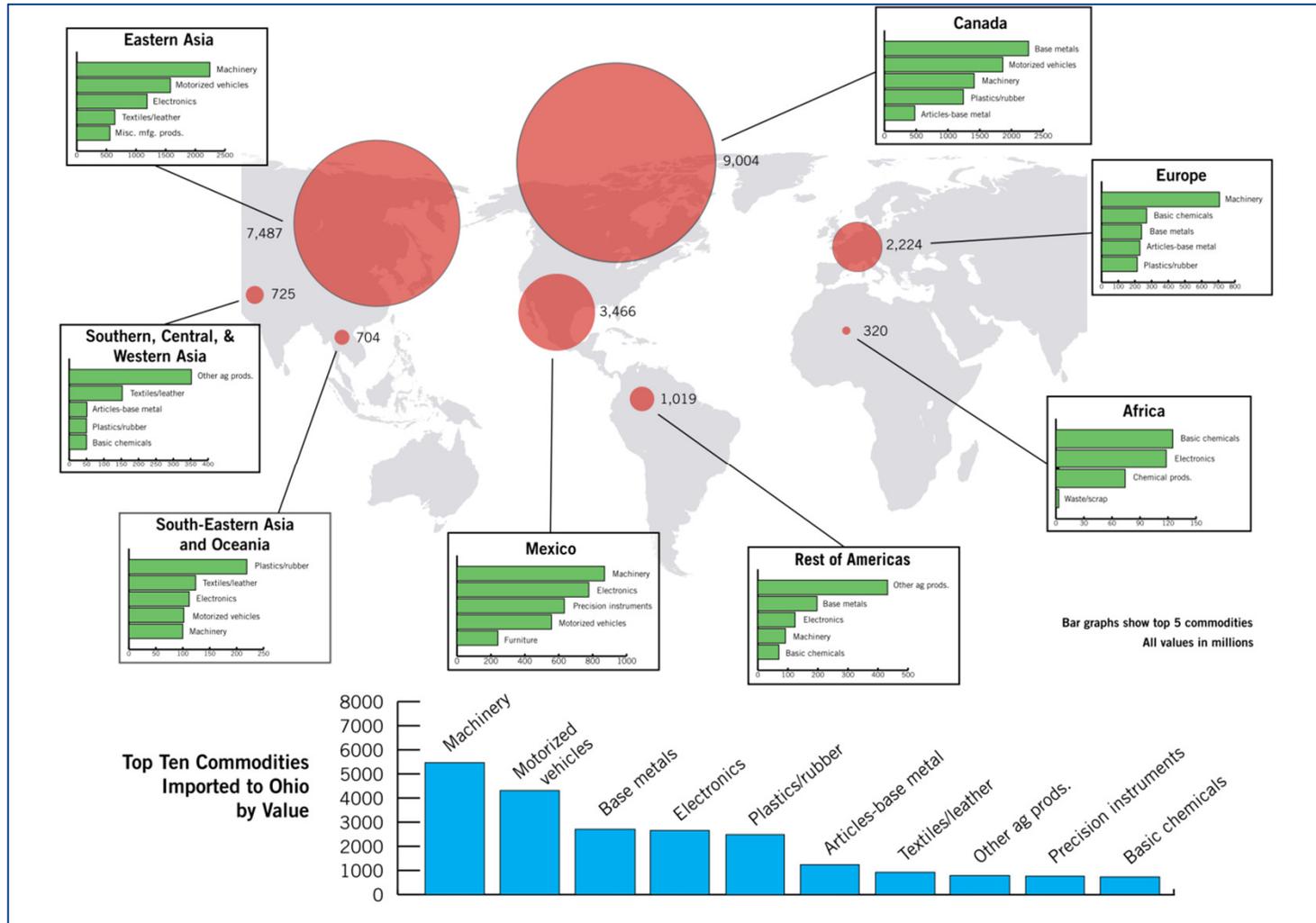
Ohio Department of Transportation



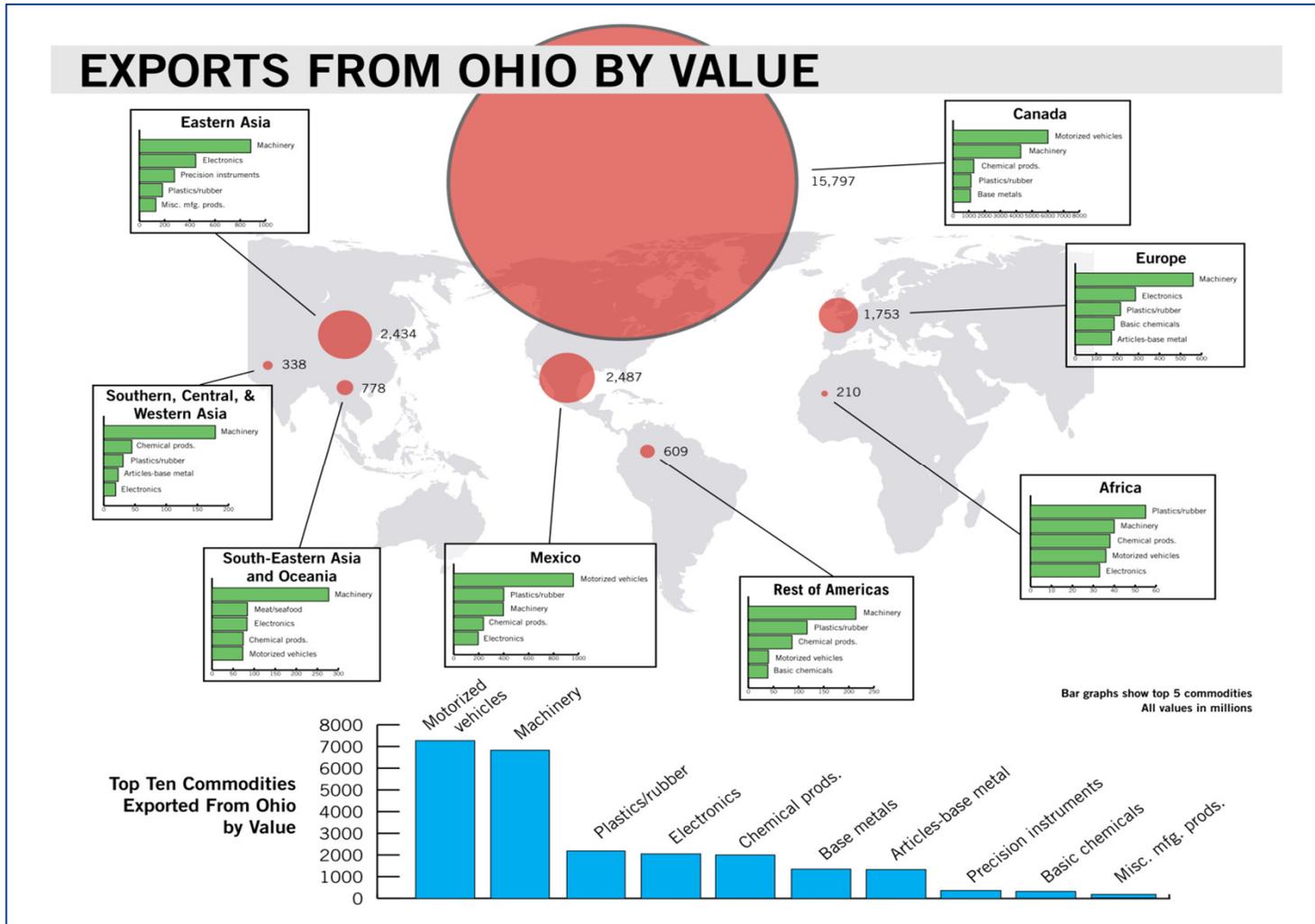
Freight Flow by Mode, by Value



Ohio \$Imports



Ohio \$Exports





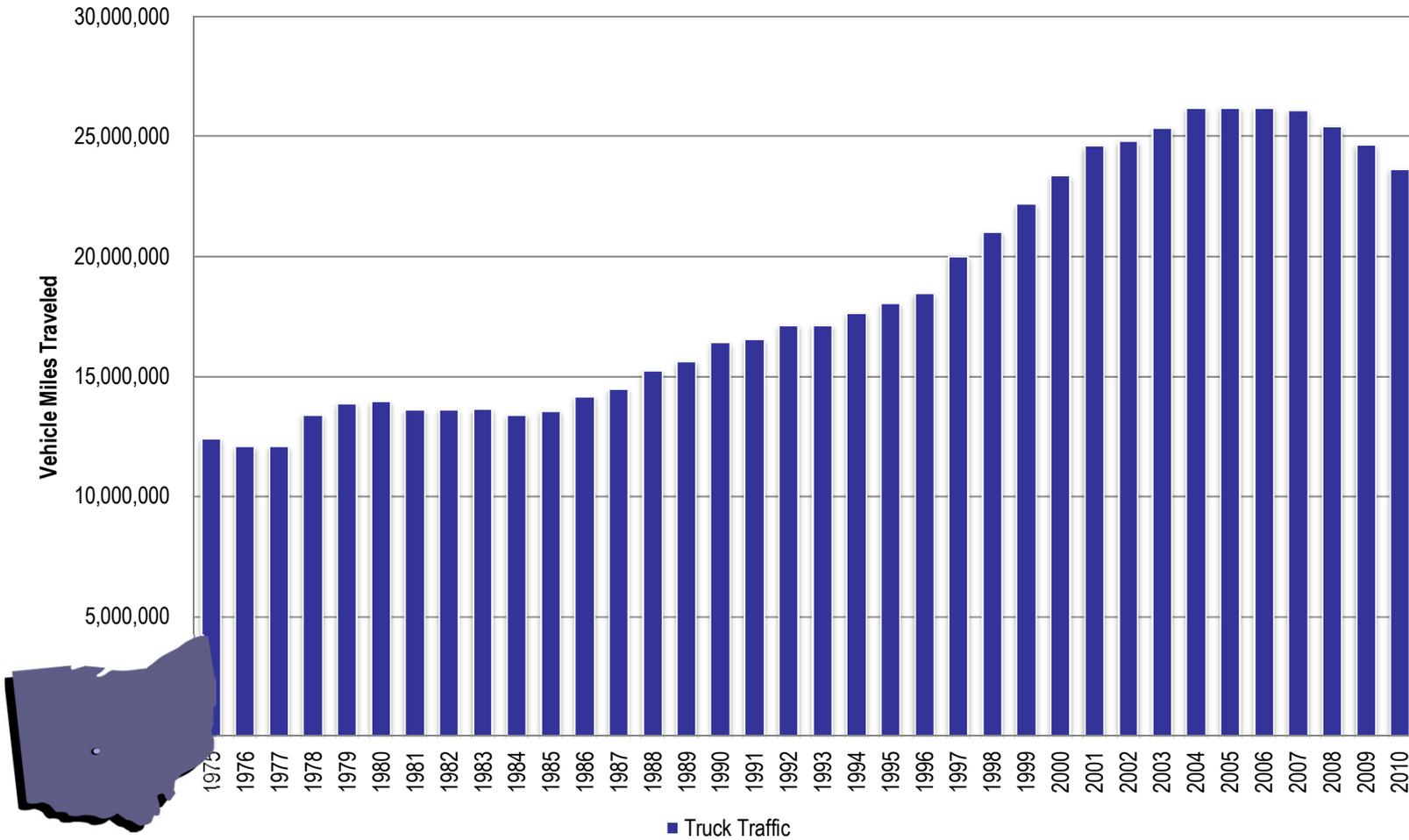
Ohio Truck Freight Analysis

Truck VMT 1975 - 2010

Ohio Department of Transportation



Ohio State Highway System



Top 10 Commodities

Ohio Department of Transportation

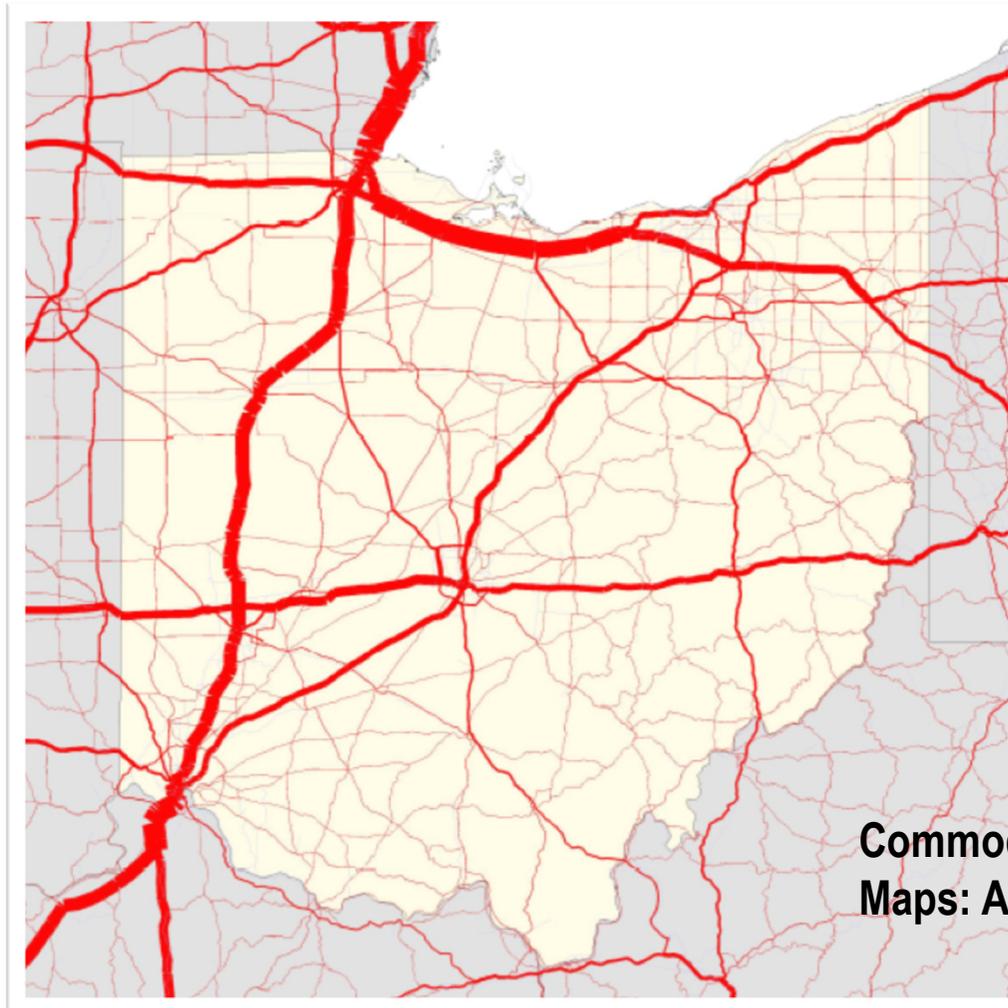


Top 10 Ohio Truck Commodities by Weight and Value

Base Year = 2007					
Weight (Thousand Tons)			Value (\$ millions)		
Commodity	Number	Percent	Commodity	Number	Percent
Total	936,314.5		Total	\$1,677,810.1	
Base metals	78,102.6	8.34%	Motorized vehicles	215,941.7	12.87%
Gravel	76,157.8	8.13%	Machinery	168,953.3	10.07%
Nonmetal min. prods.	60,689.8	6.48%	Electronics	130,210.3	7.76%
Other foodstuffs	60,449.4	6.46%	Base metals	110,376.1	6.58%
Waste/scrap	59,450.4	6.35%	Plastics/rubber	98,217.0	5.85%
Cereal grains	53,329.0	5.70%	Mixed freight	92,440.0	5.51%
