



Freight Planning Efforts *in the Bi-State Region*

March 2018 – Iowa Freight Advisory Council

Some Presentation Slides were Developed by Cambridge Systematics and/or WSP Parsons Brinkerhoff in Preparing the Bi-State Freight Plan

Freight Planning in the Bi-State Region

- ▶ **Bi-State Region Characteristics & Network**
- ▶ **Freight Planning History**
- ▶ **Freight Planning Process**
- ▶ **Recent Plan Results & Recommendations**
- ▶ **Freight Lessons Learned**

Bi-State Region Characteristics

2 States IA/IL, 5 Counties

Regional Population 428,000

Metro Population 298,000 – Bisected by the Mississippi River

Highway Network

4 Interstates – 80, 280, 88, 74

5 US Highways – 6, 34, 61, 67, 150

Rail Network

2 Class I – CP, BNSF

1 Class II – Iowa Interstate

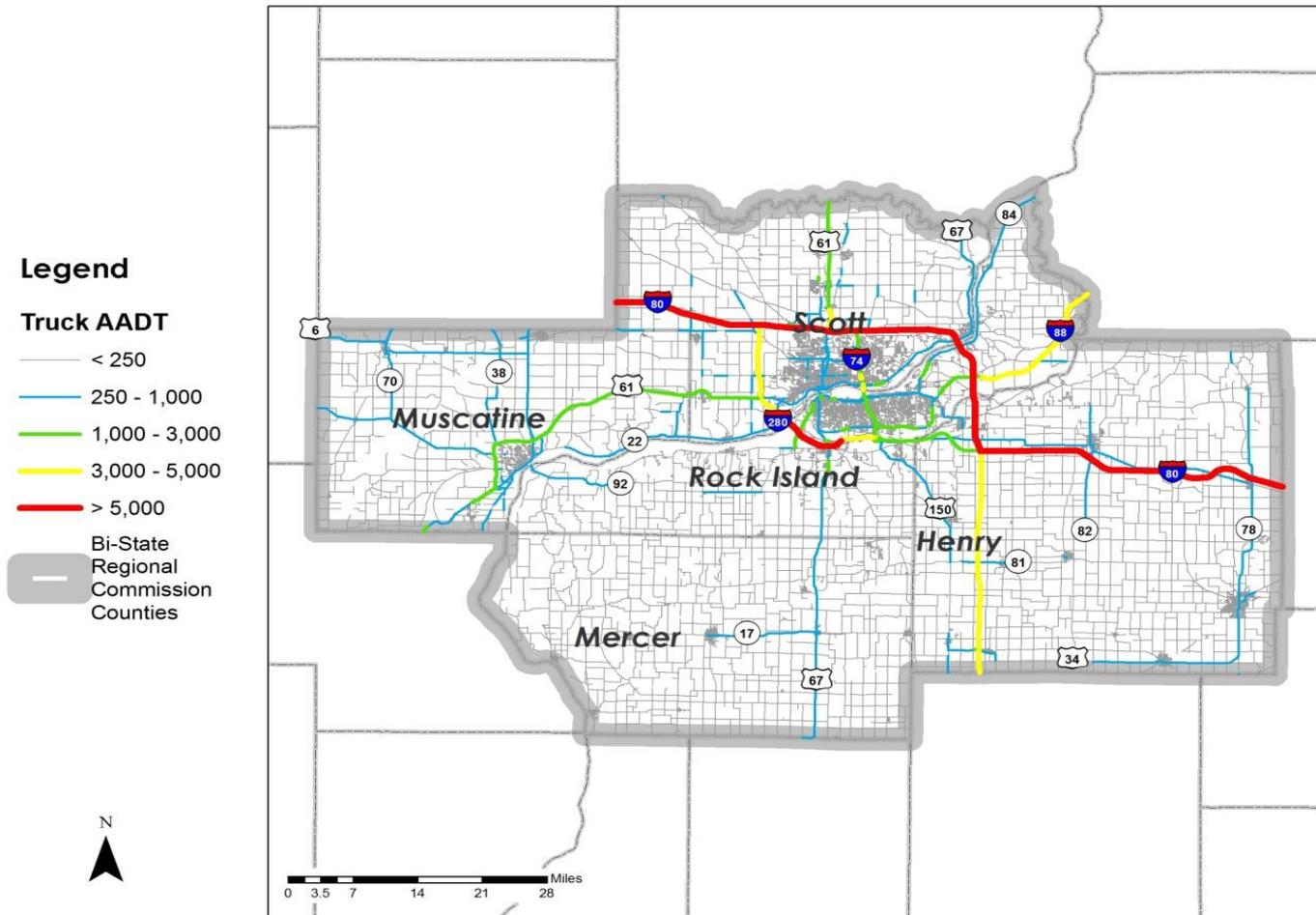
Riversystem and Air

Multiple Barge Terminals + 4 Locks/Dams

1 Commercial Airport, 5 General/Local Airports

Bi-State Region Highway Network

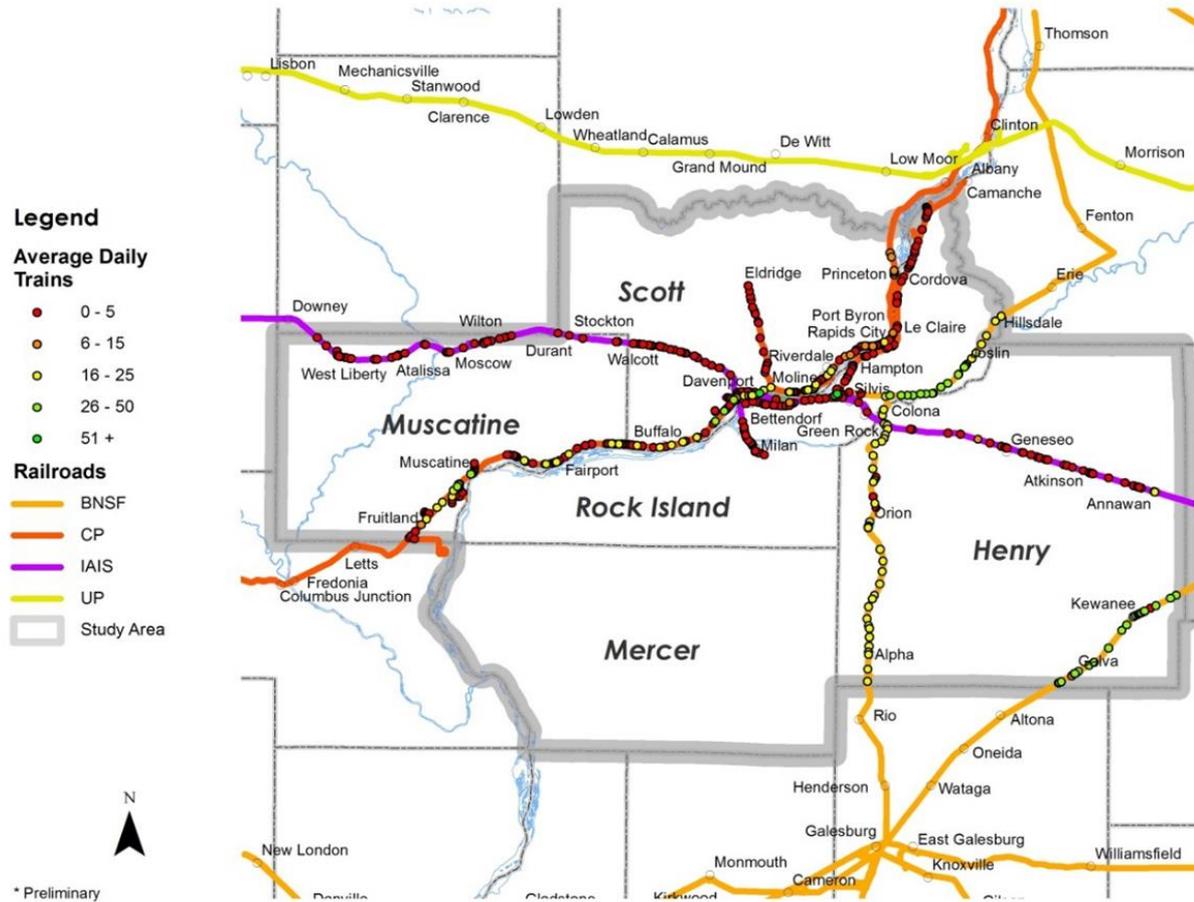
Total Truck Volumes on the Bi-State Region's Highway System



