



**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

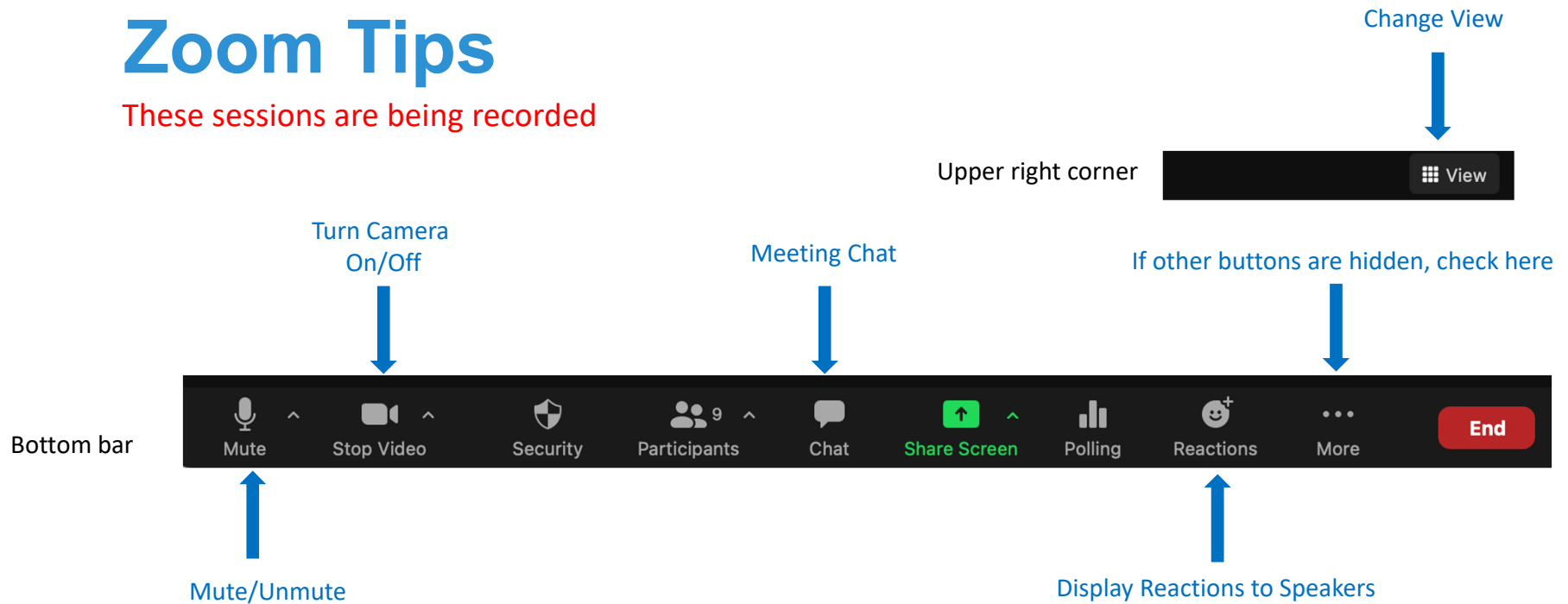
Welcome to the Second Kentucky Summit

Economic Development Strategies to Leverage Kentucky Riverports and Freight Network



Zoom Tips

These sessions are being recorded



Please keep your microphone muted when you are not speaking

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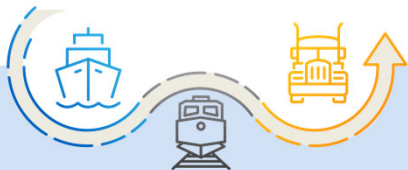
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Kentucky Summit on Economic Development Strategies to Leverage Kentucky Riverports and Freight Network

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Opening Session	March 24, 10:00 to 10:45 am
2021 Changes in Federal Transportation & Trade Policies	March 24, 1:00 to 1:45 pm
What's New in the Neighborhood? Updates from Adjacent State DOTs	March 24, 2:00 to 3:00 pm
Forecasting the Future of KY's Freight Economy	March 25, 10:00 to 11:45 am
How will the Future of Freight Impact Other Modal Operations?	March 25, 1:30 pm to 2:30 pm
Port Infrastructure Needs & KY's Funding Process	March 25, 3:00 to 4:00 pm
Economic Development & Riverport Markets	March 26, 10:00 am to 12:00 pm



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



Featured Speakers

2021 Changes in Federal
Transportation & Trade Policies

Deb Calhoun (Waterways Council) & Tim Pickering (MARAD)

What's New in the Neighborhood?
Updates from Adjacent State DOTs

Mark Locker (OH DOT), BJ Murray (IL DOT), & Dan Pallme (TN DOT)

Forecasting the Future of KY's
Freight Economy

Paul Bingham (IHS Markit) & Chandler Duncan (MA)

How will the Future of Freight
Impact Other Modal Operations?

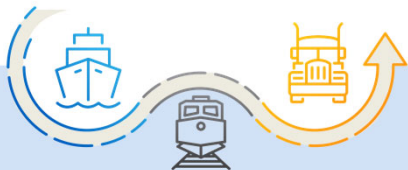
Tim Kizer (Port of Louisville), William Downey (RJ Corman), & PJ Donavon (USACE)

Port Infrastructure Needs &
KY's Funding Process

Lindsay Hoskins (Qk4)

Economic Development &
Riverport Markets

Derek Cutler (EBP), Matt Yates (Port of Louisville), Anthony Ellis (KY Innovation), & Adam Wasserman (IEDC)



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**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

Opening Session

**Welcome to the Second Kentucky Summit
Economic Development Strategies to Leverage Kentucky
Riverports and Freight Network**

MARCH 24-26, 2021



Speakers

Mikael Pelfrey, KYTC Division of Planning

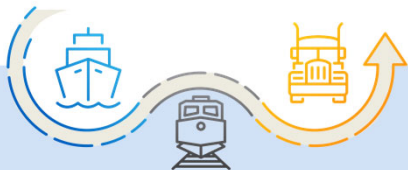
Jim Gray, Secretary of Transportation

Jeff Taylor, Economic Development Commissioner

Chandler Duncan, Metro Analytics

Agenda

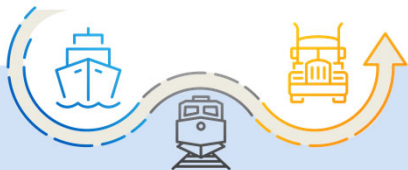
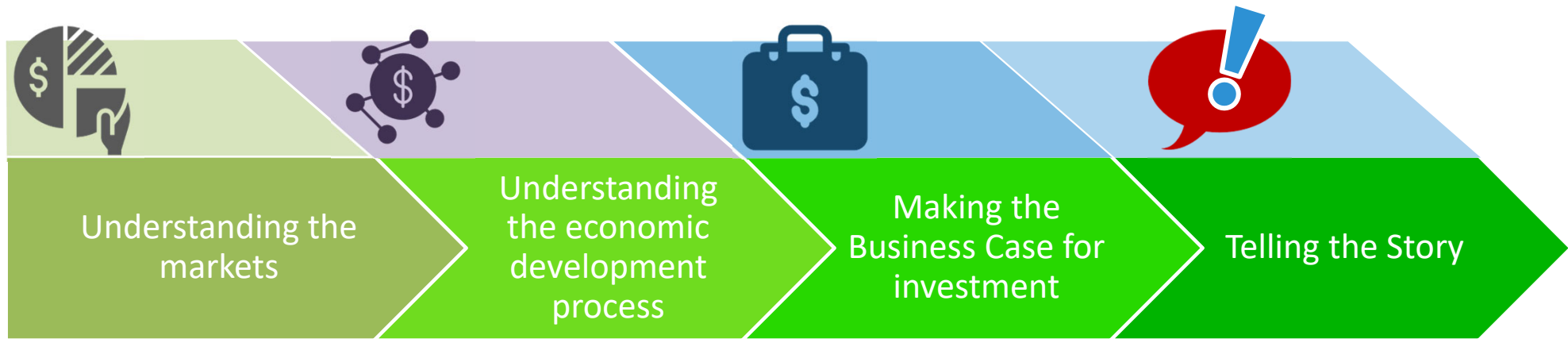
- Welcome/Introductions
- Overview of Study Tasks and progress to date



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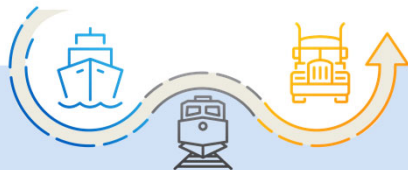
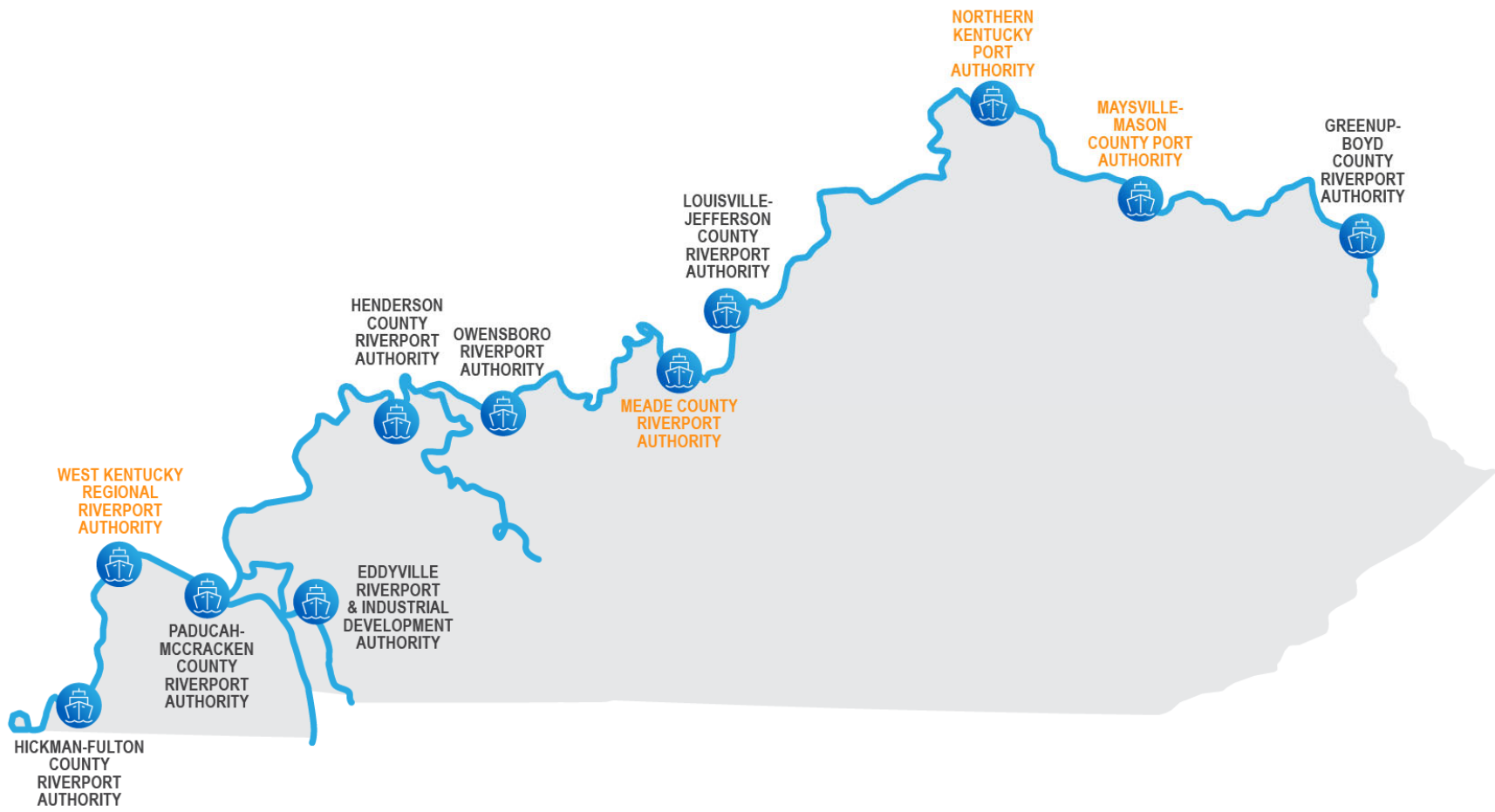


Project Overview



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



Project Tasks



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY

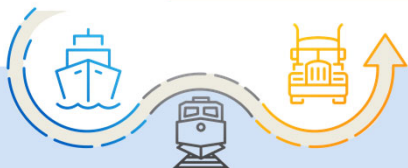




Task 1

Existing Role of Kentucky Riverports & Freight in the Economy

Key Activities	Committee Involvement	Key Deliverables
<ol style="list-style-type: none"> 1) Define strategic roles of infrastructure 2) Quantify and demonstrate current market dynamics 3) Identify and profile existing transportation system 4) Quantify economic impacts of current modal contributions/performance 5) Review KYTC model and methods for integration 6) Develop informational materials for Summit No. 1 	<ul style="list-style-type: none"> - Review and Comment <ul style="list-style-type: none"> - Port Visit Interview Guide - Summit Presentation Materials - Suggest Summit Programming Content - Summit No.1 attendance 	<ul style="list-style-type: none"> - Summit Presentation and Handouts (Statewide port and regional profiles) - Existing markets summary - Brief Memorandum

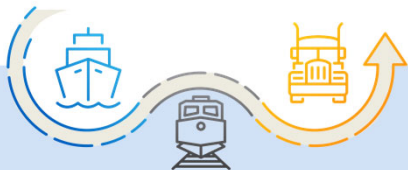




Task 2

Forecast Future Trade Volumes and Performance Implications

Key Activities	Committee Involvement	Key Deliverables
<ol style="list-style-type: none">1) Forecast trade and utilization of ports2) Integrate KYTC model3) Develop informational materials for Summit No. 2	<ul style="list-style-type: none">- Suggest Summit Programming Content- Review and Comment<ul style="list-style-type: none">- Summit Presentation Materials	<ul style="list-style-type: none">- Summit No. 2 Presentation and handouts (Statewide port and regional profiles)- Future markets summary- Brief Memorandum





Task 3

Engage Stakeholders on Future Needs and Opportunities

Key Activities	Committee Involvement	Key Deliverables
<ol style="list-style-type: none"> 1) Execute Summit No. 2 2) Present future trade and growth scenarios 3) Take input from potential policies and projects 4) Complete SWOT in collaboration with Ports 	<ul style="list-style-type: none"> - Summit No.2 attendance - Review and Comment on SWOT memorandum 	<ul style="list-style-type: none"> - Summit and Site Visit Records/Proceedings - SWOT Memo

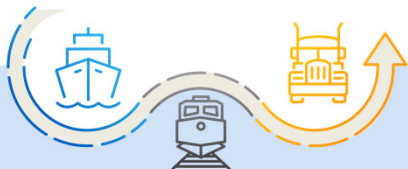




Task 4

Investment and Performance Scenarios

Key Activities	Committee Involvement	Key Deliverables
<ol style="list-style-type: none">1) Integrate and enhance project investment concepts2) Develop scenarios (investment and supportive policies)3) Vet scenarios through KYTC and key stakeholders	<ul style="list-style-type: none">- Provide input on scenarios direction and focus	<ul style="list-style-type: none">- Scenario definitions, detailed characteristics, and rationale (including maps, narrative and charts).

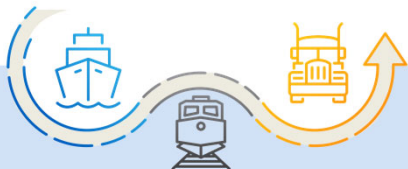




Task 5

Scenario Impacts and Formation of Preferred Scenario

Key Activities	Committee Involvement	Key Deliverables
<ol style="list-style-type: none">1) Assess economic performance impacts of scenarios2) Develop preferred scenario (with investments, impacts, supportive policies, possible growth trajectories)	<ul style="list-style-type: none">- Review and provide feedback on scenarios	<ul style="list-style-type: none">- Strategic recommendations and implications (economic, performance, ROI, other).

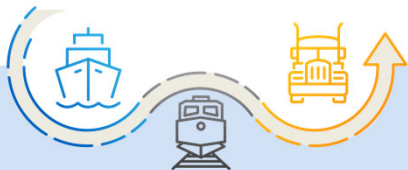




Task 6

Success Roadmap

Key Activities	Committee Involvement	Key Deliverables
<ol style="list-style-type: none">1) Present preferred strategies2) Develop implementation concepts3) Final Roadmap	<ul style="list-style-type: none">- Review and Comment on final recommendations and priorities- Review and Comment on documents and final deliverables	<ul style="list-style-type: none">- Clear and concise Executive Summary- Final Report and port-by-port summary- Marketing Toolkit (strategic, educational, and promotional elements)



How can we relate investments in the river system to statewide and regional economic development goals and opportunities?



River system investments support statewide and regional economic development goals and opportunities

Build a Consensus

Increase Trade

Reduce Unemployment

Increase Income

Maximize ROI

Manage natural and culture assets



Attract new revenue streams

Provide economic toolkit

Increase prosperity

Expand commodities

Maximize ROI return on investment

Generate net new TIF and PID tax revenue streams

Increase high paying career economic opportunities

Goals

Strategies

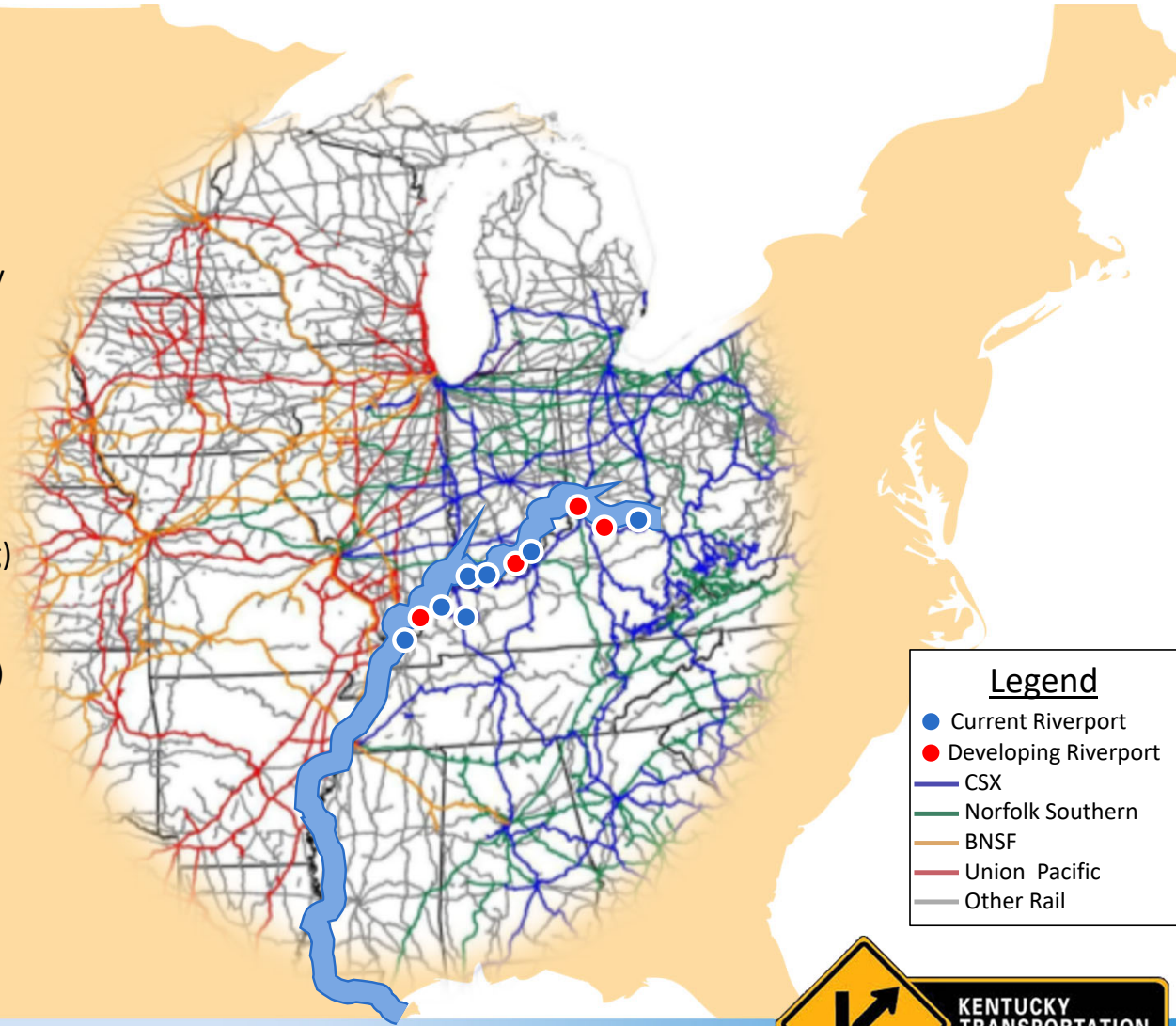


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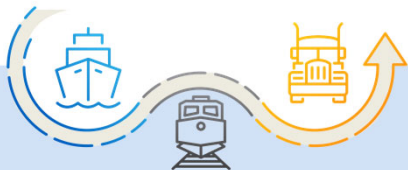
Port Locations

Eddyville Riverport and Industrial Development Authority
Greenup-Boyd County Riverport Authority
Henderson County Riverport Authority
Hickman-Fulton County Riverport Authority
Louisville and Jefferson County Riverport Authority
Owensboro Riverport Authority
Paducah-McCracken County Riverport Authority
Maysville-Mason County Riverport Authority (Developing)
Meade County Riverport Authority (Developing)
Northern Kentucky Port Authority (Developing)
West Kentucky Regional Riverport Authority (Developing)



Legend

- Current Riverport
- Developing Riverport
- CSX
- Norfolk Southern
- BNSF
- Union Pacific
- Other Rail



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Next Steps

Port Visits

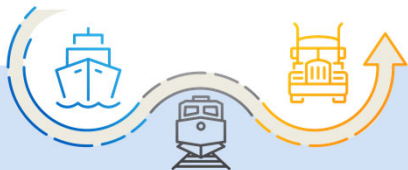
- Second Round = April
- Understand Future Changes
- Refine Collaborative Strategies

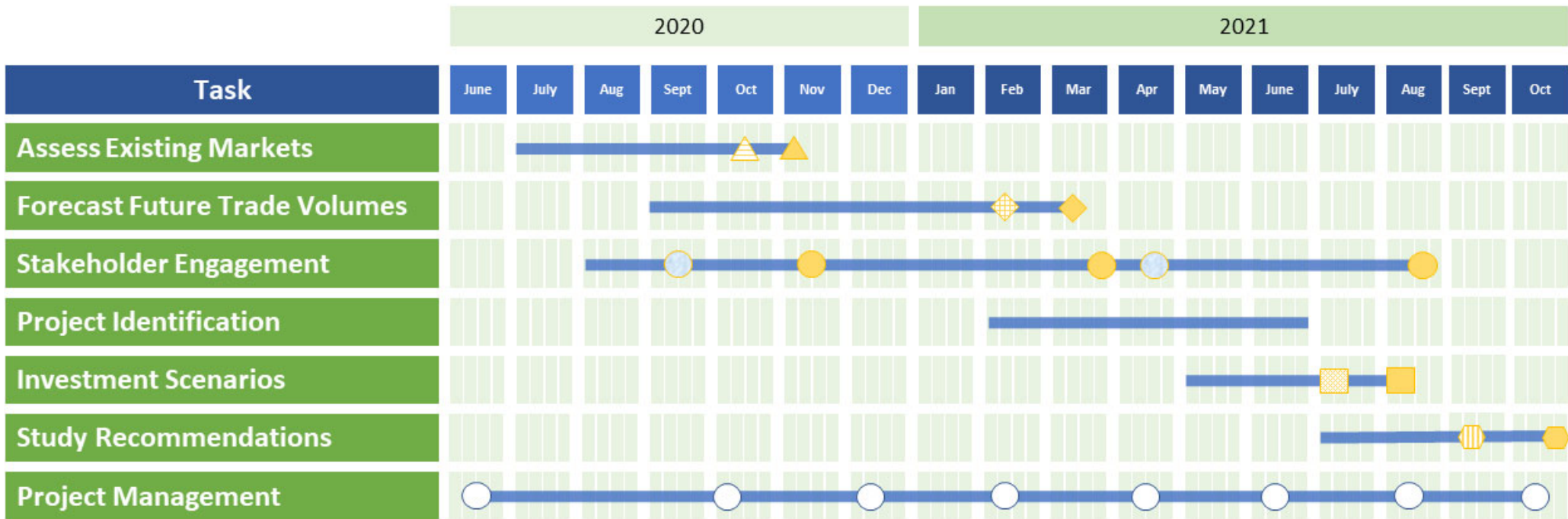
Scenario Planning

- Represent Strategies
- Role of Stakeholders
- Trade-offs

Technical Memos

- Ongoing
- Review the website for content
- Questions?





- Project Team Meetings
- Statewide Freight Summit
- Port Tours
- ▲ Draft Freight Profiles
- ◆ Draft Freight Forecast
- Draft Investment Scenarios
- ▨ Draft Study Recommendations
- ▲ Final Freight Profiles
- ◆ Final Freight Forecast
- Final Investment Scenarios
- ▨ Final Study Recommendations



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Questions



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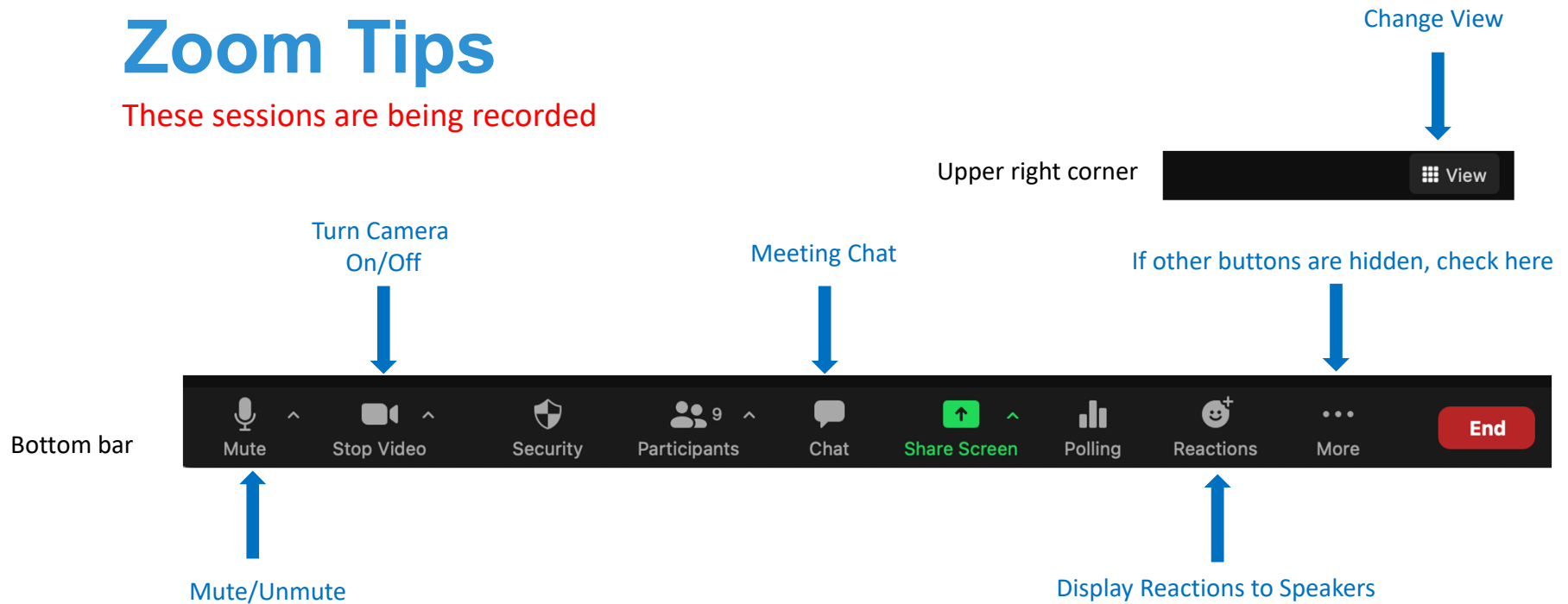
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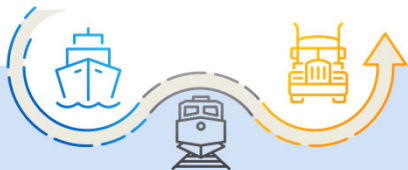
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2021 Changes in Federal Transportation & Trade Policies

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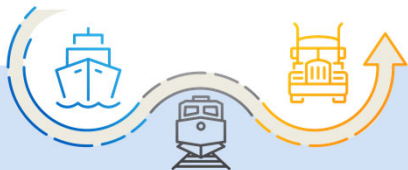
Waterways Council, Inc.

Tim Pickering

MARAD

Agenda

- State of the Inland Waterway System
- What's next for Infrastructure?



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WCI and Its Mission: Funding for the Inland Waterways System

GHE #FDOKRXQ /#VYS

N \ #ULYHUSRUV VXPPLW

P DUFK #57 /#5354

**12,000 MILES
IN 38 STATES**
239 LOCKS AT 193 SITES

NEARLY
**600 MILLION
ANNUAL TONS**
VALUED AT OVER \$300 BILLION

**20% OF COAL
60% OF GRAIN**
MOVED ON OUR RIVER SYSTEM

TODAY'S U.S. INLAND WATERWAYS SYSTEM
A CRITICAL PART OF THE TRANSPORTATION SUPPLY CHAIN

AS MANY AS
540,000 JOBS
DEPEND ON INLAND NAVIGATION

**THE SAFEST AND
MOST ENERGY-EFFICIENT**
MODE OF SURFACE TRANSPORTATION



Waterways Benefit the Entire Nation

Who Benefits from the Waterways?



**Flood Control
Beneficiaries**



Shippers



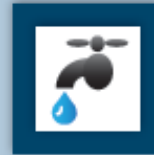
**Recreational
Boaters**



Land Owners



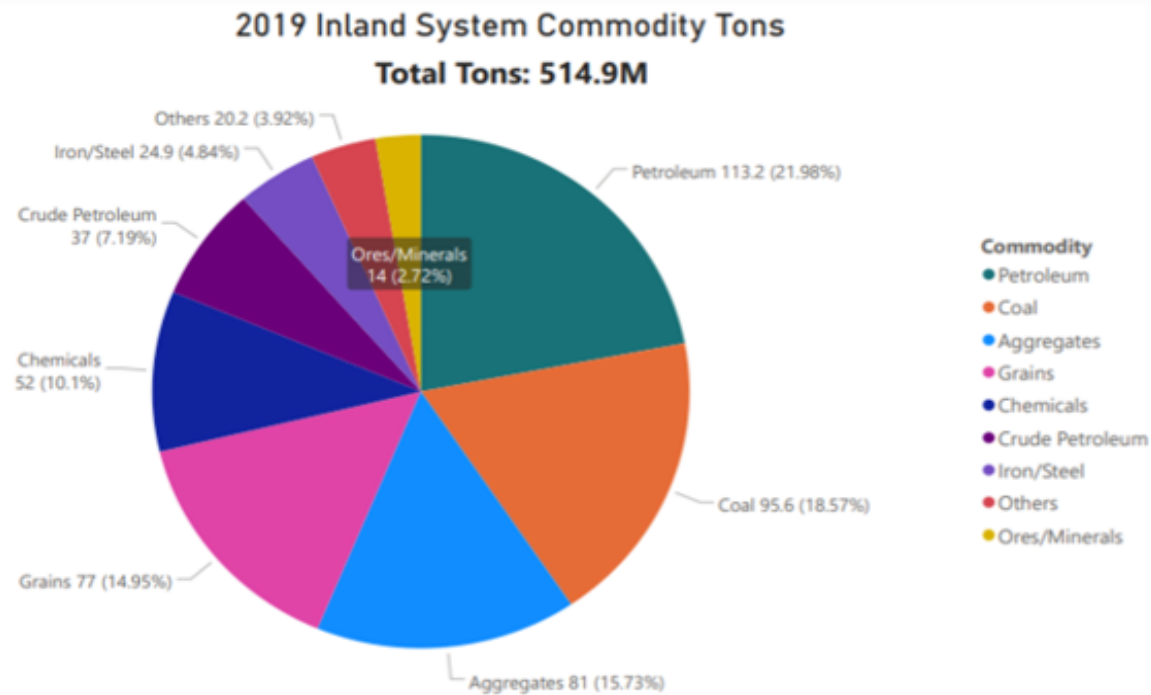
**Hydropower
Generation**



**Industrial and
Municipal Water Users**

What's Moving on the Inland Waterways?

2019, 514.9 million tons valued at \$134.1 billion



Source: Waterborne Commerce Statistics



INLAND
WATERWAYS



**DELAYS FROM
UNSCHEDULED LOCK AND
DAM CLOSURES COST UP
TO \$739 PER HOUR FOR
AN AVERAGE TOW.**

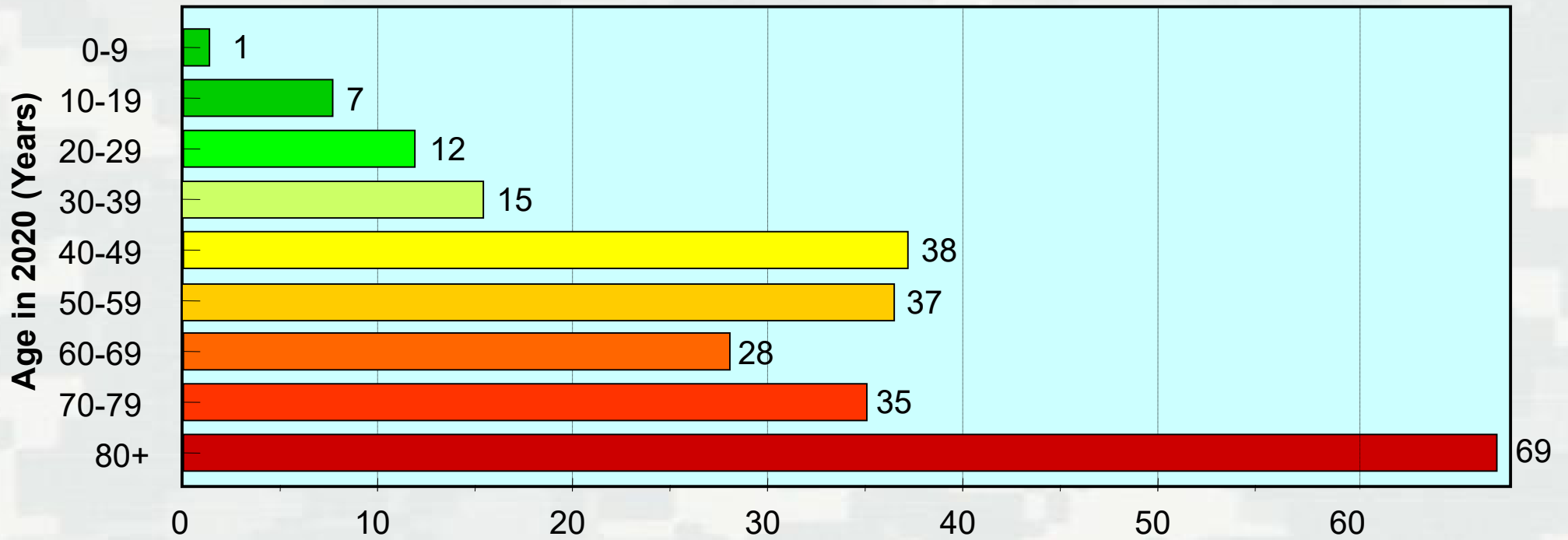
LEARN MORE AT
WWW.INFRASTRUCTUREREPORTCARD.ORG

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

On March 3, the American Society of Civil Engineers (ASCE) released its 2021 Report Card for America's Infrastructure.

ASCE's quadrennial assessment grades the condition and performance of 17 categories of infrastructure – including inland waterways locks, dams, drinking water, roads, levees, and more.

Aging Corps Lock Portfolio: 2020



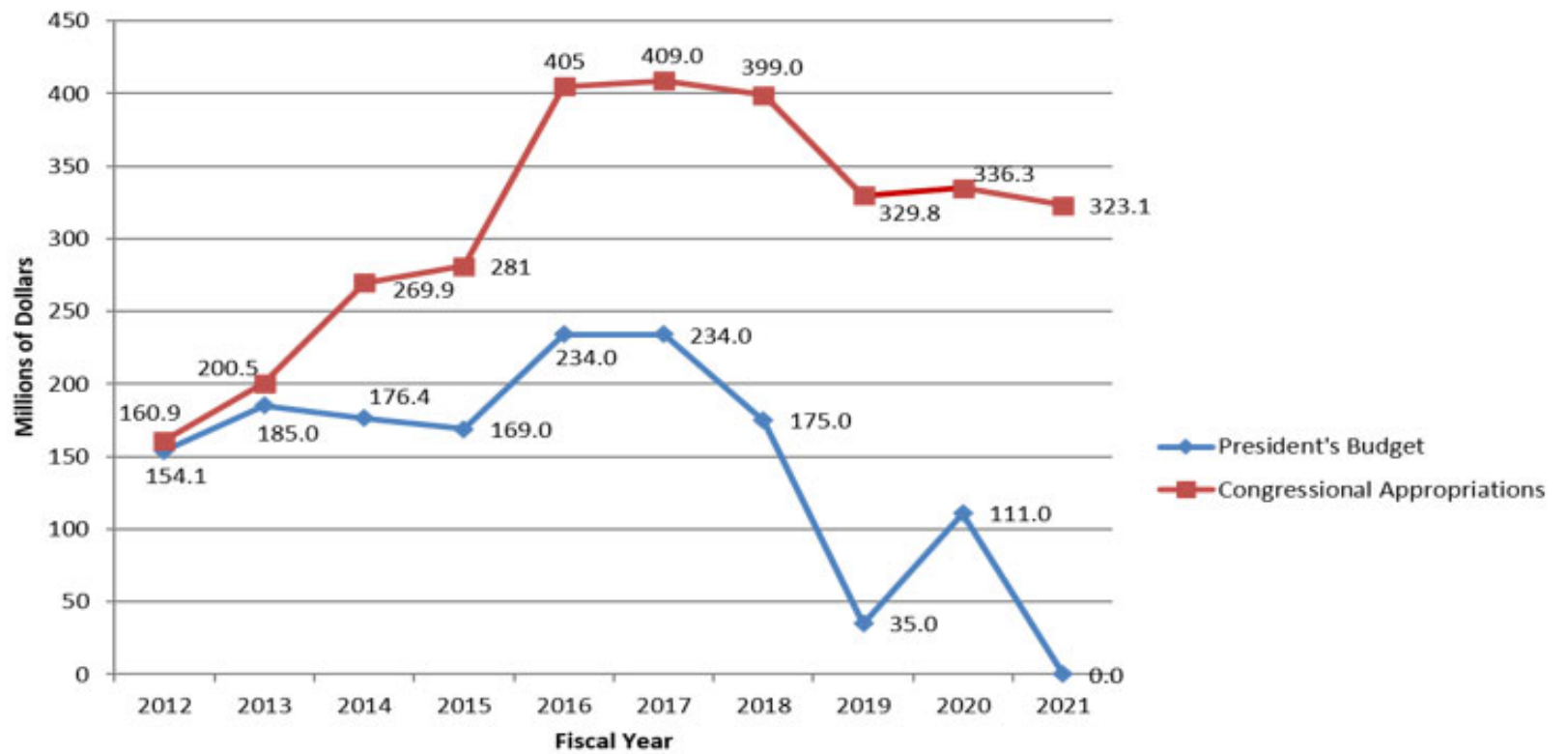
242 Operational Lock Chambers

*Includes All Operational Deep and Shallow Draft Corps and TVA Navigation Locks and Control Structures.