Motorized vehicles	36,622.8	3.91%	Textiles/leather	92,049.8	5.49%
Natural sands	35,034.8	3.74%	Pharmaceuticals	78,840.1	4.70%
Plastics/rubber	34,122.4	3.64%	Chemical prods.	76,983.5	4.59%
Mixed freight	30,034.4	3.21%	Other foodstuffs	74,049.7	4.41%

Flow Maps

Ohio Department of Transportation



**Commodity-Specific Flow
Maps: Automotive Parts**

Trucking Issues

Ohio Department of Transportation



- Driver Shortage, Hours of Service (HOS) Regulations
- Truck Parking
- Fuel Cost
- Congestion
- Truck Size and Weight
 - Exacerbated by driver shortage and HOS
 - Need to identify oversize routes and terminals
- Highway Funding



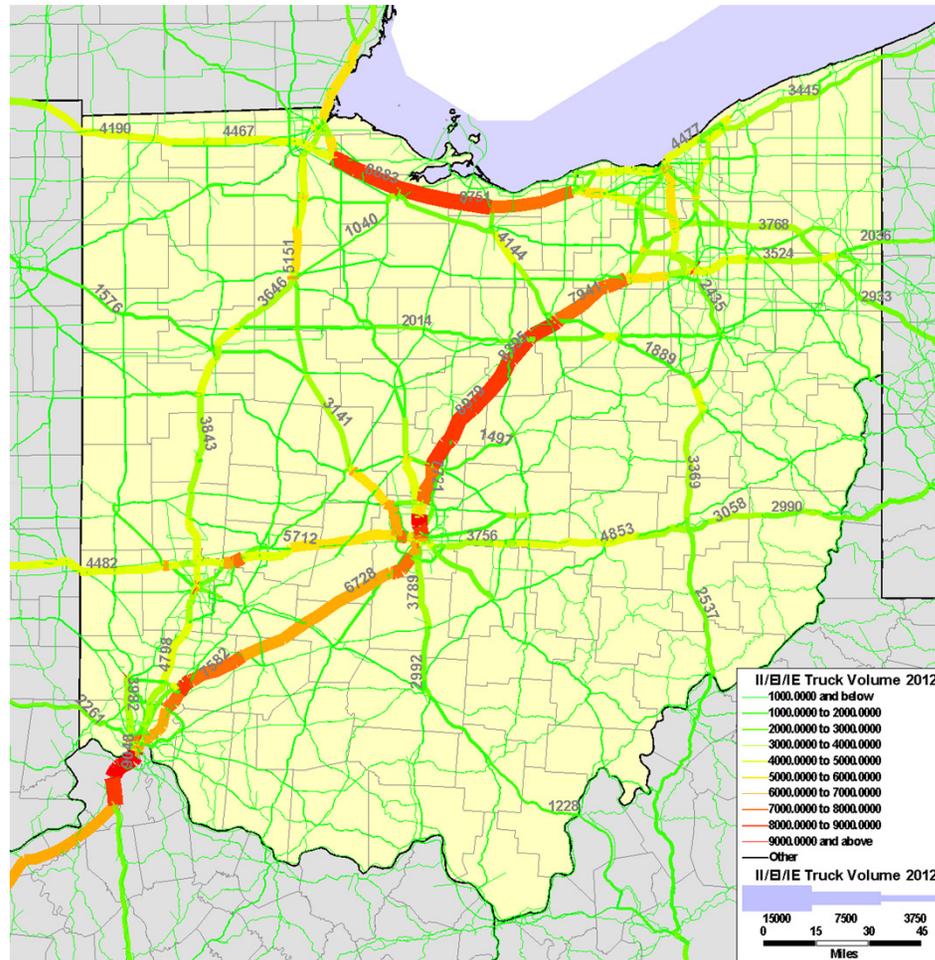
- Parking
 - Sponsor P3 for truck parking facilities?
- Oversize/overweight routes
 - Identify a system of routes for Superloads, inclusive of lake and river ports
- Funding
 - Identify MAP-21 compliant freight routes (eligible for 95% funding share)
 - Metropolitan-level freight routes
- Fuel Cost
 - Support of natural gas fuel distribution network for commercial vehicles