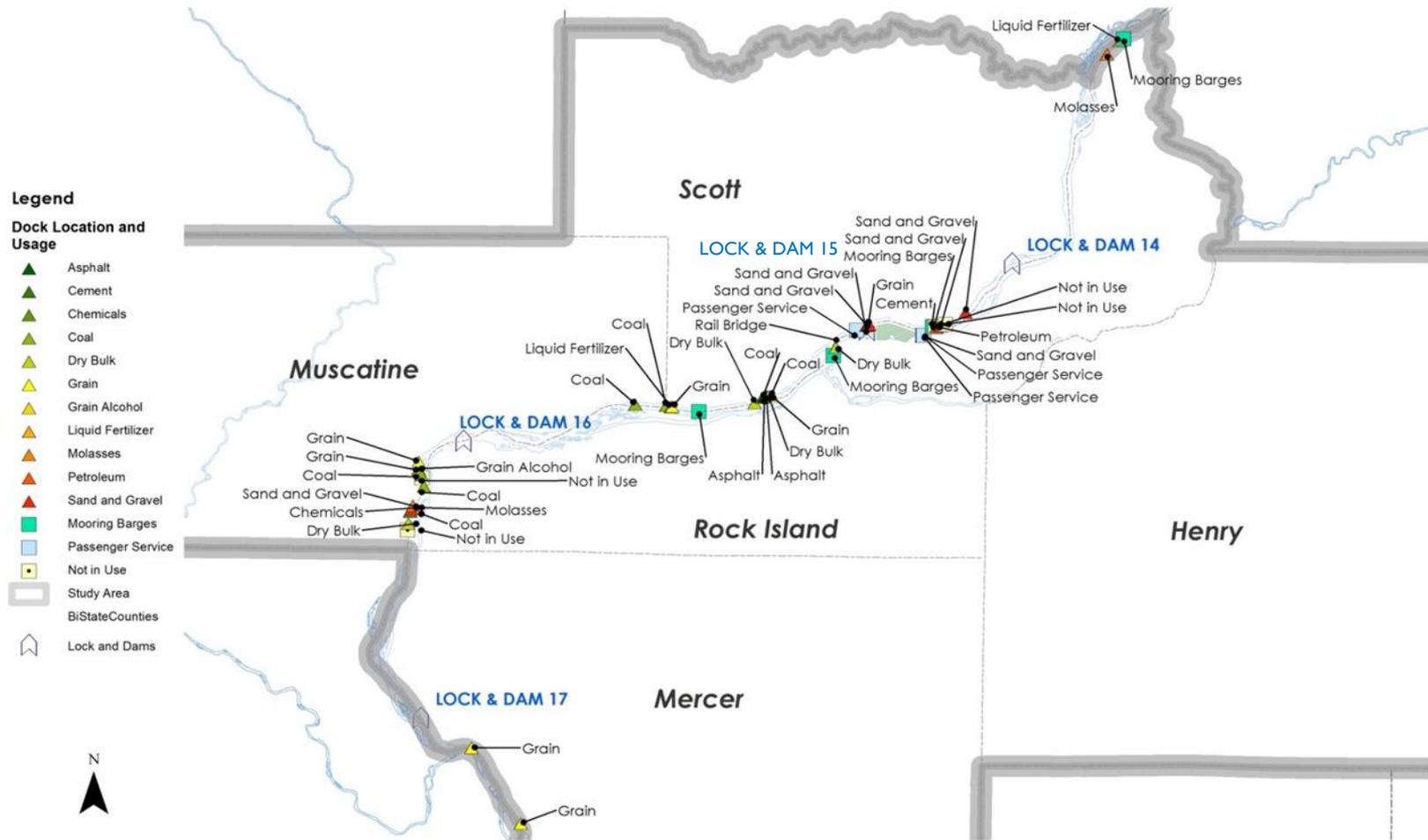
Source: Illinois DOT Illinois Technology Transfer Center, <http://gis.dot.illinois.gov/gist2/>; Iowa DOT GIMS Database, <http://www.iowadot.gov/gis/downloads/default.aspx>. Accessed Oct. 14, 2014