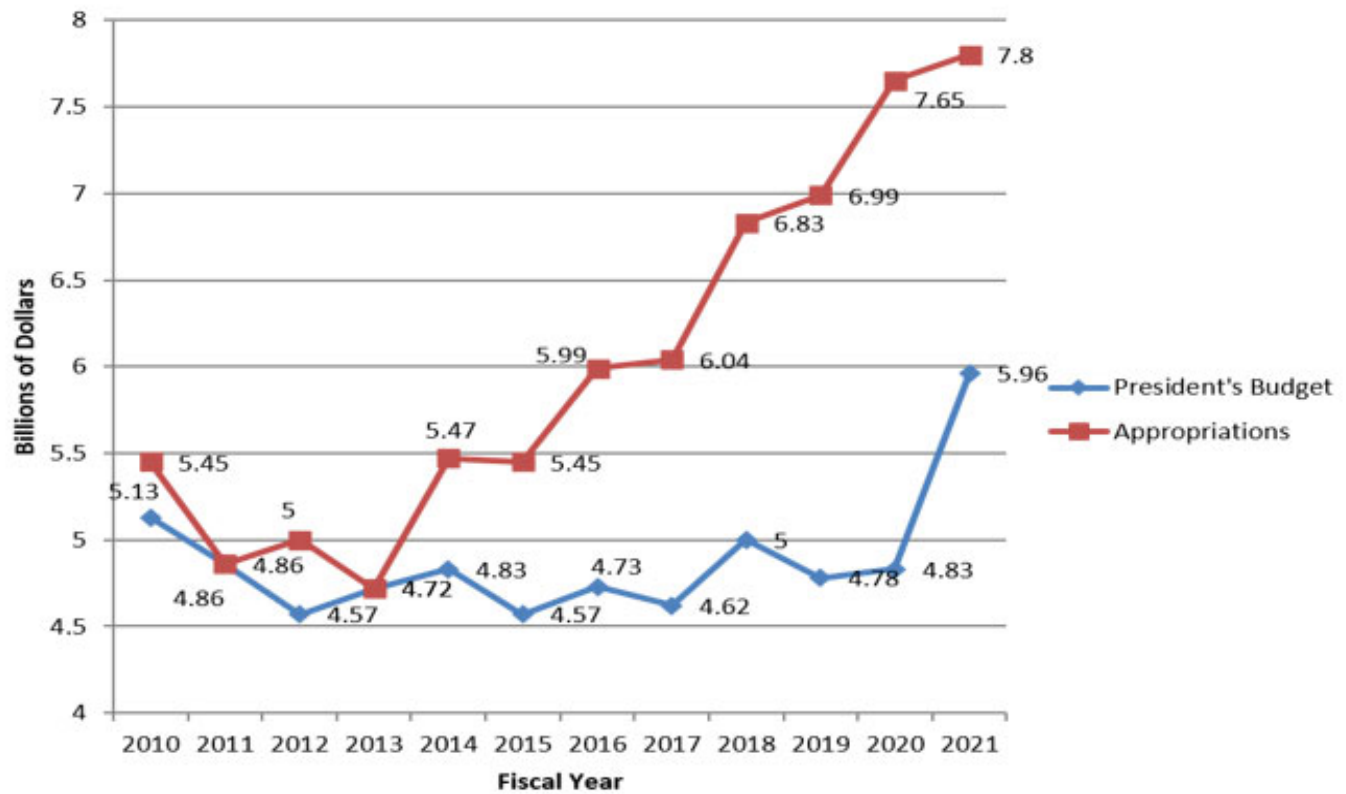


BUILDING STRONG®

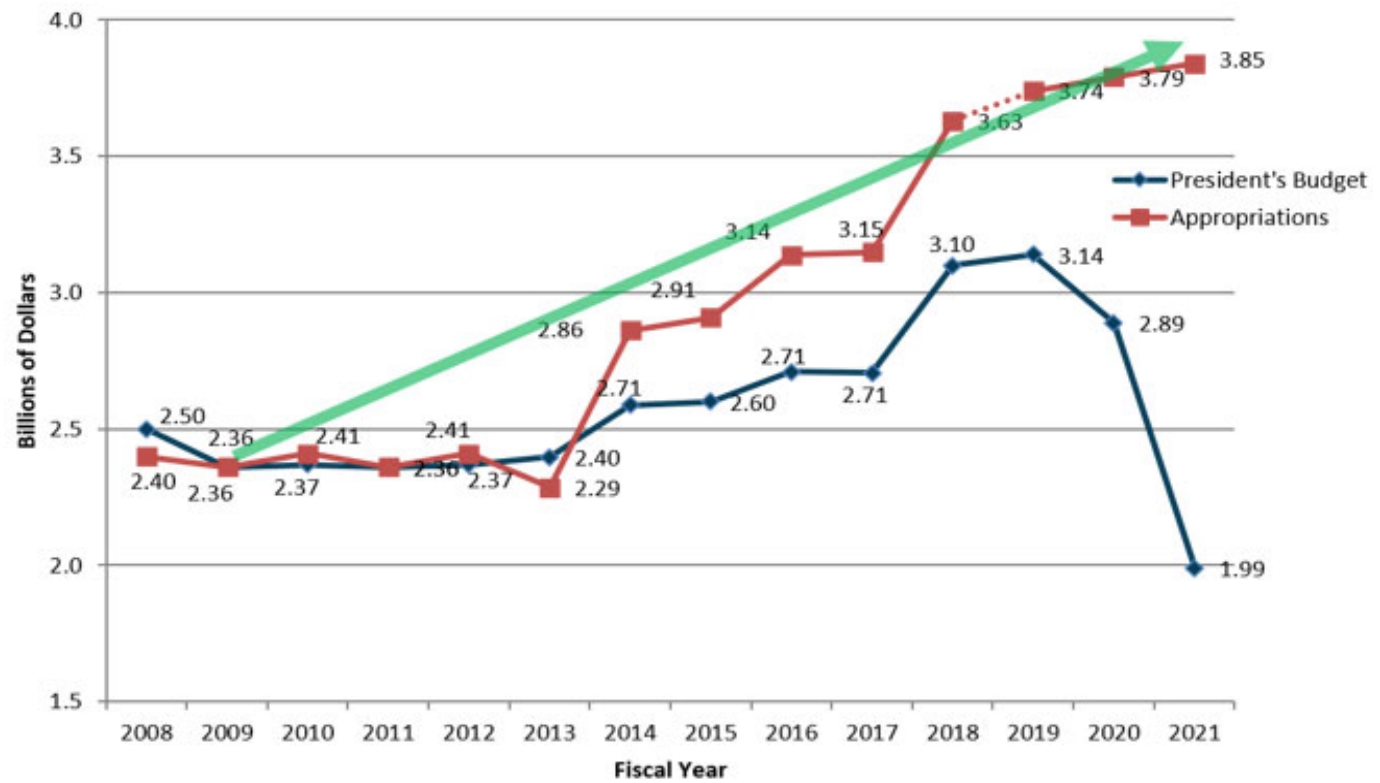
Inland Waterways Trust Fund Annual Funding FY2012-2021



Corps Civil Works Annual Funding FY2010-2021

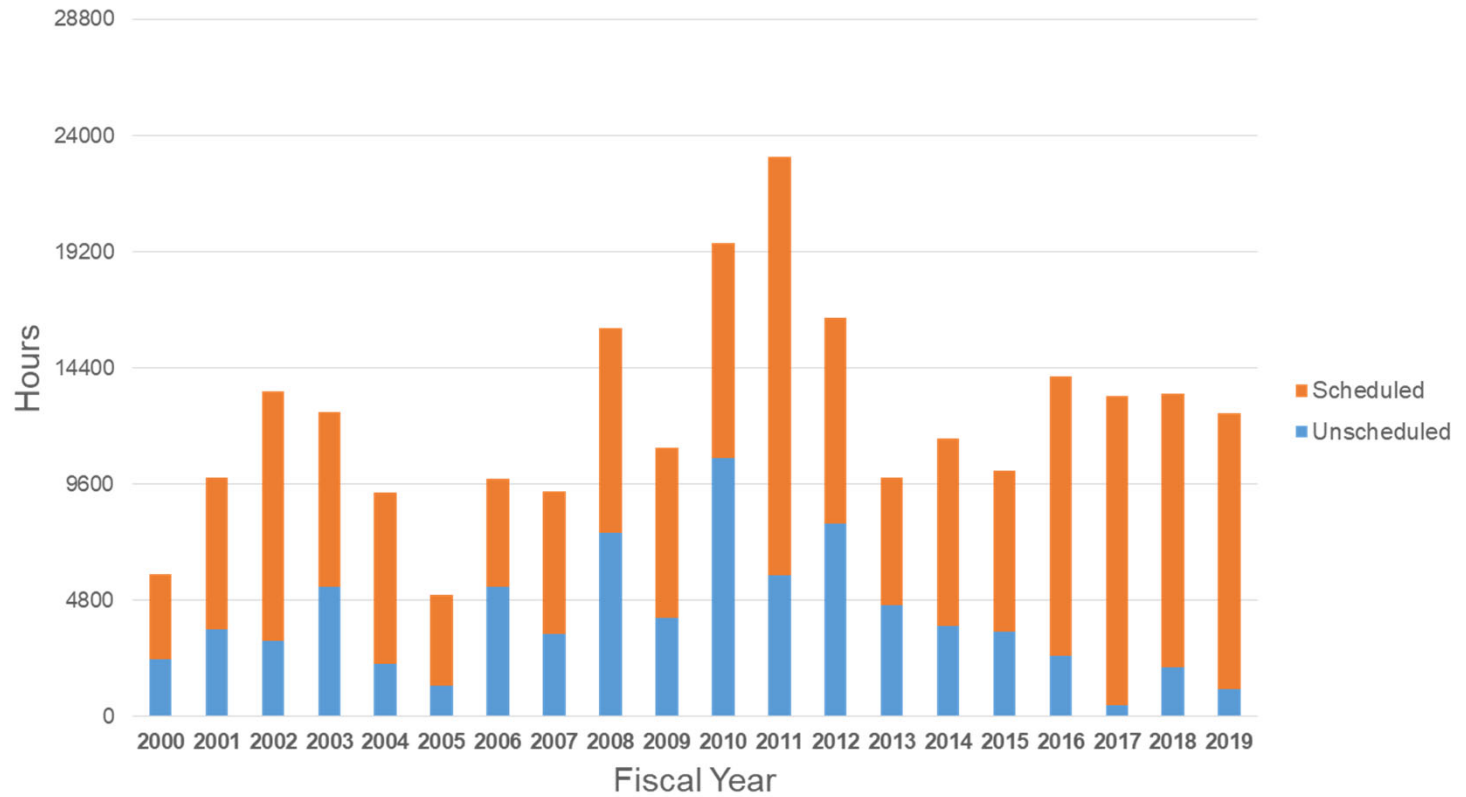


Operations & Maintenance Annual Funding FY2008-2021



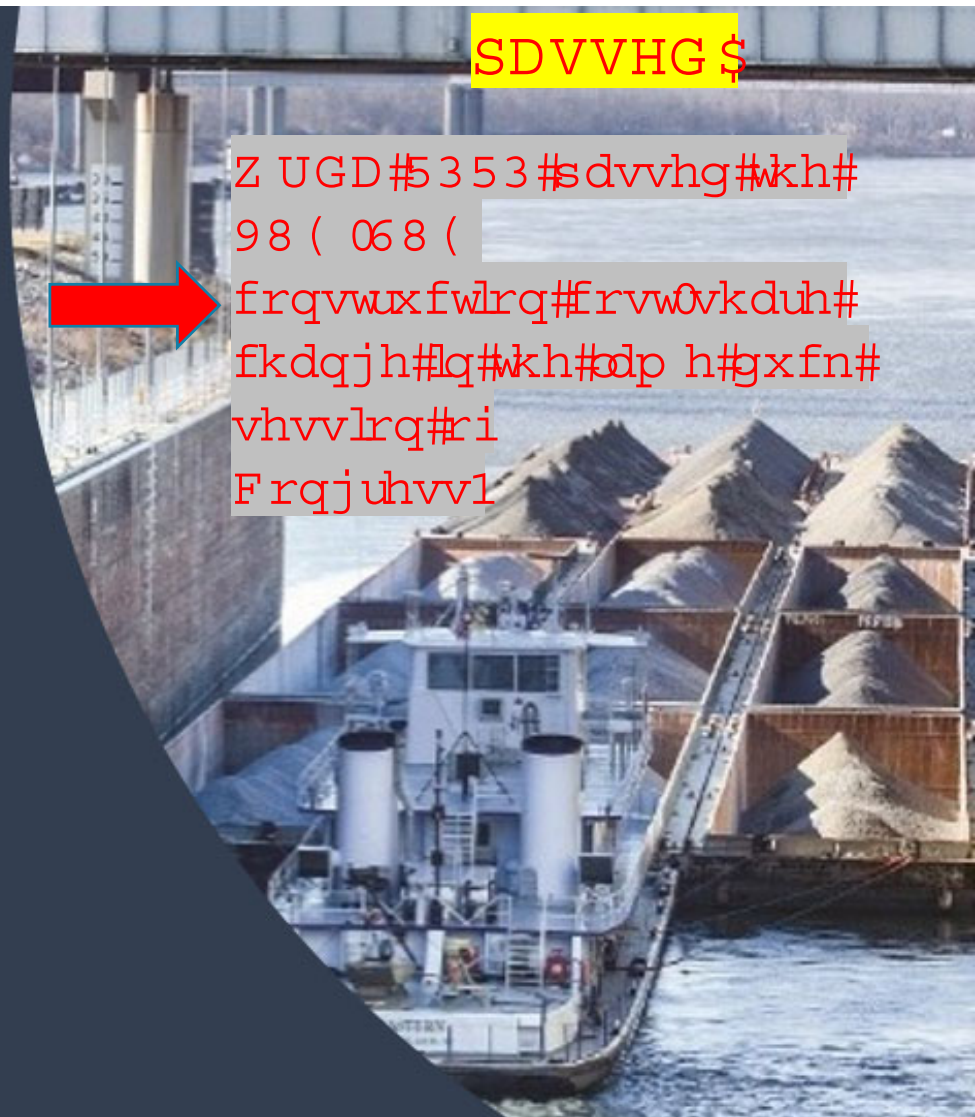
*National Lock
Portfolio Service
Trends
Main Chamber
Mechanical
Unavailable Hours
(Events Longer than 1
Day)*

Lock Closures
Main Chamber Mechanical Unavailable Hours
(Events longer than 1 day)



Water Resources Development Act 2020

- Senate base text: 65%/35%
 - 17 Senators requested 75/25 shift
- House base text: 65%/35%,
7-year sunset, each new
start within FY21-27 stays
at 65/35 until construction
completion
 - 78 House Members requested
75/25



SDVVHG \$

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What's Next on Infrastructure?

President Biden may introduce a \$2 trillion infrastructure package. Details of package have not been released.

*“We must ensure all of our transportation systems — from aviation to public transit, to our railways, roads, ports, **waterways**, and pipelines — are managed safely during this critical period, as we work to defeat the virus,”* Pete Buttigieg said.

Remaining cost of projects currently under construction

Project	River/State	Amount
Chickamauga Lock and Dam	Tennessee River/ TN	\$230,300,000
Kentucky Lock and Dam	Tennessee River/ KY	\$562,055,099
Total=		\$792,355,099

New start construction projects

Project	River/State	Amount
Upper Mississippi River Lock and Dam 25	Mississippi River/ MO & IL	\$626,024,000
Three Rivers	MKARNS/AR & OK	\$201,652,000
Montgomery Lock	Ohio River/ PA	\$677,570,000
LaGrange Lock	Illinois River/ IL	\$507,433,000
Upper Mississippi River Lock and Dam 24	Mississippi River/ MO & IL	\$686,083,000
MKARNS 12 Foot Channel	MKARNS/AR & OK	\$234,428,000
Emsworth Lock	Ohio River/ PA	\$463,180,000
Upper Mississippi River Lock and Dam 22	Mississippi River/ MO & IL	\$578,532,000
Upper Mississippi River Lock and Dam 21	Mississippi River/ MO & IL	\$749,869,000
Dashields Lock	Ohio River/ PA	\$454,738,000
Peoria Lock	Illinois River/ IL	\$547,838,000
Upper Mississippi River Lock and Dam 20	Mississippi River/ MO & IL	\$496,502,000
Thomas O'Brien Major Rehab	Little Calumet River/ IL	\$53,000,000
Brazos River Flood Gate	Gulf Intracoastal Waterway/ TX	\$158,147,000
Colorado River Lock	Gulf Intracoastal Waterway/ TX	\$251,630,000
Total =		\$6,276,849,000



Thank You!

For questions:

- Dcalhoun@waterwayscouncil.org
- 301-332-0813





MARITIME ADMINISTRATION

Marine Highway Program Overview

Presented to the Kentucky Riverports Summit

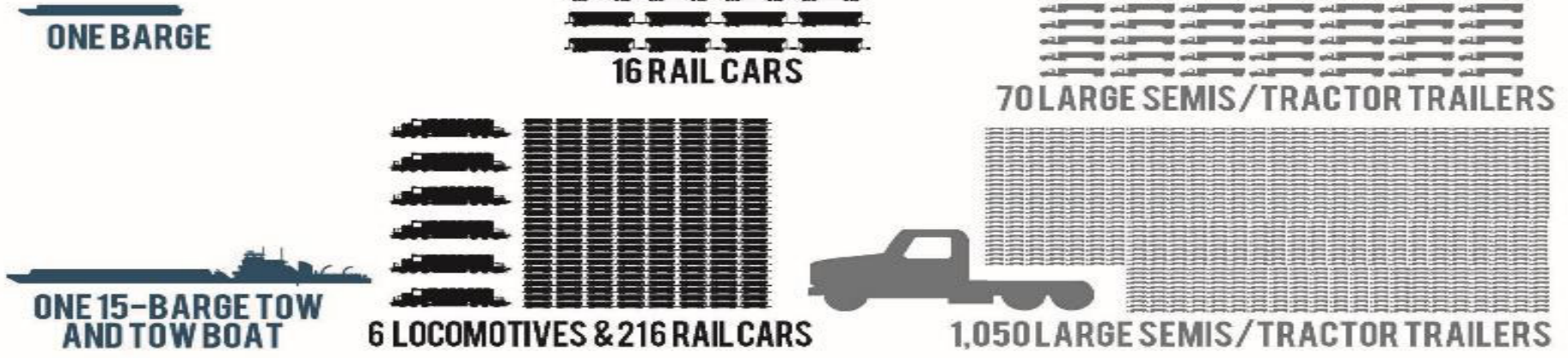
Office of Ports & Waterways Planning



Why Marine Highways



EQUIVALENT UNITS



EQUIVALENT LENGTHS



America's Marine Highway (AMH) Program

The Marine Highway System consists of the vast majority of U.S. navigable waterways including our coastlines, inland waterways, and the Great Lakes St. Lawrence Seaway System.

- The Marine Highway Program has three steps:
 - **Route Designation:** A commercially navigable waterway in the U.S. that is capable of moving freight is designated by the Secretary as a Marine Highway Route.
 - **Project Designation:** A public entity applies for a new or expanded marine highway service along a designated Marine Highway Route are then designated as Marine Highway Project.
 - **Federal Support:** Designated Projects can then apply for Marine Highway Grant funding.



Step 2 Project Designation

45
Designated
Projects

Eligible applicants (sponsors) include:

- State government agencies
- Local governments or Port Authorities
- Tribal governments
- Metropolitan or Regional Planning Organizations

Purpose of the Project Designation:

- Create a new, or expand an existing, Marine Highway service
- Realize public benefits
- Receive recognition from the USDOT Secretary



Step 2 Project Designation

- Must be on a U.S. documented vessel (46 USC § 121)
- Must be loaded or unloaded at U.S. ports, or between a U.S. port and a Canadian port within the GL/SLS System
- Eligible freight types:
 - Containerized
 - Ro/Ro
 - Palletized or unitized
 - Freight vehicles carried aboard commuter ferry boats



Step 3 Federal Support

- Eligibility for Marine Highway Grant Funding
- Credibility of Concept
- U.S. Department of Transportation Support
- Clearinghouse of Lessons Learned
- Promoting and Developing Partnerships
- Linking coastwise services to international services



Step 3 Federal Support

Since 2016, MARAD has provided \$33.8 million in AMH Grants to 18 eligible AMH Projects

FY 2016 – Six recipients

\$5 Million

• Baton Rouge–New Orleans Shuttle on the M-55	\$1,758,595
• Illinois Intrastate Shuttle on the M-55	\$ 713,000
• James River Expansion Project on the M-64	\$ 476,748
• New York Harbor and Container and Trailer on Barge	\$1,632,296
• M-55/M-35 Container on Barge Project	\$ 96,000
• Potomac River Commuter Ferry Project	\$ 173,361

FY 2017 – Six recipients

\$5 Million

• Baton Rouge–New Orleans Shuttle on the M-55	\$2,507,200
• Port of Davisville/Brooklyn/Newark Container on Barge Service	\$ 855,200
• James River Expansion Project on the M-64	\$ 456,000
• New York Harbor and Container and Trailer on Barge	\$ 298,423
• Cross Sound Enhancements	\$ 503,927
• Paducah-McCracken Riverport Container on Barge Service	\$ 251,927

FY 2018 – Three recipients

\$7 Million

• SEACOR AMH - Baton Rouge–New Orleans Shuttle on the M-55	\$3,155,622
• JRBL - James River Expansion Project on the M-64	\$1,822,093
• Harbor Harvest Long Island Sound Service	\$1,812,285

FY 2019 – Nine recipients

\$7.5 Million

• Fernandina Express Container on Barge M-95 Florida to SC	\$1,291,800
• McCracken Container on Barge – Paducah, KY	\$ 480,000
• New Orleans Shuttle of the M-55 - Baton Rouge, LA	\$1,040,000
• Lake Erie Shuttle – Michigan	\$1,101,735
• M-84 Barge Service Expansion - Port of Morrow, Oregon	\$1,623,200
• Gateway and Gulf Container on Barge Central Node – Houston, TX	\$ 180,000
• James River Expansion Project M-64 - Port of Virginia	\$ 189,840
• M-95 Intermodal Barge Service - Wallops Island, Virginia	\$ 96,425
• Bainbridge Island Ferry Service – Seattle, WA	\$1,500,000

FY 2020 – Eight recipients

\$9.775 Million

• Port Landside Infrastructure Improvements - Pago Pago, American Samoa	\$ 943,000
• America’s Central Port Container Handling & Securing Project – Granite City, Illinois	\$1,268,000
• Tidewater M-84 Expansion Project – Morrow, Oregon	\$3,200,000
• Nucor Steel Brandenburg Marine Terminal – Brandenburg, Kentucky	\$2,363,800
• Jeffersonville Nucor Barge Shuttle Storage Facility - Indiana	\$ 545,136
• Capacity & Efficiency Container Barge Service – SEACOR AMH	\$ 778,350
• NY Harbor Container & Barge Cargo Handling Efficiency – M-95	\$ 148,664
• USCS Kearny Point - Newtown Creek Barge Service M-95, New York, NY	\$ 308,000

A Notice of Funding Opportunity for \$10.819M in Marine Highway Grants will be released soon.

M-70 Barge Service in the Port of Cincinnati, Northern Kentucky and Beyond

- A barge service to replace trucks between Nucor Steel's manufacturing facility in Gallatin, KY and customers in the Cincinnati to Louisville Marine Highway Route along the M-70
 - Trucking 77 miles total, 66 miles interstate 10 miles state highways = \$6.59 per truck delivery in road maintenance costs
 - It will replace 500 tractor trailers a month from a 66 mile stretch of I-71, saving at least \$42,000 a year in highway maintenance costs
 - The grant funds will convert a former casino barge to a manufacturing facility and another barge to be used for transportation.
 - This project is only the second Designated Project on the M-70
-
- Project Parties include the Central Ohio River Business Association (CORBA), The Ports of Cincinnati and Northern Kentucky, Port of Brandenburg, Port of Indiana-Clarke Maritime Center, Port of Paducah, Kentucky, Nucor Steel Company, Port of Louisville
 - Congressional supporters include Congressmen Brett Guthrie, John Yarmuth and Thomas Massie

Marine Highway Program Staff

Director, Office of Ports & Waterways Planning



Vince Mantero

America's Marine Highway Program



Timothy Pickering

Operations Development Manager

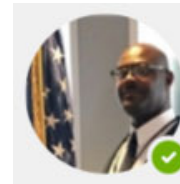


Mauricio Castro

Transportation Specialist

Fred Jones

Transportation Specialist



Questions



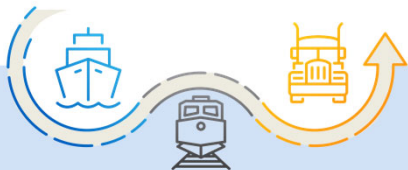
KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



Kentucky Summit on Economic Development Strategies to Leverage Kentucky Riverports and Freight Network

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KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

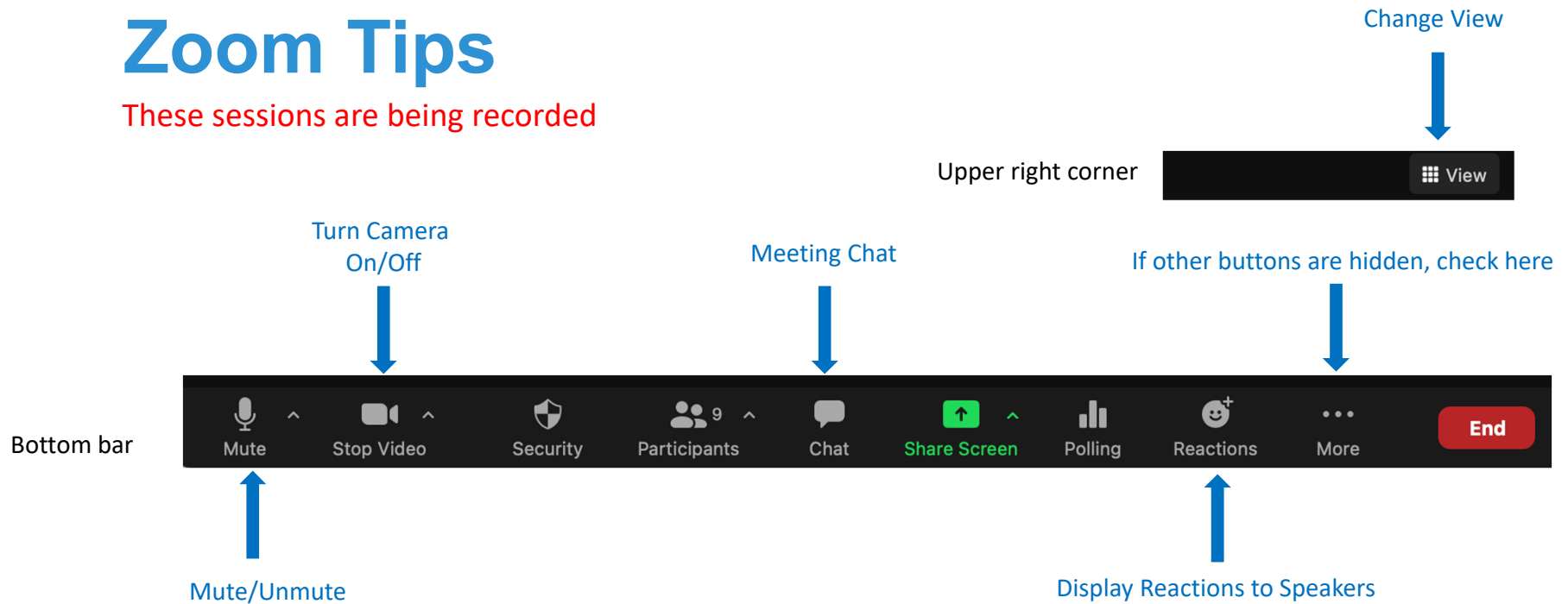
Welcome to the Second Kentucky Summit

Economic Development Strategies to Leverage Kentucky Riverports and Freight Network



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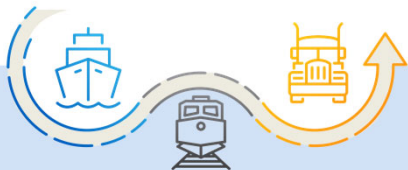
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KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

**What's New in the
Neighborhood?**

**Welcome to the Second Kentucky Summit
Economic Development Strategies to Leverage Kentucky
Riverports and Freight Network**

MARCH 24-26, 2021

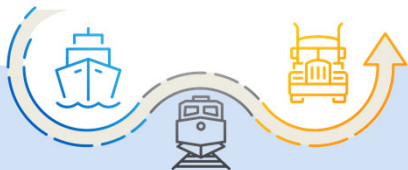


Speakers

Jimmy McDonald	Metro Analytics (Moderator)
Mark Locker	Ohio DOT
B.J. Murray	Illinois DOT
Dan Pallme	Tennessee DOT

Agenda

- Panel Discussion about Riverports Nearby



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



The Ohio River Supporting the Economy

KYTC Statewide Summit

“What's new in the Neighborhood” 2pm March 24, 2021



OHIO DEPARTMENT OF
TRANSPORTATION

Mark Locker, AICP
Manager Freight Maritime & Logistics

TRANSPORT OHIO



Snapshot of Ohio's Freight System

Ohio has an extensive and robust multimodal freight system.



Interstate
Miles*

1,330



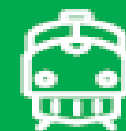
Cargo
Handling
Airports

8



Maritime
System
Miles

736



Active
Rail
Miles

5,081



Miles of
Gathering and
Transmission
Pipeline

110,000+

*ODOT owned, operated and maintained, only.

OHIO'S FREIGHT SYSTEM TRANSPORTED NEARLY 900 MILLION TONS
OF GOODS WORTH OVER \$1 TRILLION IN 2018.

OHIO MARITIME SYSTEM

Maritime

736

Maritime System
Miles

8

Active Great Lake
Ports

265

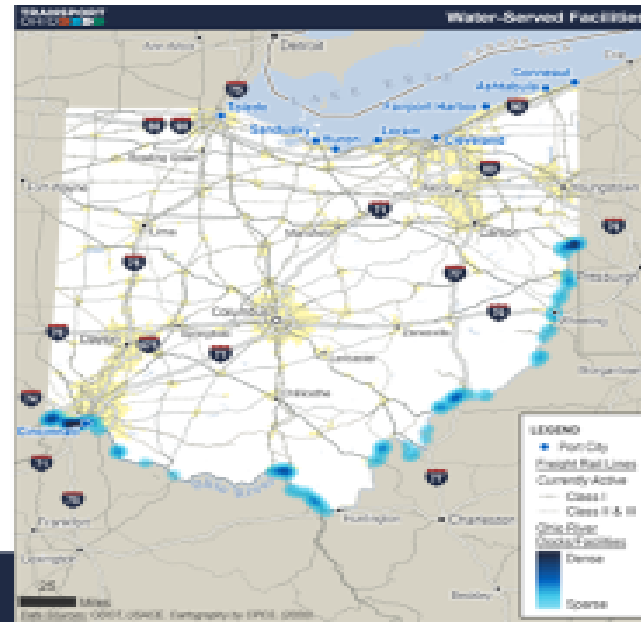
Miles of coastline
along Lake Erie

65

Great Lakes
Commercial
Terminals

97

Ohio River
Commercial
Terminals



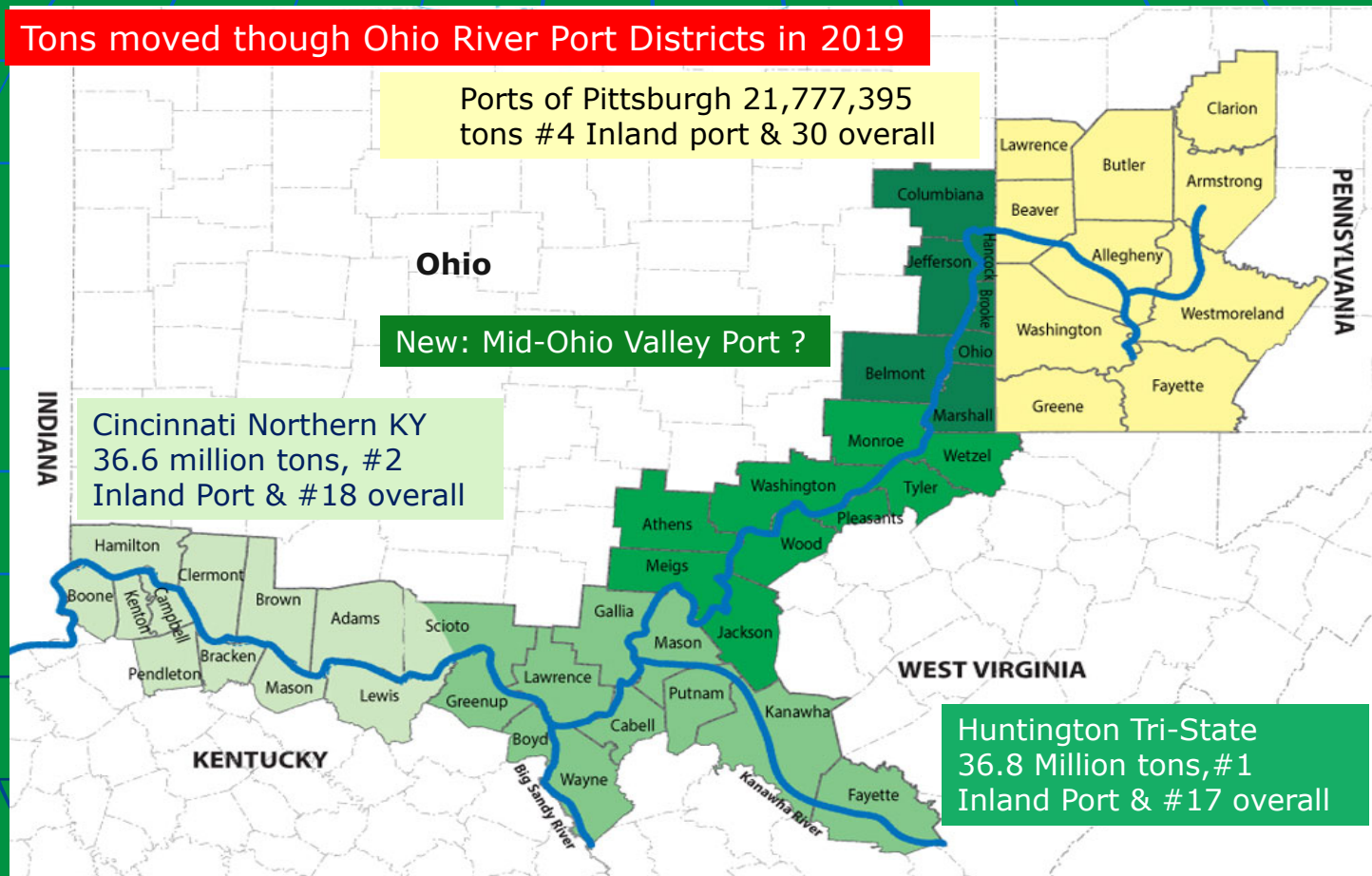
OHIO DEPARTMENT OF
TRANSPORTATION



dot

OHIO RIVER

Tons moved through Ohio River Port Districts in 2019



Ohio Maritime Investment

Keeping Ohio's Maritime Transportation System Economically Competitive

- ODOT Maritime Assistance Funding (\$23M MAP)
 - Assist Private Terminals through Public Port Authorities:
 - Columbiana County Port Authority
 - SH Bell, Parsons Terminal, Wellsville Terminal
 - Monroe County Port Authority
 - Powhattan #7 Riverfront



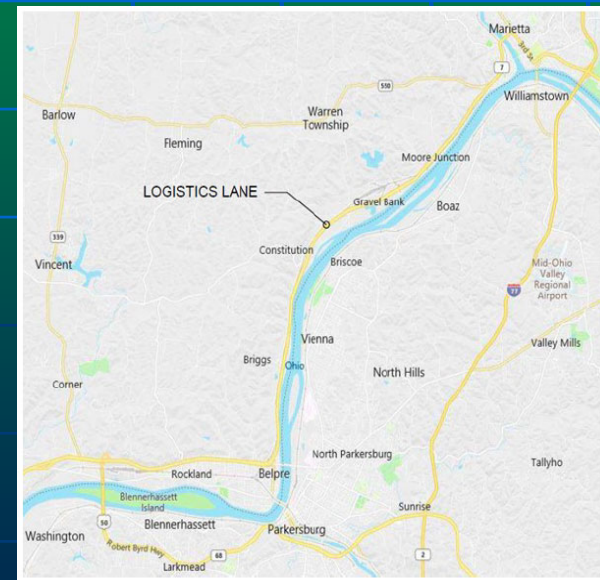
ODOT Washington County SR 7 USDOT INFRA (\$13.1M)



Installation of technology backbone infrastructure to allow for future testing and deployment of smart mobility solutions targeted at freight movement.


Roadway improvements to a two mile corridor of State Route 7 that will improve existing intermodal freight connections between Ohio River shipping and the National Highway System.

Expansion of (CORIS) that displays individual port and terminal information along with Automatic Identification System (AIS) receiver network allowing users to see boat movements on the Ohio River for scheduled freight deliveries.



MARITIME & FREIGHT STUDIES

TRANSPORT OHIO
Characteristics of Ohio's Freight System
Executive Summary



Submitted to Office of Statewide Planning & Research
December 10, 2020

CPCS **TRANSPORT OHIO** **OHIO DEPARTMENT OF TRANSPORTATION**

OHIO DEPARTMENT OF TRANSPORTATION
OHIO MARITIME STRATEGY



JUNE 2019


TRANSPORT OHIO
DRAFT Working Paper 3
Truck Parking Inventory



Submitted to Office of Statewide Planning & Research

CPCS **TRANSPORT OHIO** **OHIO DEPARTMENT OF TRANSPORTATION**

THE ECONOMIC IMPACTS OF OHIO RIVER MARITIME ACTIVITY ON THE STATE OF OHIO

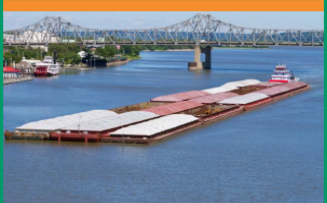


The environmental review, consultation, and other actions required by applicable federal environmental laws for these projects are being, or have been, carried out by USOP pursuant to 33 U.S.C. 207 and a general order of underpinning dated December 11, 2016, and executed by FERRA and USOP.

Submitted to Office of Statewide Planning & Research
December, 2019

Prepared by **MARTIN ASSOCIATES** **OHIO DEPARTMENT OF TRANSPORTATION**

DOCUMENTATION TO SUPPORT THE REQUEST FOR CREATING THE MID-OHIO VALLEY PORT DISTRICT



Submitted to Ohio Department of Transportation
July 2020

Prepared by **W. R. Coles and Associates** **OHIO DEPARTMENT OF TRANSPORTATION**

CPCS
Working Paper

Ohio Maritime Study
Working Paper 1 – Ohio's Maritime Transportation System

Prepared for:
Ohio Department of Transportation

Prepared by:
CPCS Transcom Inc.

In consultation with:
W. R. Coles and Associates
Dr. Peter Lindquist, University of Toledo

CPCS Inc. 2022
March 18, 2022 version



Ohio River Supports these Industries...



W.R. Coles and Associates
wrcoles.com

ODOT Maritime System Study

ron@wrcoles.com
615-594-1576

Thank you



Mark Locker, AICP
The Ohio Department of Transportation
Office of Statewide Planning & Research
Maritime, Freight & Logistics
Mark.locker@dot.ohio.dot
614.466.2347



Kentucky Riverports Summit

3-24-2021

Dan Pallme, Assistant Chief of Freight & Logistics

Transportation Equity Fund

- History
 - Aviation
 - Railways
 - Water
- Historical Program: Rail rehabilitation
- Rail Connectivity grants

Rail Connectivity Program

- *Purpose of the Competitive Rail Connectivity Grants: This grant program seeks to strategically expand rail access and opportunities within the state of Tennessee in order to benefit the state by:*
 - impacting job creation and capital investment by industries that require rail access;
 - enhancing the marketability of available industrial sites; and/or
 - reducing highway and bridge maintenance costs by diverting heavy freight from the roadway network to rail.

Rail Connectivity Program

- \$10.3 million
- Maximum request: \$2 million
- 10% match
- Tight schedule:
 - Application: 10-15-2018
 - Notice of Intent: 11-15-2018
 - Application Due: 12-7-2018
 - Award Announcement: 1-19-2019
- Eligibility: rail authorities, port authorities, local governments, industrial development corporations, governmental entities
- Project examples: spurs, sidings, truck-rail transload and river-rail transload facilities, bridge rehabilitation projects, etc.