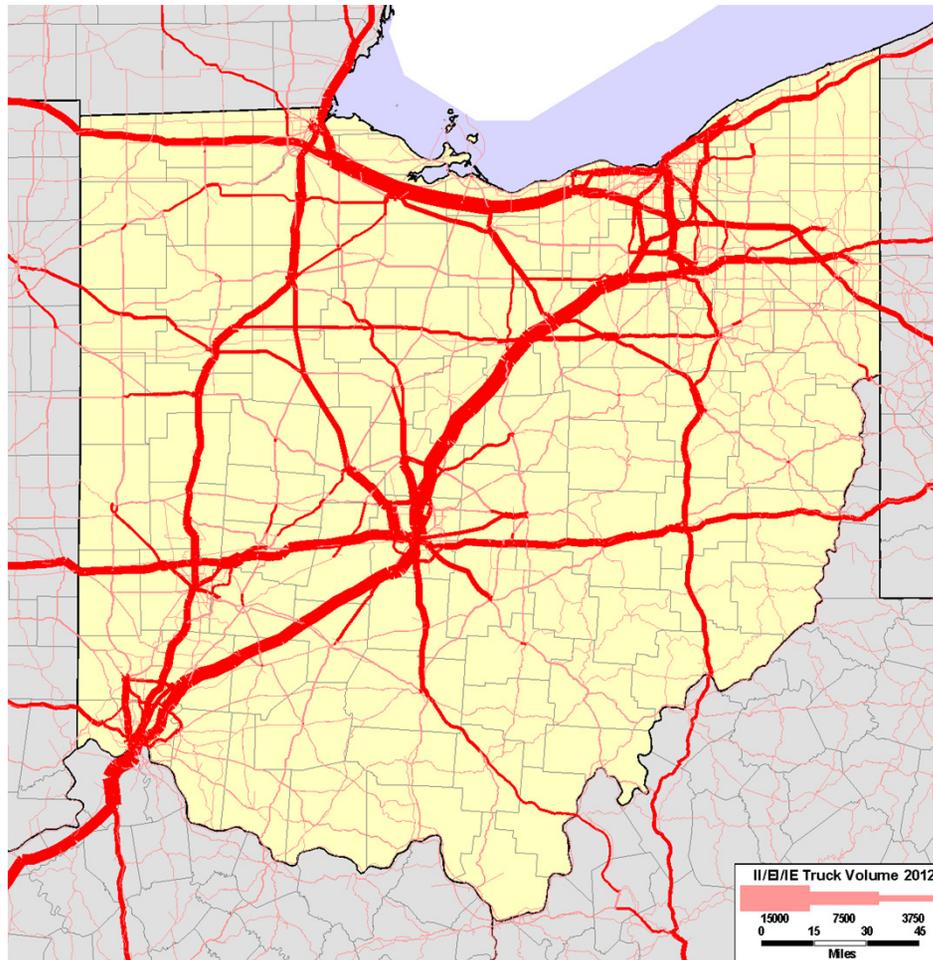
Defining Key Truck Corridors

ADTT Thresholds

Ohio Department of Transportation

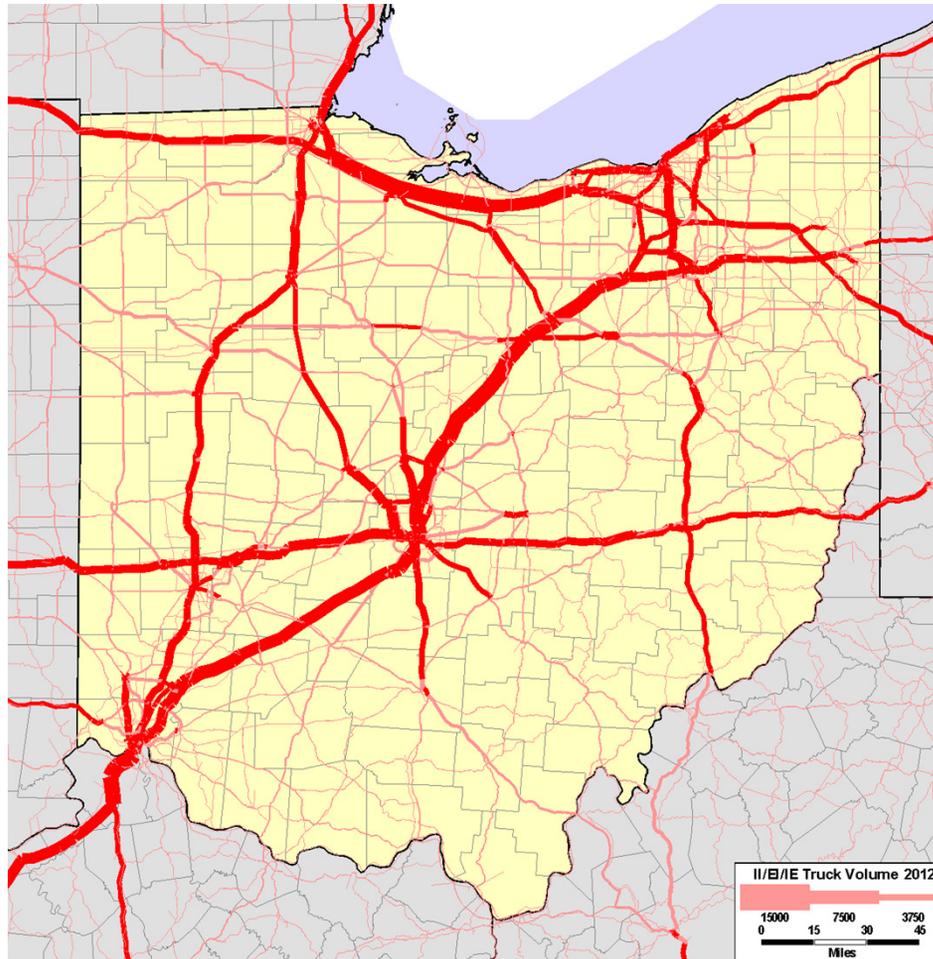


> 1,000



Ohio Truck
Volume: Internal
Trips and Trips
with an Ohio
Origin or
Destination

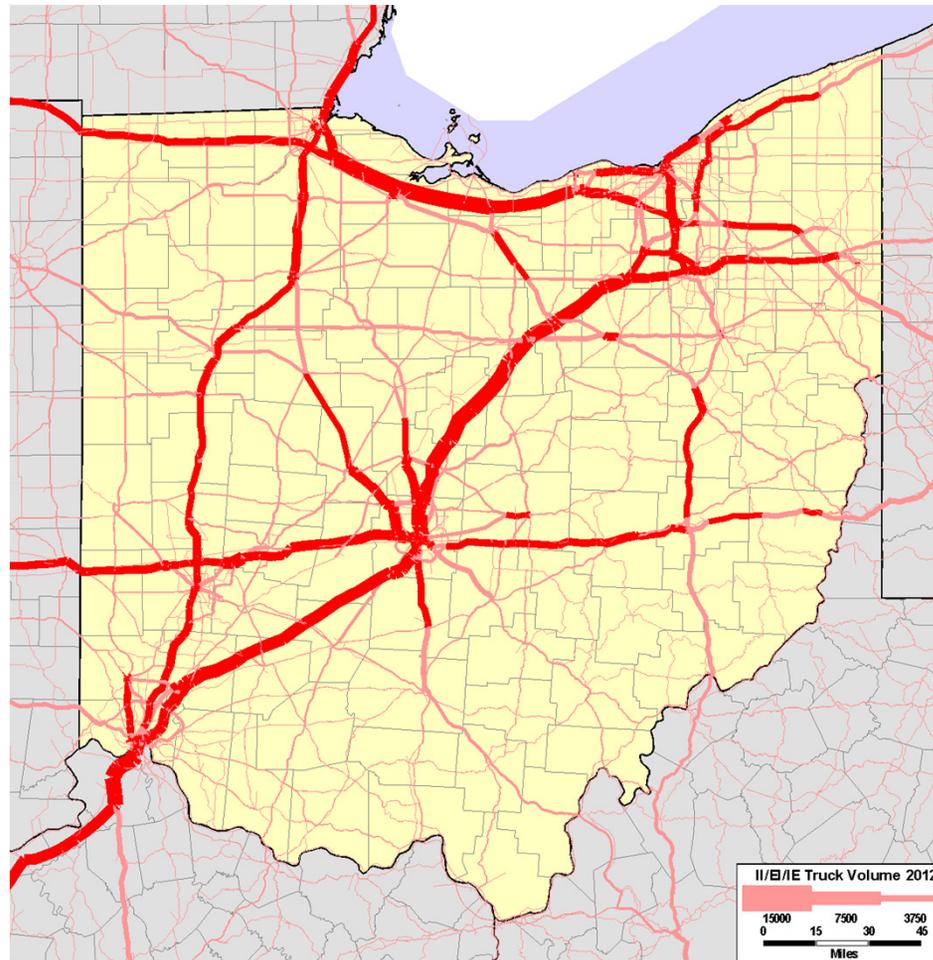
> 2,000



Ohio Truck
Volume: Internal
Trips and Trips
with an Ohio
Origin or
Destination