Bi-State Region Rail Network

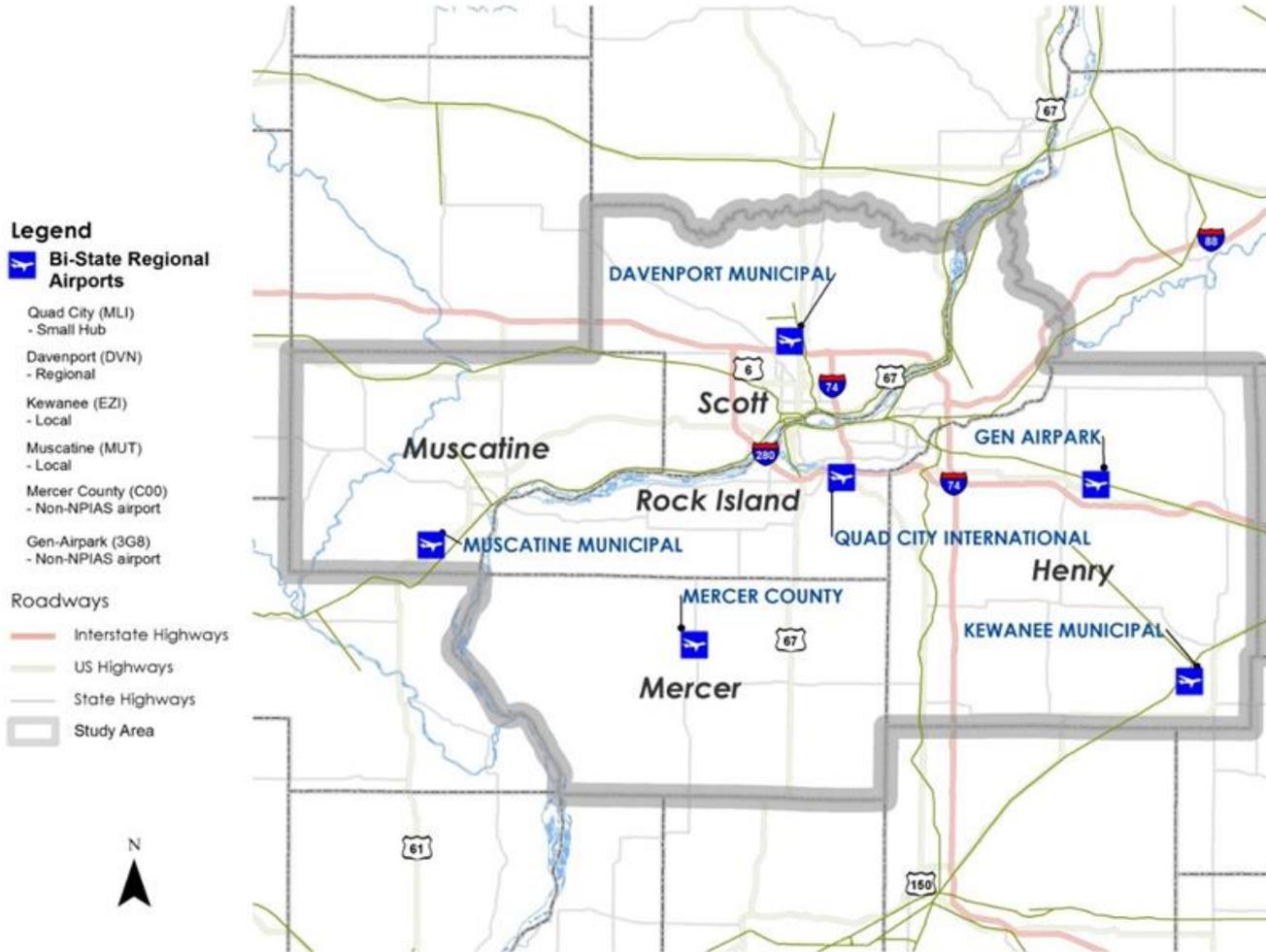
Study Area Railroad Operators and Average Daily Trains