Statistics of Program

- 31 Applications
 - \$36.7 million total ask (not counting local match)
 - Projects selected were geographically diversified

FY2019 COMPETITIVE RAIL CONNECTIVITY GRANT AWARDS

Awarded

Applicant	County	Grant	Project Description
Cheatham County	Cheatham	\$2,000,000	Construction of a 2600 ft. rail spur, 650 feet of loading tracks, and improvements to 2000 feet of track to serve a new river port
City of Memphis & Shelby County Port Commission	Shelby	\$1,723,500	Install 4,900 ft. of new rail track with 4 new switches at the public terminal facility on Presidents Island at the Port of Memphis
Hamilton County Railroad Authority	Hamilton	\$1,272,600	Construction of a rail-highway bulk transload facility in the Enterprise South industrial area
Marion County	Marion	\$2,000,000	Construction of a rail spur at the Nickajack Port Industrial Park
Nashville & Eastern Railroad Authority	Wilson	\$297,000	Install two new switches and 290 ft. of tangent track to provide service to an existing industry without current rail connectivity
TennKen Railroad Authority	Dyer	\$486,000	Construction of a rail spur with a 16 car push to provide service to an existing industry without current rail connectivity
Town of Spring City	Rhea	\$500,000	Construction of a rail spur to serve an available 61 acre parcel in the Spring City Industrial park
Washington County Economic Development Board	Washington	\$2,000,000	Construction of a rail spur to serve existing industries without current rail connectivity

Rail – River Projects - #1

- City of Memphis and Shelby County Port Commission
 - **Project description:** 4900 ft new track and 4 switches to serve the river port and its customers on President's Island
 - **Total cost:** \$1.915 million
 - **State program:** \$1.723 million
 - **Status:** Current posted on website as advertised for the required 21 days for bids

Memphis		Public					
Port	79RC20S3	Terminal	<u>Drake</u>	3/17/2021	4/13/2021	<u>Advertisement</u>	<u>Bid Sheet</u>
Commissi	002	Rail	<u>Danley</u>				
on		Extension					

Rail – River Projects - #2

- Cheatham County – Nashville area
- **Project description:** The project includes improvements to 2000 ft of current rail bed and line, as well as construction of a rail spur. The spur will cross Thompson Road in Ashland City to serve a new, multi-modal barge port on the Cumberland River. The spur itself will be approximately 2600 feet along with about 650 feet of storage/loading tracks on the county-owned site.
- **Total cost:** \$3.641 million
- **State program:** \$2 million
- **Status:** Currently on hold. Going through the NEPA phase since this is a new port

Rail – River Projects - #3

- Marion County – Chattanooga area
- **Project description:** A rail spur to facilitate an expansion at Colonial Chemicals and the Nickajack Port Industrial Park; been in the works for 3 years; have other financial partners but lacking \$1.3M to make it happen; have estimate from CSX for the work
- **Total cost:** \$3.584 million
- **State program:** \$2 million
- **Status:** Goal is set to advertise for bids on 4/1/21. Lengthy process of going back between CSX, TDOT, Marion County to get this completed. They are going to advertise for 6 weeks to try to get more competitive bid offers

Contact Information

Dan Pallme, Assistant Chief of Freight & Logistics
Environment & Planning Bureau

615-741-4031 office

615-879-4390 cell

Daniel.pallme@tn.gov

Questions



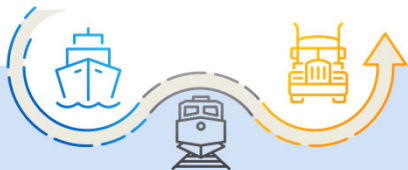
KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



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KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

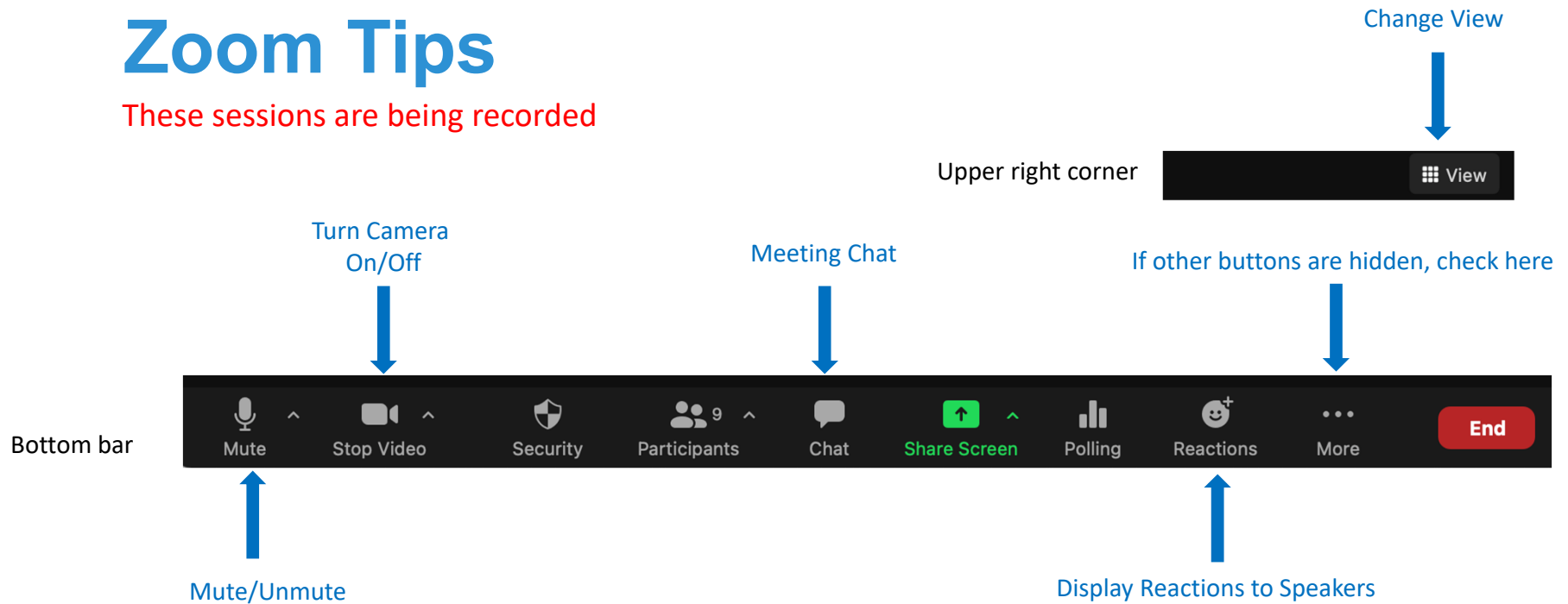
Second Kentucky Summit on Economic Development Strategies to Leverage Kentucky Riverports and Freight Network

Session 4: Forecasting the Future of Kentucky's Freight Economy



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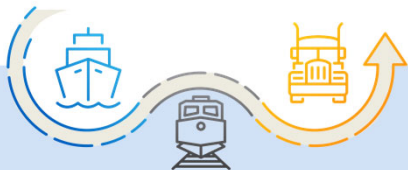
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KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

Forecasting the Future of KY's Freight Economy

**Welcome to the Second Kentucky Summit
Economic Development Strategies to Leverage Kentucky
Riverports and Freight Network**

MARCH 24-26, 2021



Speakers

Paul Bingham

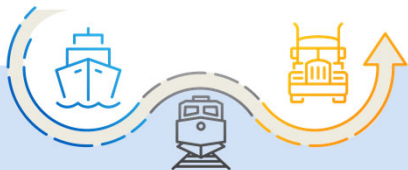
IHS Markit

Chandler Duncan

Metro Analytics

Agenda

- Economic Forecasts: 2018 Base to 2045 Possible Futures
- Applying Forecasted Growth to Kentucky's Freight Networks



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



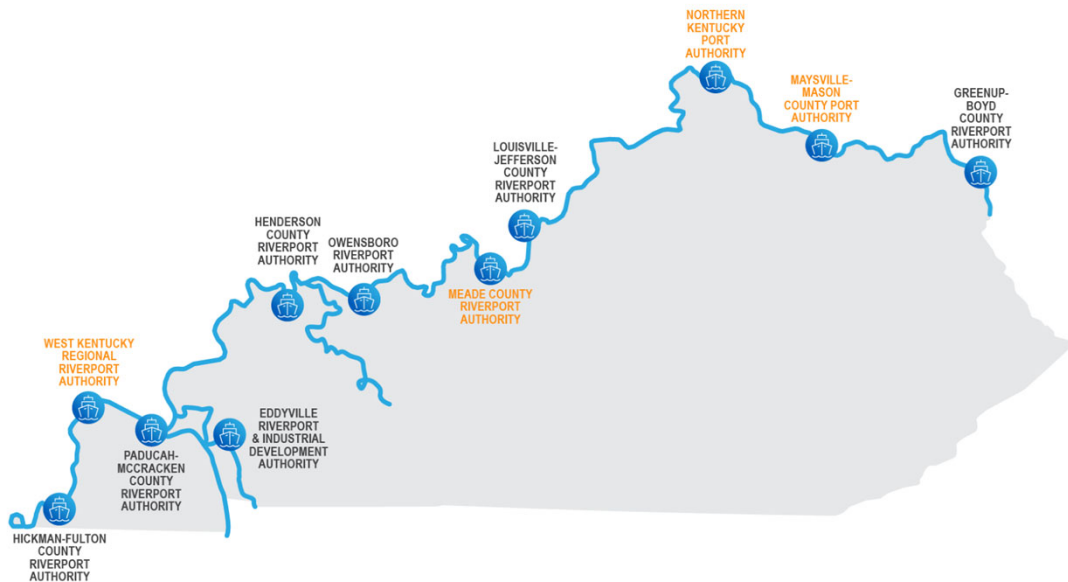
SESSION PURPOSE





Session Purpose

- Present freight demand forecast scenarios with future commodity flows for the 11 public riverports in the Commonwealth with associated truck and rail freight for potential diversion to waterways.
- Use scenarios to help account for uncertainty in freight markets.



FREIGHT FORECAST CONTEXT





Kentucky Riverports, Highway and Rail Freight Forecasts from IHS Markit Transearch

Objectives

- Identify total freight market for seven Kentucky riverports operating now for all relevant freight modes. The potential for the four developing ports comes from diversion from rail/truck.
- Identify port potential with long-term forecasts for regional modal freight flow demand under a baseline and two alternative growth forecast scenarios before any new diversion.

Riverports

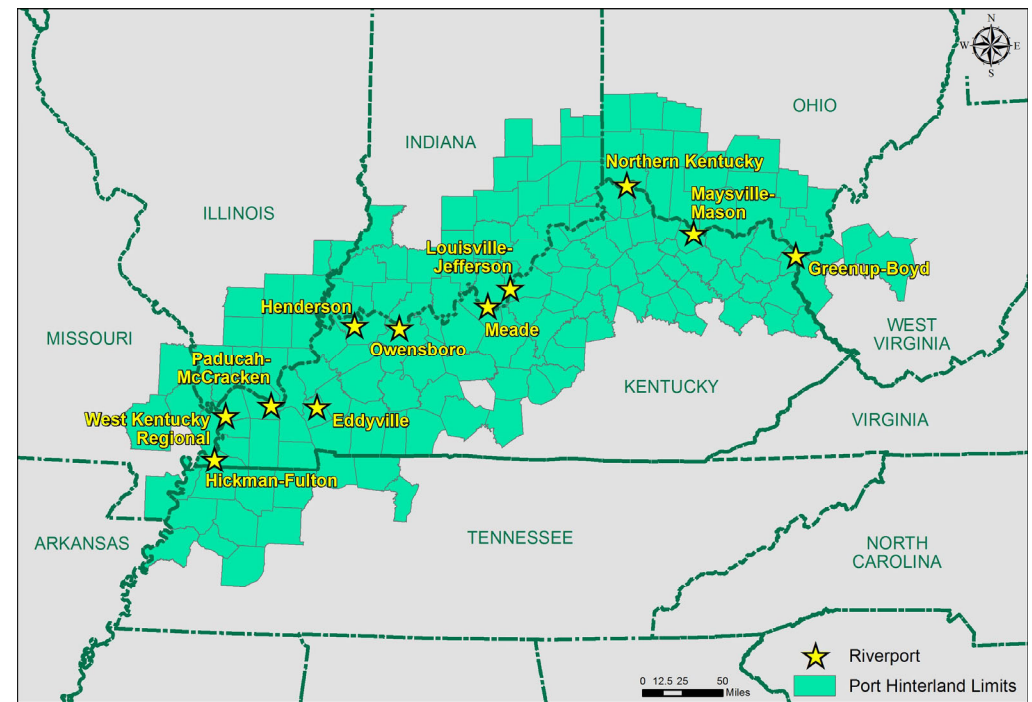
Kentucky Riverport	Status	
West Kentucky Regional Riverport Authority	Developing	
Paducah -McCracken County Riverport Authority	Operating	
Eddyville Riverport and Industrial Development Authority	Operating	
Henderson County Riverport Authority	Operating	
Meade County Riverport Authority	Developing	
Jefferson Riverport International	Operating	
Maysville -Mason	Developing	
Greenup -Boyd County Riverport Authority	Operating	
Owensboro Riverport Authority	Operating	
Hickman -Fulton County Riverport Authority	Operating	
Northern Kentucky Riverport	Developing	





Kentucky Riverport Market Hinterlands

- Each riverport competitive market hinterland assessed.
- Counties reached in 90-minute driving time from each riverport.
- Kentucky's market reach of the riverports extends into Illinois, Indiana, Missouri, Ohio, Tennessee and West Virginia.
- Riverports market reach can and do overlap.



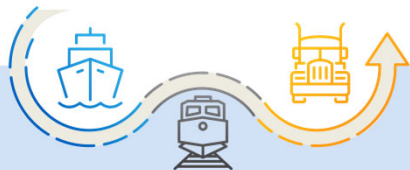


Transearch Freight Flow Data & Forecasts

Multimodal Origin Destination Freight Flows – Annual Total Tons & Value

- Transearch Base Year Calendar Year 2018; Forecast Horizon of 2045
- Geography
 - US Markets:
 - Kentucky, neighboring-state and river-adjacent riverport market counties
 - State portions of Business Economic Areas (BEAs)
 - Canada & Mexico Imports and Exports
 - Overseas Imports and Exports

Transearch enables location-specific freight flow analysis for transportation and market planning



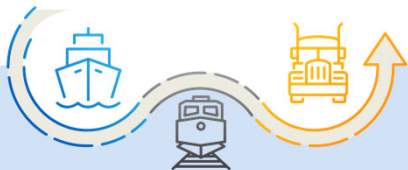
KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





Transearch Freight Flow Data & Forecasts

- Freight Flow Volumes:
 - Annual volume in net (short) tons,
 - Equipment unit volumes for truck and rail modes
 - Total tonnage for inland waterway and air freight
 - Truck loads (for truck modes only)
 - Trailers or containers (for intermodal rail)
 - Carloads (for non-intermodal rail)
- Freight Value:
 - Dollar value of commodities shipped





Kentucky Freight Forecast Scenarios

- Long-term forecasts of commodity demand driven by industry production, consumer and business consumption and trade
 - The three 2045 scenario alternatives for the economy and freight:
 - **Baseline** is the most likely of possible paths for the overall economy without further major disruptions or shocks
 - Higher growth reflecting higher investment and employment with generally **optimistic** performance of the economy (averages GDP 0.4% higher per year)
 - Lower growth reflecting slower investment and development with generally **pessimistic** performance of the economy (averages GDP 0.6% lower per year)





The Economic Forecast Scenarios

Comparison of US Economic Forecast Scenario Indicators, 2020-2045

	Historic Avg. 1989-2019	Baseline	Optimistic	Pessimistic
Average Annual Real Growth				
Potential Output	2.5	1.9	2.3	1.4
GDP	2.5	1.9	2.3	1.3
Consumption	2.7	2.2	2.5	1.5
Business Fixed Investment	4.3	2.6	3.2	1.8
Government	1.3	0.7	1.1	0.5
Exports	4.9	2.8	3.4	2.5
Imports	5.1	3.2	3.4	2.6
Average Annual Growth				
Labor Force	0.9	0.5	0.8	0.4
Productivity	1.9	1.6	2.0	1.2
Industrial Production	1.8	1.3	2.0	0.7
Inflation (% GDP Deflator)	2.1	2.1	1.8	3.4
Unemployment (%)	5.8	4.4	4.2	5.1

Source: IHS Markit, Copyright © 2020





Kentucky's Public Riverport Forecasts

- Waterway and port infrastructure improvements not assumed in the forecast scenarios beyond what is already underway.
- No explicit port competitiveness changes assumed.
- Potential diversion to inland waterway transport can change future riverport freight volumes, if opportunities are captured.



Freight Forecast Scenarios By Mode, All Riverports

Total Tonnage Growth to 2045

- Baseline Scenario: 18.3%
- Optimistic Scenario: 24.5%
- Pessimistic Scenario: 10.7%

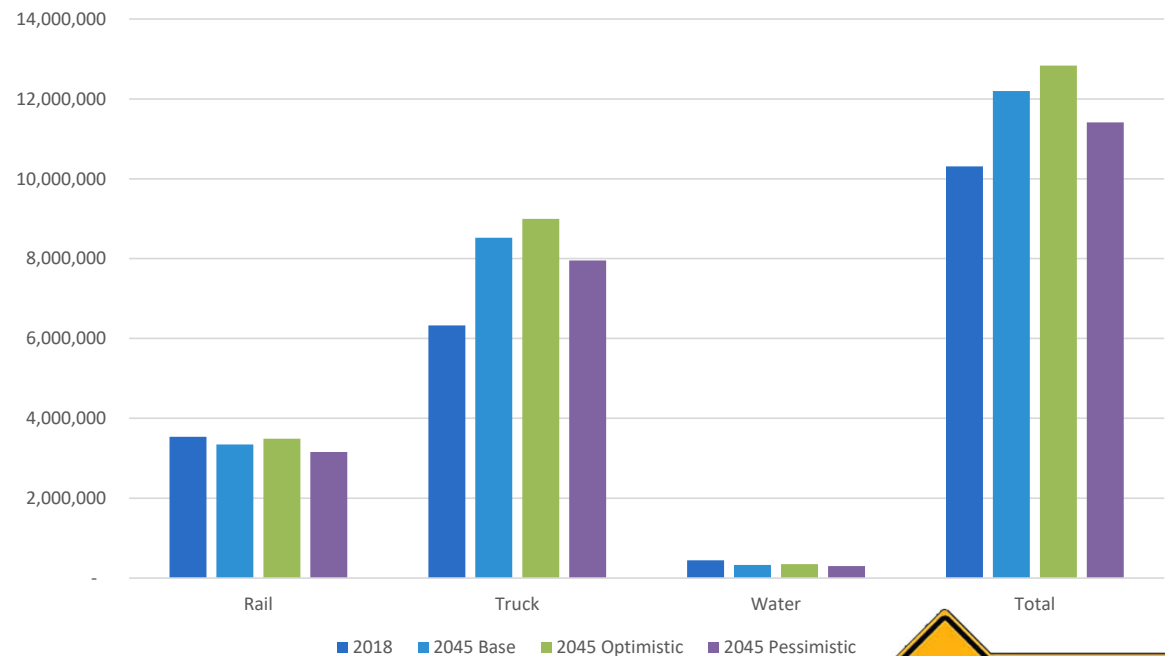
Truck Tonnage Growth to 2045

- Baseline Scenario: 34.7%
- Optimistic Scenario: 42.2%
- Pessimistic Scenario: 25.7%

Rail Tonnage Growth to 2045

- Baseline Scenario: -5.4%
- Optimistic Scenario: -1.4%
- Pessimistic Scenario: -10.7%

Freight Forecast Scenarios in 2045, All Ports Hinterlands
(1000s of Tons)



FREIGHT FORECAST SCENARIOS BY RIVERPORT

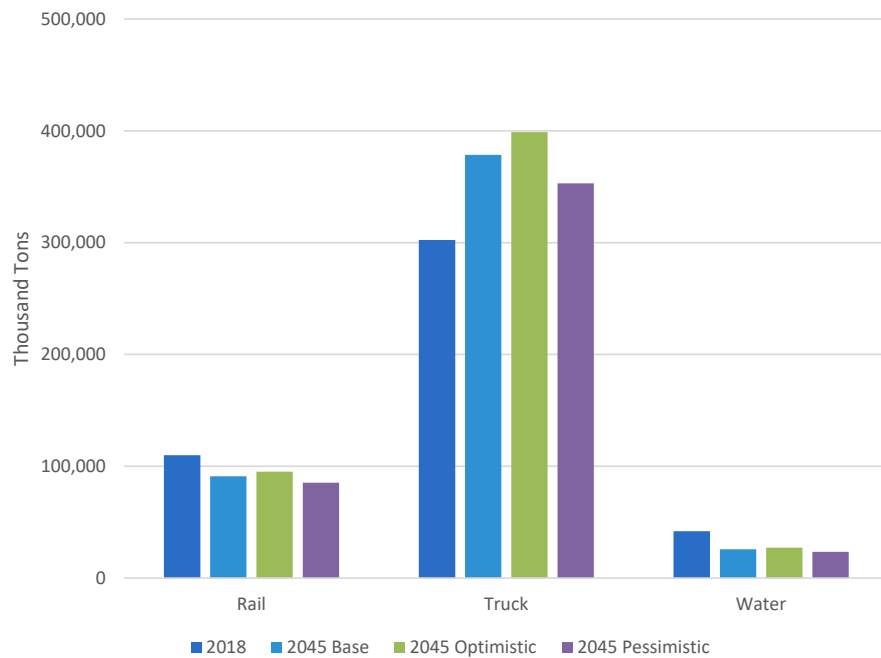


Developed Public Riverports in Kentucky

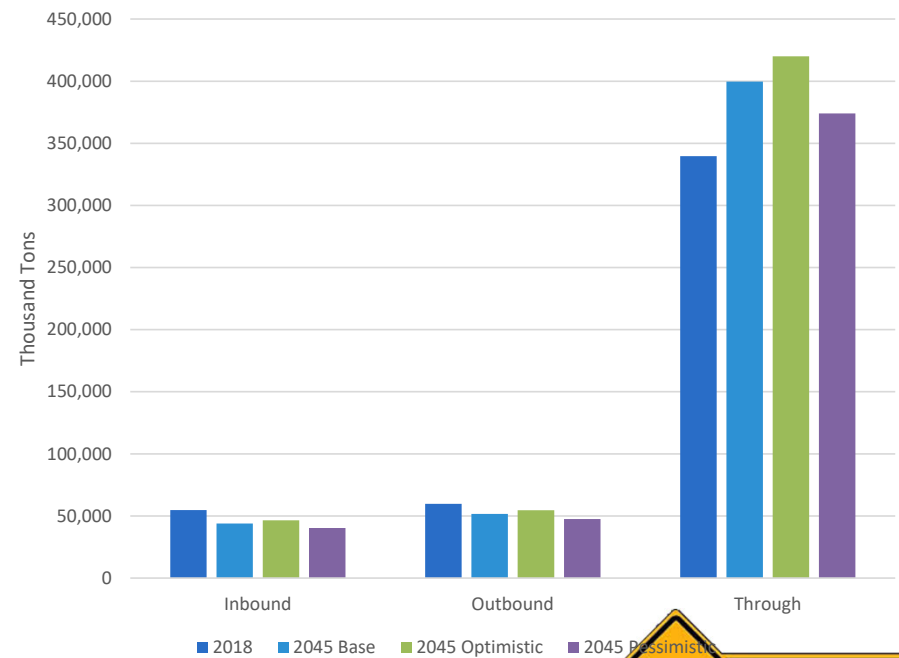


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

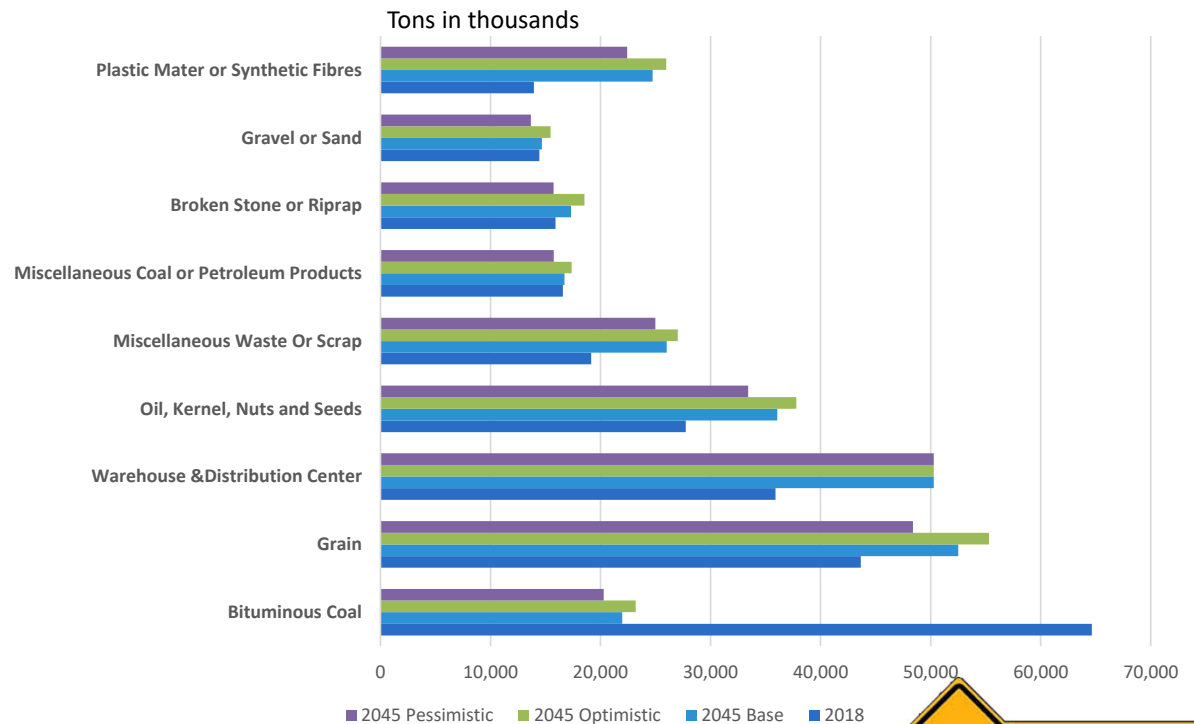


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

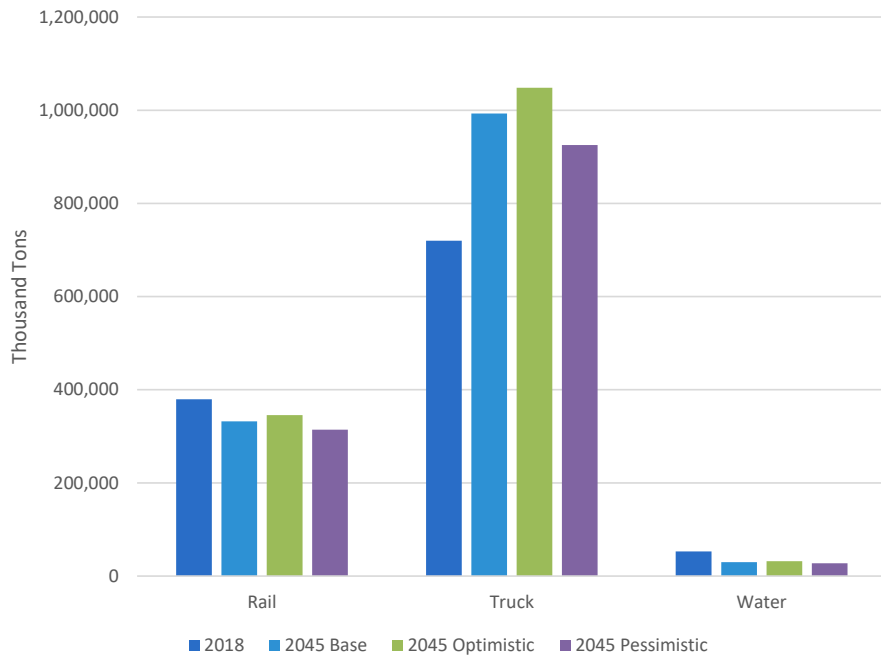
- Grain replaces coal as #1
- Mixed consumer products in warehouses are #2 but with diversion challenges
- Soybeans in oil, kernel, nuts and seeds #3
- Waste and scrap #4
- Plastics & synthetics #5

Freight Forecast Scenarios: Top Commodities

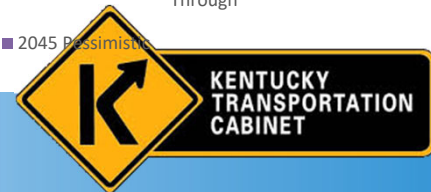
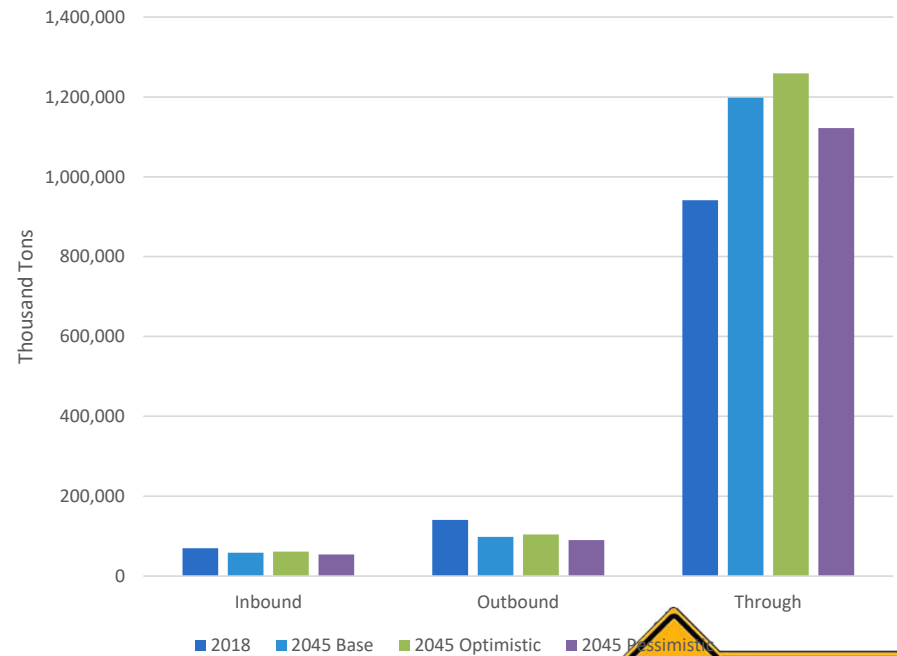


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

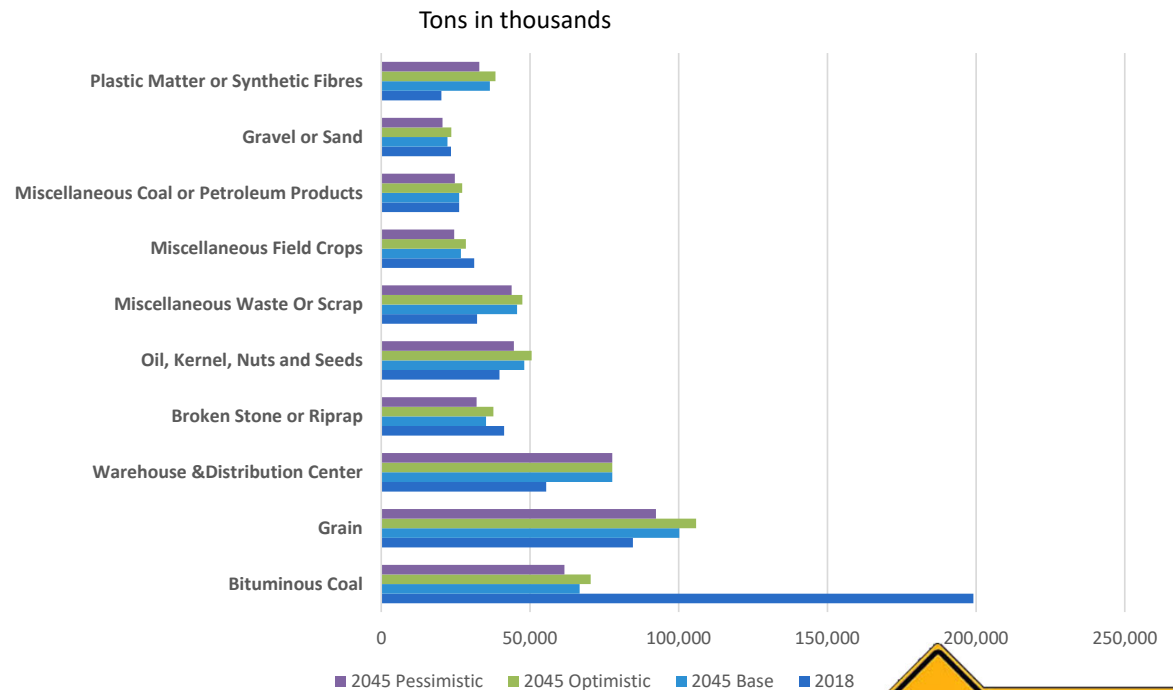


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

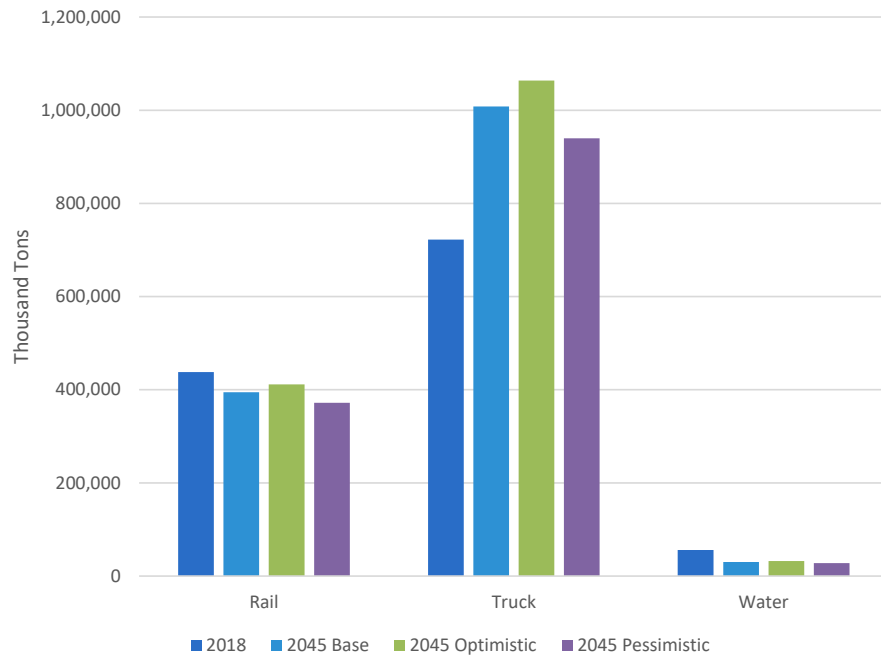
- Grain replaces coal as #1
- Mixed consumer products in warehouses are #2 but with diversion challenges
- Soybeans in oil, kernel, nuts and seeds #4
- Waste and scrap #5
- Broken stone / riprap #6
- Coal #3 but still in decline

Freight Forecast Scenarios: Top Commodities

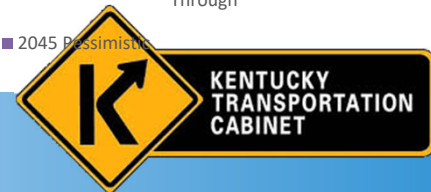
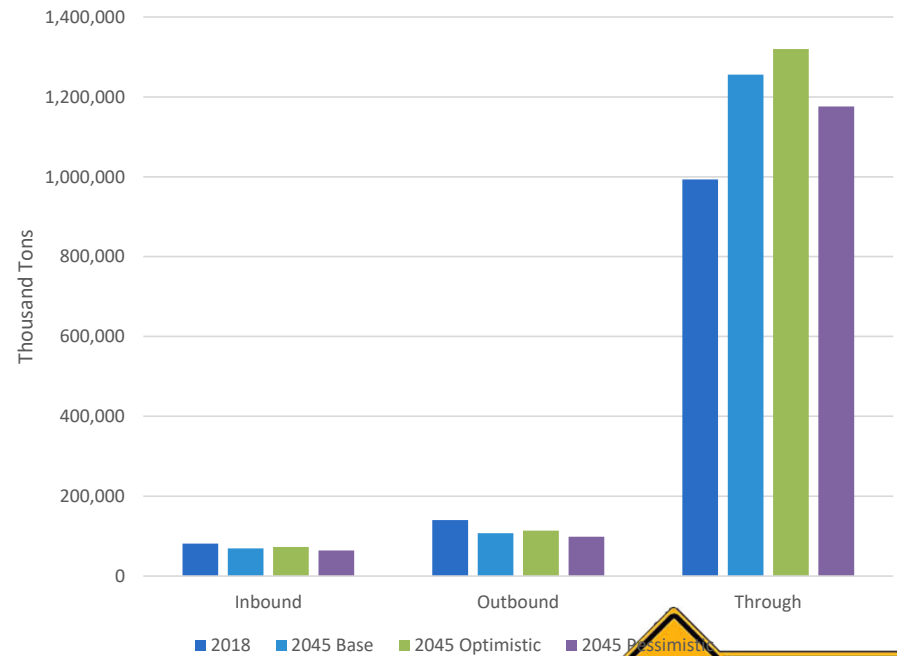


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

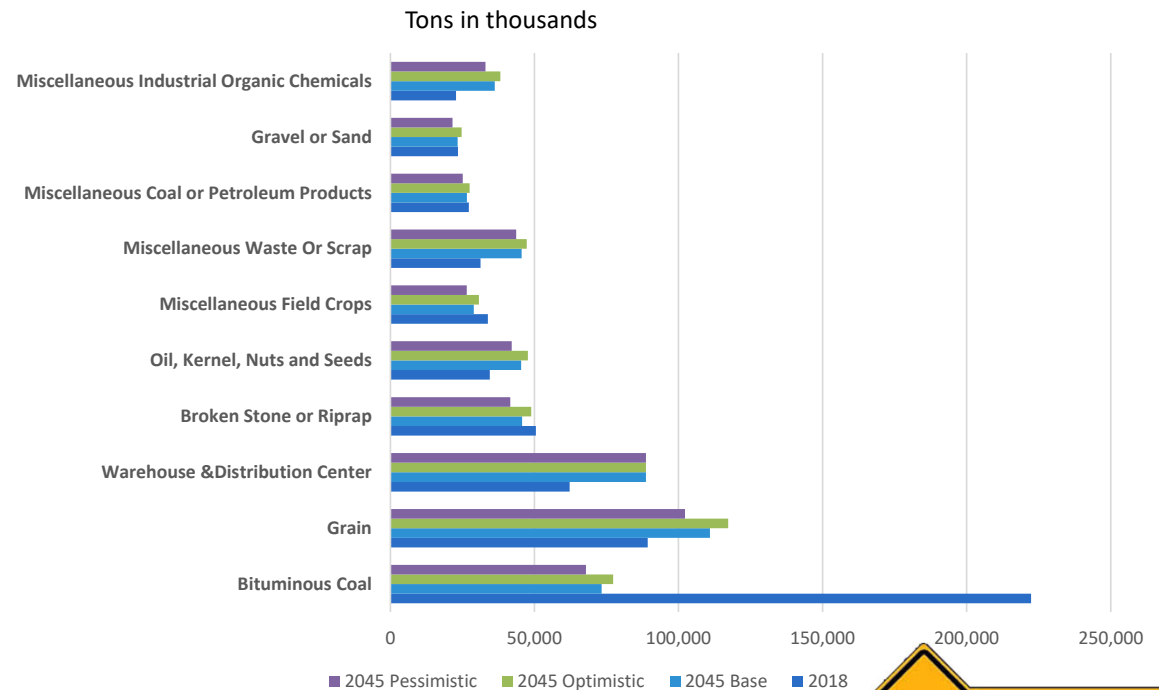


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

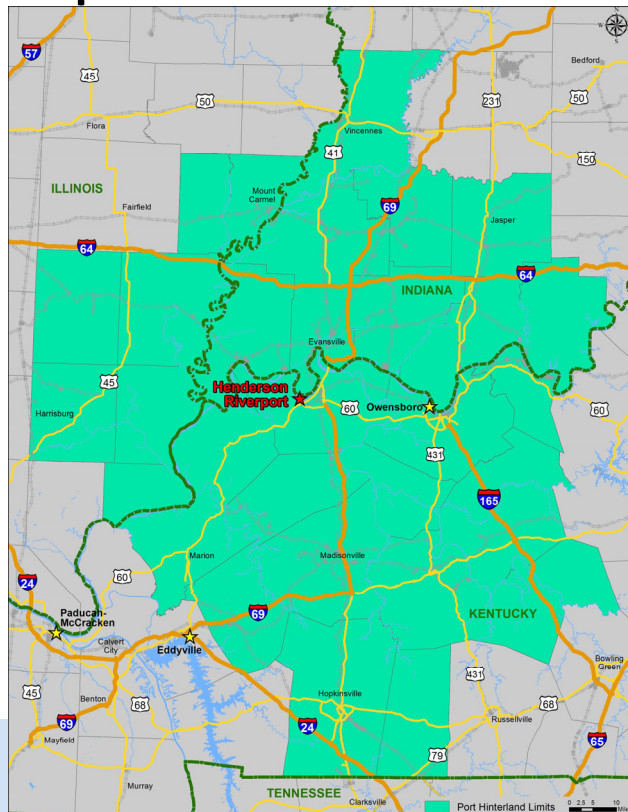
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- Waste and scrap #6
- Coal #3 but still in decline