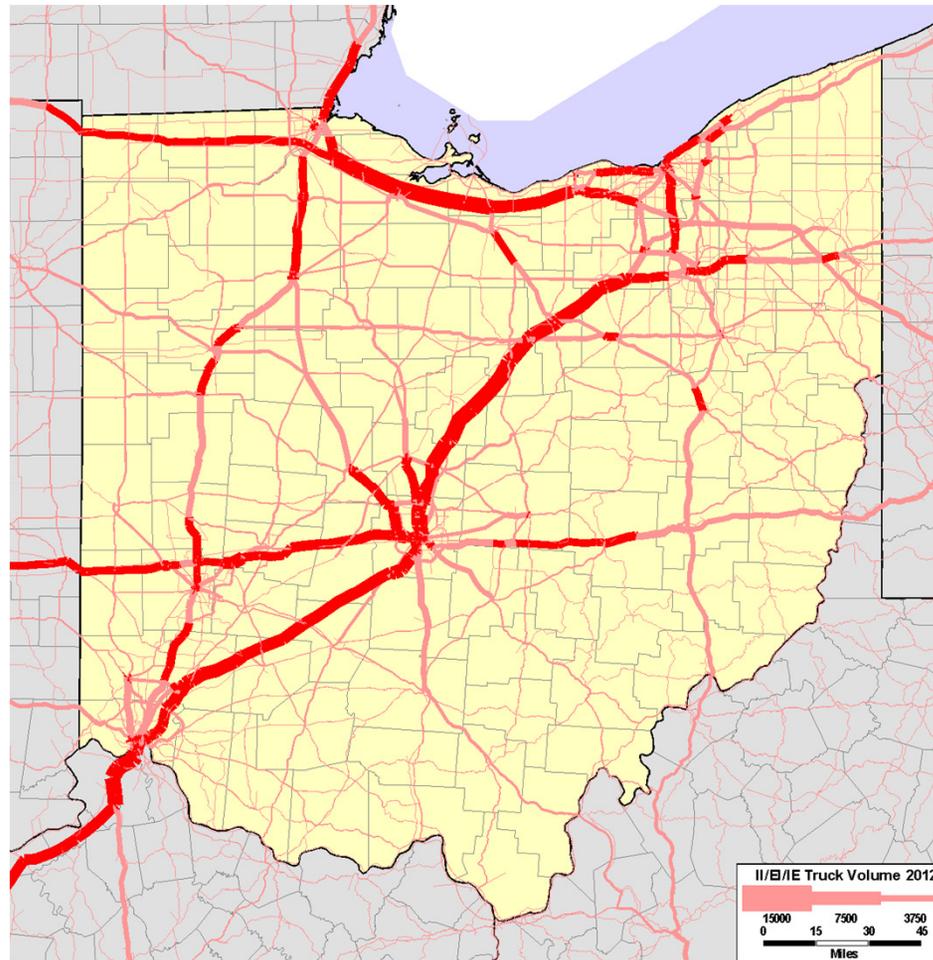
> 3,000

Ohio Department of Transportation



Ohio Truck
Volume: Internal
Trips and Trips
with an Ohio
Origin or
Destination

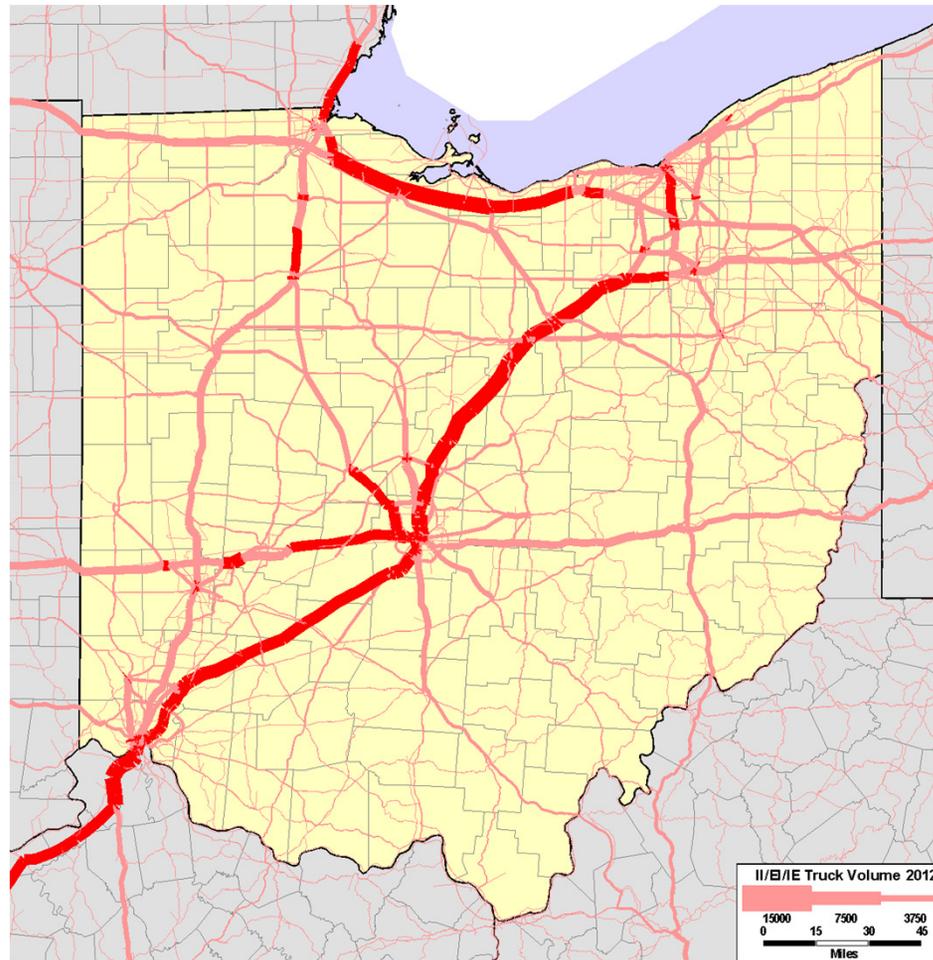
> 4,000



Ohio Truck
Volume: Internal
Trips and Trips
with an Ohio
Origin or
Destination

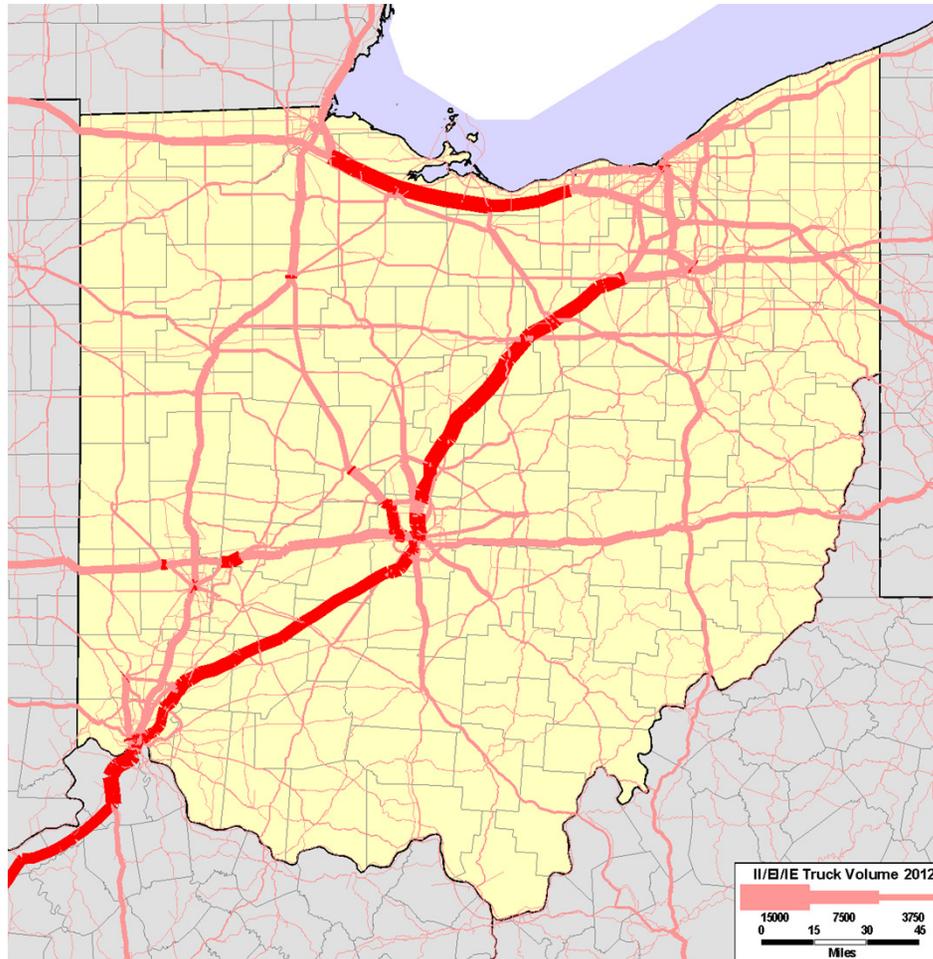
> 5,000

Ohio Department of Transportation



Ohio Truck
Volume: Internal