Bi-State Region Mississippi River System



Bi-State Region Airports



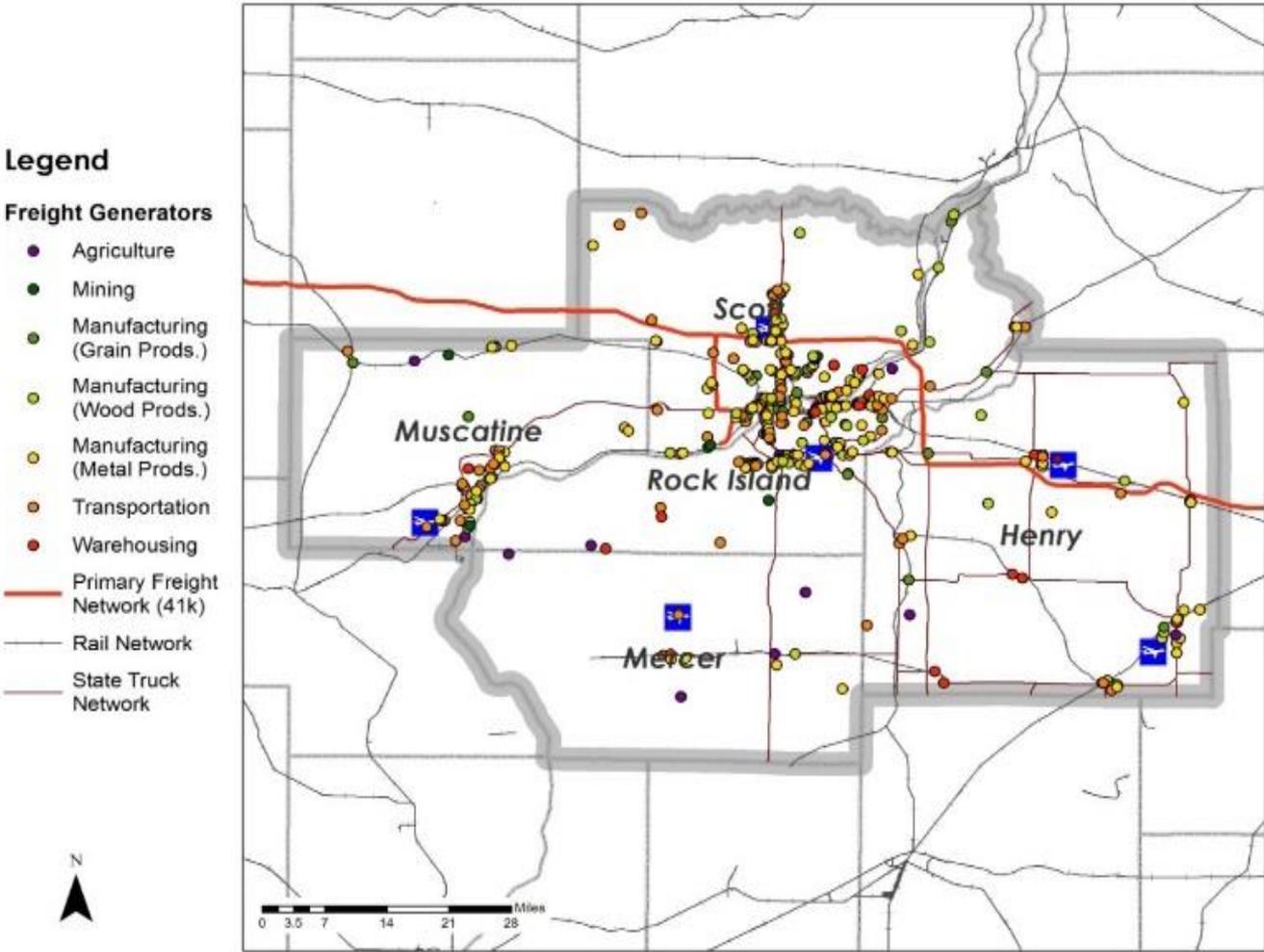
Bi-State Region Large Freight Industries

Regional Industry Clusters

- ▶ Machinery Manufacturing
- ▶ Primary/Fabricated Metals Manufacturing
- ▶ Agribusiness/Food Processing and Technology
- ▶ Furniture and Related Products Manufacturing



Bi-State Region Freight Generators



Bi-State Region Freight Modes/Industry

(NAICS) Industry	Highway	Rail	Water	Air	Pipeline
(11) Agriculture, Forestry, Fishing and Hunting					
(21) Mining					
(22) Utilities					
(23) Construction					
(31-33) Manufacturing					
(42) Wholesale Trade					
(44-45) Retail Trade					
(48-49) Transportation and Warehousing					
Key:	Less important				More Important



Bi-State Region Freight Planning History

- ▶ 1989 Federal Funded Barge Terminal Study for Metro Area
 - ▶ Containers on Barges Not Feasible
 - ▶ Best Location – Site of New Entertainment Development
 - ▶ Private Ownership
- ▶ Freight Network Discussion Required Element in MPO Long Range Plans since mid 1990's
- ▶ Economic Development Related Logistics Industry Council 2000's
- ▶ Assistance with Grant Applications for Transload Facilities, Switch Yard Studies, Rail Spurs, Grade Separations, etc.
- ▶ 2014-15 Regional Freight Study