Freight Forecast Scenarios: Top Commodities



Henderson County Riverport Authority

Competitive Market Hinterland



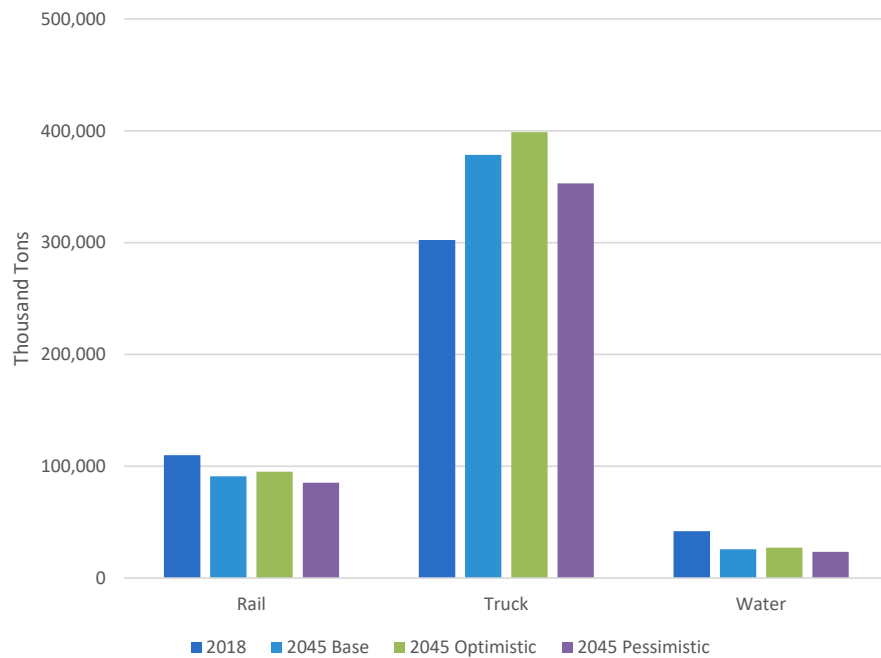
Market Outlook

- Agriculture and manufacturing in the region provide key opportunities.
- Hinterland of 30 counties extends to Kentucky, Illinois and Indiana

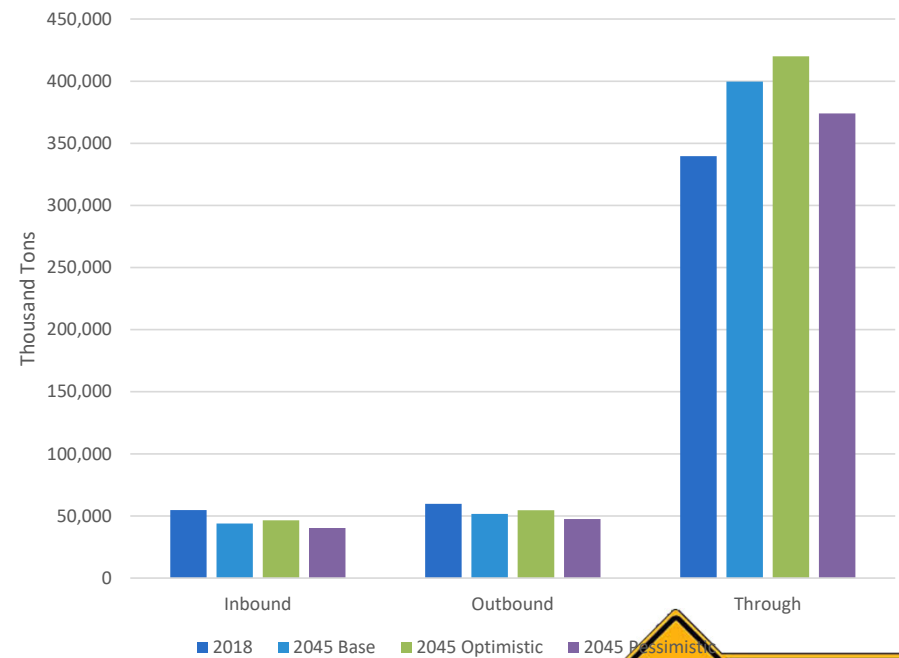


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

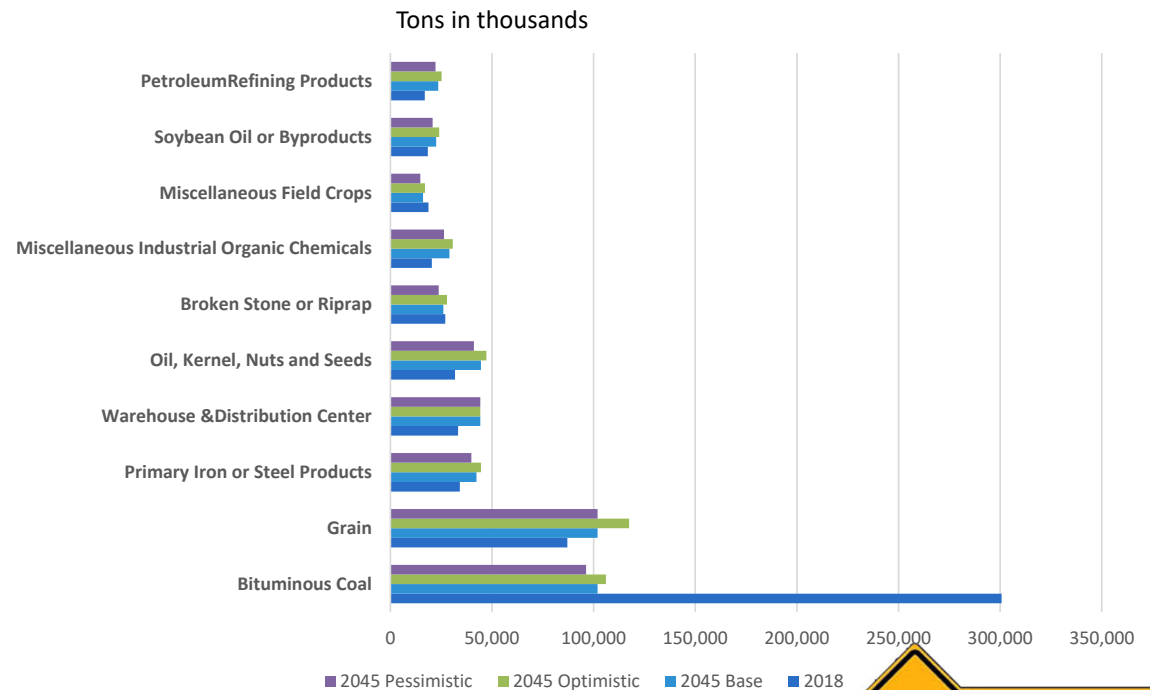


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

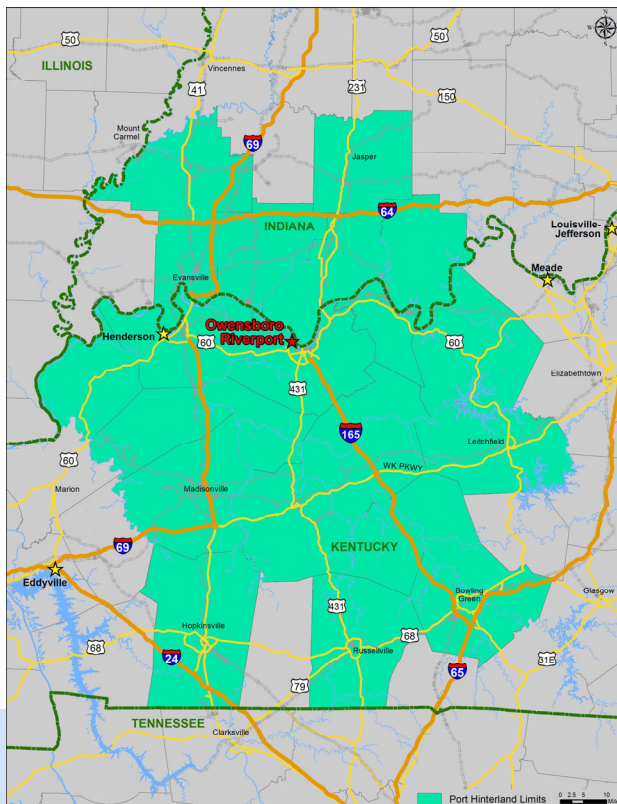
- Grain replaces coal as #1
- Soybeans in oil, kernel, nuts and seeds #3
- Mixed consumer products in warehouses are #4 but with diversion challenges
- Iron and Steel #5
- Industrial Chemicals #6
- Coal #2 but still in decline

Freight Forecast Scenarios: Top Commodities



Owensboro Riverport Authority

Competitive Market Hinterland



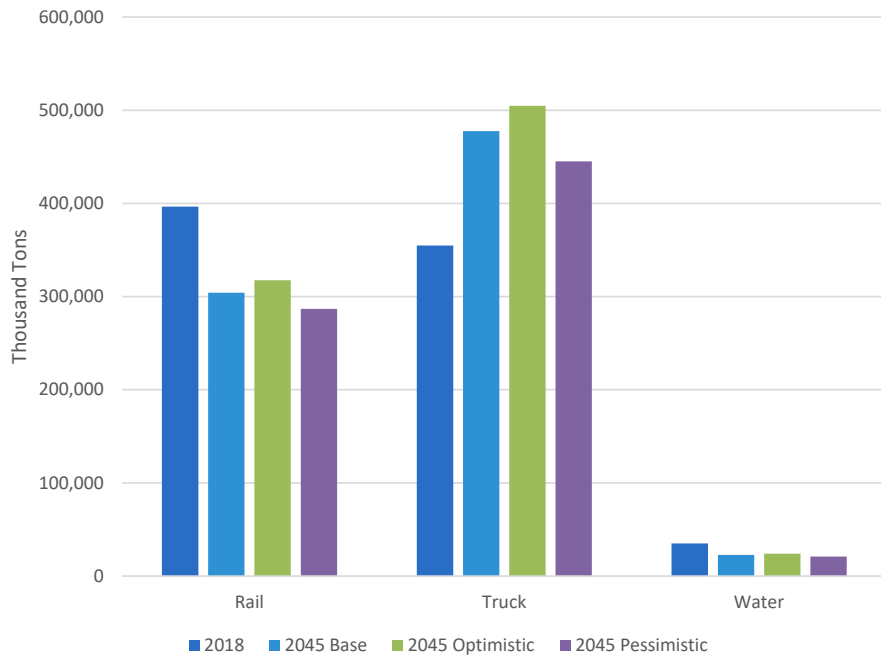
Market Outlook

- Regional growth from manufactured commodities including aluminum already handled by the port.
- Rail access provides diversion potential
- Hinterland of 21 counties in Kentucky and Indiana includes much product manufacturing

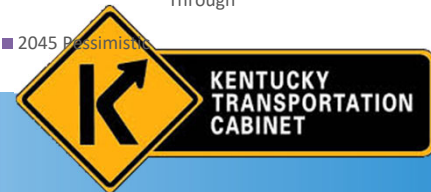
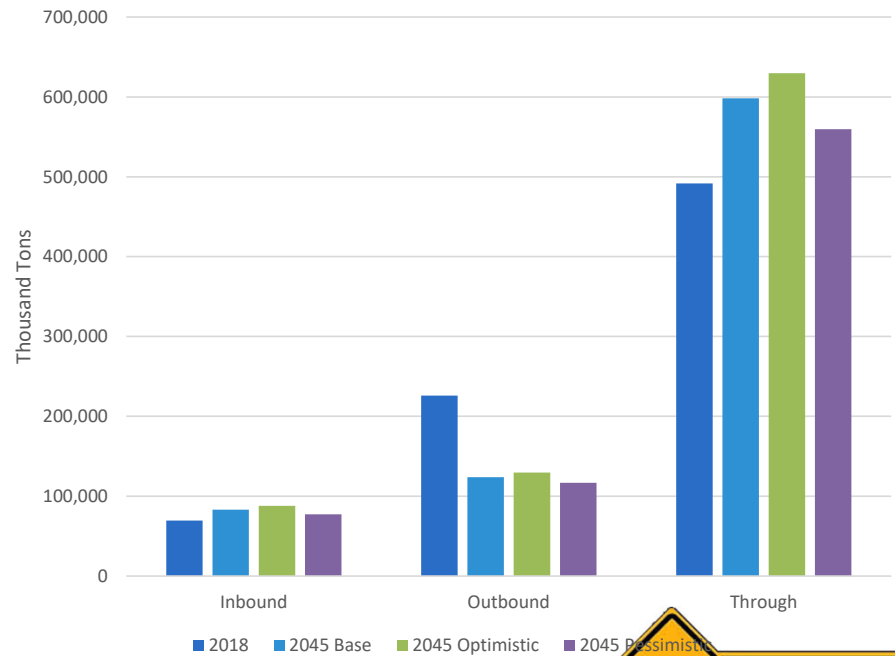


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

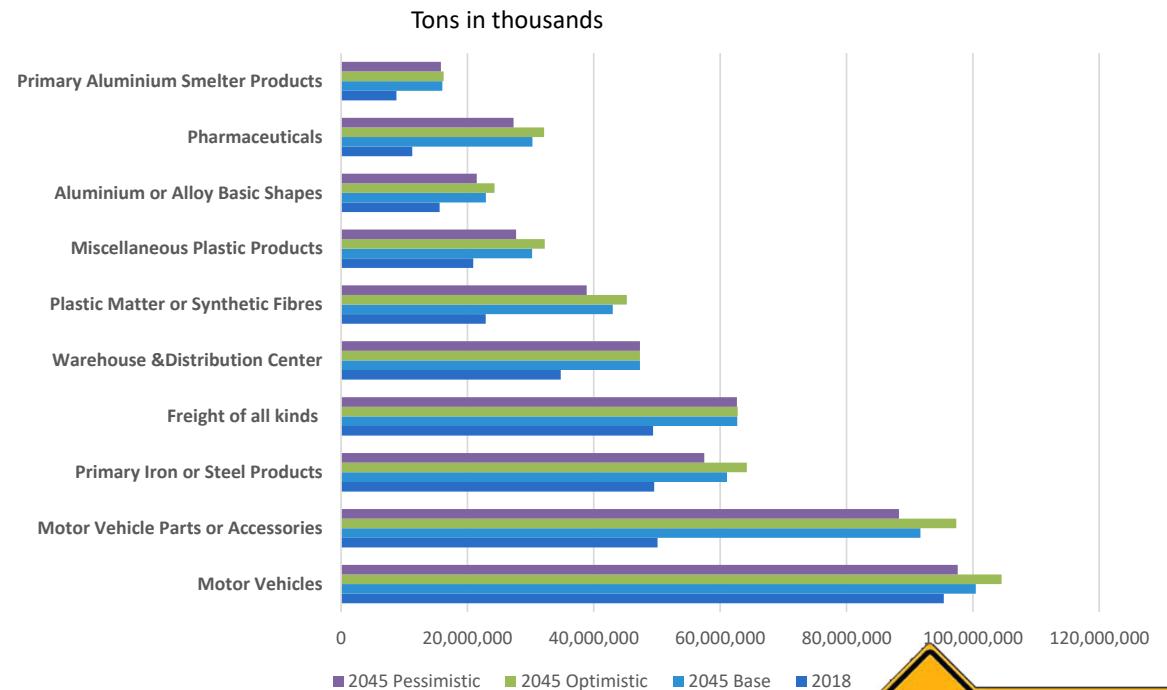


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

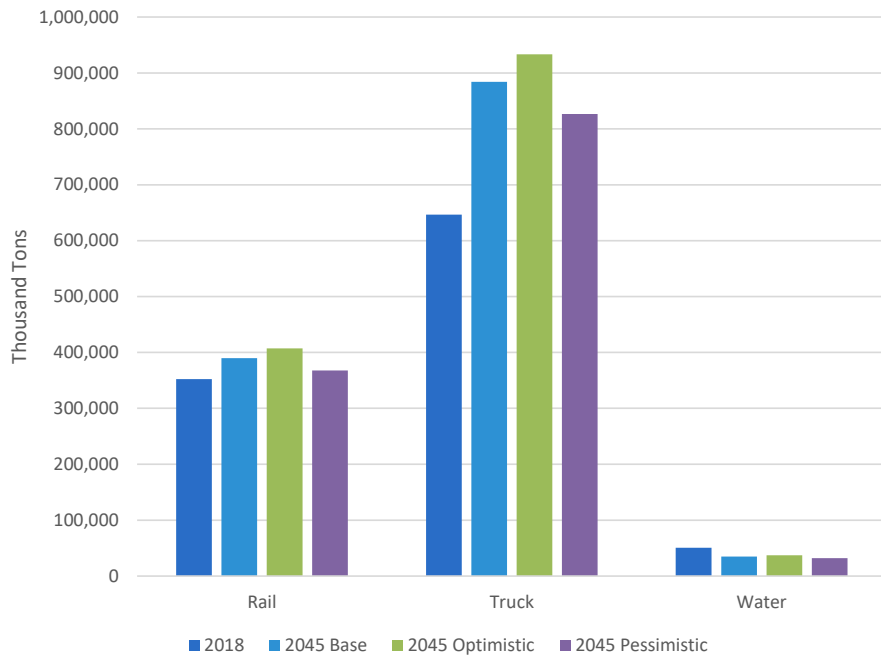
- Motor vehicles are #1
- Motor vehicle parts #2
- Mixed Freight All Kinds #3
- Iron and Steel #4
- Mixed consumer products in warehouses are #5
- Plastics, Synthetics #6

Freight Forecast Scenarios: Top Commodities

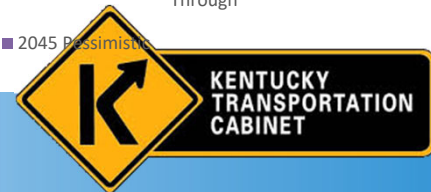
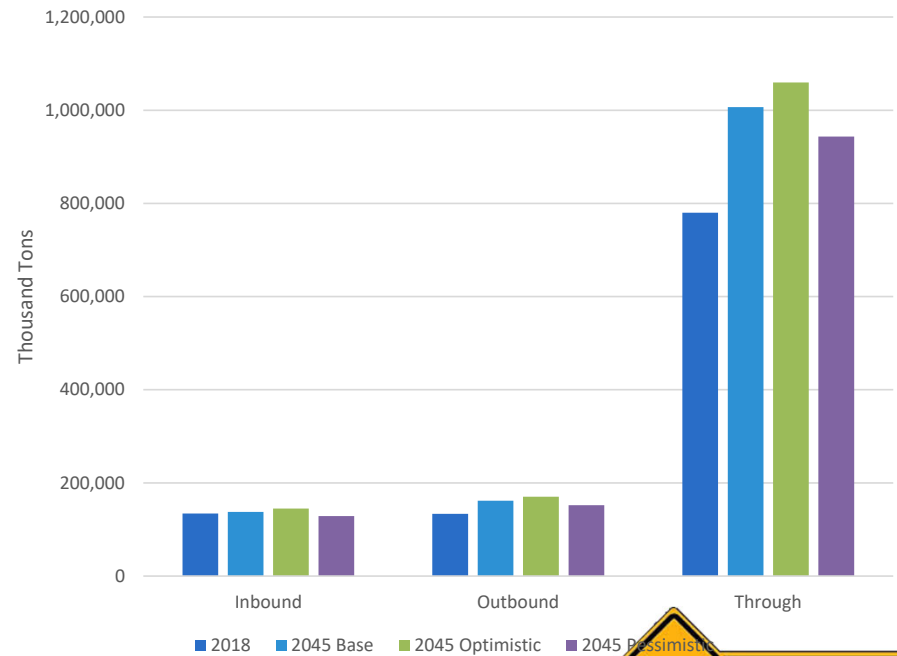


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

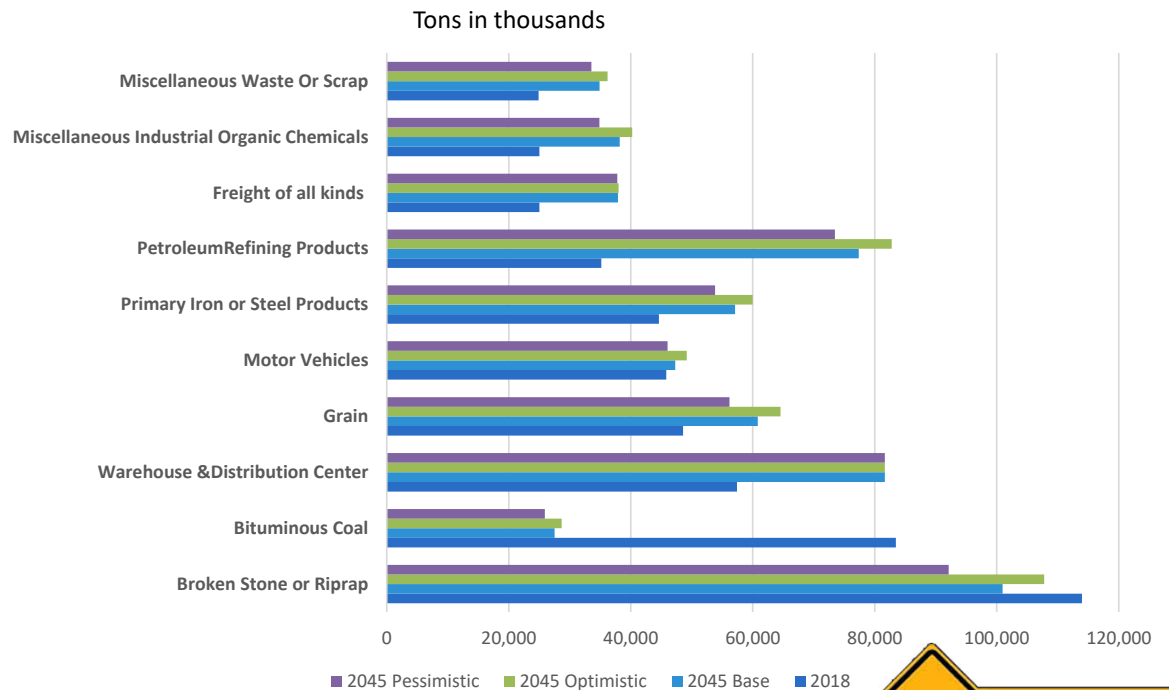


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

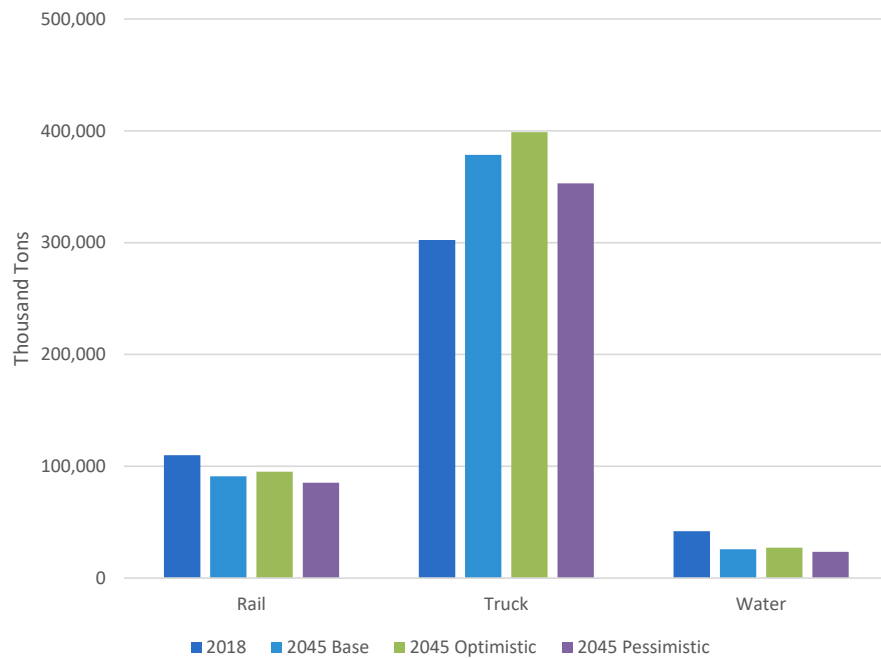
- Broke stone, riprap #1
- Mixed consumer products in warehouses are #2
- Petroleum Products #3
- Grain #4
- Iron and Steel #5
- Motor Vehicles #6
- Coal falls from #2 to #9

Freight Forecast Scenarios: Top Commodities

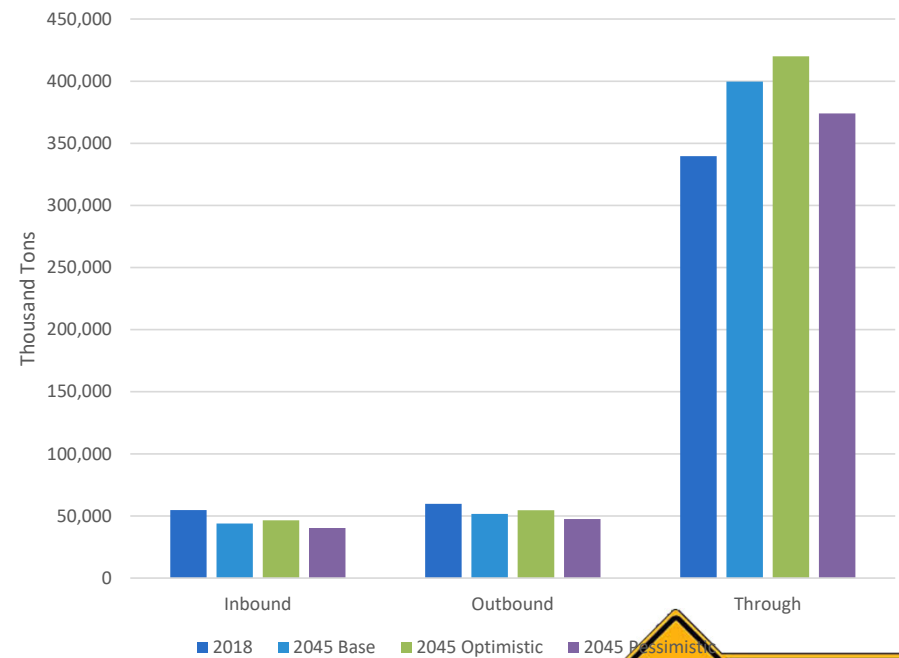


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

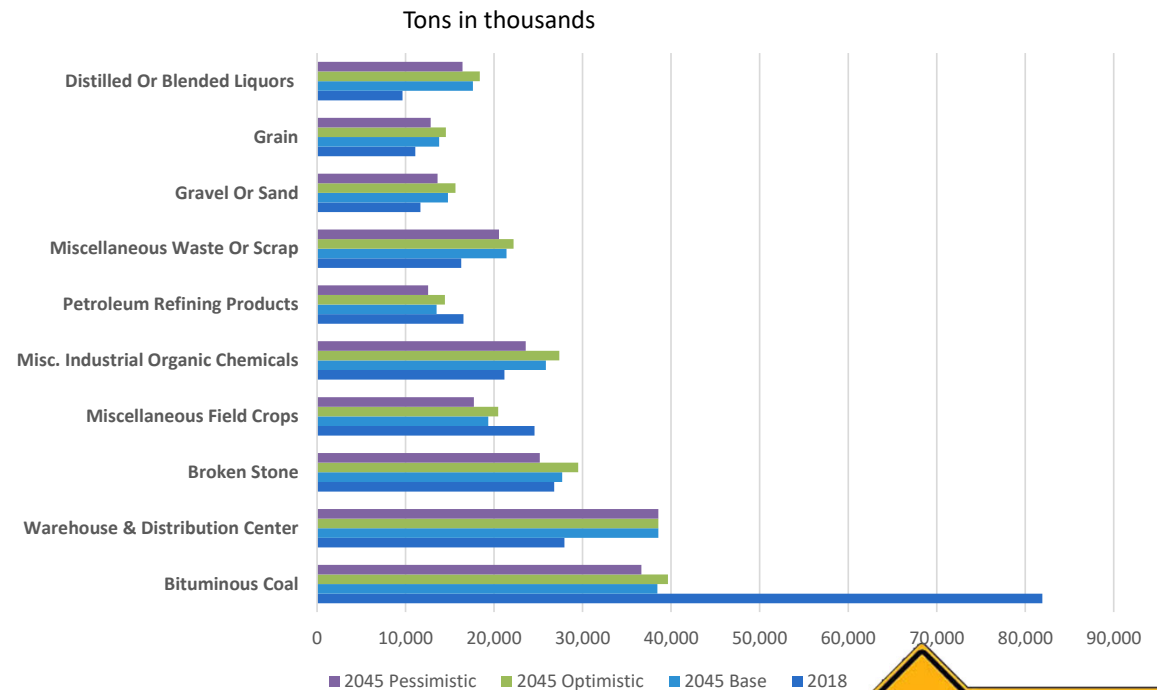


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

- Coal down but still #1 or #2
- Mixed consumer products in warehouses are #2
- Broken stone #3
- Industrial Chemicals #4
- Waste or Scrap #5
- Field Crops #6
- Liquors #7

Freight Forecast Scenarios: Top Commodities

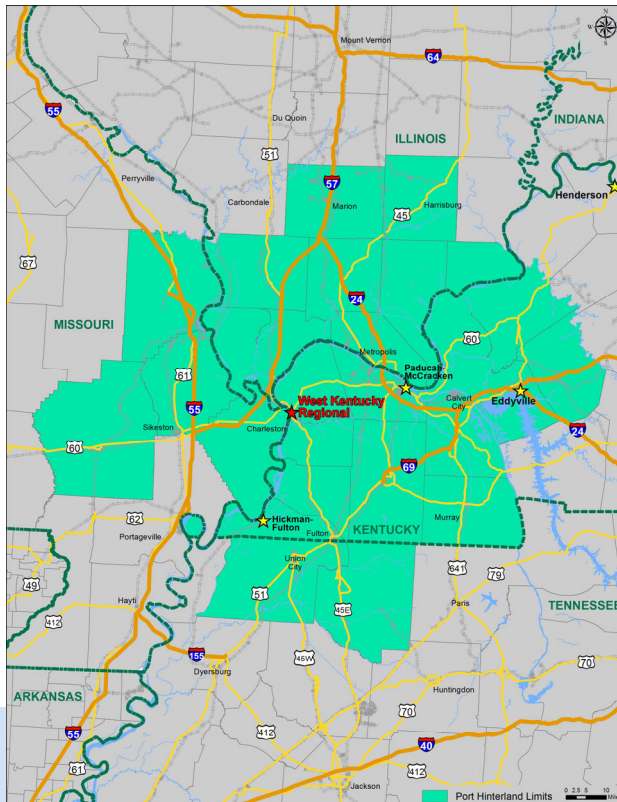


Developing Public Riverports in Kentucky



West Kentucky Regional Riverport Authority

Competitive Market Hinterland



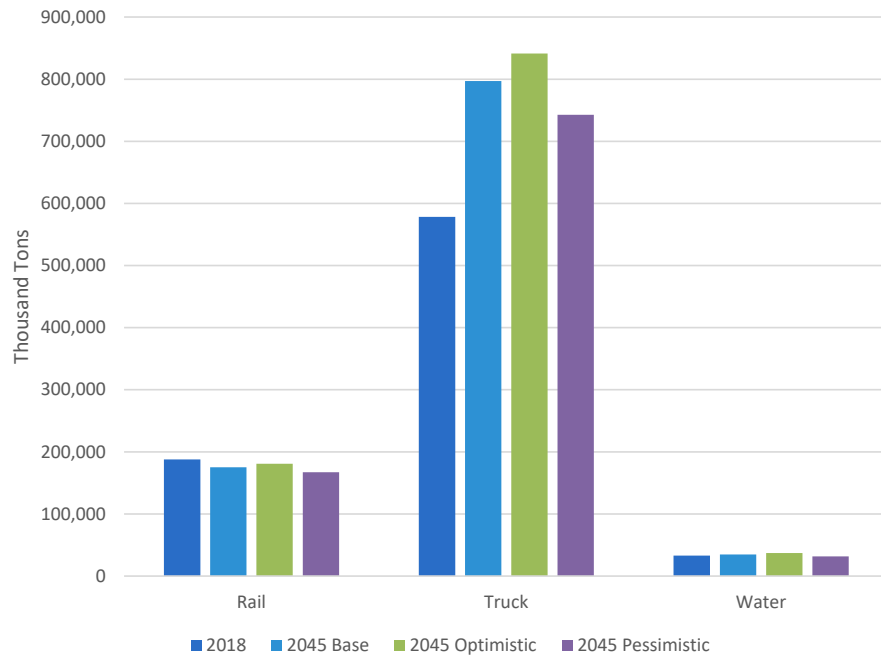
Market Outlook

- Potential from rail and truck commodity growth regionally
- Variety of agricultural, resource and manufactured growth categories provide opportunities
- Hinterland of 27 counties in Kentucky, Illinois and Missouri

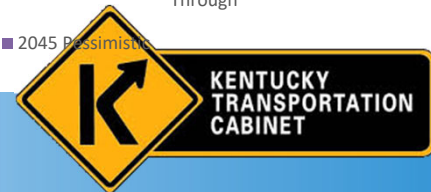
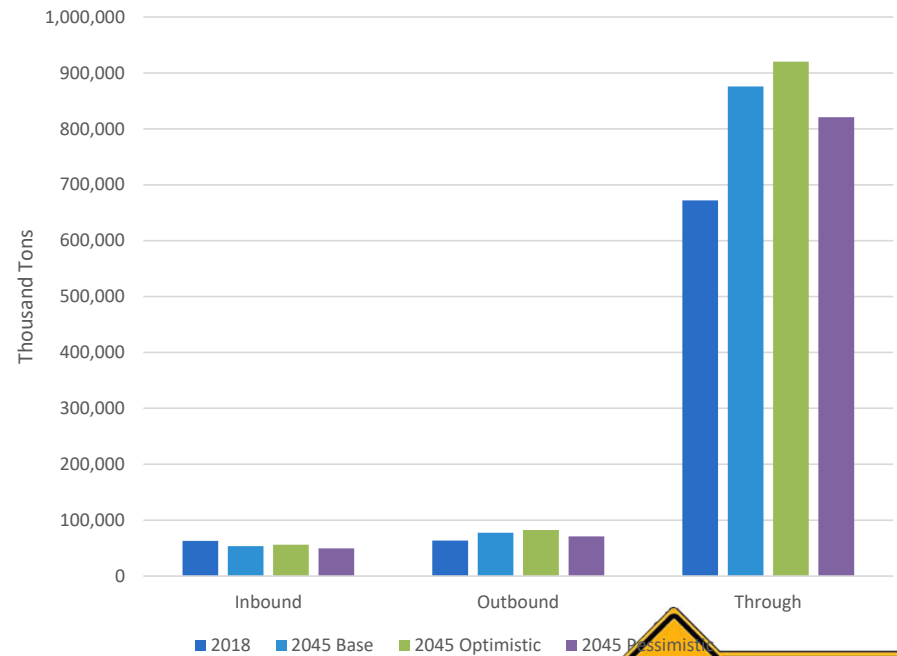


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

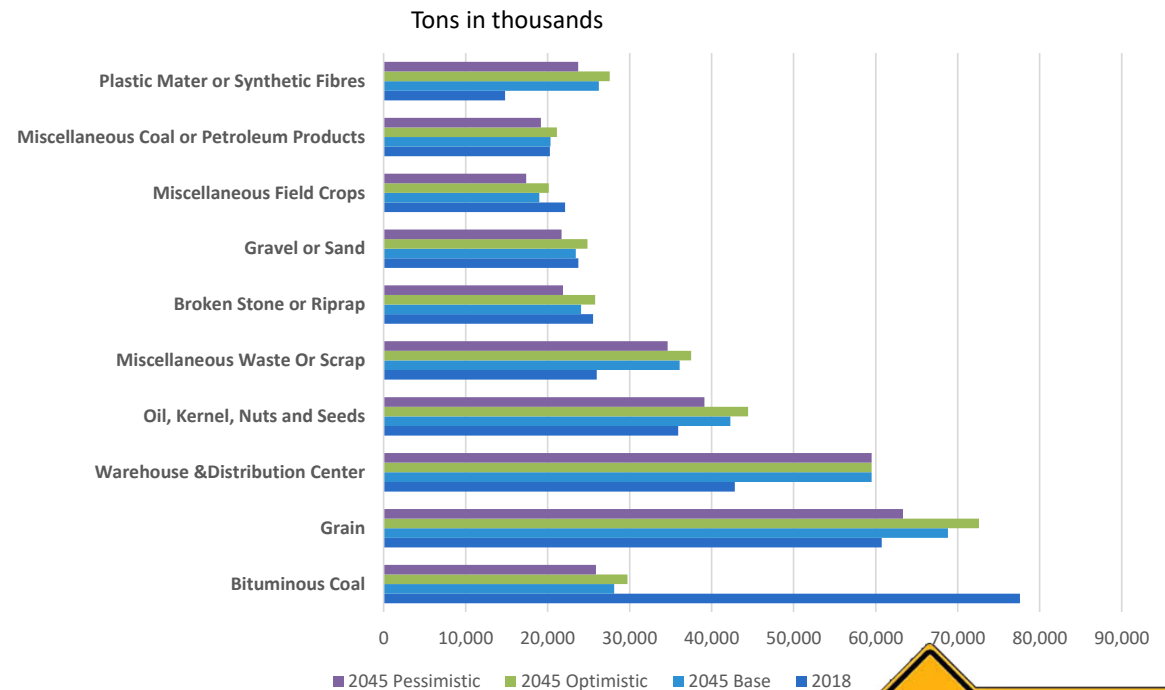


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

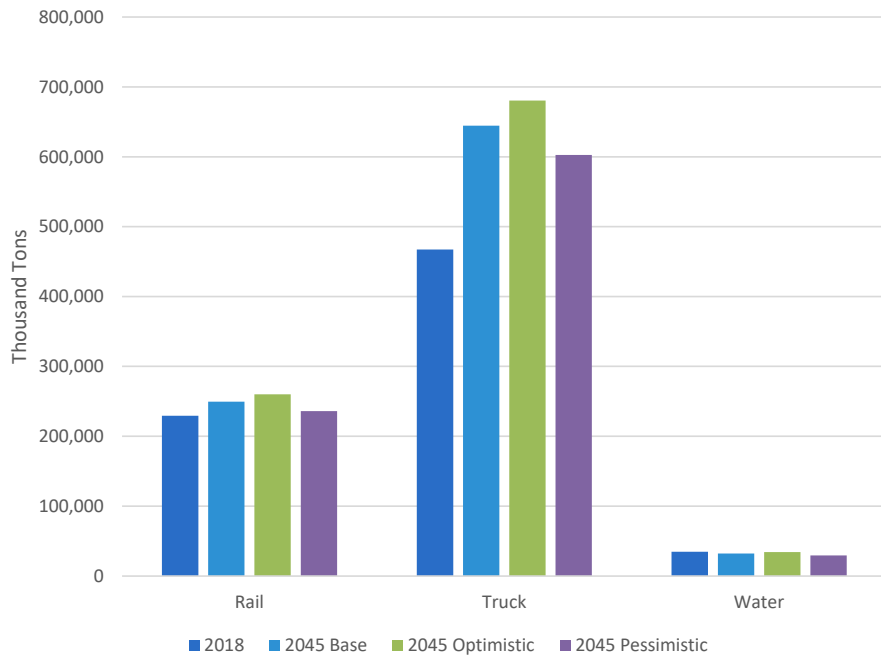
- Grain replaces coal as #1
- Mixed consumer products in warehouses are #2 but with diversion challenges
- Soybeans in oil, kernel, nuts and seeds #3
- Waste and scrap #4
- Plastics & synthetics #5