Trips and Trips
with an Ohio
Origin or
Destination

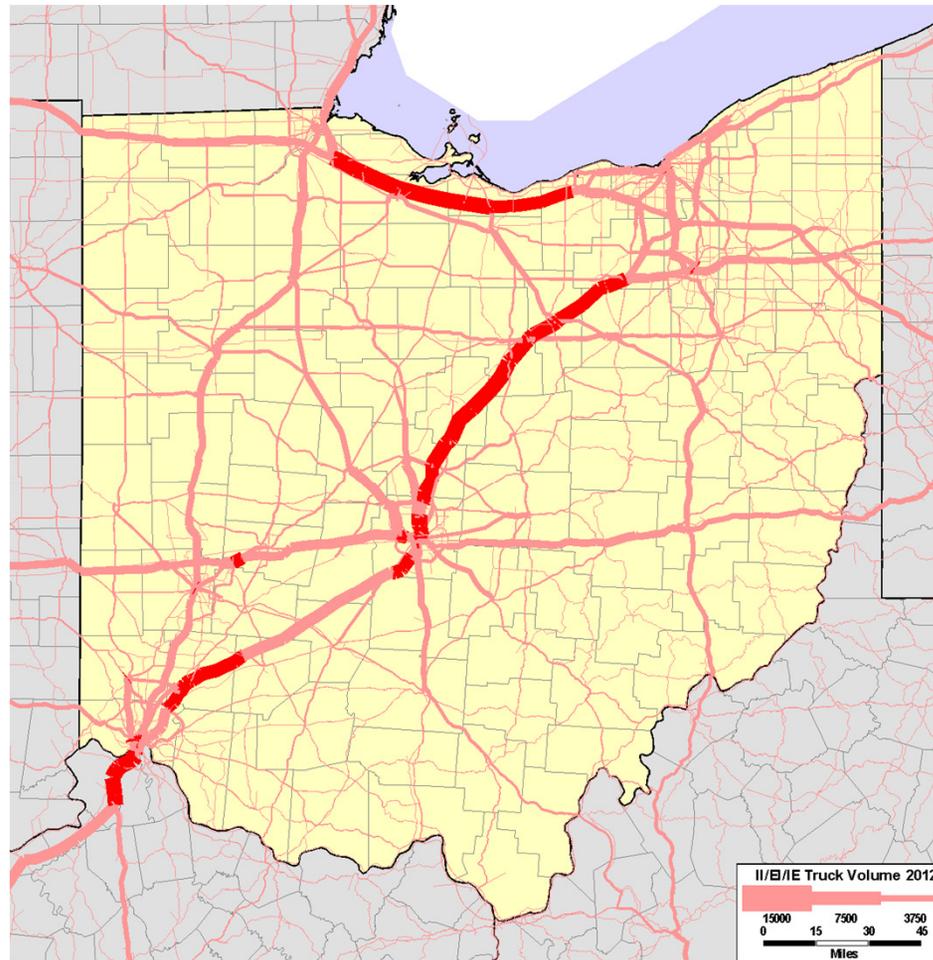
> 6,000



Ohio Truck
Volume: Internal
Trips and Trips
with an Ohio
Origin or
Destination

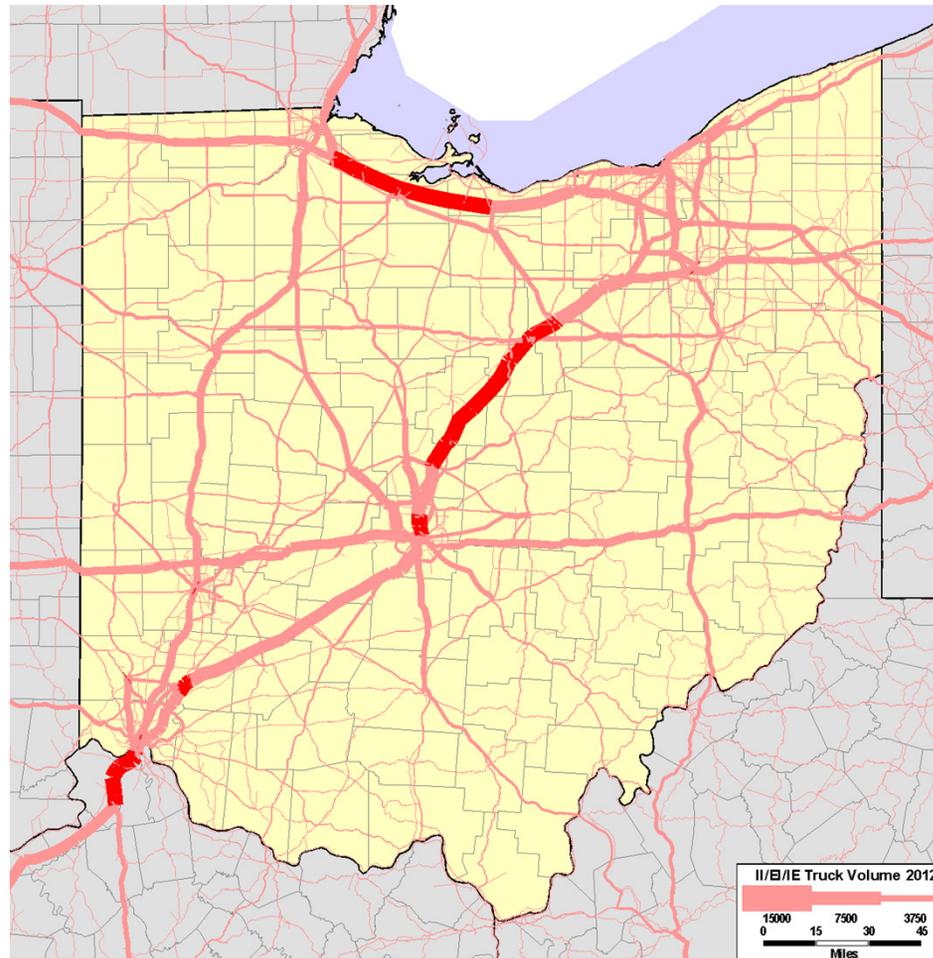
> 7,000

Ohio Department of Transportation



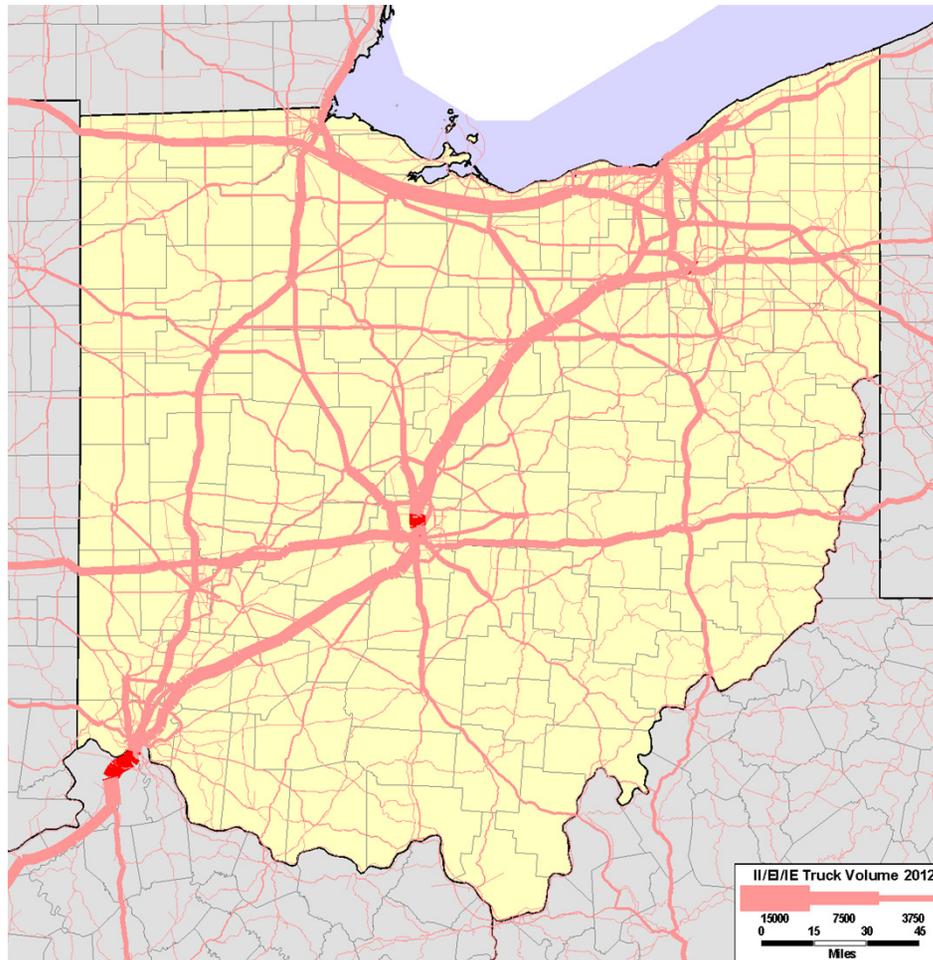
Ohio Truck
Volume: Internal
Trips and Trips
with an Ohio
Origin or
Destination