Bi-State Region Freight Plan

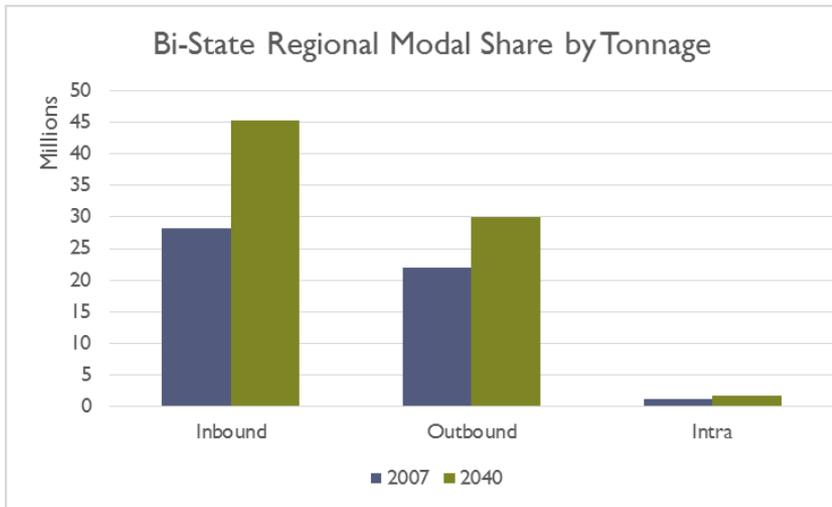
- ▶ Freight Plan Scope
 - ▶ Data Collection – Physical/Operation Profile, Industry Surveys
 - ▶ Needs Analysis – Performance Measures, Commodity Flows, Projected Modal Profiles
 - ▶ Study Recommendations
- ▶ Steering Committee – Local Governments, DOT's, Economic Development Organization, Modal Industry, Corps of Engineers, Corporations/Businesses, Farm Bureau

Freight Plan – Regional Trends

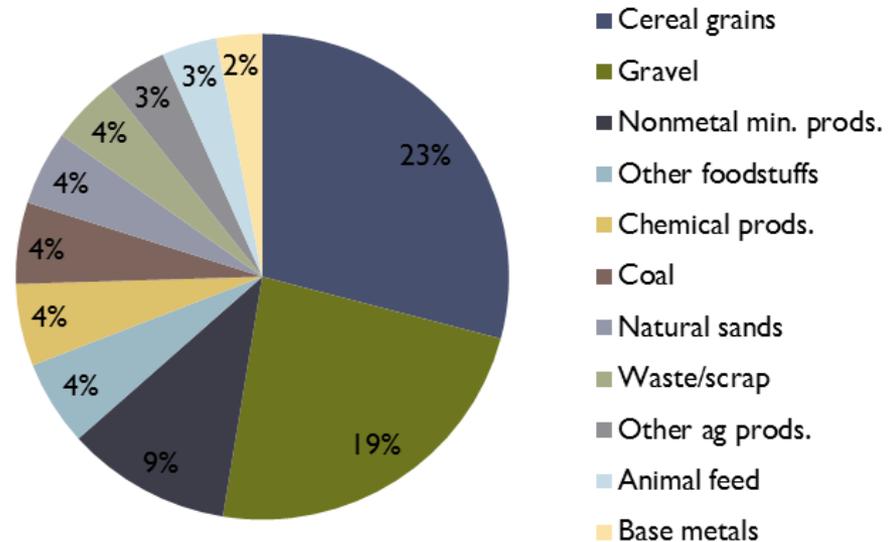
- ▶ Expansion of Panama Canal
- ▶ Agricultural Production and Export
- ▶ E-Commerce
- ▶ Energy Diversification and New Sources – Wind Energy, Natural Gas Pipeline, Nuclear, Hydroelectric
- ▶ Freight Workforce

Freight Plan – Regional Future Commodities

Directional Share by Tonnage 2007/2040



Commodity By Tonnage 2040



Freight Plan – Database & Visualization Tool

- ▶ Database/Tool was developed to:
 - ▶ Assemble different data sources in one place
 - ▶ Make it easy to query data and report results
 - ▶ Develop modal and commodity profiles
 - ▶ Identify hot spots and choke points
 - ▶ Help the study team formulate freight strategies and recommendations