Freight Forecast Scenarios: Top Commodities

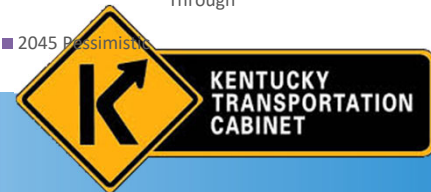
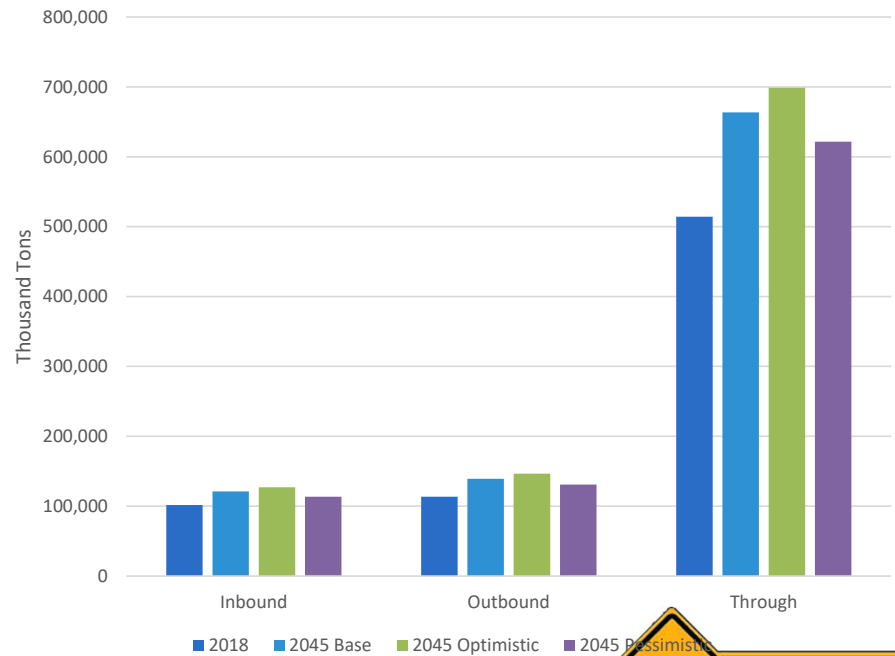


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

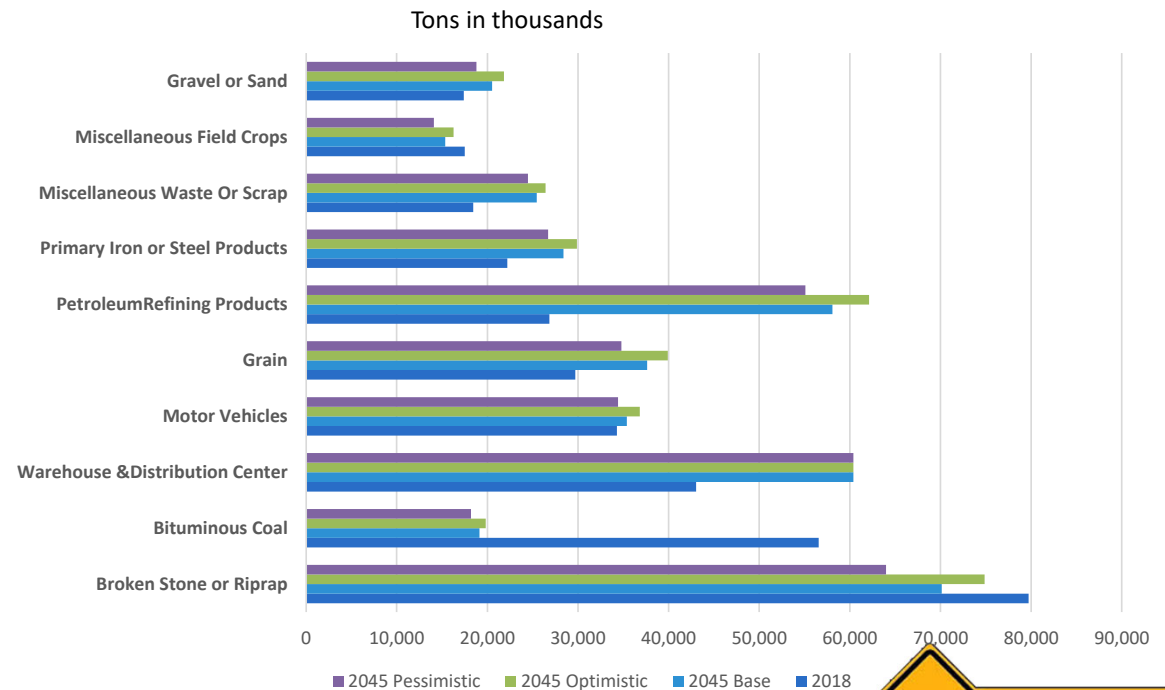


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

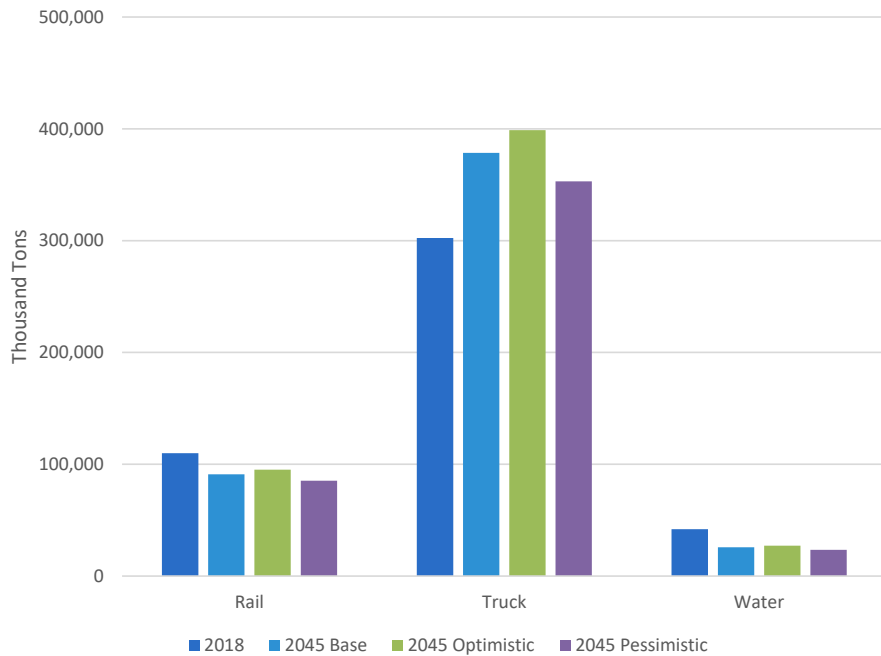
- Broken stone, riprap #1
- Mixed consumer products in warehouses are #2 but with diversion challenges
- Petroleum Products #3
- Grain #4
- Motor Vehicles #5
- Iron or Steel Products #6
- Coal falling from #2 to #9

Freight Forecast Scenarios: Top Commodities

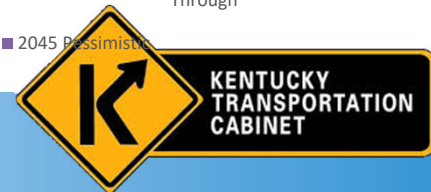
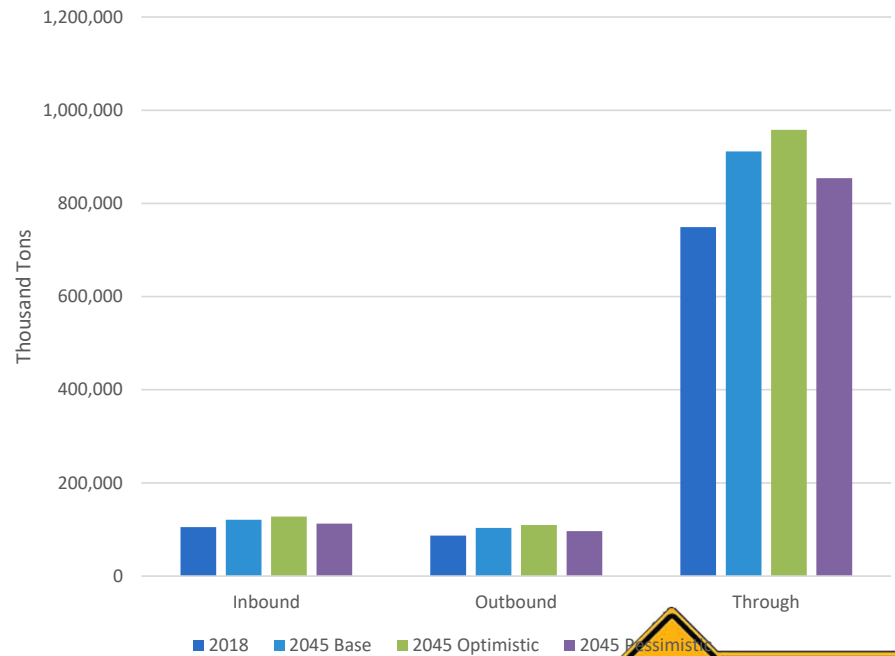


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

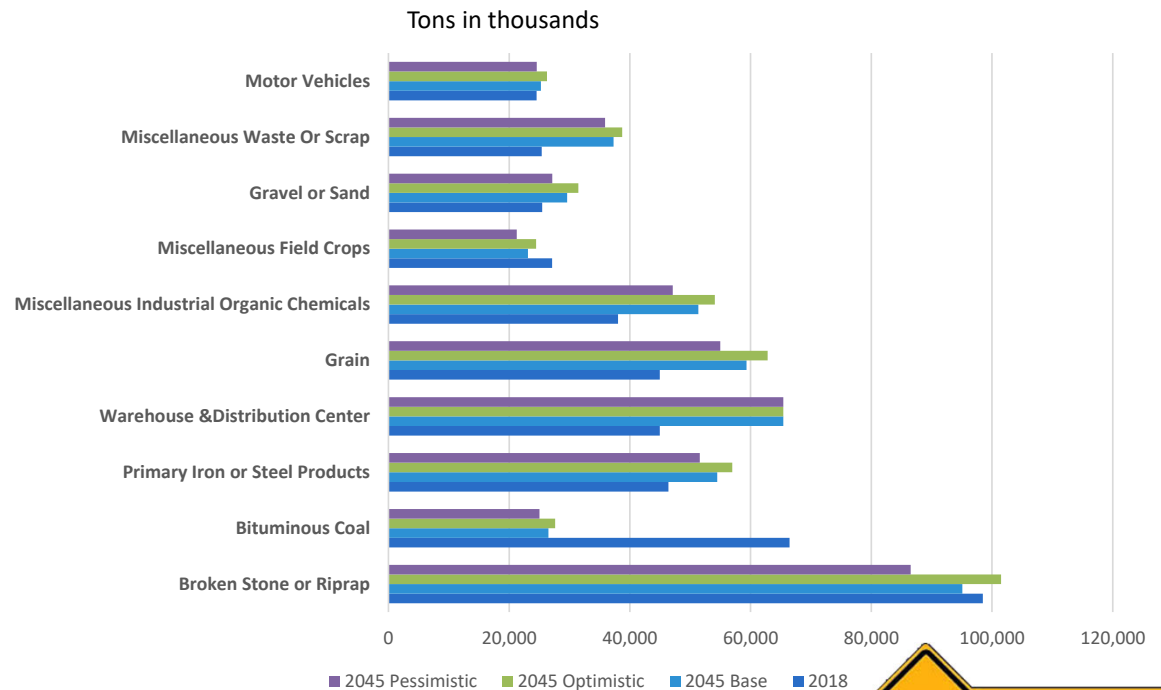


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

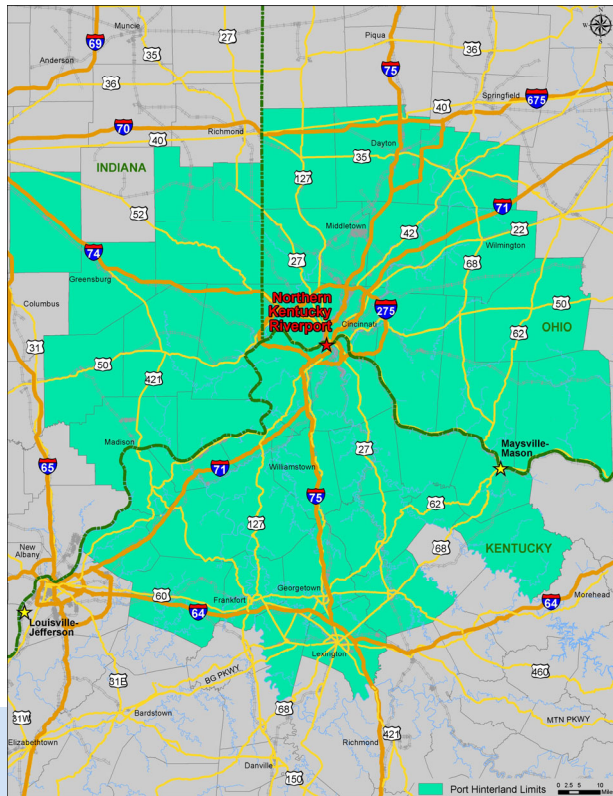
- Broken stone, riprap #1
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- Grain #3
- Iron or Steel Products #4
- Industrial Chemicals #5
- Waste and Scrap #6
- Coal falling from #2 to #9

Freight Forecast Scenarios: Top Commodities



Northern Kentucky Riverport

Competitive Market Hinterland



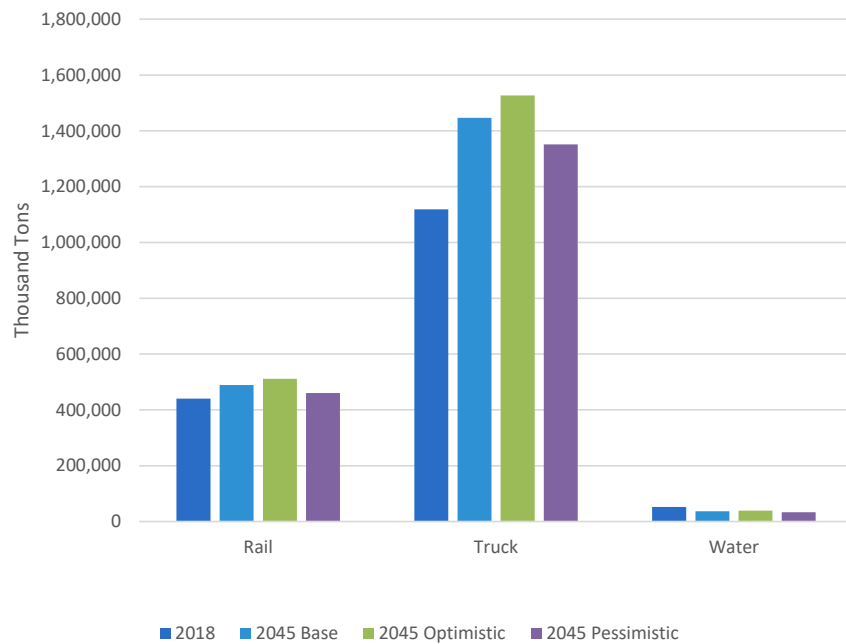
Market Outlook

- Cincinnati metro area economy continues to offer development potential
- Hinterland of 44 counties in Kentucky, Ohio and Indiana

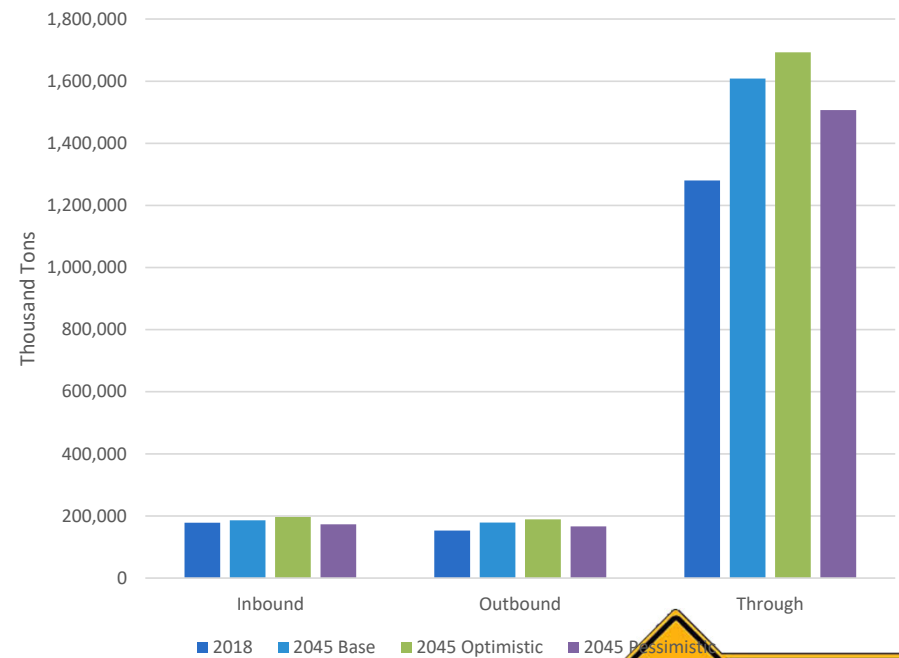


Forecast Scenarios Summary

Modal Freight Forecast Scenarios



Freight Forecast Scenarios by Direction

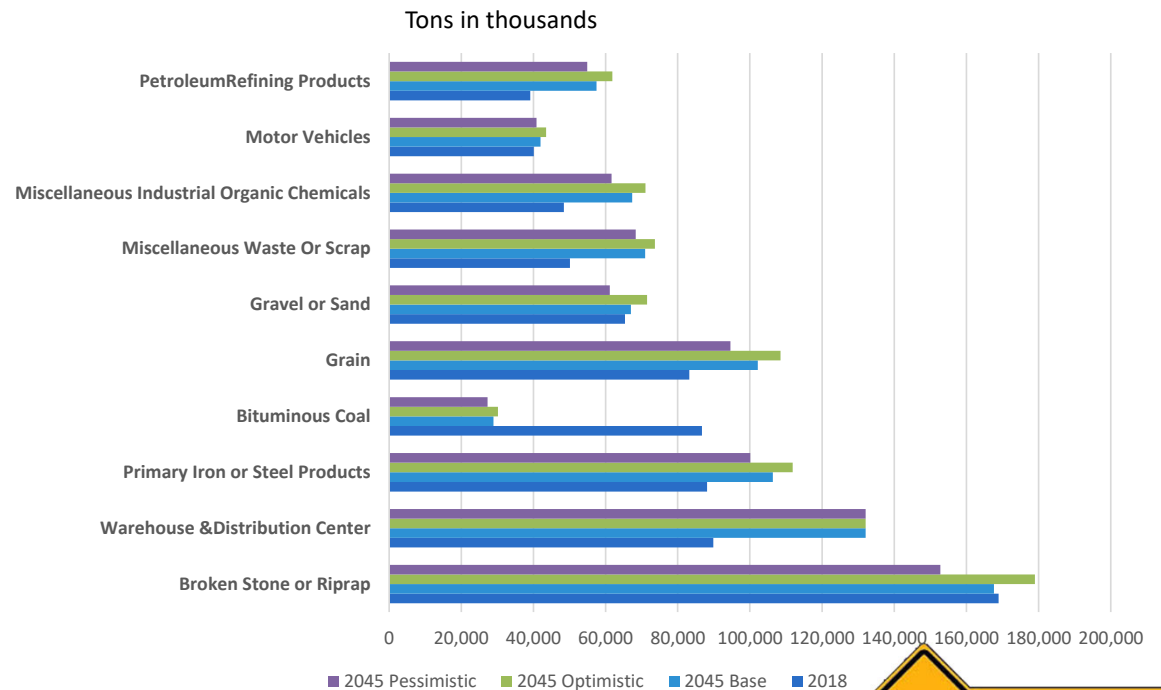


Freight Forecast Scenarios for Top Commodities

Key commodity growth:

- Broken stone, riprap #1
- Mixed consumer products in warehouses are #2 but with diversion challenges
- Iron or Steel Products #3
- Grain #4
- Waste or Scrap #5
- Industrial Chemicals #6
- Coal falling from #4 to #10

Freight Forecast Scenarios: Top Commodities



QUESTIONS AND COMMENTS



Summary of Graphics

- National Scale: Magnitude and percent change in truck-base water-divertible commodities
- Regional: County/region-based market size and percent change
- Corridors: Identifies corridors with significant truck-based flow that also have a reasonable water-based path.
- State level: Network analysis of total truck load, divertible load, and port-county divertible.
- Sub-State (three regions): 3D Network views of Port County flows:
 - Water divertible vs Not divertible
 - 2018 Divertible vs 2045 Divertible
 - Pct change in divertible from 2018 to 2045

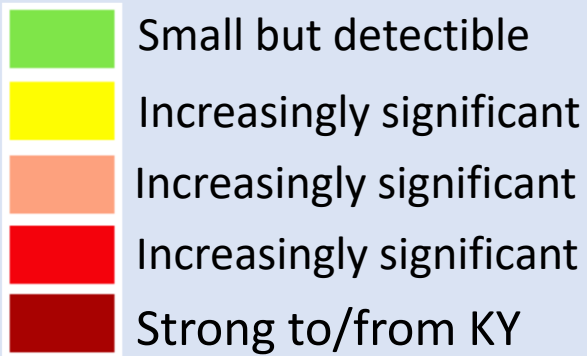


National Scale

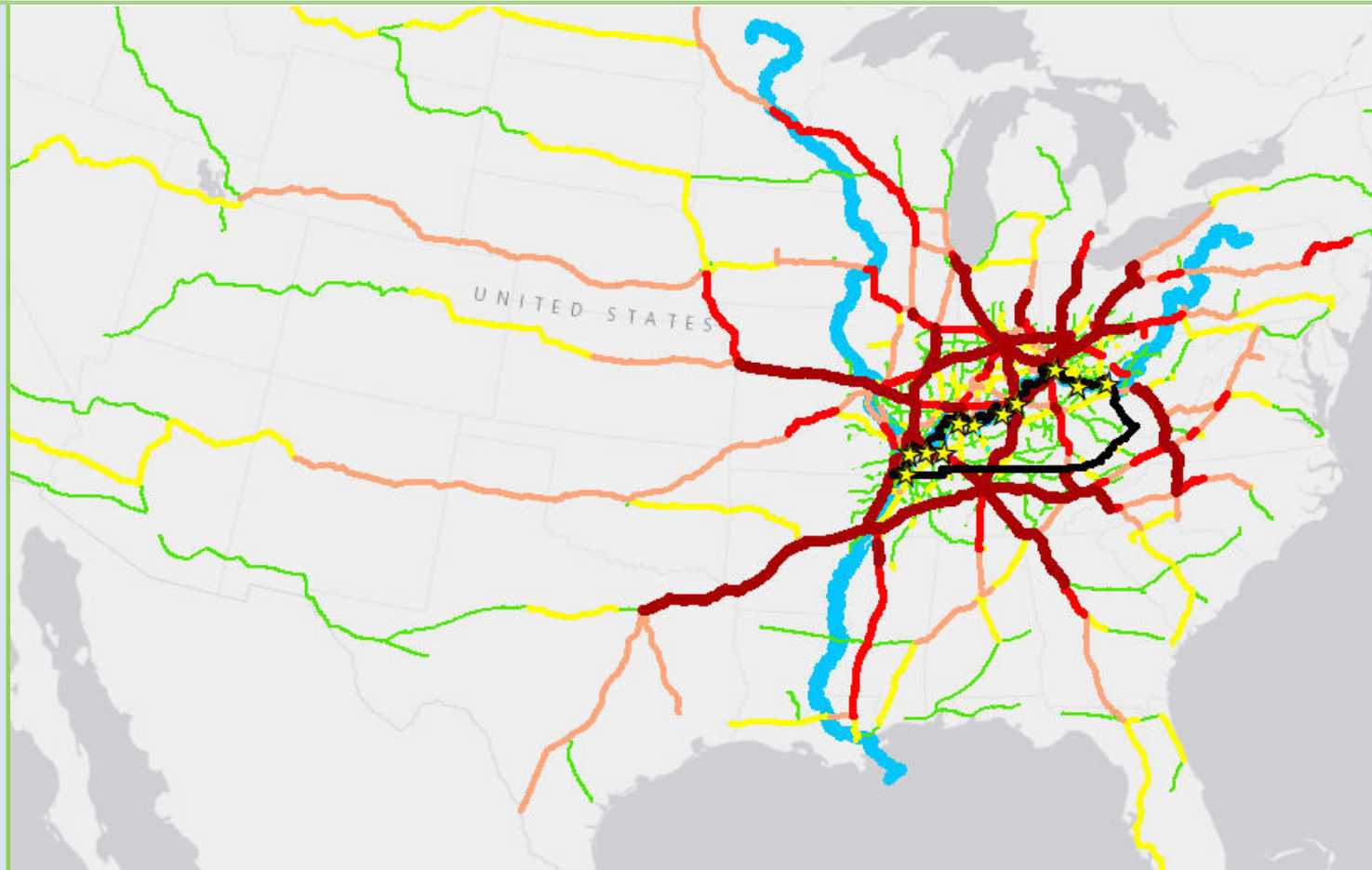
- Magnitude and percent change in truck-base water-divertible commodities



2018 Water-Divertible Commodities

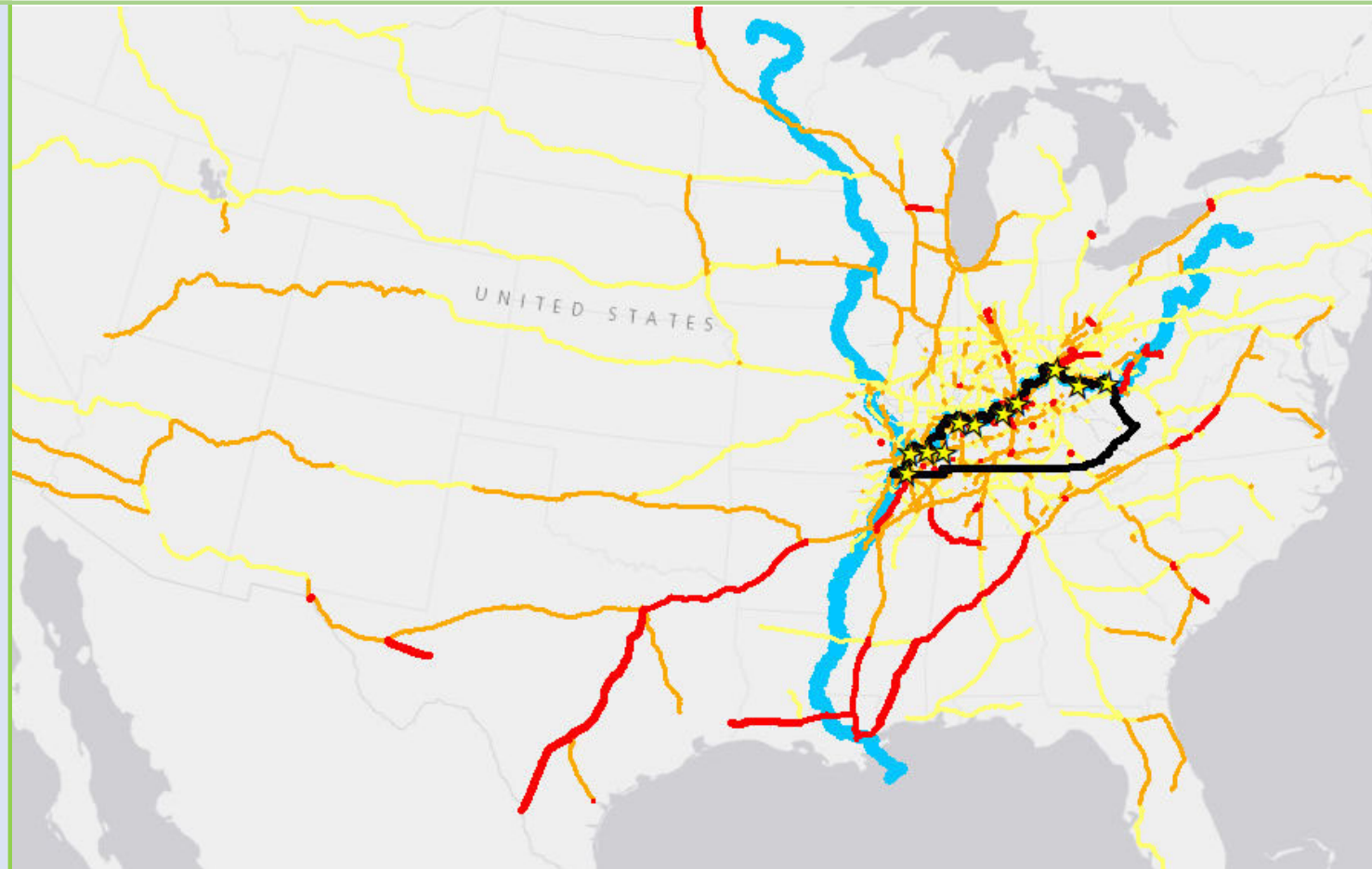


- Some corridors have potential for diversion, while others do not.



2018 to 2045 Growth in Water-Divertible Commodities

- **Yellow:** Up to 25%
- **Orange:** Up to 50%
- **Red:** More than 50%



Regional Scale

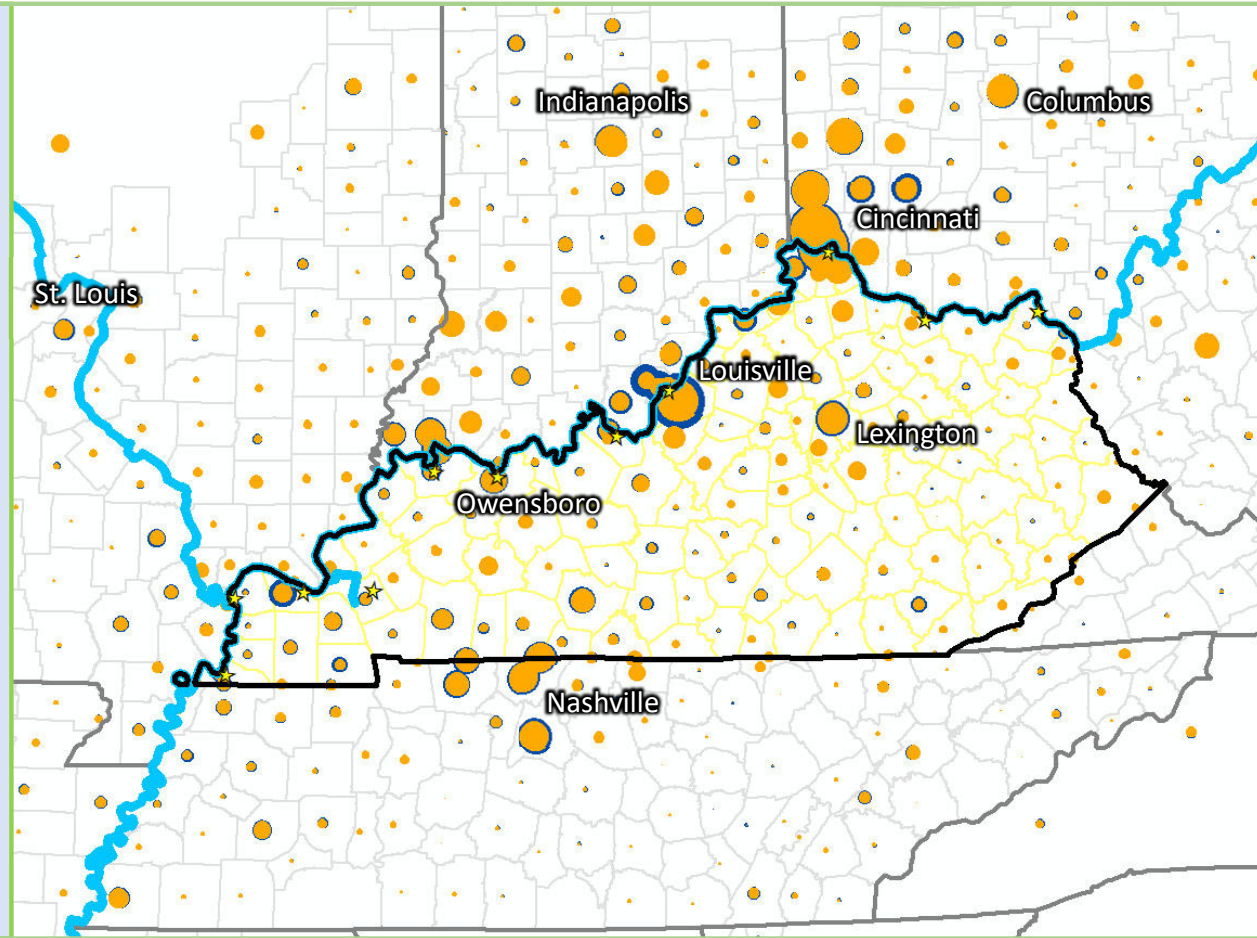
- Regional: County/region-based market size and percent change



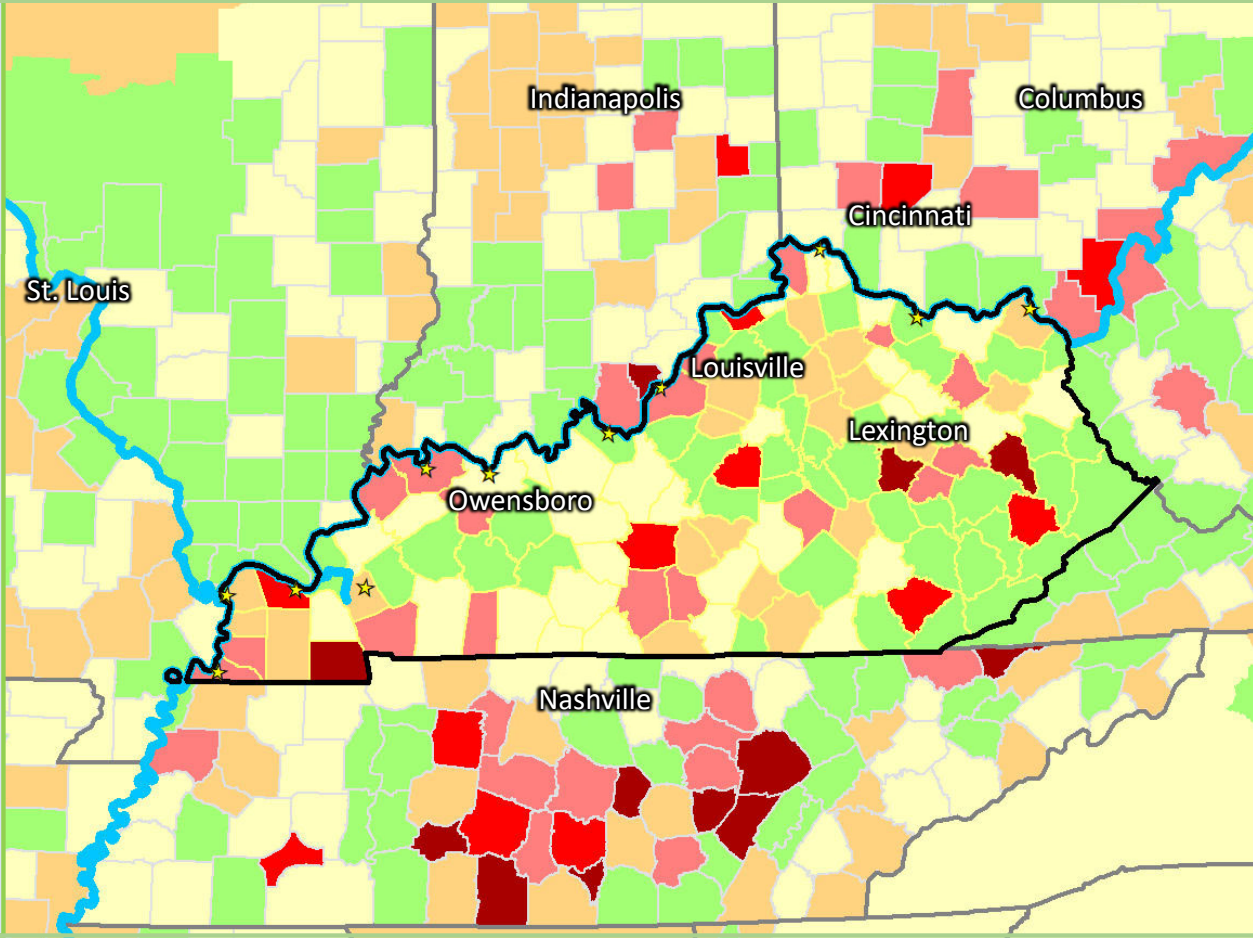
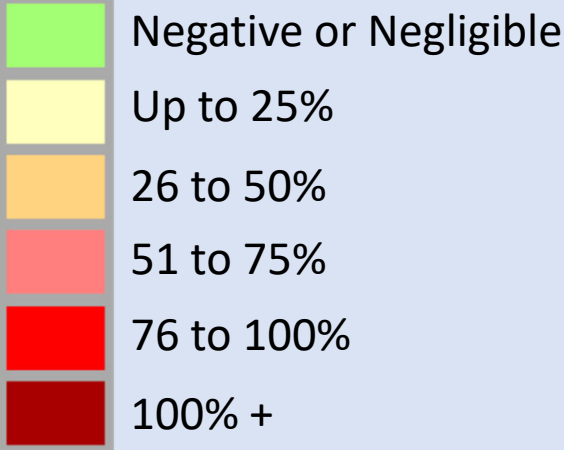
Water Divertible Shipment Sizes

- **Orange:** 2018 market size
- **Blue:** 2045 market size

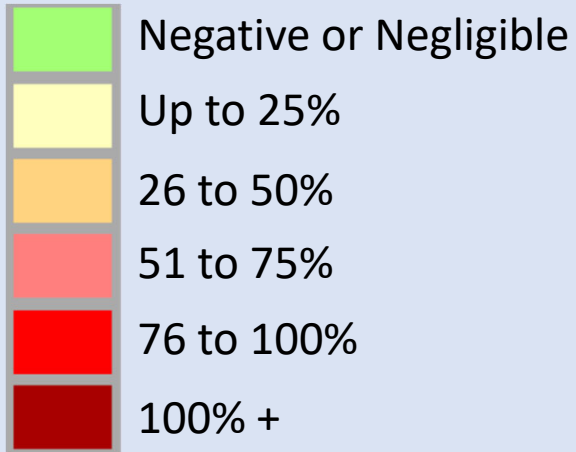
Louisville shows the strongest growth, followed by Nashville and suburbs of Cincinnati.