> 8,000



Ohio Truck
Volume: Internal
Trips and Trips
with an Ohio
Origin or
Destination

> 9,000



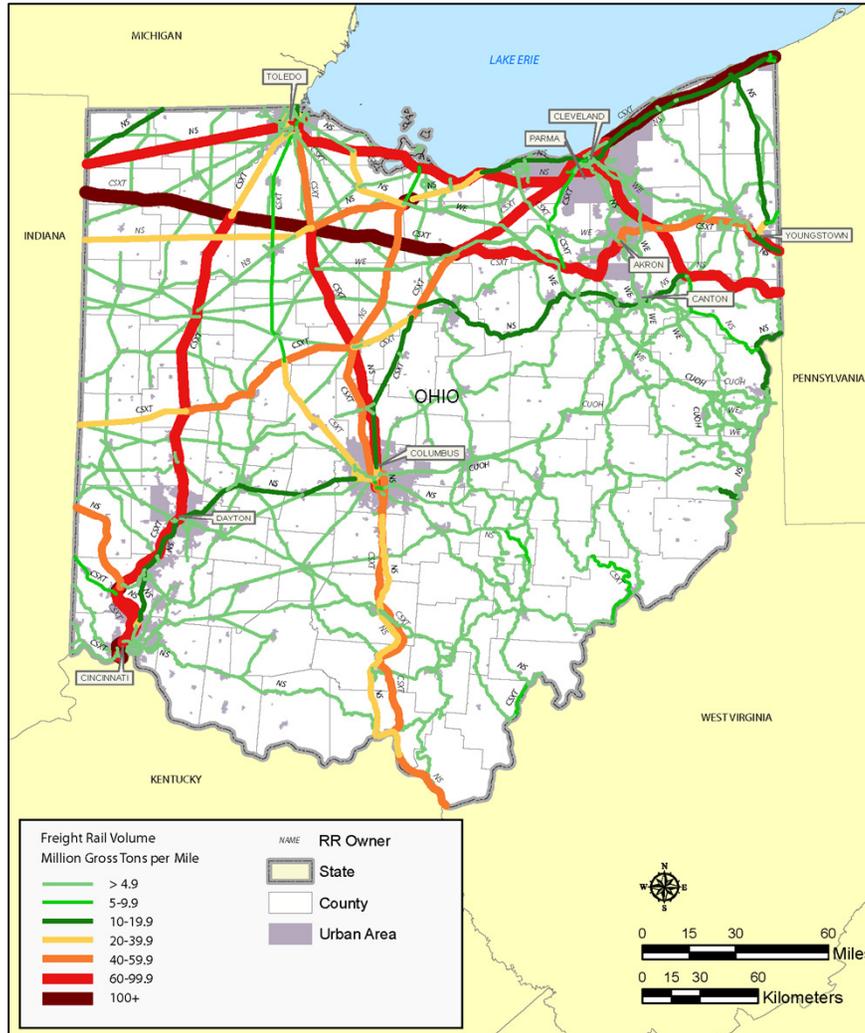
Ohio Truck
Volume: Internal
Trips and Trips
with an Ohio
Origin or
Destination



Ohio Rail Freight Analysis

System Analysis

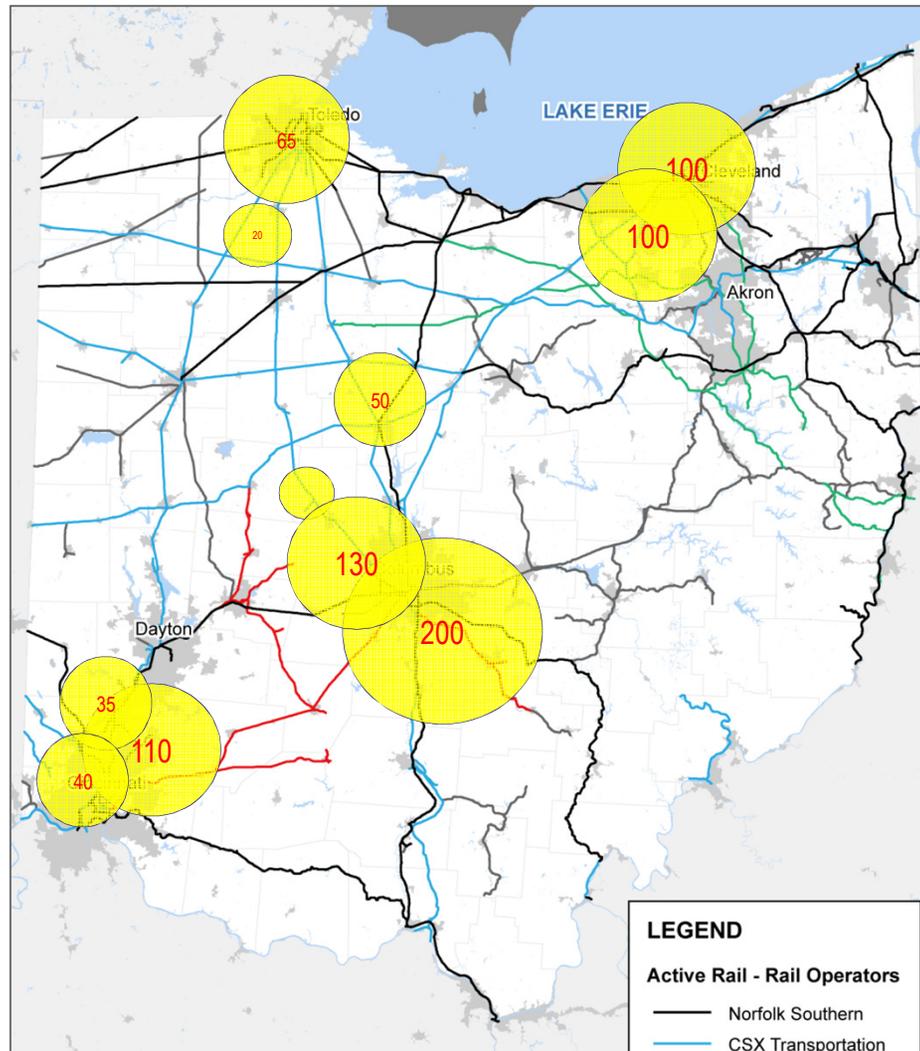
Ohio Department of Transportation



Rail Freight Traffic Density

Rail Intermodal

Ohio Department of Transportation



Containers per Year	
CSX Cleveland	100,000
NS Toledo (Airline)	65,000
NS Cleveland	100,000
CSX Marysville	15,000
NS Columbus	200,000
CSX Columbus	130,000
CSX Marion	50,000
CSX Cincinnati	40,000
NS Cincinnati (Gest St)	110,000
NS Cincinnati (Sharonville)	35,000
CSX North Baltimore	20,000

Rail Freight Issues

Ohio Department of Transportation



- Ohio has a very strong rail freight system
- Large amount of public and private investment over the last 10 years, especially in intermodal
- Capacity to do more, within economic and service constraints
 - Shipment size
 - Customer accessibility to rail
 - Speed and reliability

But...domestic intermodal service addresses some of these constraints

Rail Issues...continued

Ohio Department of Transportation



- Abandonments or underuse – there are still rail lines which are in disuse, with the threat of abandonment
 - Represents overcapacity, yet the rail corridors may once again be needed
- Marginal economics of some short line operators; lack of traffic to reinvest
- Deficient infrastructure (especially short lines) such as inability to handle 286k pound cars; bridge deficiencies

Rail Strategies

Ohio Department of Transportation

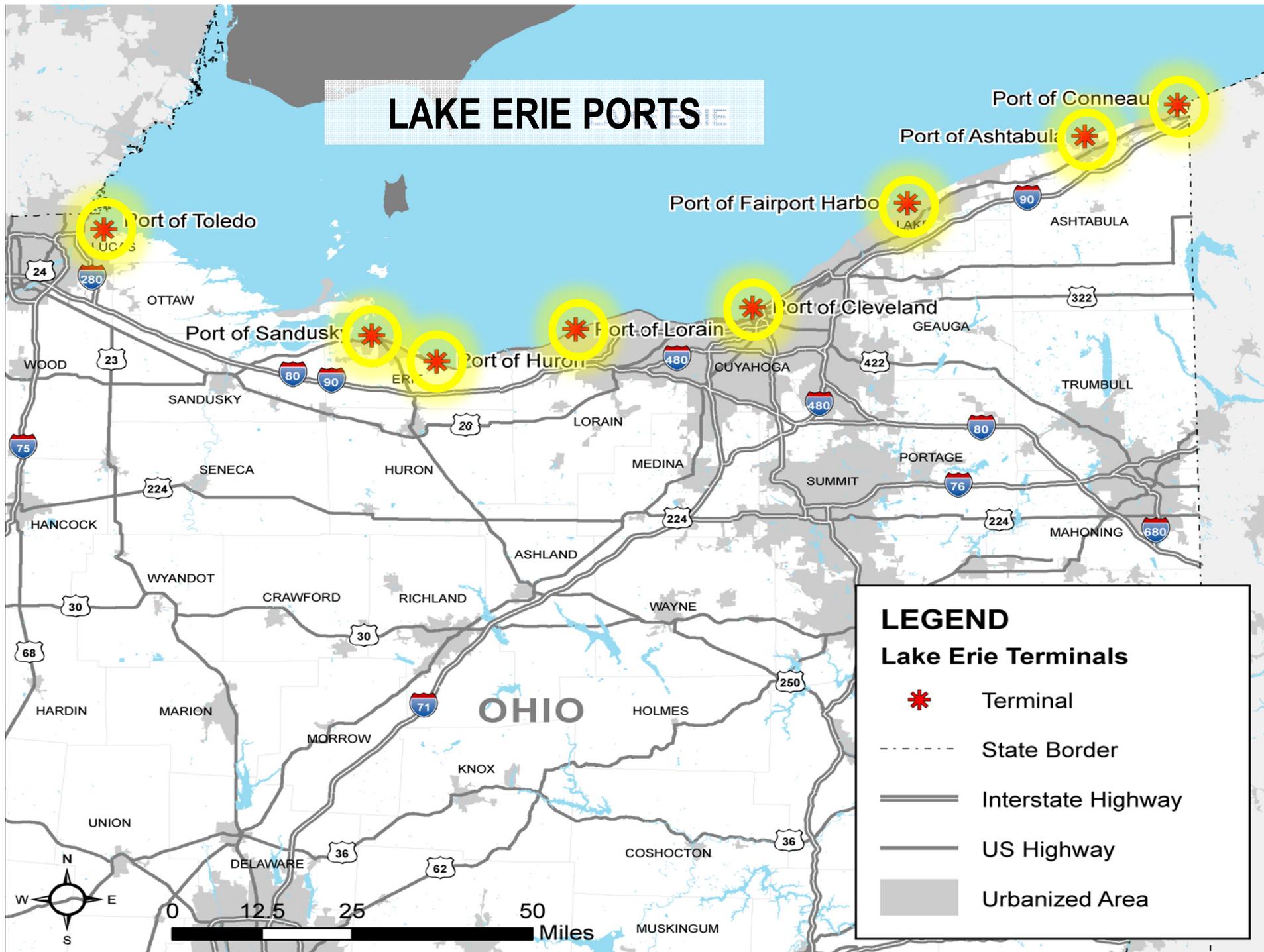


- Mode shift:
 - Good data on truck freight to gauge the commodity/distance that could be “divertible” to rail;
 - Expanding domestic intermodal via NS and CSX investments
 - Estimate benefits to highway system, and other public benefits
- Reporting on rail freight deficiencies (“state of the system?”) to illustrate investment needs
- New or expanding markets
 - Shale oil and gas
 - Agriculture export