Freight Plan – Visualization Tool Profile

Dashboards and Worksheets

- Disaggregated Freight Fl...
- Freight Flows FAF 2012
- FAF0740
- Disaggregated County F...
- Summary Disaggregate...
- Truck Congestion Analy...
- Truck AADT Volumes
- Air Cargo (T100)
- Volume-Capacity Ratio 2...
- Waterborne Facilities
- Waterborne Commerce
- Intermodal Rail Yards
- Truck Comparison FAF 2...
- Rail Comparison FAF 200...
- Waterborne Comparison...
- Railroad Bottlenecks in I...
- Highway Bottlenecks Iowa
- Highway Bottlenecks Sta...
- Waterway Bottlenecks in...
- Lock Performance Data
- Reference USA Dash
- All crash data map
- All AADT data map

Description

Navigator

Show Back/Forward Buttons

Story

Size: Exactly

w 1200 h 800

Show Title

Bi-State Region Freight Profile

Freight Flows - Disaggregated 2007
Freight Flows by County - Disaggregated 2007
Summary Freight Flows - Disaggregated FAF 2007
Freight Flows - FAF 2012
Trucking - Dis. FAF2007 vs. FAF2012
Rail - Dis. FAF2007 vs. FAF2012
Waterborne FAF2007 v FAF2012

New Blank Point
Duplicate

Freight Flows to and from Bi-State Counties (Disaggregated FAF 2007)

Filter Flows Thousands of T..

10.0 391.1

Type of Flow

- From IA/IL to elsewhere
- Not related to IA/IL
- To IA/IL from elsewhere
- Within IA and IL

Relation to Bi-State Counties
For flows related to IA/IL

- (All)
- Bi-State Counties in IA/IL
- Halo Counties in IA/IL

Year

- 2007
- 2040

Mode

- (All)
- Intermodal
- Rail
- Truck

Commodities

- (All)
- Alcoholic beverages
- Animal feed
- Articles-base metal
- Base metals
- Basic chemicals

Top Commodities

Commodity	Mode	Thousands of Tons
Cereal grains	Water	~900
	Truck	~500
	Rail	~400
	Intermodal	~150
Gravel	Water	~350
	Truck	~350
Other ag prods.	Water	~300
	Truck	~300
Fertilizers	Water	~250
	Truck	~250
Nonmetal min. prods.	Water	~200
	Truck	~200

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Freight Plan – Improvement Recommendations

- ▶ Improve Lock and Dams
- ▶ Improve Rail Bridges/Lines - 286K Compliant
- ▶ Intermodal Facilities
 - ▶ Study Container Port in Muscatine
 - ▶ Complete Transload/Intermodal Facility
- ▶ Expand/Attract Air Cargo at QCIA
- ▶ I-74 Bridge Widening and Replacement
- ▶ Highway Capacity Improvements – I 80 Widening
- ▶ Roadway and Bridge Maintenance – I 80 Bridge Replacement



Freight Plan – Implementation

- ▶ Port Initial Feasibility Study (Publically Funded) Completed and Second Feasibility Study (Privately Funded) Nearing Completion
- ▶ Seek Funding to Study Rail Bridge Needs
- ▶ Established On-going Freight Stakeholders Group
- ▶ Enhanced Staff Capabilities in Freight Data and Analysis
- ▶ Integrated Projects into 2045 Long Range Plan
- ▶ Continue to Foster Collaboration to Implement Projects

Bi-State Freight Planning Lessons Learned

- ▶ Additional Funding Often Needed for Studies – Start Early to Seek Assistance
- ▶ Difficulty in Engaging Freight Industry – Use their time Wisely
 - ▶ Study Steering Committee/Freight Forum
 - ▶ Freight Stakeholder Input into MPO Long Range Plan
- ▶ What Goes Around Comes Around – Containers on Barges may be Feasible Now
- ▶ Clarify Terminology
- ▶ Participate in Freight Forums and Round Tables when Invited – Stay Involved



For more information,
visit our website:
www.bistateonline.org

Denise Bulat
Bi-State Regional Commission
P.O. Box 3368

Rock Island, IL 61204-3368

Phone: (309)793-6302, Ext. 140

E-Mail: dbulat@bistateonline.org