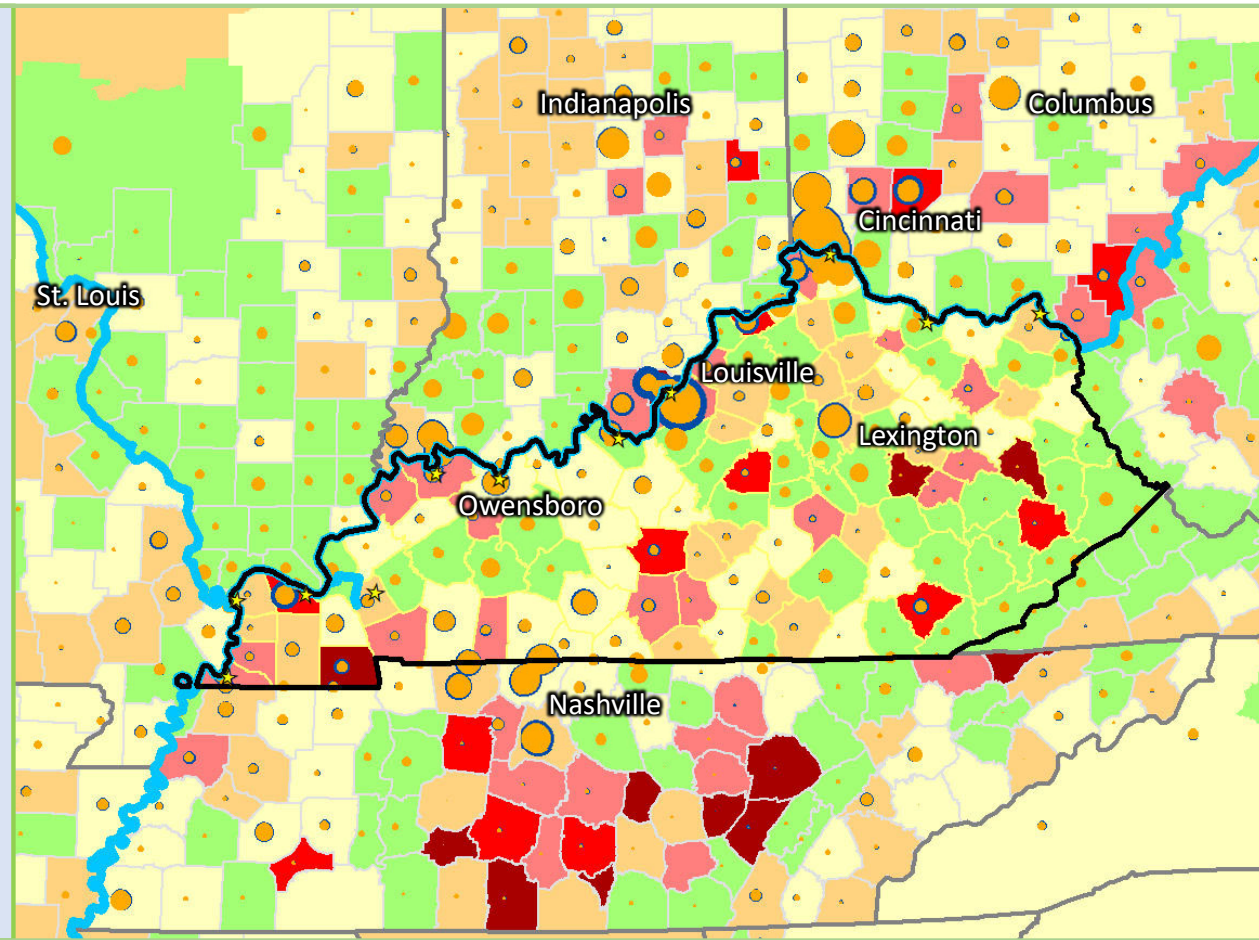
2018 to 2045 Percent Change in Divertible Shipment Sizes



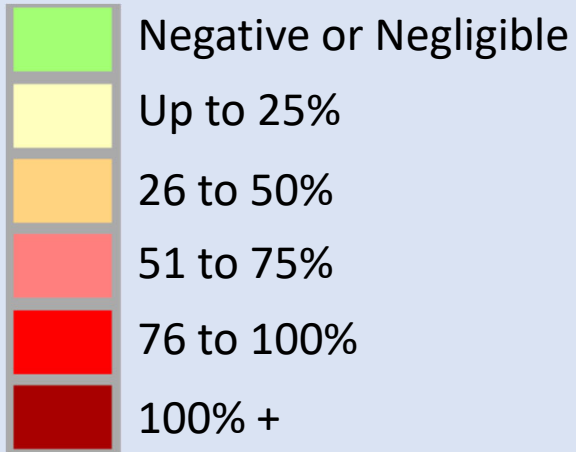
Market Size + 2018-2045 Percent Change in Divertible Shipment Sizes



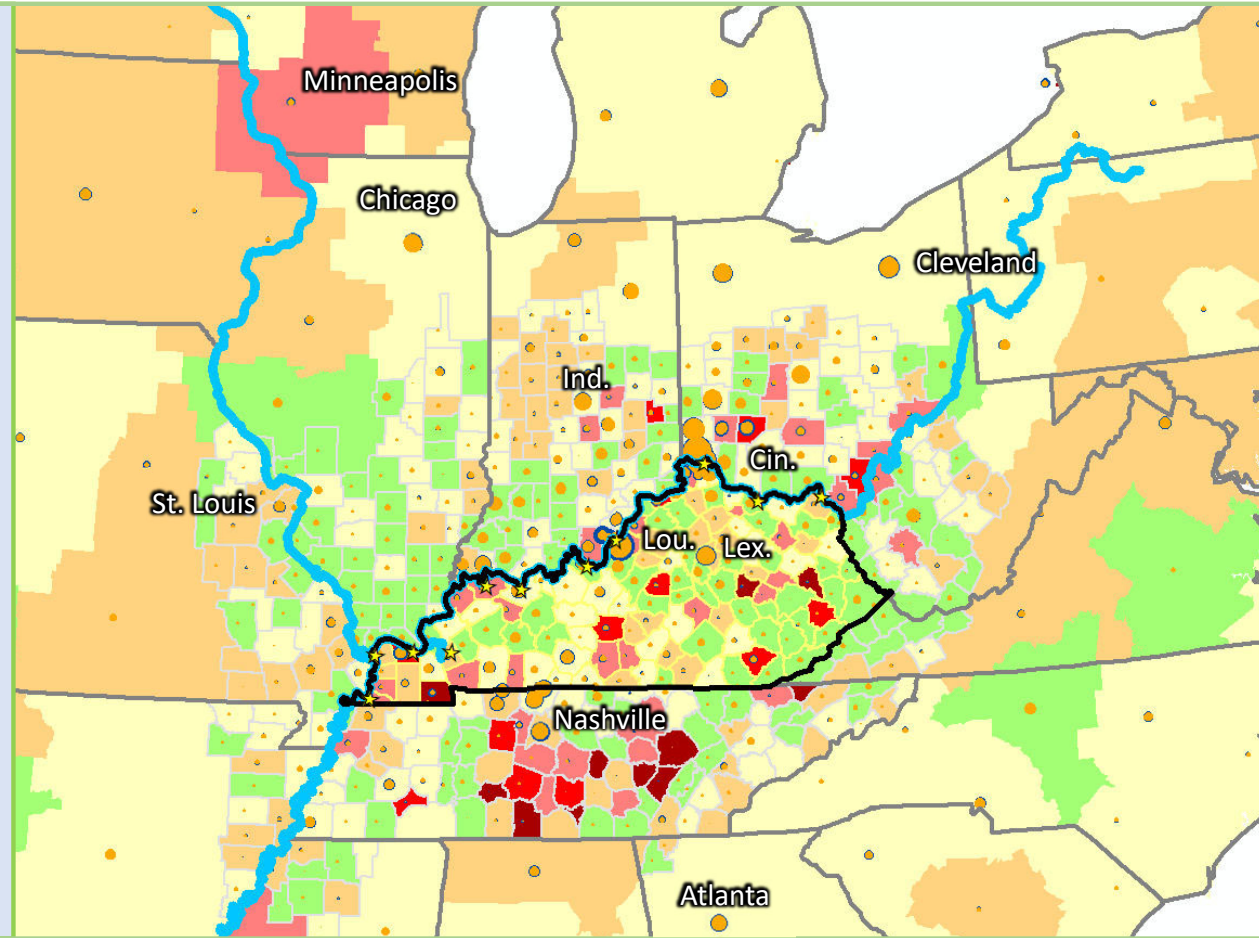
- **Orange:** 2018 market size
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Market Size + 2018-2045 Percent Change in Divertible Shipment Sizes



- **Orange:** 2018 market size
- **Blue:** 2045 market size



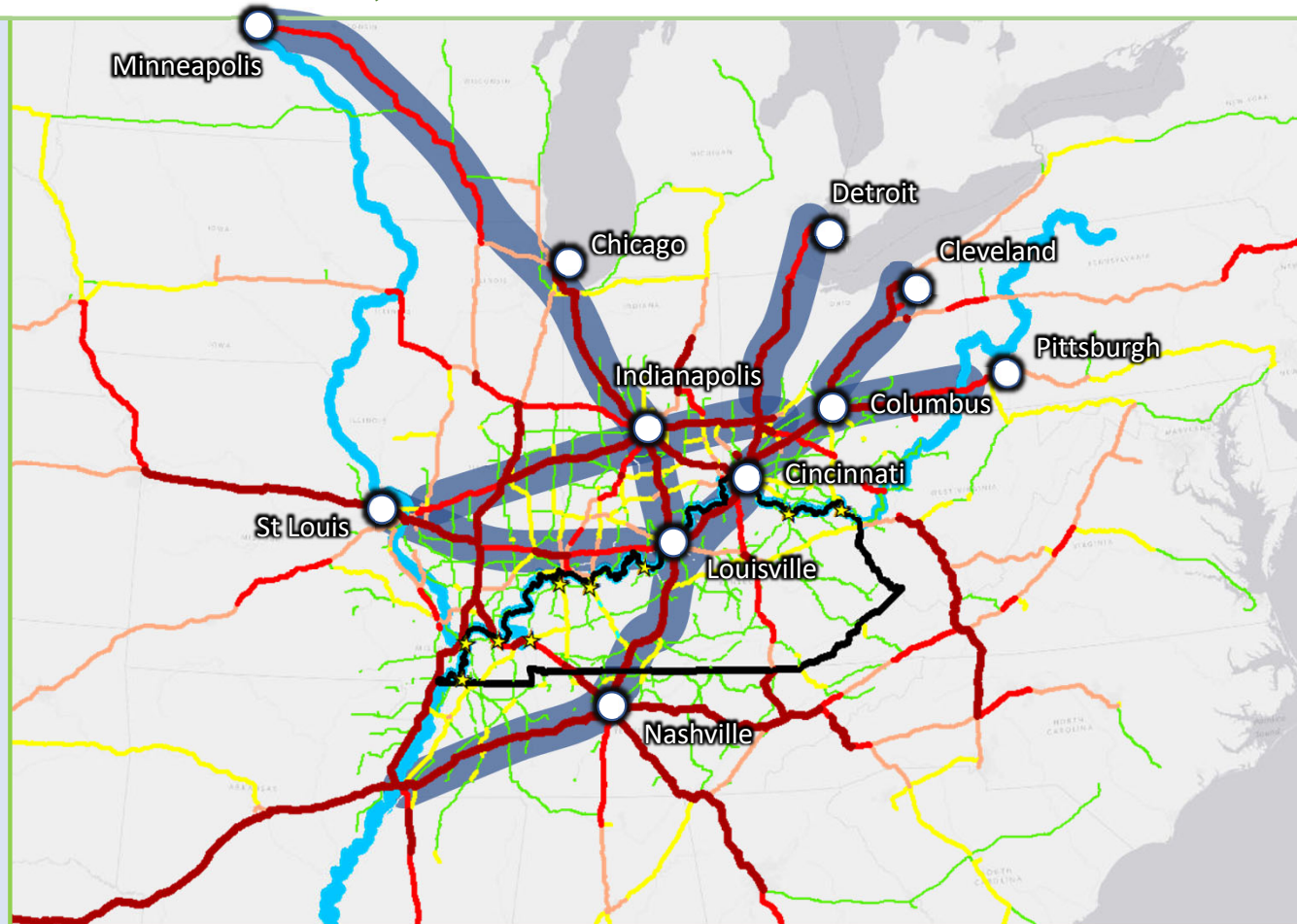
Corridor Analysis

- Identifies corridors with significant truck-based flow that also have a reasonable water-based path.



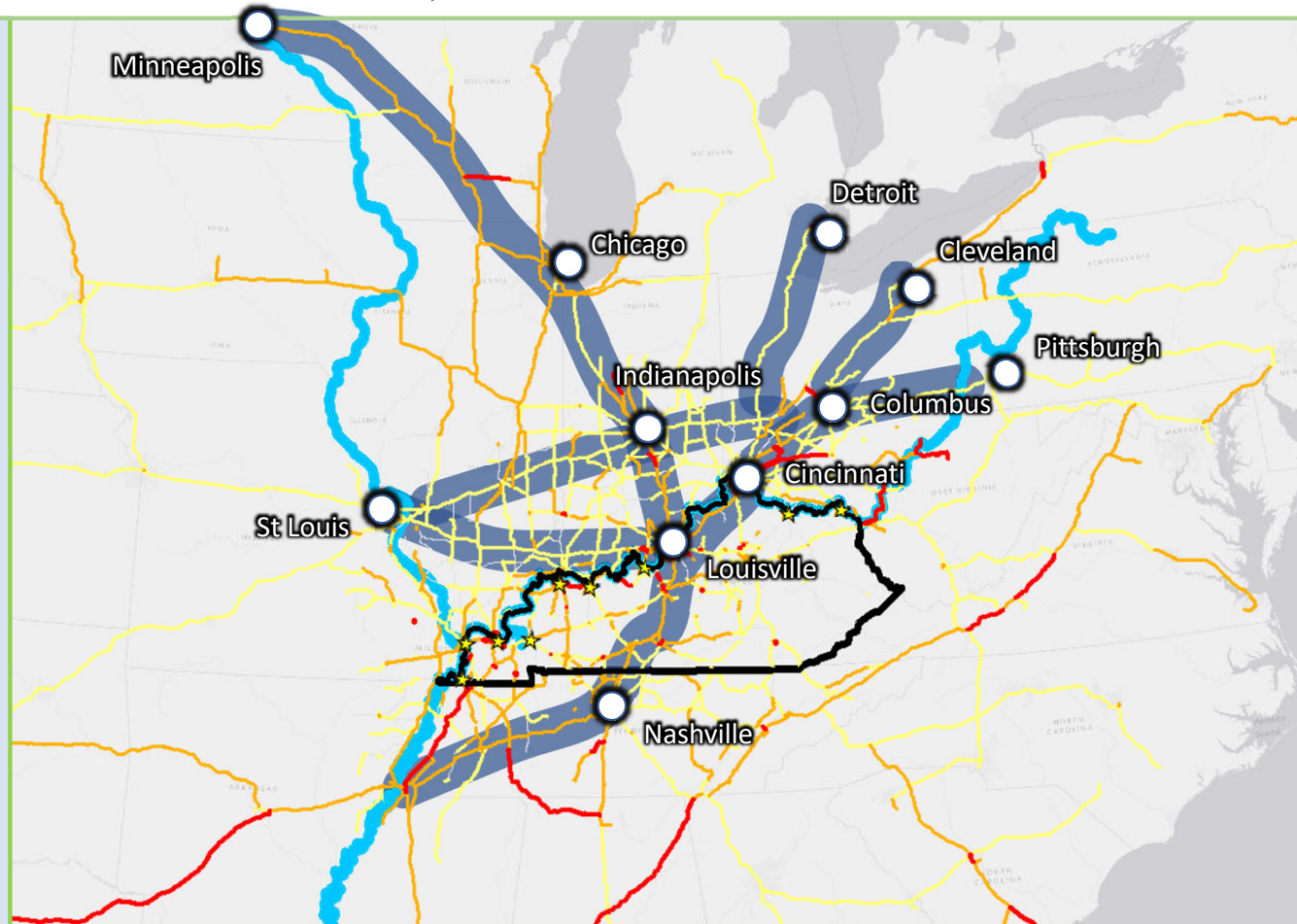
2018 Water-Divertible Commodities, Corridors of Interest

- These corridors ship significant water-divertible commodities by truck, but also tend to have waterway paths available for the majority of the trip.



2018 to 2045 Water-Divertible Growth, Corridors of Interest

- **Yellow:** Up to 25%
- **Orange:** Up to 50%
- **Red:** More than 50%



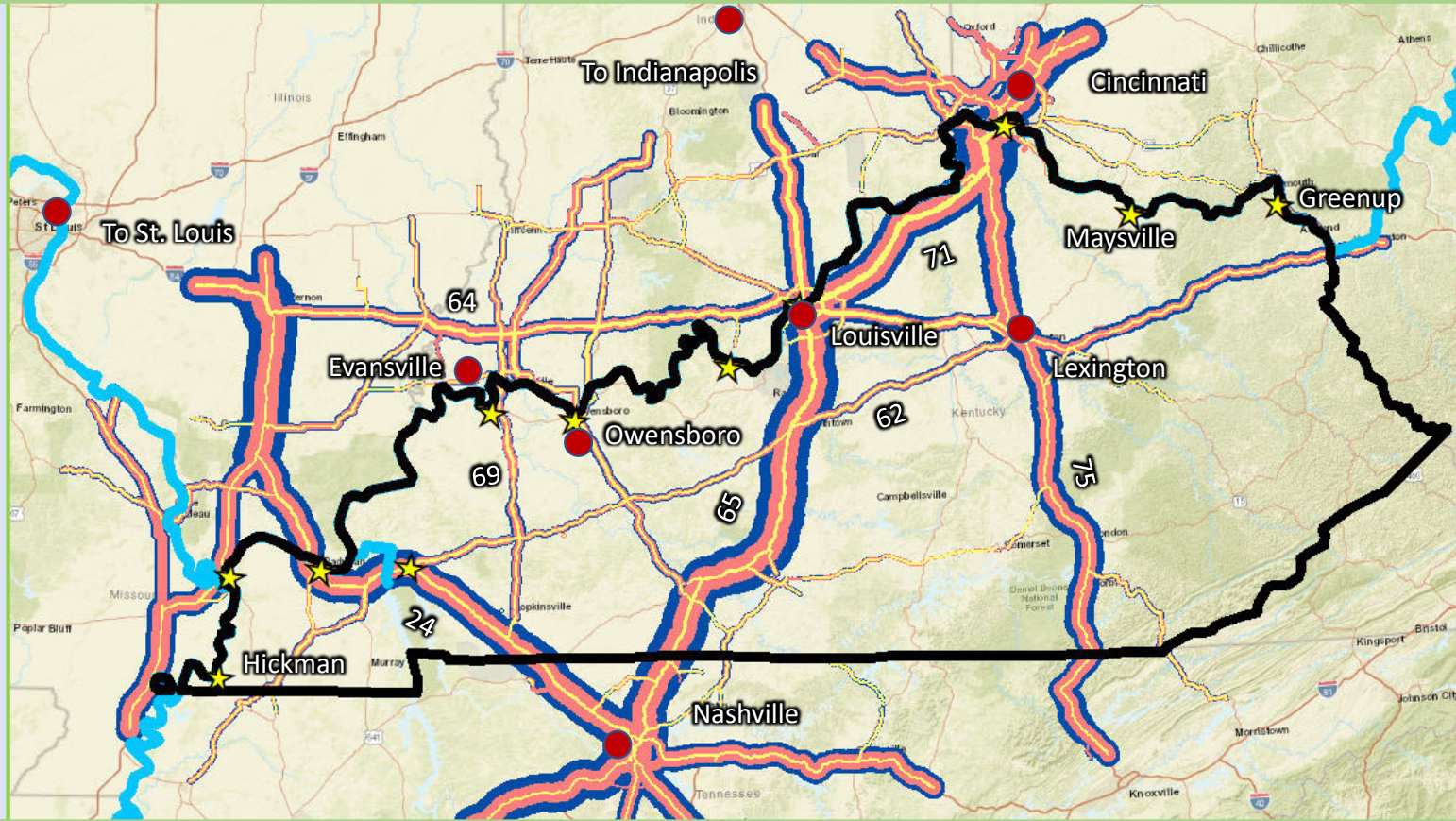
State-Level Corridor Analysis

- Network analysis of total truck load, divertible load, and port-county divertible.



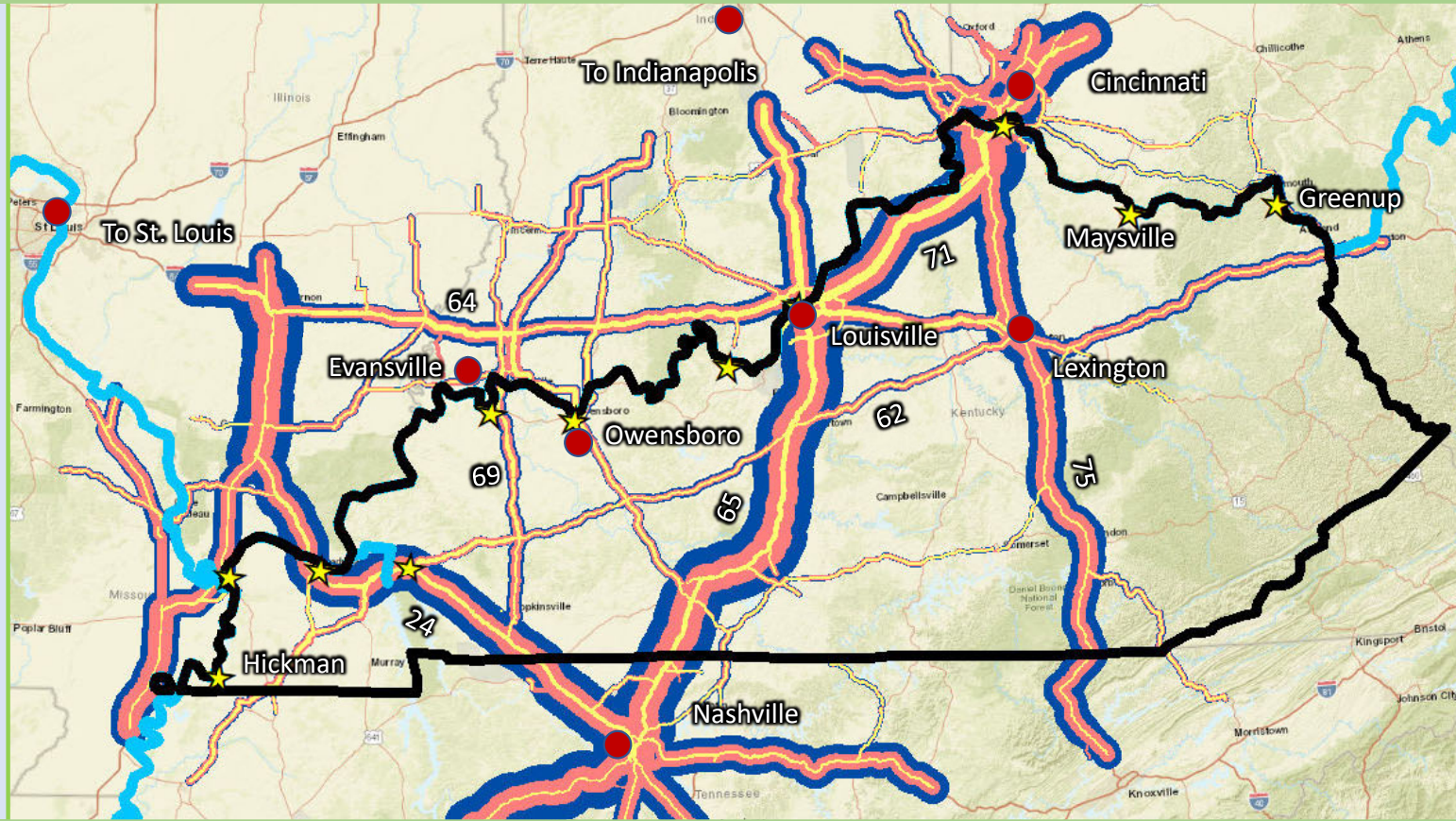
2018, Total Loads vs Water Divertible

- **Blue:**
Total Truck-Base Loads
- **Pink:**
Water-Divertible
- **Yellow:**
Water Divertible, Port
County Origin / Destination



2045, Total Loads vs Water Divertible

- **Blue:**
Total Truck-Base Loads
- **Pink:**
Water-Divertible
- **Yellow:**
Water Divertible, Port
County Origin / Destination





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

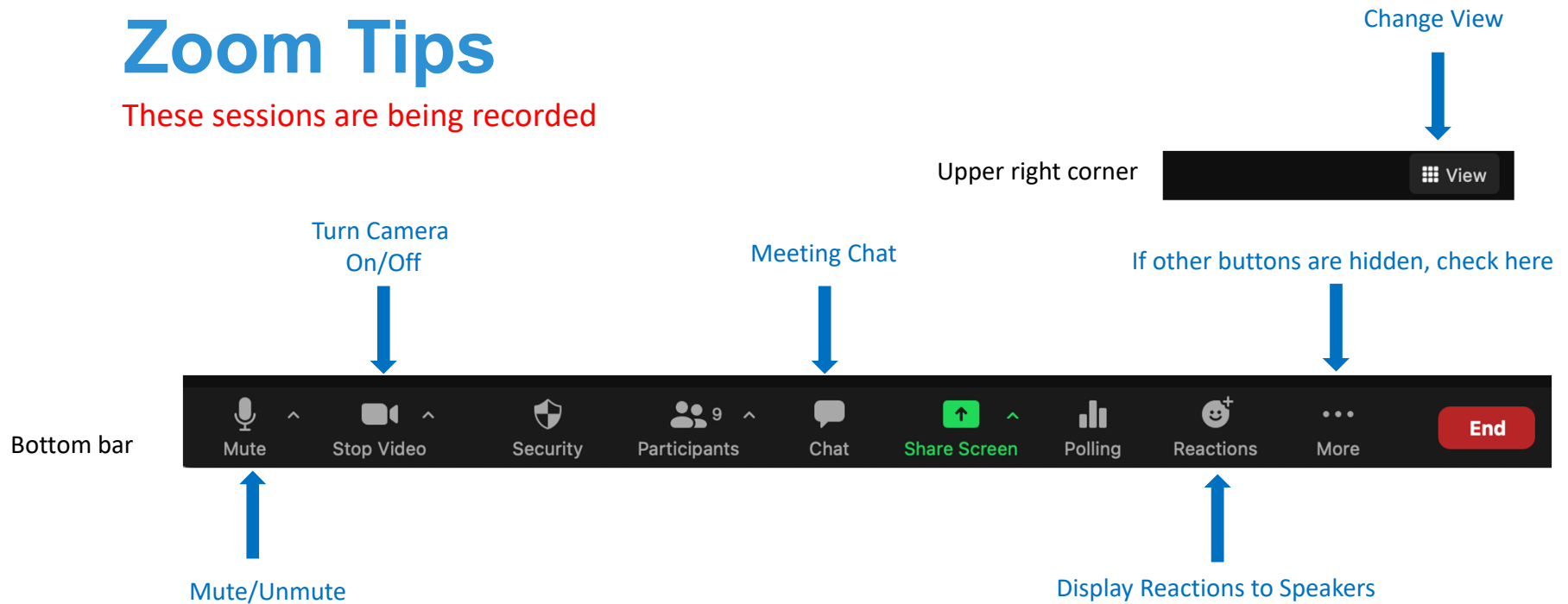
Welcome to the Second Kentucky Summit

Economic Development Strategies to Leverage Kentucky Riverports and Freight Network



Zoom Tips

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Please use the "Reactions" button to raise or lower your hand or provide other non-verbal feedback to the host (if enabled)

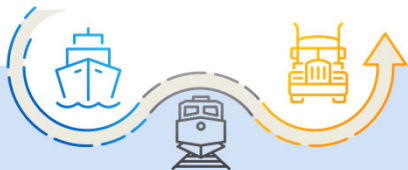
In the upper right corner you can select "speaker view" or "gallery view"



Kentucky Summit on Economic Development Strategies to Leverage Kentucky Riverports and Freight Network

- All sessions will be recorded
- Attendees can participate in sessions via Zoom – video and/or audio

Opening Session	March 24, 10:00 to 10:45 am
2021 Changes in Federal Transportation & Trade Policies	March 24, 1:00 to 1:45 pm
What's New in the Neighborhood? Updates from Adjacent State Ports	March 24, 2:00 to 3:00 pm
Forecasting the Future of KY's Freight Economy	March 25, 10:00 to 11:45 am
How will the Future of Freight Impact Other Modal Operations?	March 25, 1:30 pm to 2:30 pm
Port Infrastructure Needs & KY's Funding Process	March 25, 3:00 to 4:00 pm
Economic Development & Riverport Markets	March 26, 10:00 am to 12:00 pm



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

**How will the Future of
Freight impact other
Modal Operations?**

**Welcome to the Second Kentucky Summit
Economic Development Strategies to Leverage Kentucky
Riverports and Freight Network**

MARCH 24-26, 2021

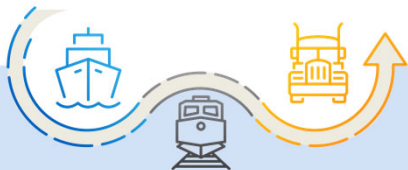


Speakers

Ken Eriksen	IHS Markit (Moderator)
Tim Kizer	Riverport of Louisville
William Downey	RJ Corman Railroad
P.J. Donovan	US Army Corps

Agenda

- Panel Discussion on the impact of Projected Growth on Modal Operations



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



Questions



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



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KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

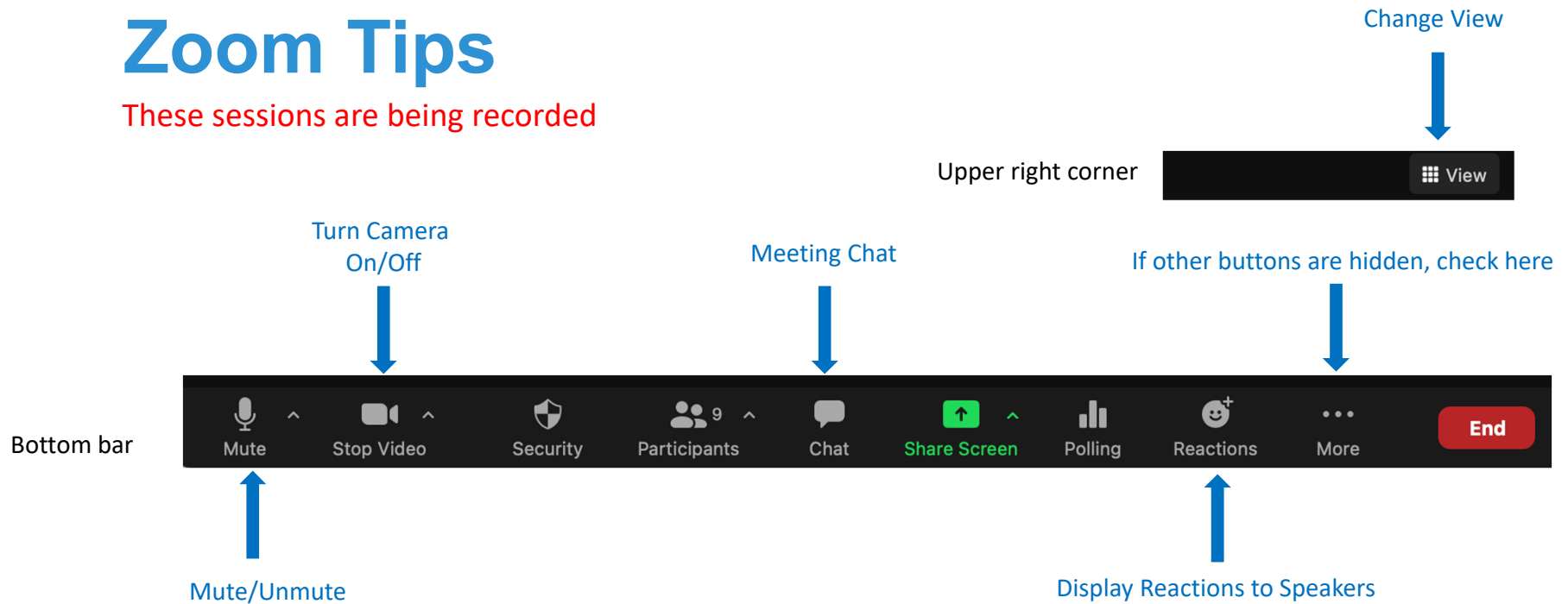
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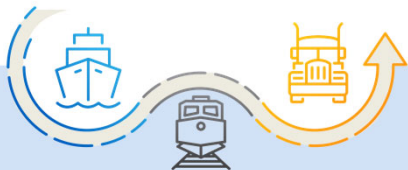
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KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

Freight Infrastructure Needs & Kentucky's Funding Process

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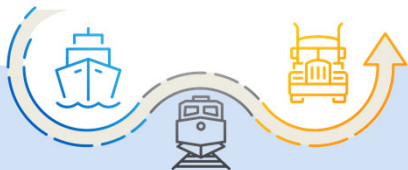


Speakers

Lindsay Hoskins Qk4, Inc.

Agenda

- Overview of KYTC's Funding Processes
- Breakout Groups: Your input on Freight Infrastructure Needs



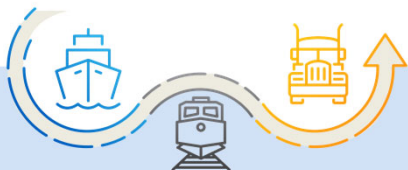
KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





Division of Program Management

Responsible for preparing the programming documents for authorization of state and federal funding for the Preliminary Engineering (PE) and Environmental, Design, Right-of-Way, Utility, and Construction phases of KYTC projects.



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Division of Program Management

- Develops and monitors Six-Year Highway Plan (SYP)

- Develops and monitor Statewide Transportation Improvement Program

- Monitors project expenditure for “cash flow balances”

- Processes requests for state and federal funding

- Prepares state and federal funding authorization documents

- Monitor Oracle SYP Preconstruction Status System and prepares monthly reports

- Provides and maintains web-based location maps of SYP projects

- Monitors federal funding and prepares weekly reports

- Prepares Federal Discretionary Funding applications

- Coordinates federal funding eligibility checks for Congressional-earmarked projects

- Prepares ad-hoc special reports

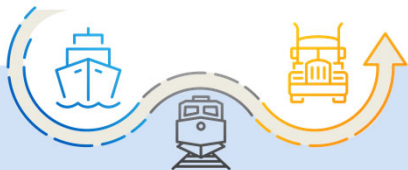
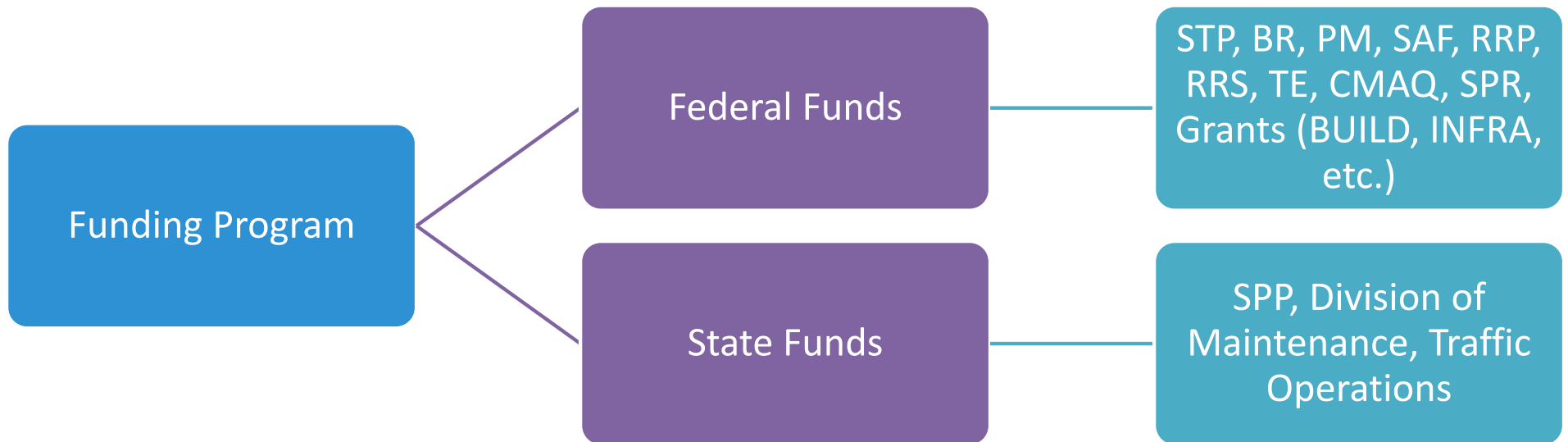
- Performs Geographic Information Systems (GIS) and dynamic internet data collection



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



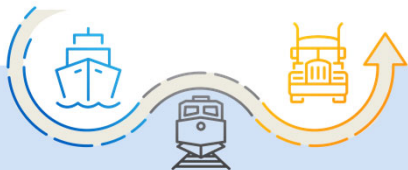
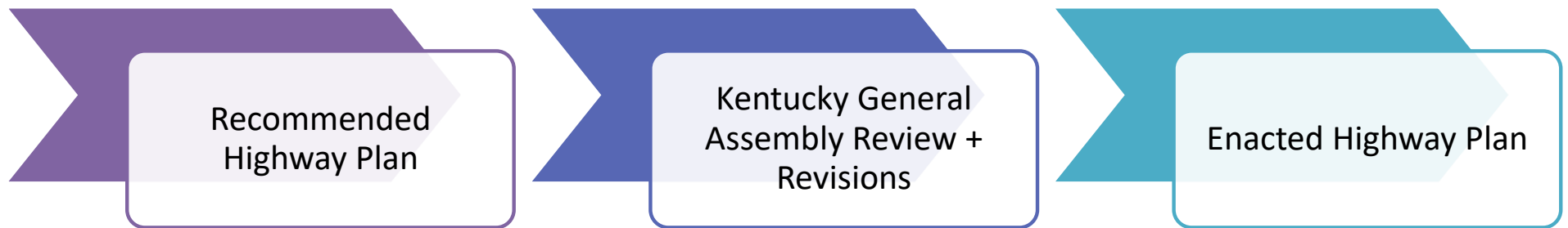
How are KYTC Projects Funded?