Ohio Ports

LAKE ERIE PORTS



LEGEND

Lake Erie Terminals

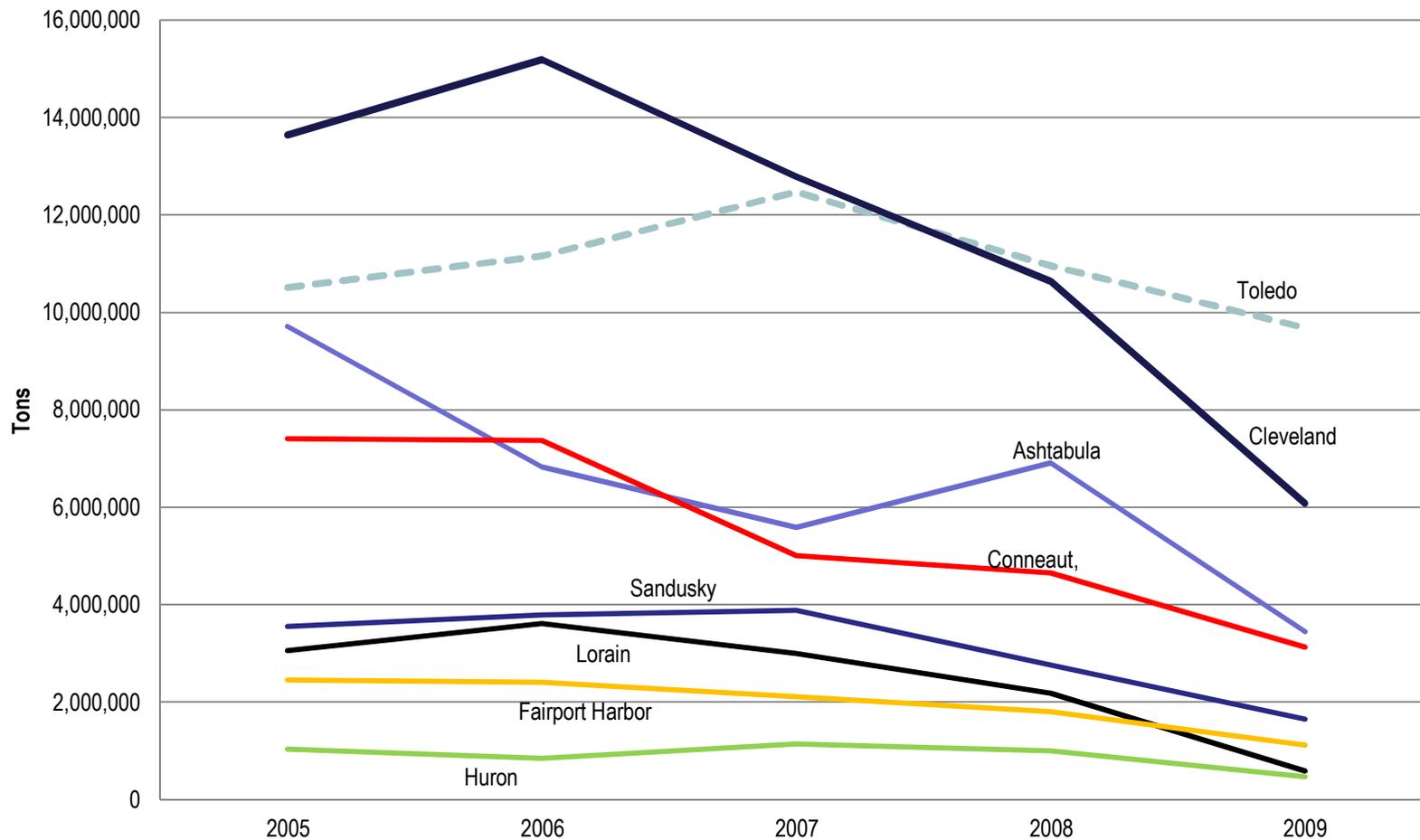
-  Terminal
-  State Border
-  Interstate Highway
-  US Highway
-  Urbanized Area

Lake Port Trends

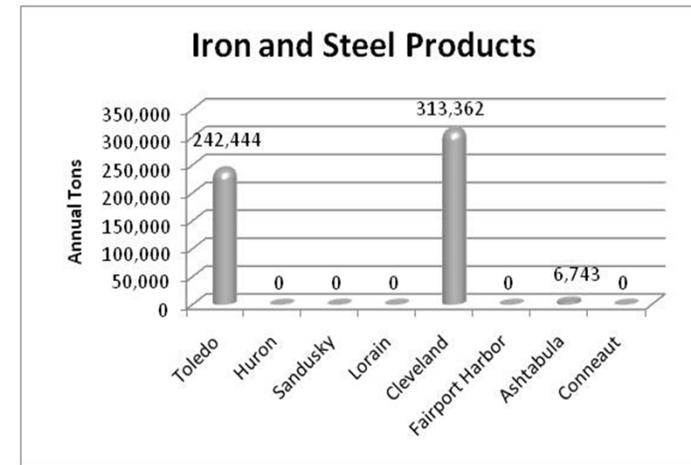
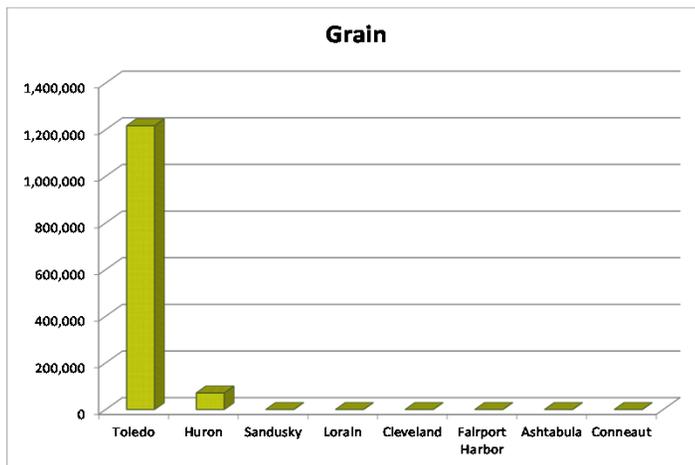
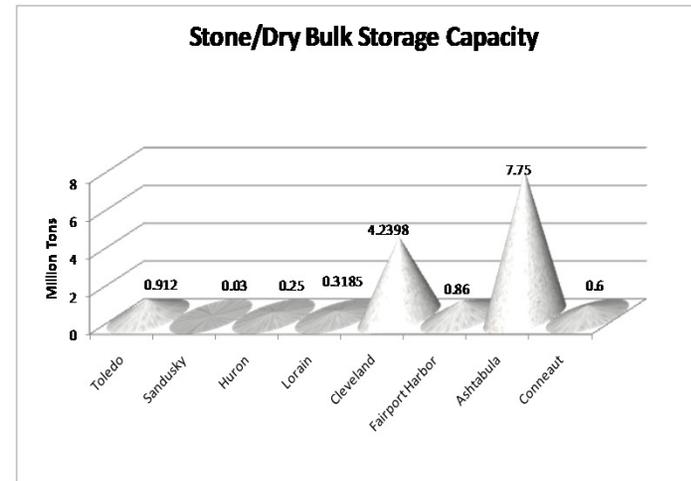
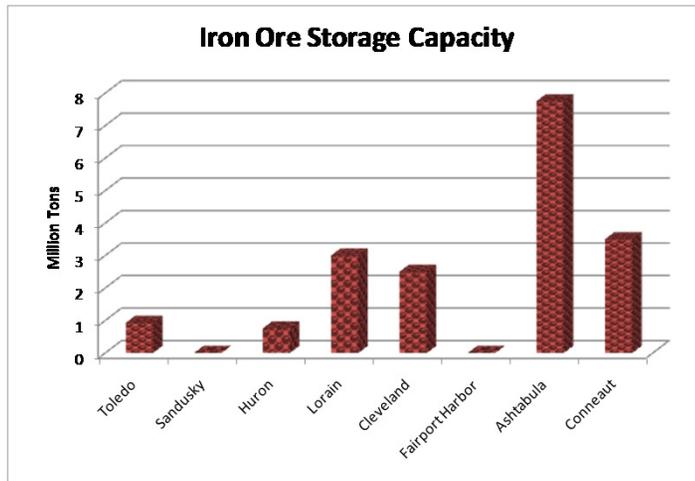
Ohio Department of Transportation