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



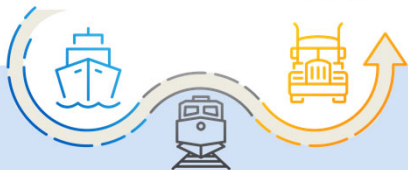
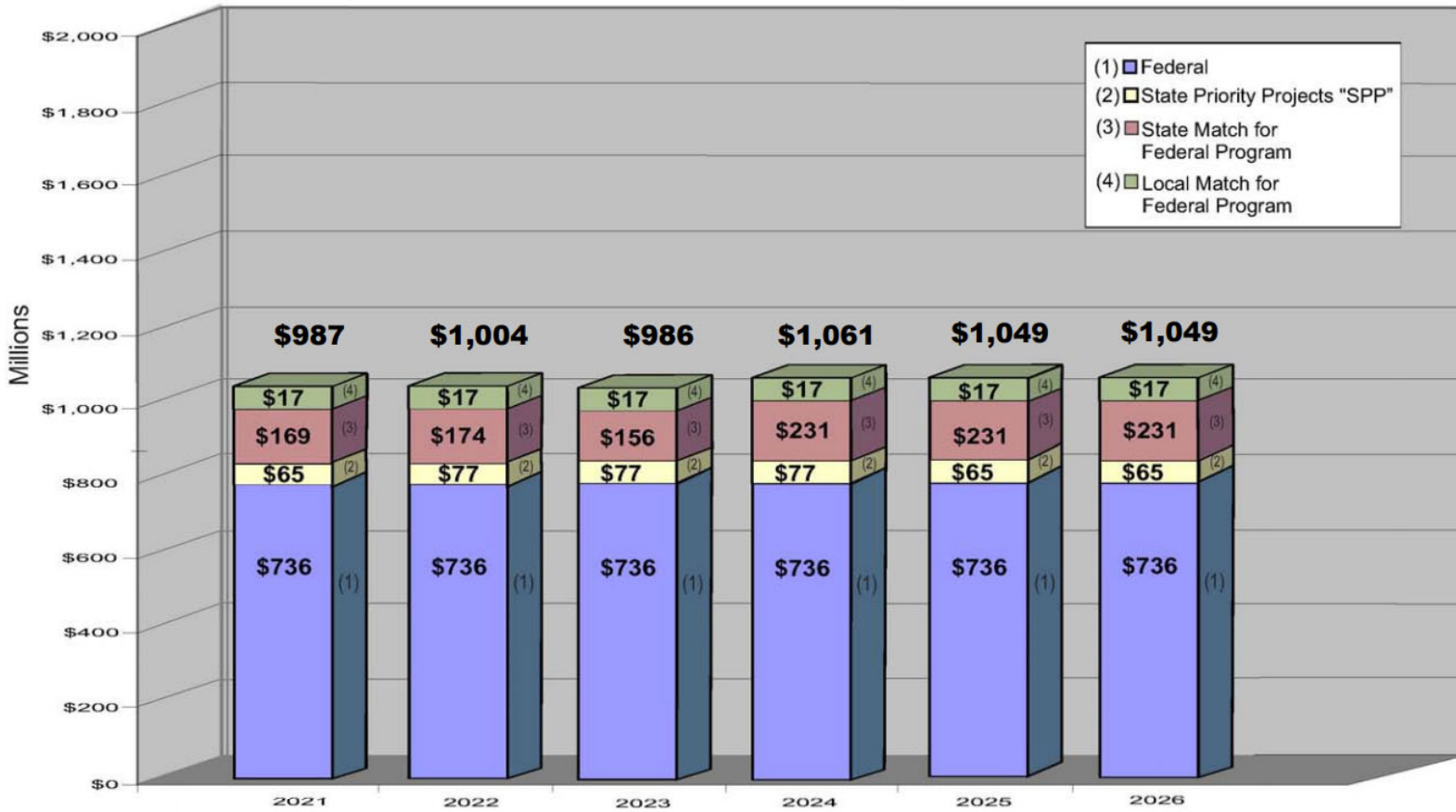
Six-Year Highway Plan Process



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



FEDERAL AND STATE HIGHWAY FUNDING LEVELS AVAILABLE FOR OBLIGATION FROM 2021 THRU 2026
 (\$6.1 billion estimated by the Kentucky Transportation Cabinet)



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



FAST Act Federal Funding Category	PERCENT OF REQUIRED MATCHING FUNDS	FY-2021 COMBINED FEDERAL AND MATCHING FUNDS	FY-2022 COMBINED FEDERAL AND MATCHING FUNDS	FY-2023 COMBINED FEDERAL AND MATCHING FUNDS	FY-2024 COMBINED FEDERAL AND MATCHING FUNDS	FY-2025 COMBINED FEDERAL AND MATCHING FUNDS	FY-2026 COMBINED FEDERAL AND MATCHING FUNDS	2020-2026 COMBINED FEDERAL AND MATCHING FUNDS
Available Federal-Aid Highway Funding		736	736	736	736	736	736	
GARVEE BOND DEBT SERVICE PAYMENTS (NH) (Toll Credits Matching Funds)	Toll Credits	81	81	72	72	72	72	450.0
Federal Funding for Expenditures on Previous Funded Projects		100	100	100	0	0	0	300.0
Bridge Asset Management Program (BR)	20%	64	64	64	64	64	64	384.0
Preventive Pavement Management Program (PM)	20%	64	64	100	100	100	100	528.0
Surface Transportation Program Dedicated Funding (Requires 20 Percent Local Matching Funding)								
• STP-Henderson (SHN)(With 20% Local Matching Funds)	20%	0.8	0.8	0.8	0.8	0.8	0.8	4.5
• STP-Louisville (SLO)(With 20% Local Matching Funds)	20%	21.8	21.8	21.8	21.8	21.8	21.8	130.8
• STP-Lexington (SLX)(With 20% Local Matching Funds)	20%	7.6	7.6	7.6	7.6	7.6	7.6	45.6
• STP-Northern Kentucky (SNK)(With 20% Local Matching Funds)	20%	8.6	8.6	8.6	8.6	8.6	8.6	51.6
• STP-Huntington/Ashland (SAH)(With 20% Local Matching Funds)	20%	1.5	1.5	1.5	1.5	1.5	1.5	9.0
Combined Dedicated MPO Funding		40.3	40.3	40.3	40.3	40.3	40.3	241.5
Dedicated Federal-aid Highway Funding (Requires Matching Funding)								
• Highway Safety/High Risk Rural Road (SAF) (With 10% State Match)	10%	39.0	39.0	39.0	39.0	39.0	39.0	234.0
• Rail Protective Devices (RRP) (With 10% State Match)	10%	2.0	2.0	2.0	2.0	2.0	2.0	12.0
• Rail Separation (RRS) (With 10% State Match)	10%	2.0	2.0	2.0	2.0	2.0	2.0	12.0
• Transportation Enhancement (TE) (With 20% Local Match)	20%	10.0	10.0	10.0	10.0	10.0	10.0	60.0
• Congestion Mitigation (CMAQ)(With 20% Local Match)	20%	14.4	14.4	14.4	14.4	14.4	14.4	86.4
Federal SPR and Research Program (With 20% State Match)	20%	14.5	14.5	14.5	14.5	14.5	14.5	87.0
• Metropolitan Planning (With 20% Local Match)	20%	2.7	2.7	2.7	2.7	2.7	2.7	16.2
Combined Dedicated Statewide Federal Funding		84.6	84.6	84.6	84.6	84.6	84.6	507.6
Federal Funding for Recommended Highway Plan Projects		302.2	302.2	275.2	375.2	375.2	375.2	2,004.9
Summary of Anticipated Federal-Aid Highway Funding		\$736.0	\$736.0	\$736.0	\$736.0	\$736.0	\$736.0	4,416.0

NOTE:

- 1) Mandated GARVEE Bond Debt Service Payments of \$81 million in FY 2021; \$81 million in FY 2022; \$72 million in FY 2023; \$72 million in FY 2024; \$72 million in FY 2025; and \$72 million in FY 2026; having a combined total of \$531 Billion.
- 2) No projected allocations of future Congressional HPP or KYD earmark funding
- 3) No remaining "Toll Credits" available for required state match on new obligations during FY 2020 through FY 2026.
- 4)"Toll Credits" used as matching funds on GARVEE Bond Debt Service Payments and on expenditures of previously obligated federal funded projects.



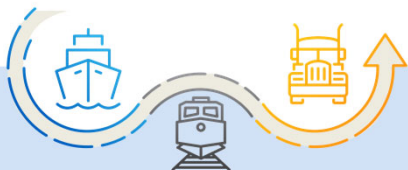
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SHIFT

KENTUCKY AHEAD

The **Strategic Highway Investment Formula for Tomorrow** is the Kentucky Transportation Cabinet's data-driven, objective approach to compare capital improvement projects and prioritize limited transportation funds



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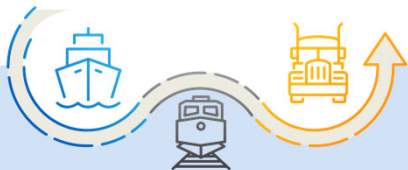
Why **SHIFT**?

KENTUCKY AHEAD

- Helps Reduce Overprogramming

- Provides a clear roadmap for construction in the coming years

- Applies to all transportation funding that isn't prioritized by other means, such as maintenance work, local government projects, and dedicated federal projects.



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY

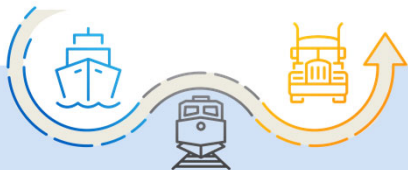


Five Key Attributes of **SHIFT** KENTUCKY AHEAD

- Projects are scored based on five key attributes



- Uses measurable data to assess need for and benefits of planned projects and compare them to each other



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



How **SHIFT** Works

KENTUCKY AHEAD



The List



Local Boosting



Sponsorship



Regional Priorities



Review and Scoring



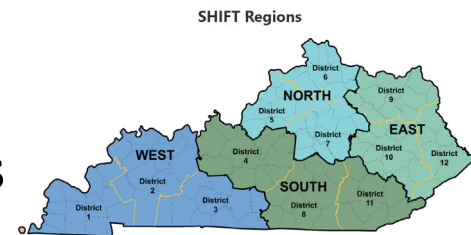
Recommended State Highway Plan



Statewide Priorities



Enacted State Highway Plan



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



SHIFT 2022

KENTUCKY AHEAD

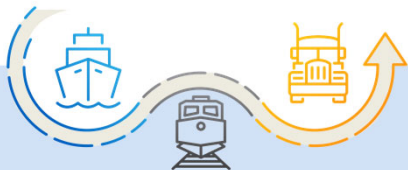


SHIFT Kentucky Ahead

Strategic Highway Investment Formula for Tomorrow

- Underway for the development of the **2022 Recommended Highway Plan**
- Process includes several refinements to scoring metrics and the prioritization process based on feedback and experience

	Timeline	Action	Acting Party
Sponsorship	now - 5/14 2021	Projects are Sponsored for consideration in SHIFT	Area Development District (ADD), Metropolitan Planning Organization (MPO) Highway District Office (HDO)
Project Data Review and Updates	5/3 - 6/25 2021	Data is verified, travel time and economic modeling is conducted, project costs and schedules are updated.	Central Office, HDO, ADD, MPO
Statewide Priorities	6/28 - 7/16 2021	Statewide projects (generally interstate and parkway projects) are scored in the SHIFT model. Statewide priorities are established through a balance of SHIFT scores, project schedules, and available funding.	Central Office and HDO
Local Boosting	7/19- 9/14 2021	Regional Projects and Statewide projects that did not make the Statewide Priority List are scored in the SHIFT model. ADDs, MPOs, and KYTC Districts determine which projects in their areas to boost.	Central Office, ADD, MPO, and HDO
Regional Priorities	9/15 - 10/8 2021	District / Local (ADD/MPO) Priorities Plans are submitted outlining how the public was engaged and how boosting determinations were made/ Regional Summits are held to discuss priority projects.	ADD, MPO, HDO
Recommended Highway Plan	10/11 - 12/27 2021	KYTC Develops Recommended Six Year Highway Plan (includes SHIFT and non-SHIFT elements)	Central Office



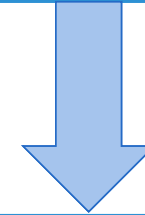
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& RAIL FREIGHT STUDY

Freight Infrastructure
Needs & Kentucky's
Funding Process



Breakout Session

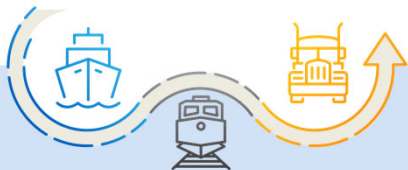
**Welcome to the Second Kentucky Summit
Economic Development Strategies to Leverage
Kentucky Riverports and Freight Network**

MARCH 24-26, 2021



Outreach to Identify Infrastructure Needs

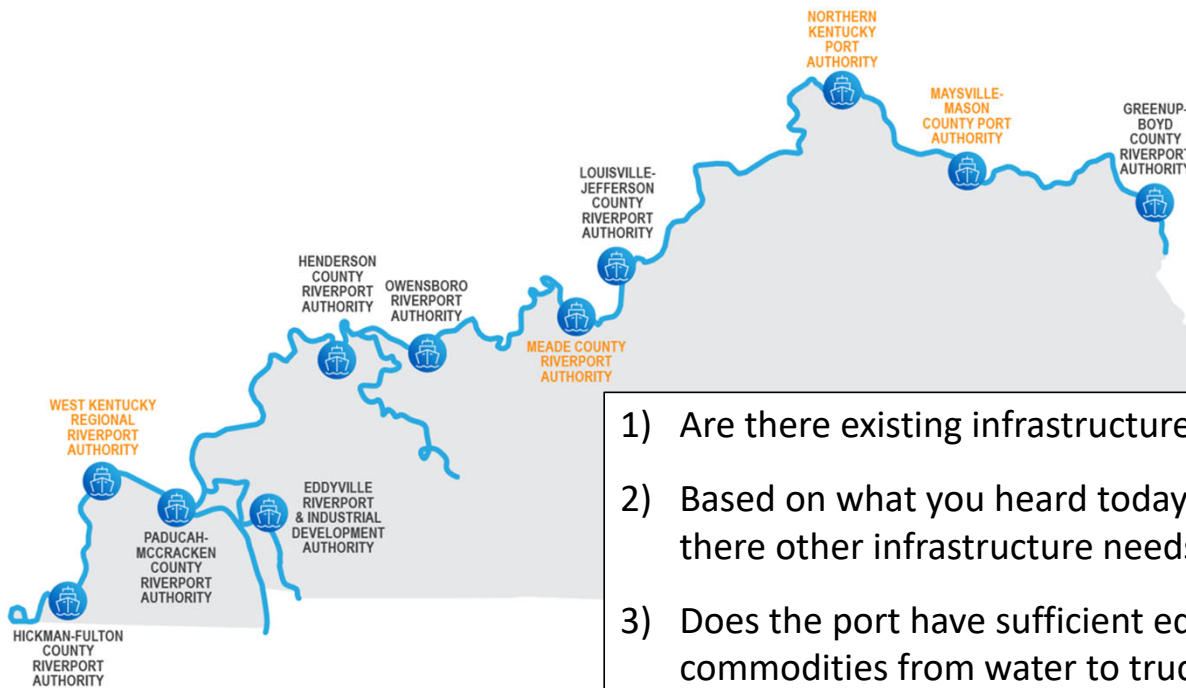
- Increased Funding
- Stable Funding
- Marketing Support



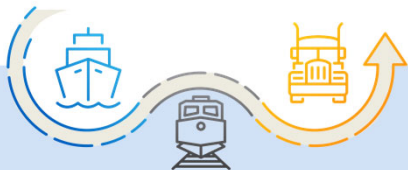
KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



Outreach to Identify Infrastructure Needs to Support Riverports



- 1) Are there existing infrastructure needs not already captured?
- 2) Based on what you heard today about freight forecasts, are there other infrastructure needs you foresee?
- 3) Does the port have sufficient equipment to transfer commodities from water to truck or rail? If no, what equipment is needed?

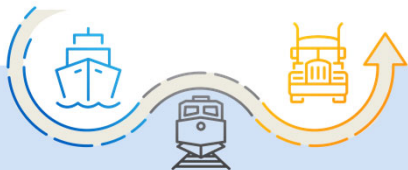


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Breakout Session Overview

- Each group will have 20 minutes
- Review each question and discuss accordingly
- Team members will take notes
- After 20 minutes has elapsed, each participant will receive a prompt to return to the main meeting space. This will appear as a 1-minute countdown. If discussion is complete, you can hit enter to return. If not, you all will **AUTOMATICALLY** be pulled back into the larger group once the timer hits zero.



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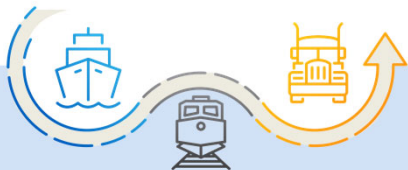
Breakout Groups

- **West:** Eddyville, Henderson, Hickman-Fulton, Paducah-McCracken
 - Lindsay (Qk4) & Kevin (Metro Analytics)
- **Central/East:** Owensboro, Louisville, Greenup-Boyd
 - Rebecca (Qk4) & Ken (IHS Markit)
- **Developing:** West KY Regional, Meade, Northern KY, Maysville-Mason
 - Tom (Qk4) & Jimmy (Metro Analytics)

-- *Breakout* --



Questions



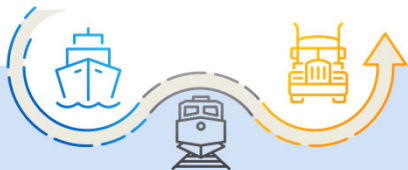
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Kentucky Summit on Economic Development Strategies to Leverage Kentucky Riverports and Freight Network

- All sessions will be recorded
- Attendees can participate in sessions via Zoom – video and/or audio

Opening Session	March 24, 10:00 to 10:45 am
2021 Changes in Federal Transportation & Trade Policies	March 24, 1:00 to 1:45 pm
What's New in the Neighborhood? Updates from Adjacent State Ports	March 24, 2:00 to 3:00 pm
Forecasting the Future of KY's Freight Economy	March 25, 10:00 to 11:45 am
How will the Future of Freight Impact Other Modal Operations?	March 25, 1:30 pm to 2:30 pm
Port Infrastructure Needs & KY's Funding Process	March 25, 3:00 to 4:00 pm
Economic Development & Riverport Markets	March 26, 10:00 am to 12:00 pm



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

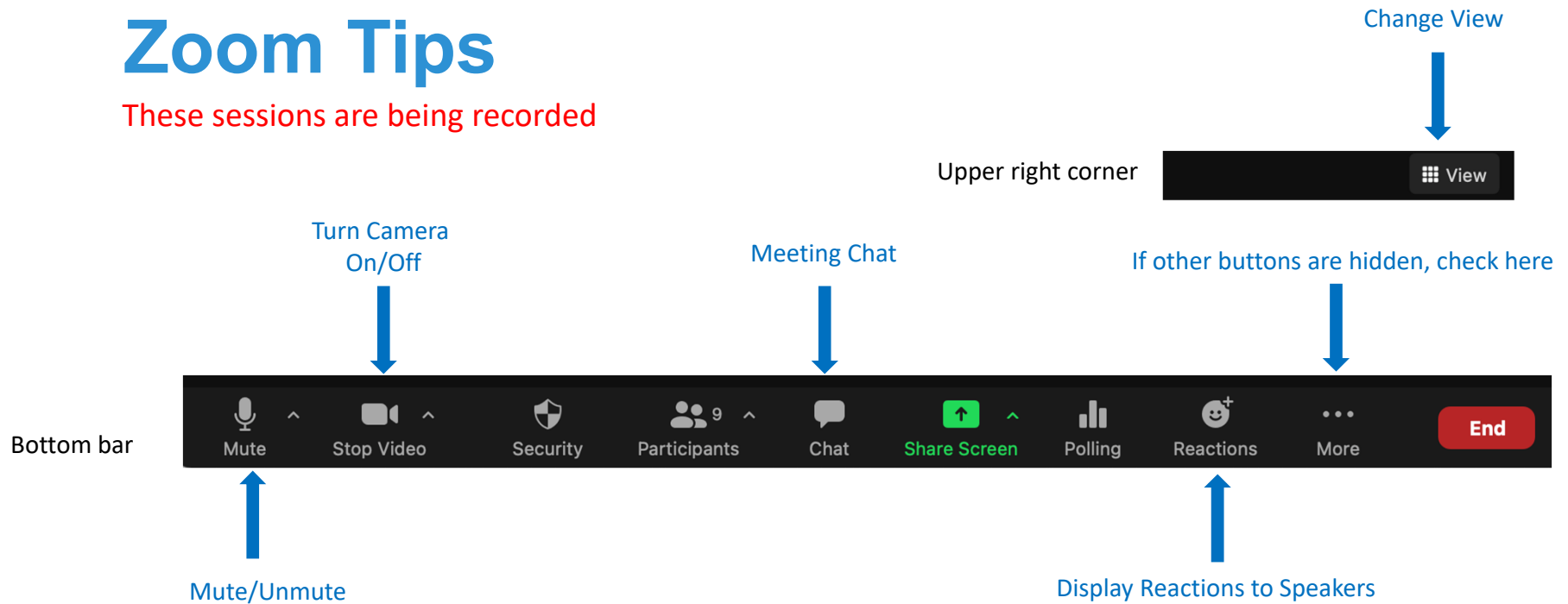
Welcome to the Second Kentucky Summit

Economic Development Strategies to Leverage Kentucky Riverports and Freight Network



Zoom Tips

These sessions are being recorded



Please keep your microphone muted when you are not speaking

Please use the chat button to submit questions to the speakers or wait until the Question and Answer portion of the session

Please use the "Reactions" button to raise or lower your hand or provide other non-verbal feedback to the host (if enabled)

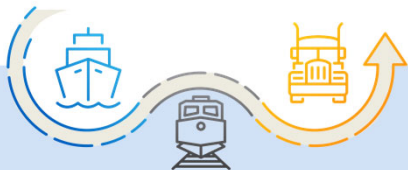
In the upper right corner you can select "speaker view" or "gallery view"



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KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY





**KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY**

Economic Development & Riverport Markets

**Welcome to the Second Kentucky Summit
Economic Development Strategies to Leverage Kentucky
Riverports and Freight Network**

MARCH 24-26, 2021



Speakers

Anthony Ellis

Kentucky Innovation

Adam Wasserman

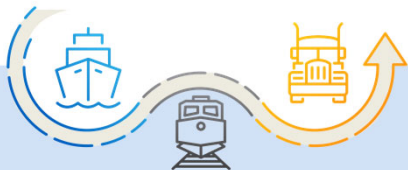
International Economic Development Council

Derek Cutler

EBP

Matt Yates

Port of Louisville



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Anthony Ellis

Anthony Ellis is Executive Director of Kentucky Innovation. A priority for Anthony and the State of Kentucky is the creation of Innovation Hubs. Innovation represent Kentucky's approach to building vibrant, regional innovation clusters across the state and growing the overall economy. This strategy modernizes Kentucky's support for entrepreneurs and high-tech, high-growth-potential startups by leveraging each region's unique strengths. The hubs unite universities, established companies and industry sectors, entrepreneurs, business accelerator and incubator programs and many other public and private entities to best serve business founders across the commonwealth. The innovation hub network currently includes three inland riverports. Anthony Ellis previously served as the Cabinet's general counsel since December 2019. He graduated from Catholic University of America with a degree in international economics and finance and earned his law degree from George Washington University. Ellis worked as a partner at a Louisville-based firm and for the past four years managed his own firm, The Ellis Law Group PLLC, one of two businesses he founded.

Anthony.Ellis@ky.gov





KY INNOVATION

Anthony Ellis, Executive Director



WHERE WE'VE BEEN

- **2001**: KY Governor creates the Kentucky Innovation Act, establishing three state investment funds to support innovation. Contracts with Kentucky Science and Technology Corporation (KSTC) to manage fund.
- **Early 2000s**: KY creates KY Innovation Network, 12 regional offices. Contracts with KSTC to manage them.
- **2018**: Contracts cancelled, funds paused.



CURRENT PROGRAMS



KY INNOVATION HUBS

Partnered with private non-profits through a competitive RFP process to create six regional KY Innovation Hubs



AWESOME INC.
Lexington



SOAR
Pikeville



BLUENORTH
Covington



GROWEST
Paducah



AMPLIFY
Louisville



CRICC
Bowling Green





KENTUCKY COMMERCIALIZATION VENTURES (KCV)



A public-private partnership to commercialize university technology:

- EIR Program – Executive Attraction
- Working with inventors at public institutions
- Identifying and advancing innovations
- Statewide Tech Transfer Office
- Legal Clinics/IP Work for Free
- Moving IP toward market-ready products and services
- Creating high-growth potential startups

SBIR/STTR SUPPORT AND MATCH

SUPPORT FOR SBIR/STTR

- The Kentucky Innovation Investment Program (KIIP) provides micro grants and professional services to better prepare Kentucky companies to win and manage federal SBIR/STTR grants.
- DOD accelerator to prepare companies for defense agency SBIR/STTR contracts; This pilot can be adapted for other agencies, problem sets

MATCHING PROGRAM

Kentucky will match, on a competitive basis, Phase 1 and Phase 2 SBIR/STTR awards.

700

Federal Awards

\$130M

Federal Awards

CURRENT ROUND CLOSES: April 26, 2021

CAPITAL AND STATE FUNDING

- **KENTUCKY ENTERPRISE FUND (KSTC)**
 - Investment Fund focused on early stage companies
 - Portion dedicated to rural investments
 - Typically 25K-50K early stage SAFE Notes/grants
 - Follow on amounts up to \$750K
- **COMMONWEALTH SEED CAPITAL (CSC)**
 - Seed and Series A investments, Fund of Funds, Impact Investing
- **ANGEL TAX CREDIT/FUND TAX CREDIT**
 - \$3M annually each/\$6 M total credit per year. Returned in 2021

KENTUCKY SMALL BUSINESS TAX CREDIT

- Non-refundable tax credit for businesses creating full-time jobs and investing \$5K or more in qualifying equipment or technology.
- Tax credits range from \$3,500 to \$25,000 per calendar year per applicant business.
- \$3 Million Tax Credit Allotment per State Fiscal Year – shared with KY Selling Farmer Tax Credit

KENTUCKY SMALL BUSINESS CREDIT INITIATIVE

- A tool for lenders to use on creditworthy loan requests that are just outside acceptable underwriting standards.
- The lender underwrites the loan and makes the credit decision.
- KSBCI support up to 20% on Collateral Support projects.

2021-2022 PRIORITIES



2021-22 PRIORITIES

- 1 Connectivity
- 2 Metrics, Data & Transparency
- 3 Diversity, Equity & Inclusion
- 4 Industry Clusters
- 5 Maximize Investment Dollars
- 6 Talent and Innovation Attraction



PRIORITY 4: INDUSTRY CLUSTERS

FORM THRIVING CLUSTERS AROUND REGIONAL, STATEWIDE INDUSTRY STRENGTHS

GOVERNOR'S AGRITECH INITIATIVE

- June 2020: Gov. Andy Beshear and AppHarvest spearhead an international agreement with the Dutch government and 15 other partners to establish Kentucky as America's AgriTech Capital.
- Research programs, construction of a center of excellence and the building of additional private infrastructure similar to AppHarvest's 2.76 million-square-foot farm in Morehead.

SUPPORT EXISTING CLUSTERS/CREATE NEW CLUSTERS

- LHCC
- Blue North Supply Chain Meetup
- Regional Cluster Recommendations in 2021



THANK YOU

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Adam Wasserman

Adam Wasserman, GLD Partners is Managing Partner in economic strategy, infrastructure development, ports management and public policy. Adam has an extensive knowledge of transportation, global logistics, infrastructure, competitiveness, economic development, and finance. He has US and Europe experience in ports and economic development, delivering infrastructure and property projects such as the redevelopment of a 350-acre site to a maritime-oriented industrial district, a new \$600M marine terminal & 1200-acre international logistics park and the development of a port hinterland district around the UK's largest ports complex. Adam has public policy experience, investment plans and legislation at the US federal government, UK Government, and the EU. Adam is responsible for delivering \$4.5B of project investment. He has a MA/MBA degree in Environmental Planning and Finance and a BS degree in Real Estate and Finance from Arizona State University, international finance from the Export-Import Bank of the United States, the Thunderbird School of International Management and earned further credentials from Loyola College in International Trade. Adam has long been involved with the International Economic Development Council, American Association of Port Authorities, British Urban Regeneration Association, US Chamber of Commerce (Maritime Committee), Council for Supply Chain Management Professionals. Coalition for America's Gateway's and Corridors and the European Development Association. He is leadership roles with the International Economic Development Council.

adam@gldpartners.com





Kentucky's Inland Ports and Economic Development Opportunity

GLOBAL LOGISTICS DEVELOPMENT PARTNERS | GLDPARTNERS



Global Logistics Development Partners | GLDPartners



Corporate Supply Chain Strategy

Automotive
Electronics
Pharma
Industrial Equipment
Food Production
Logistics
Aerospace

Airport- Seaport-Inland Port Investment Districts

US
Thailand
Philippines
India
Indonesia
UK
France

Mobility and Automation



GLDPartners Project Partner Examples

Global Infrastructure
Investors

Logistics Mobility/
Automation

Multinational
Conglomerate
Investors

Global Infrastructure
P3 Structures

Mobility Technologies

Fiber Investment



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Project Examples

- ▶ US: California Inland Port
- ▶ US: Utah Inland Port
- ▶ US: New Mexico Mobility Strategy and Infrastructure System
- ▶ US: Truck and Truck/Rail Inland Port Mobility Districts
- ▶ US: Michigan Investment Strategy – Rail, Bridge, Airport/Inland Port
- ▶ US: Atlanta Airport Investment District
- ▶ Canada: CentrePort Canada
- ▶ Philippines: New Manila Airport/Seaport Investment City
- ▶ Thailand: Bangkok New Airport and Free Trade Zone
- ▶ UK: Edinburgh Brexit Freeport Zone
- ▶ France: Airport/Inland Port Investment District (Lyon)

Core Supply Chain Markets

- ▶ ECommerce
- ▶ Automotive
- ▶ Electronics
- ▶ Apparel
- ▶ Industrial Equipment
- ▶ Medical Products and Supplies
- ▶ Food Products
- ▶ Pharma

Observations: US Inland Port System

- ▶ Generally US Logistics Assets Are Underdeveloped
- ▶ Inland Ports Are Clearly the Most Underdeveloped Logistics Assets in US
- ▶ Though Generally Publicly-Owned, Assets Managed & Operate in Silos
- ▶ Many Corporate Clients Increasingly Attracted to “Portcentric” Options
- ▶ Legacy Assets, Dominated By Legacy Cargo Business
- ▶ Many With Operating Expenses (Dredging, Other) Imbalanced to Revenues
- ▶ Value to System Strategy Approach
- ▶ Some Assets Have Significant Value, But As Strategic & Multimodal Assets
- ▶ Total Product: 1) Land/Public, 2) Rail Connectivity, 3) Water Transport
- ▶ Private Investors: Looking for Underlying Value, Investable P3 Projects

US Market Logistics System

North American Strategic Logistics Hubs

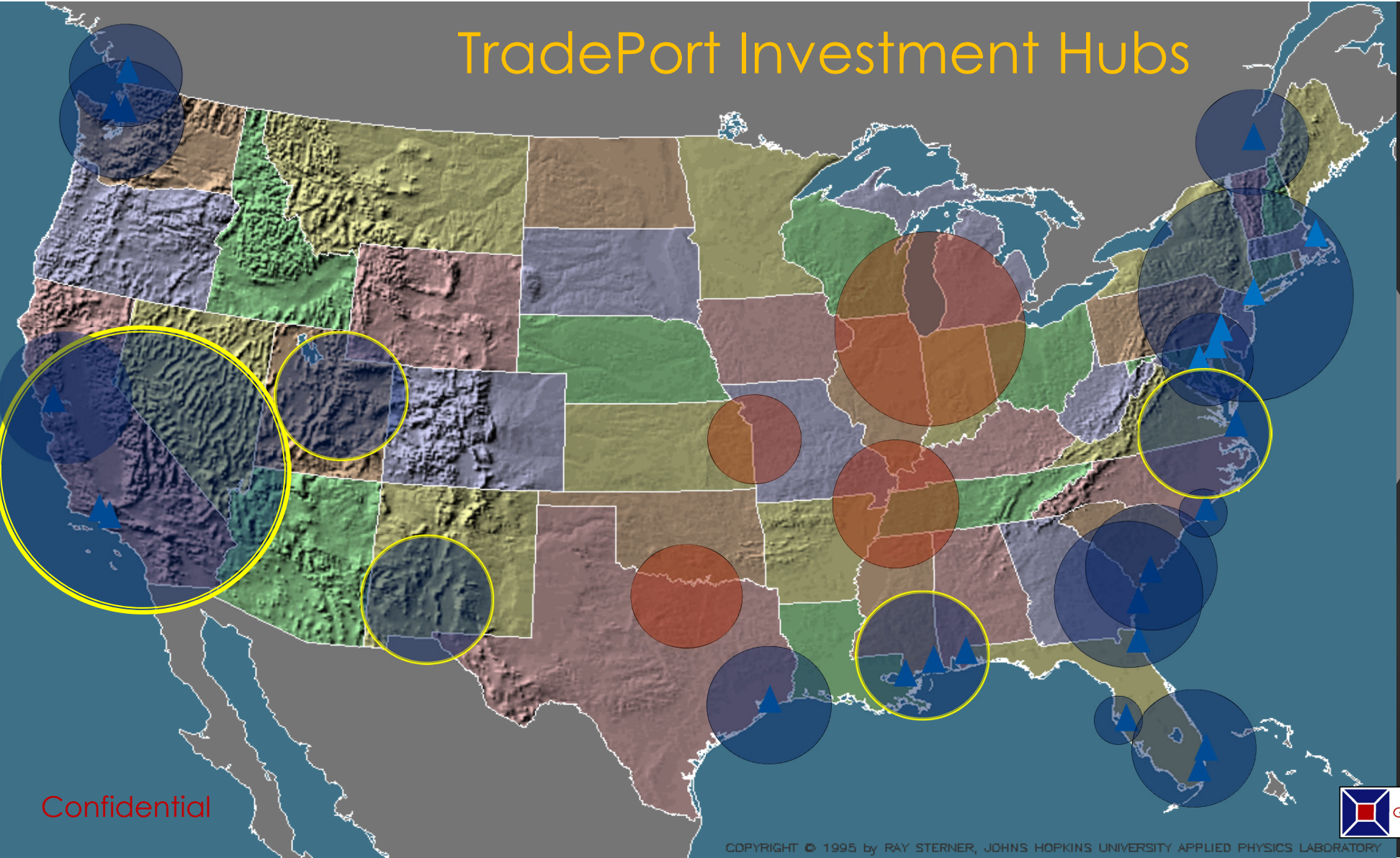


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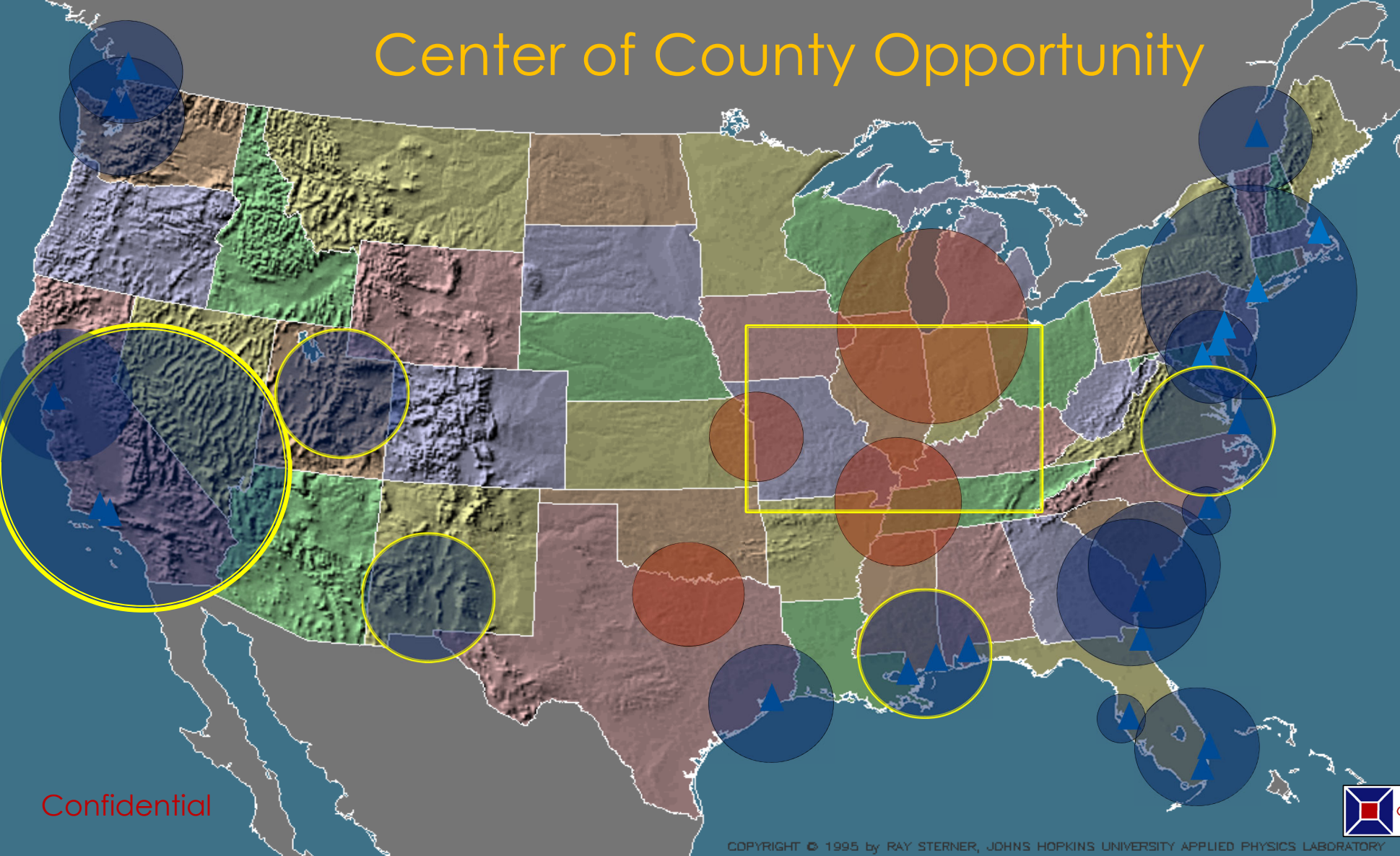


TradePort Investment Hubs



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Center of County Opportunity



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Opportunity

- ▶ Build on Legacy Business
- ▶ Capitalize on Location and Specific Supply Chain Connectivity
- ▶ All About Multimodal
- ▶ Deepwater Partner is Valuable, Beyond PoNO
- ▶ Aggregated or Separate Product
- ▶ Multiple Locations + Assets + Connectivity + Market Proximity
- ▶ World-Class Infrastructure
- ▶ Whole-System Product Could Attract Attention of Risk Capital Partners
- ▶ Differentiator: Clean and Automated

Consumption and Production Base

Project Scale

Transport Connectivity

Site Layout

Automation

Telecom

Clean Propulsion Systems

Investment Partners



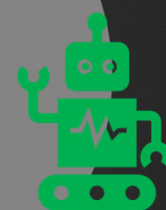
Confidential

Seamless Efficiency Via Technology

Truck Mobility

Rail Mobility

Investment District Automation



Mobility Testing and Development



Derek Cutler

Derek Cutler is the Chief Economist at EBP. He primarily focuses on studying freight-economy relationships and models to quantify the role that infrastructure plays in supporting regional economic development. His recent work experience also includes assembling large freight and trade datasets and making and applying economic impact models for both domestic and international clients, including the recent Marine Transportation System Plan for Illinois DOT. Mr. Cutler is also senior developer of TREDIS Software, supporting development of custom impact analysis tools to support decision making.