Ohio Lake Erie Port Total Tons, 2005 - 2009



Port Capabilities



Lake Port Issues

Ohio Department of Transportation



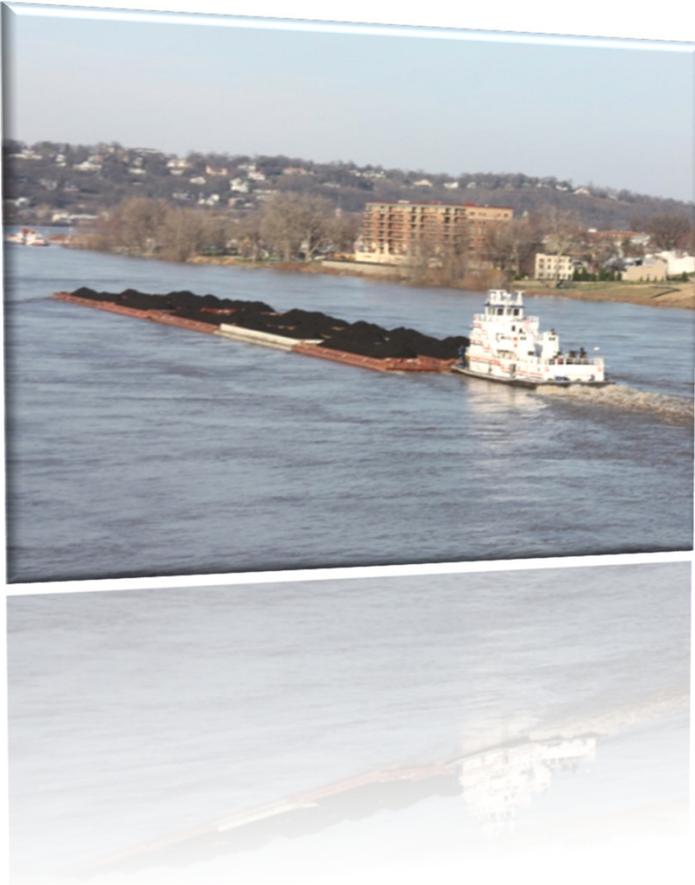
- Overcapacity
- Dredging and Dredge Disposal
- Jones Act Restrictions
- Seaway Size and Seasonal Restrictions
- Ballast Water Regulation
- Labor Costs
- Established Supply Chains to New York/New Jersey; Baltimore; Norfolk

Lake Port Strategies

Ohio Department of Transportation



- New cargo evaluation
 - Short sea shipping
 - Maher Medford International Terminal—real or imaginary
 - Shale oil and gas
 - Inbound materials to Ohio—fracking sand, pipe, equipment
 - Outbound petroleum distribution networks
 - Containers—vessel feeder service
 - Empty container consolidation to promote
- Mode shift analysis
 - Freight moving by truck or rail that fits water profile
- Lake Erie port rationalization



Ohio River Terminals

Ohio River Profile

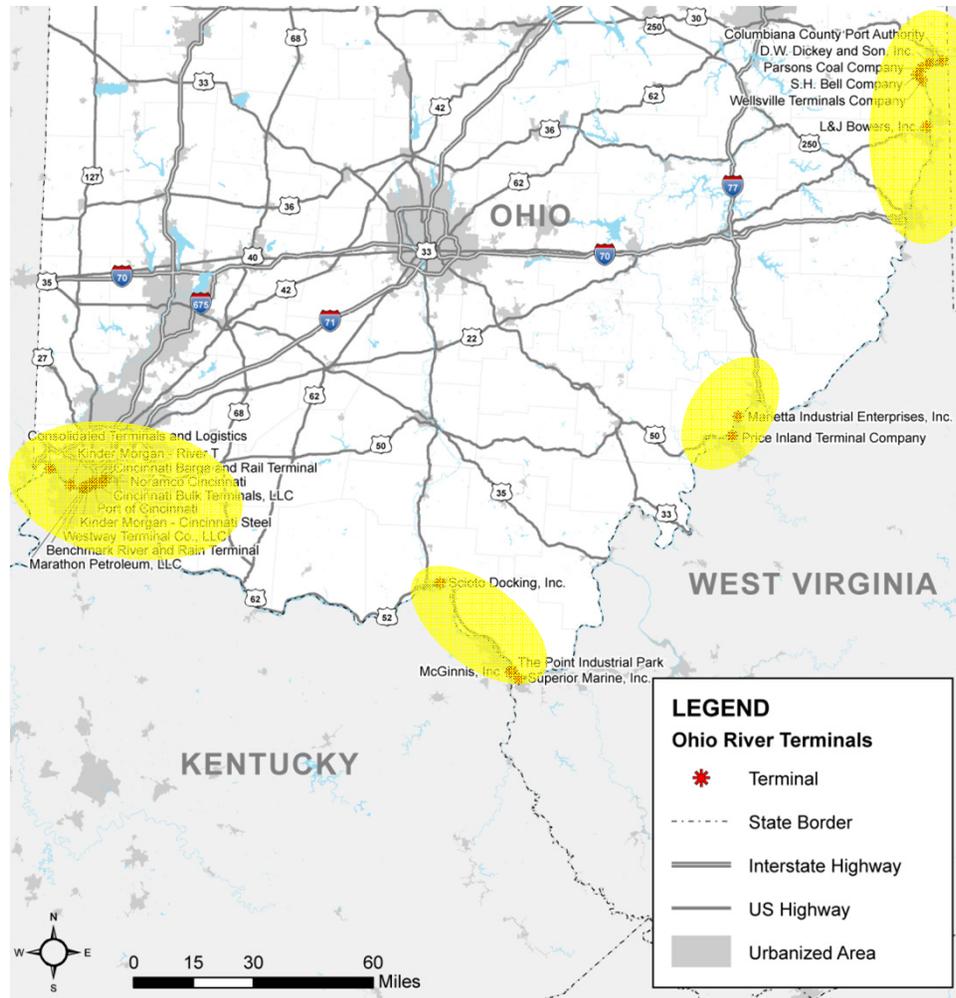
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- Barges primarily carry low value, bulk cargo: coal, iron ore, stone, chemicals
 - Heavy-lift capabilities are a big plus, but represent relatively little tonnage
- Over 95% of Ohio River terminals are privately-owned
 - Most of those have single-use, e.g., a coal terminal operated by an electric generating plant
 - We identified approximately 24 private terminals which are “public use,” meaning they will handle cargo for any customer
 - Of these 24 terminals, about 10 handle “general cargo,” such as bagged products, semi-finished steel, machinery, or heavy-lift cargo

Ohio River Terminals

Ohio Department of Transportation



Ohio River Terminal Clusters

Ohio River Issues

Ohio Department of Transportation



- (Some) overcapacity, though many terminals have gone out of business since the 1980s
- Lock and dam maintenance, the heart of the inland waterway system
 - 47% functional obsolescent , growing to 80% by 2020
 - 20 cent per gallon user fee covers half the cost of lock and dam maintenance, with other half from congressional appropriations
- Environmental regulations
 - Length of section 401 and 404 permit review time
 - Staff turnover at Ohio EPA, which increases delays
 - A state endangered species list which differs from the federal list

Ohio River Issues

Ohio Department of Transportation



- Slow speed of barge transport as compared to competing modes
- General “lack of attention” to inland waterway capabilities
 - Not a federal policy priority
 - Little state or federal funding for terminals due to private ownership

Ohio River Strategies

Ohio Department of Transportation



- Evaluate potential mode shifts—principally from rail
 - Bulk cargo greater than 500 miles
- Container on barge as an opportunity
 - How much is realistic? And what impact would such a service have?
- Designation of some terminals as part of a “Superload” network
- Last mile connections to terminals
- Marine Highway designations (M-70, M-90) – what impact?



Air Freight

Air Cargo Issues

Ohio Department of Transportation



- Ohio was once a hub for air freight; now the state has the most unused capacity in North America
- Extremely challenging business environment
- Litany of reasons for decline in Ohio air cargo
 - Dominance of FedEx and UPS
 - Use of regional jets decreased “belly cargo” capacity
 - Shift to 2nd and 3rd day delivery by trucks
 - Industry consolidation
 - Competition: Minneapolis, Detroit and Chicago attract shipments from a 500 mile radius
- Result: vacant facilities in Toledo, Wilmington, and Dayton total nearly 3,000,000 square feet

Air Cargo Strategies

Ohio Department of Transportation



- In spite of the vacant facilities, it will be difficult/ impossible to attract a new air cargo carrier...they don't exist
- Very strategic and niche market development are most appropriate, tailored to each airport. For example,
 - Rickenbacker – strategy based on real estate development associated with air cargo-dependent manufacturing
 - Toledo – conversion to trucking terminal, and develop manufacturing and related air charter operations
 - Wilmington Airpark – niche agricultural products for export
 - Cincinnati/Northern Kentucky

Air Cargo Strategies

Ohio Department of Transportation



- Strategies continued...
 - Cincinnati/Northern Kentucky (CVG) – strongest cargo operation in the Ohio freight study
 - DHL modernization of facilities, with contingencies for expansion
 - FedEx has increased operations in the area
 - Southern Air could become new tenant
 - Regional discussions of an airpark, though it does not have to be on airport property

Given the strength of CVG operation, reliable access will be an important consideration in formulating not only development decisions, but also decisions to relocate in a park whose purpose will be to house activities focused on air logistics



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QUESTIONS?