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KENTUCKY RIVERPORTS, HIGHWAY
& RAIL FREIGHT STUDY

Mastering Your Data

How to Filter the Signal From the Noise to Support Decision Making



Agenda

- Purpose
- Getting the Most out of your Freight Data
- Identify Behavior
 - Looking at Markets [[Transearch: MI](#)], [I-80]
- Communicate Importance
 - Integrating Freight-Economy
 - Case Study [[Illinois Marine Transportation System Plan](#)]
- Inform Solution Planning
 - Case Study [[Georgia Rail](#)]
- Integrate into Broader Analysis
 - Case Study [[Transearch: MI Supply Chains](#)]
 - Blueprint for Economic Development
 - Case Study [[NC Clean Energy](#)]
- Summary

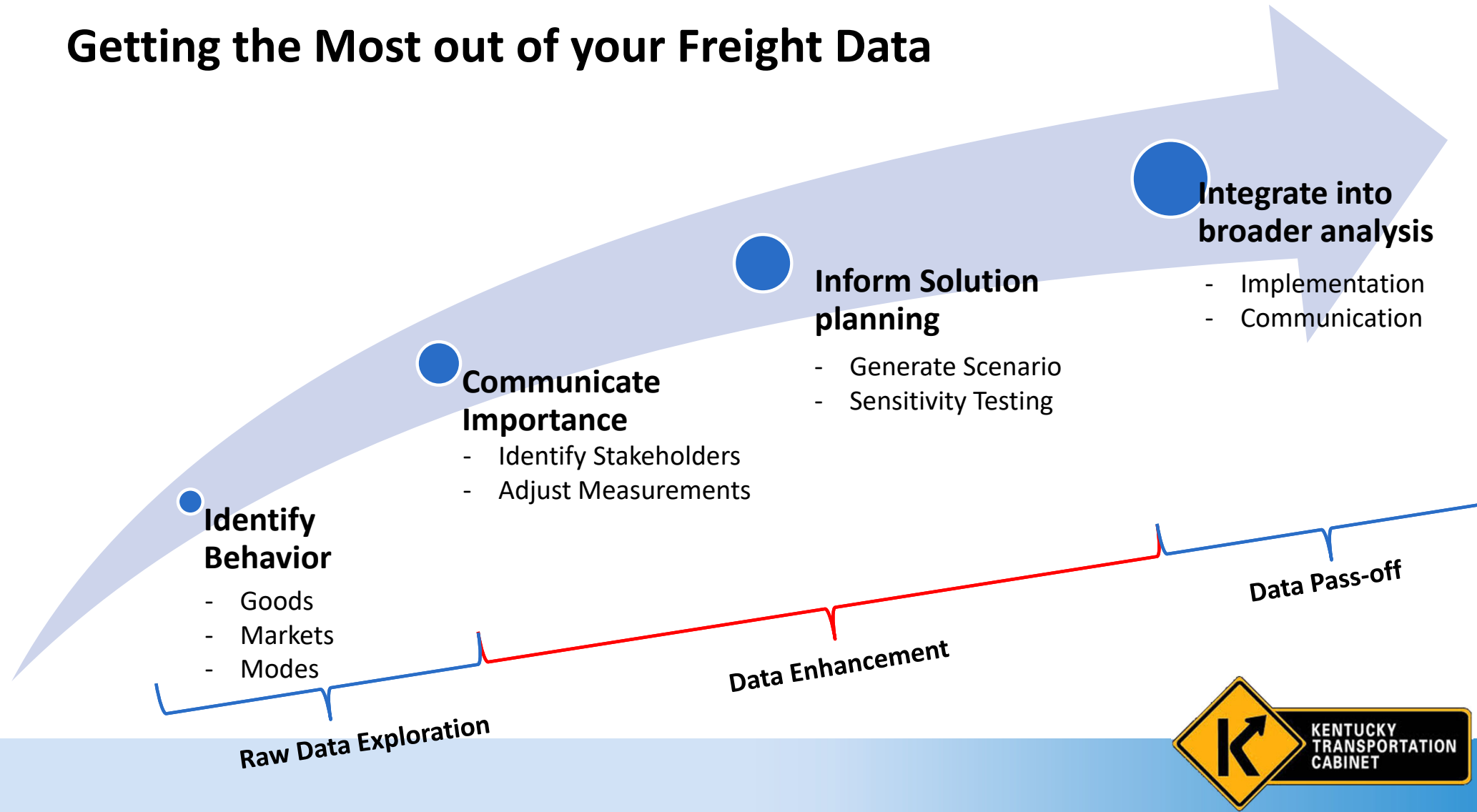


Purpose:

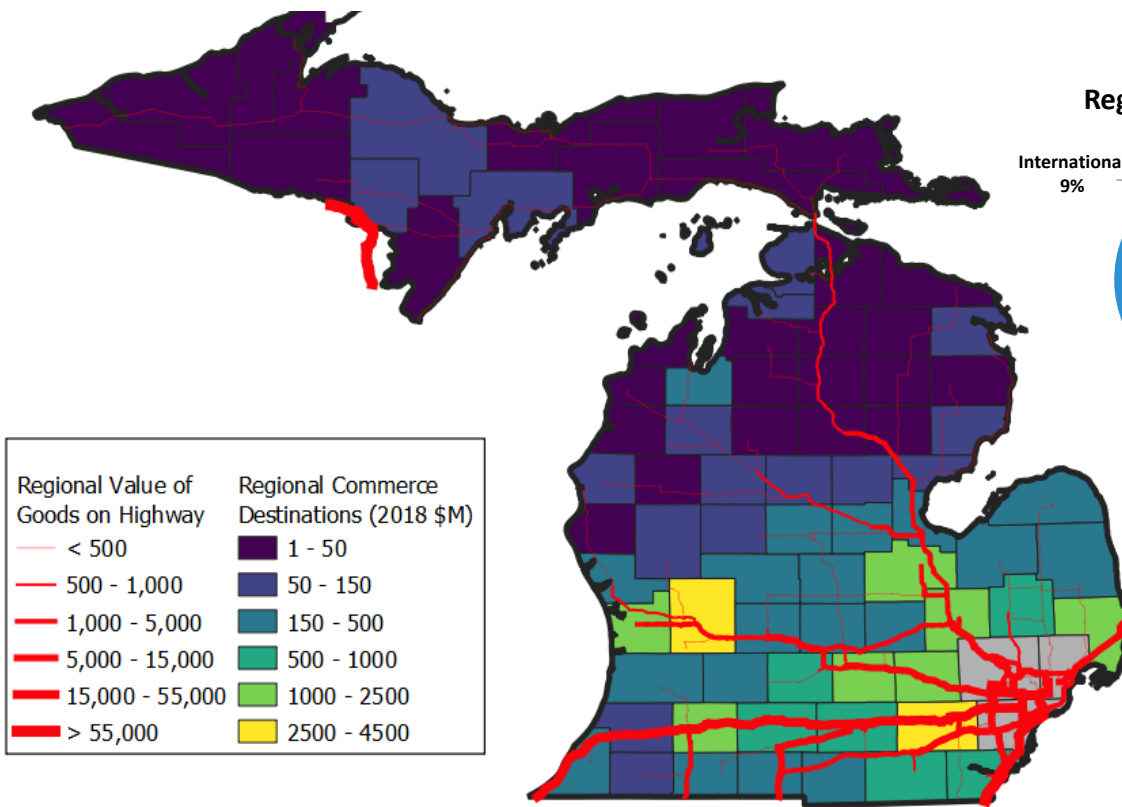
- Identify Available Resources, Capabilities
- Demonstrate Common Freight Usage
- Methods to Improve Stakeholder Engagement
- Logical Linkages to Integrate Processes



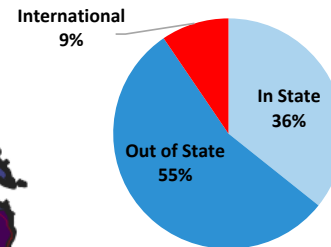
Getting the Most out of your Freight Data



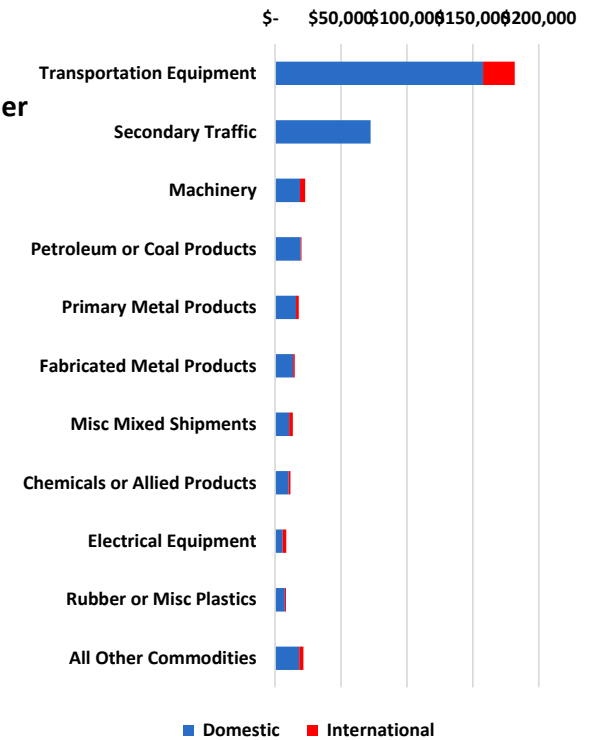
Identify Behavior: Looking at Markets



Regional Trade Partner

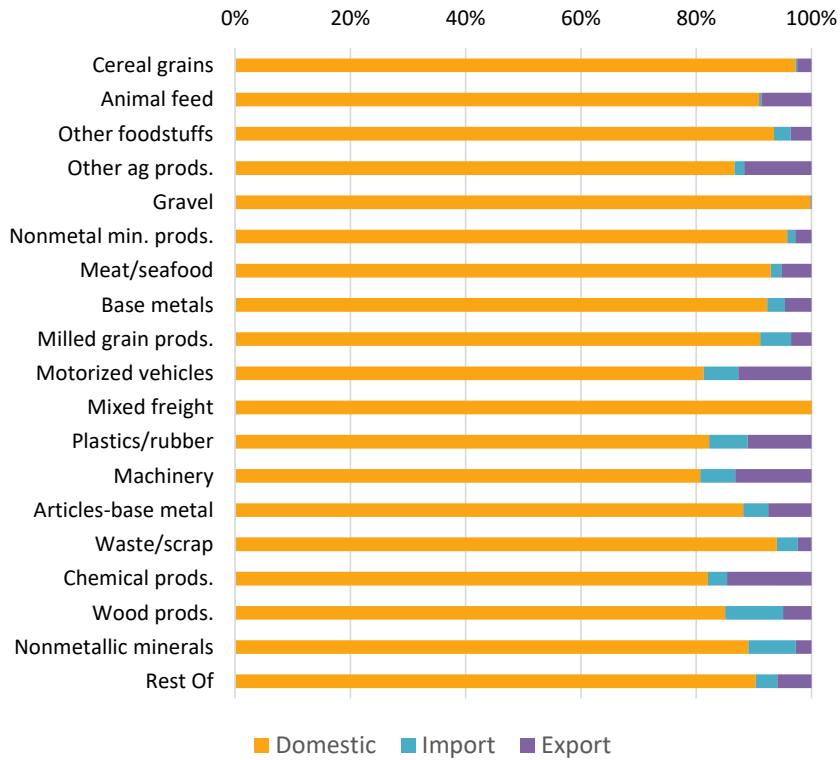


Outbound Commodities (2018 \$M)

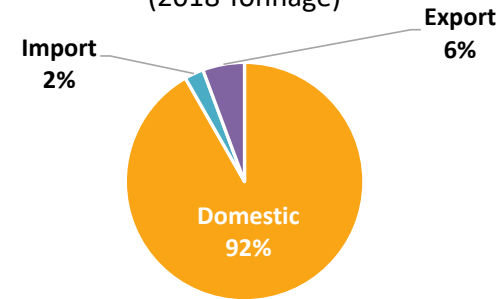


Identify Behavior: Looking at Markets

I-80 Goods Movement Emphasis, All Users
(2018 National, Tonnage Basis)



I-80 Emphasis on Freight & Trade Served
(2018 Tonnage)

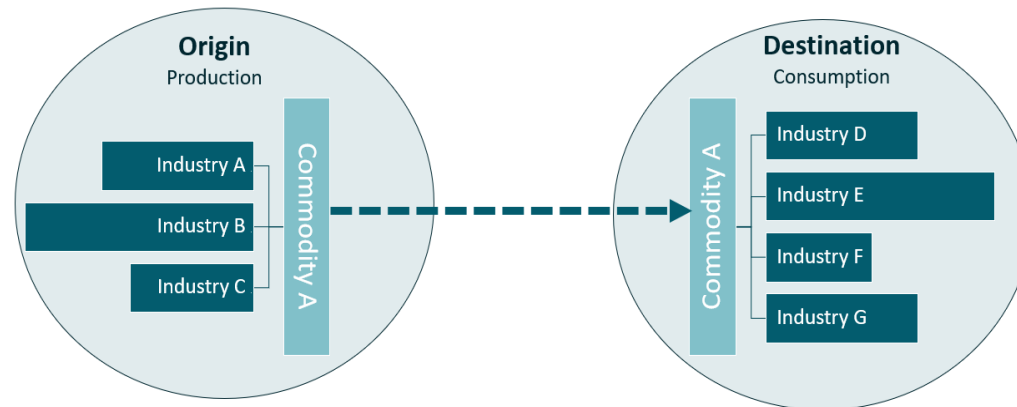


Top States Using I-80 to Conduct International Trade
(2018 Thousands of Tons)



Communicating Importance: Enriching Data

- Matching the right units of measurement to the audience
- Economic models provide structural framework to increase applications

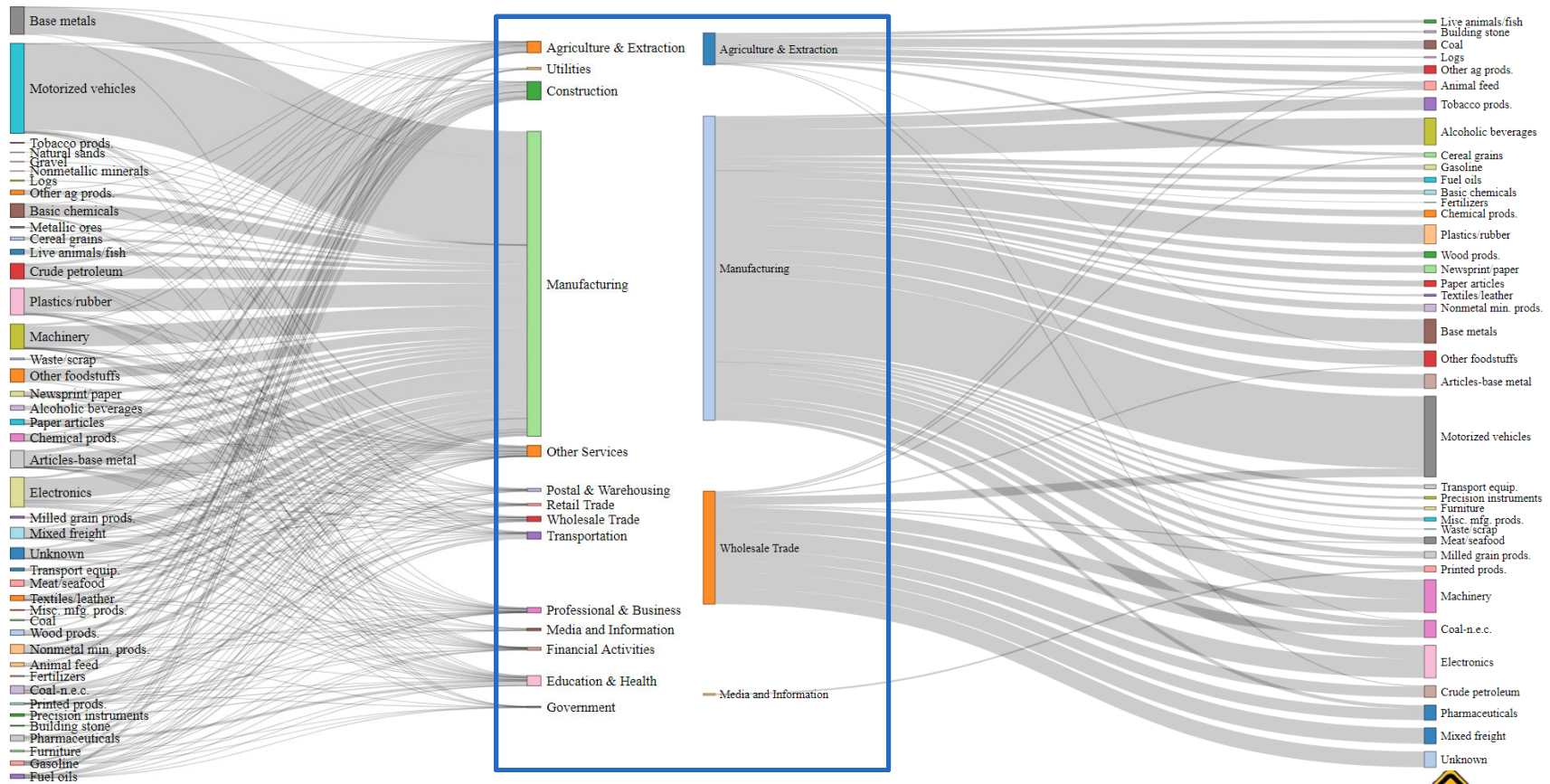


Enrichment **ENABLES**

- Market Analysis
- Corridor Demand
- Spatial Disaggregation
- Impact Analysis
- Forecasting
- Induced Freight Activity
- Workforce Analysis



Communicating Importance: Mapping the KY Freight-Economy



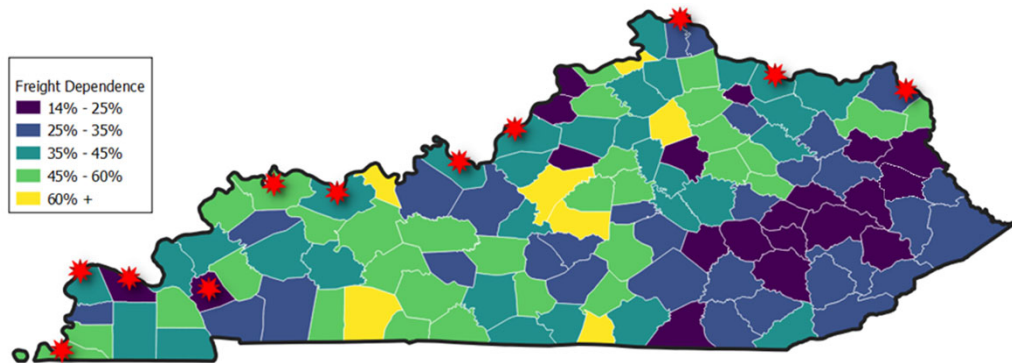
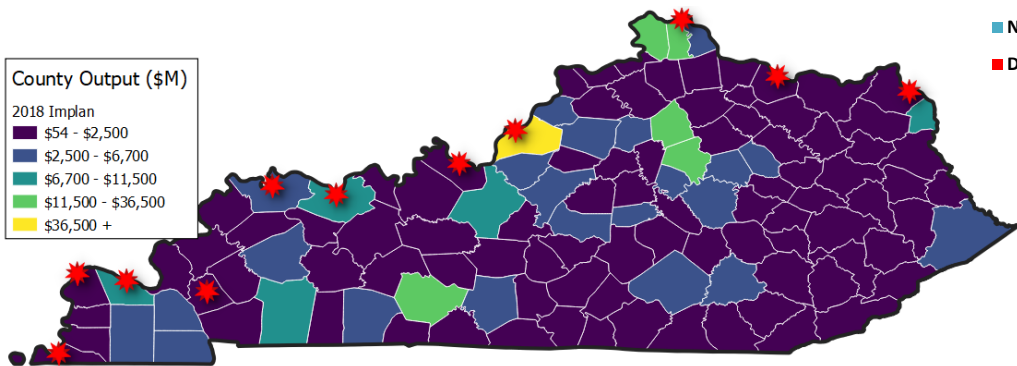
Inbound Commodities

Kentucky Industry

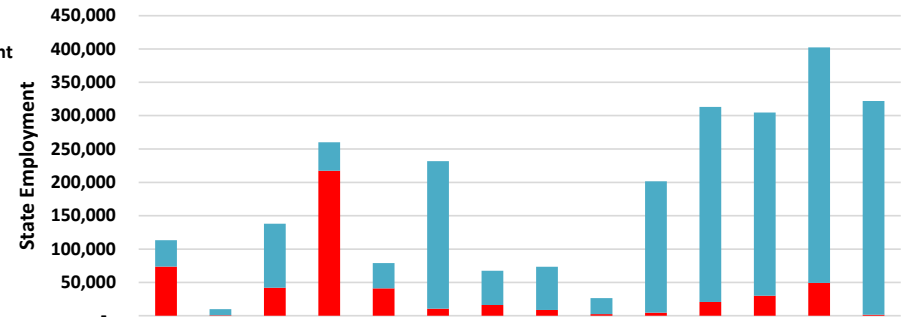
Outbound Commodities



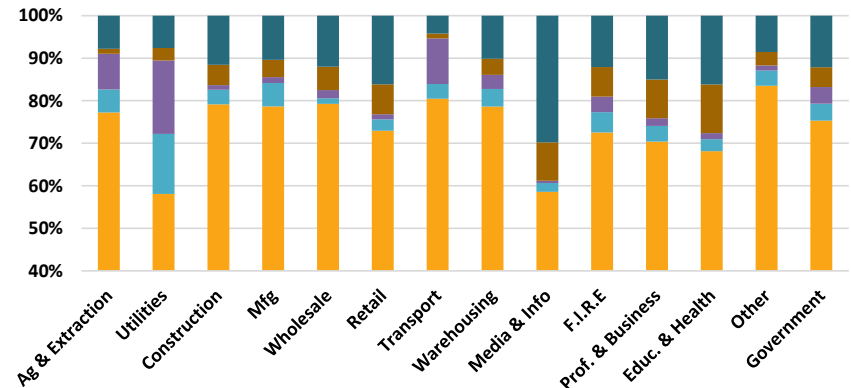
Communicating Importance: Tying in the Human Element



Kentucky Freight Dependence
2018 Employment



Breakout of Industry Reliance by Mode



Communicating Importance: Case Study

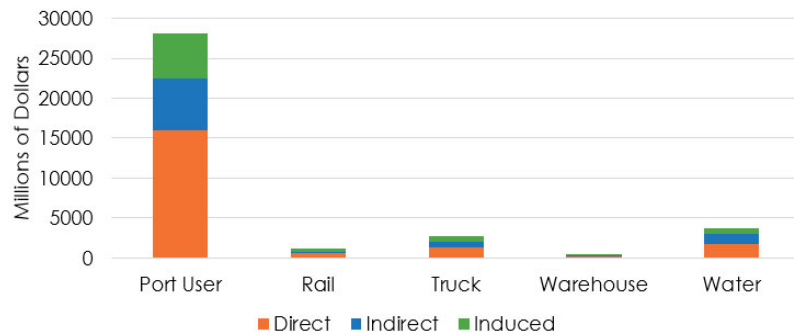


Statewide Impact: by Type of Activity

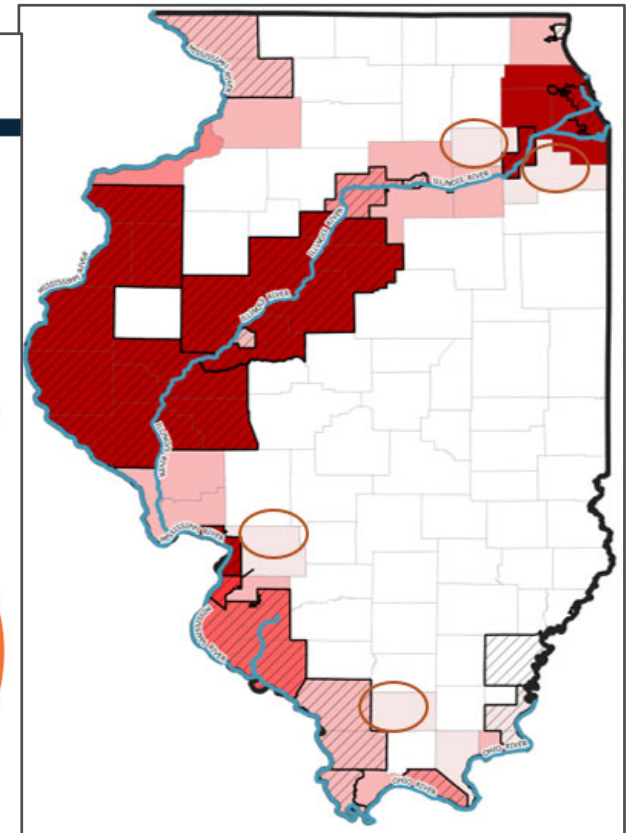
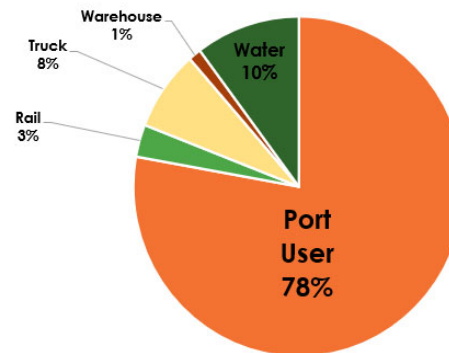
ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN

Impact Type	Direct Impact				Total Impact			
	Employment	Income (\$M)	Value Added (\$M)	Output (\$M)	Employment	Income (\$M)	Value Added (\$M)	Output (\$M)
Port User	59,372.9	3,681.5	6,216.1	15,968.5	127,481.4	7,815.2	13,286.5	28,035.3
Rail	1,704.7	302.4	368.1	564.1	4,913.2	489.8	689.3	1,109.8
Truck	8,015.9	513.4	617.8	1,314.0	16,581.8	1,013.2	1,472.5	2,749.3
Warehouse	1,831.0	117.9	140.0	216.4	3,299.3	198.6	283.1	446.5
Water	3,757.7	301.2	539.0	1,790.7	14,353.2	966.2	1,629.7	3,683.4
Total	74,682.2	4,916.4	7,880.9	19,853.6	166,628.9	10,483.1	17,361.1	36,024.4

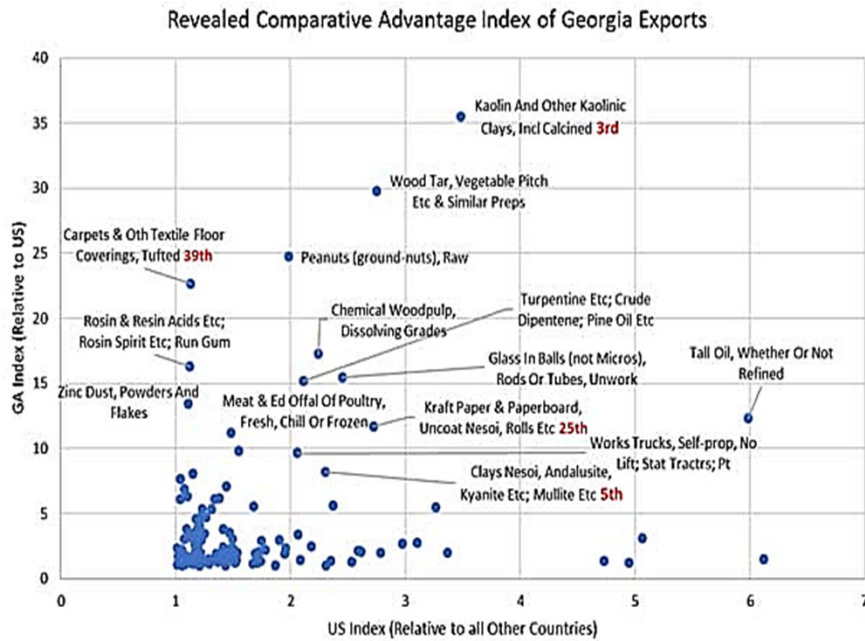
Composition of Total Impacts
(Economic Output)



Total Output by Activity (\$M)

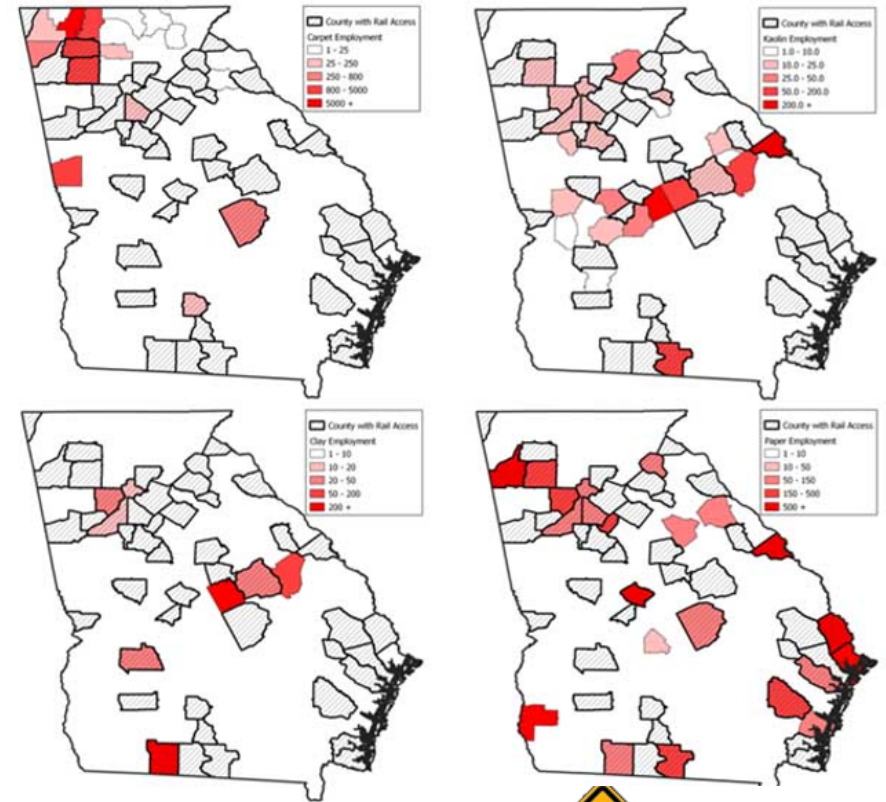


Inform Solution Planning: Case Study



Source: USA Trade, UN COMTRADE

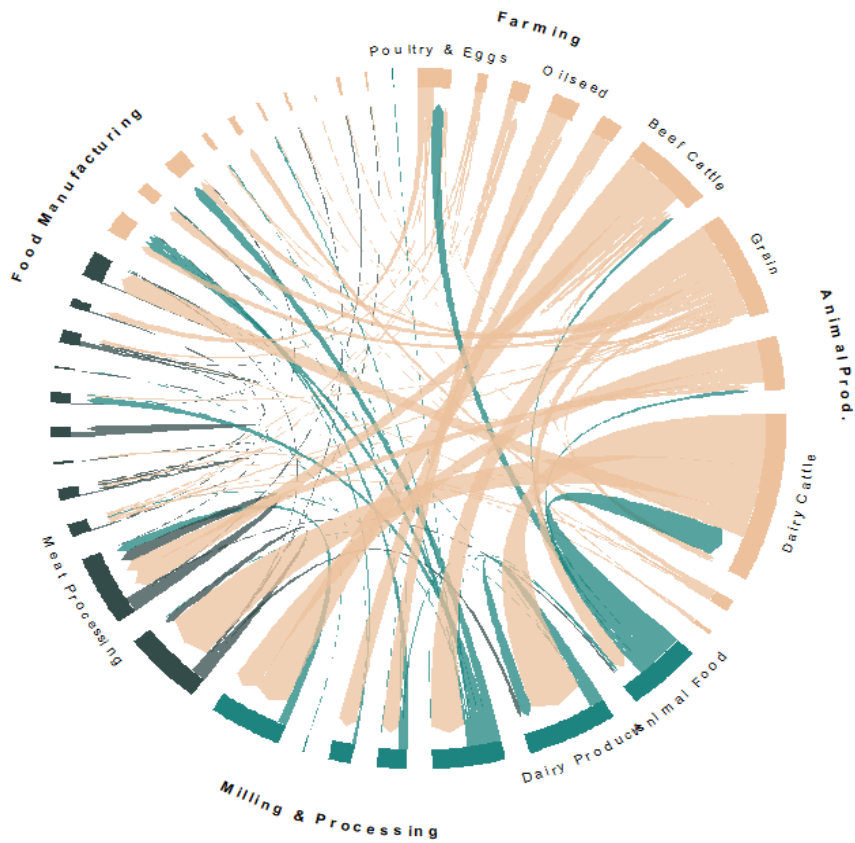
Figure 3. Relation of Strategic Sectors to Rail Sites



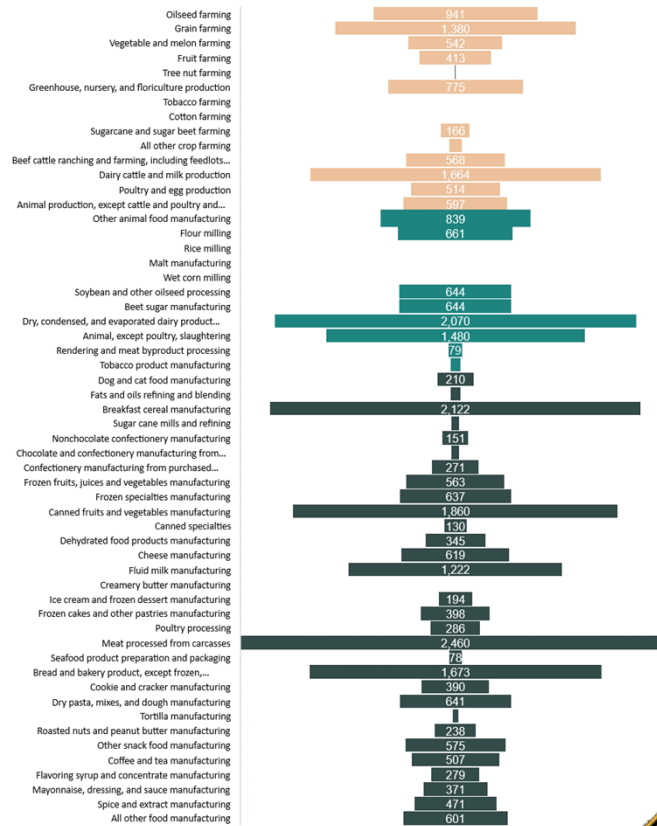
Source: Implan, County Development Data



Integrate into Broader Analysis: Case Study



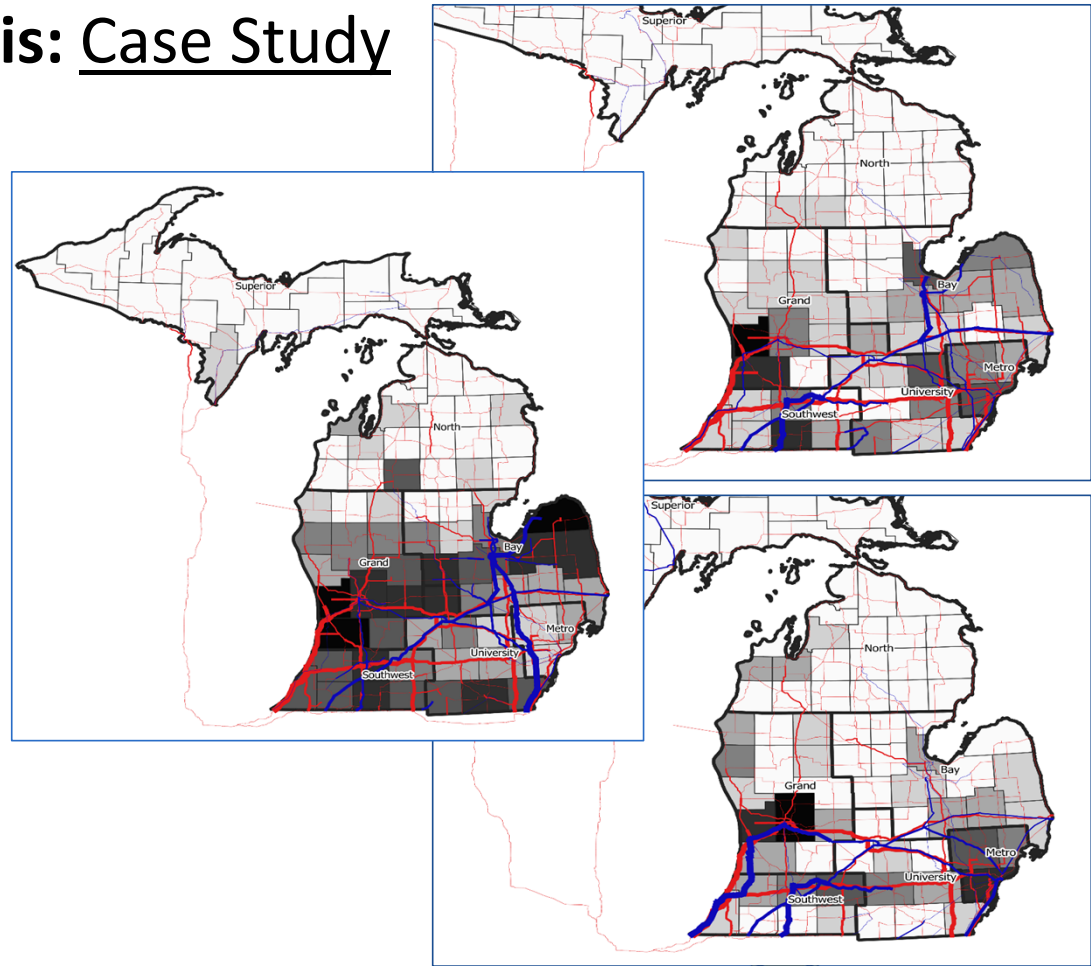
Agriculture Supply Chain Sector Definition
(2018 Output \$M)



Integrate into Broader Analysis: Case Study

Demonstrate which corridors matter for growth industries

- Capacity and Bottleneck implications
- Strategic investment fostering growth industries
- Trade Integration with Broader Regions



Integrate into Broader Analysis: Case Study

Business as Usual | 3D: Increased Solar/ High Storage/ EE & High Wind | 2028 | Brookings Clean Energy | **SUBMIT**

Sector Industry Impact | **Sector Occupation Impact** | Sector Workforce Impact

Top Growth/Decline | Detailed Changes | Naics-SOC Driver | Quality & Requirements

Table

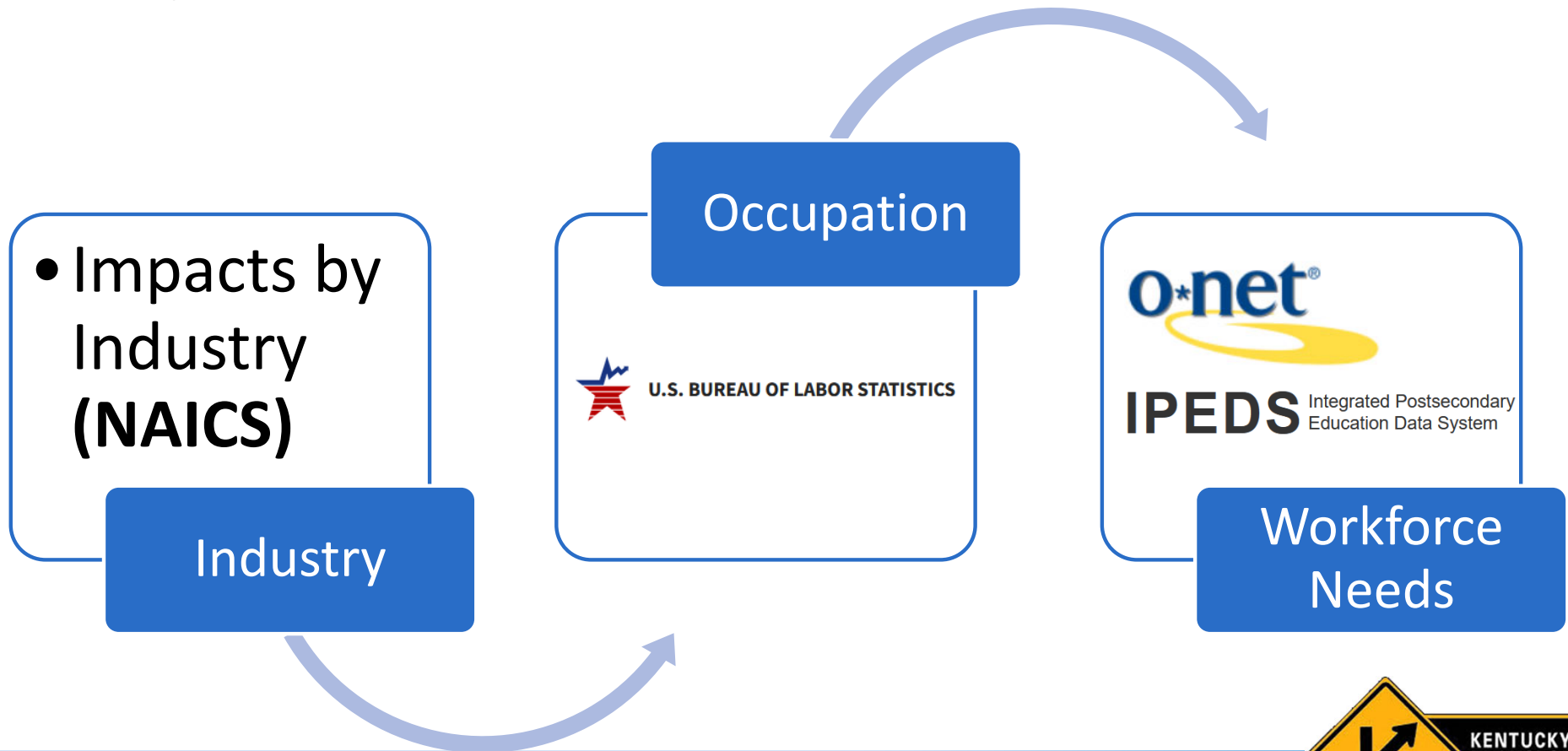
Occupation Code	Occupation Description	Entry Level Education	Related Work Experience	On-the-job Training Needed	Job Income	State Compensation (Avg)	Change in Occupational Employment
49-9051	Electrical power-line installers and repairers	High school diploma or equivalent	None	Long-term on-the-job training	\$54,497.00	\$54,182	2,406
47-2061	Construction laborers	No formal educational credential	None	Short-term on-the-job training	\$54,429.00	\$54,182	1,754
49-9052	Telecommunications line installers and repairers	High school diploma or equivalent	None	Long-term on-			
47-2073	Operating engineers and other construction equipment operators	High school diploma or equivalent	None	Moderate-term			
47-1011	First-line supervisors of construction trades and extraction workers	High school diploma or equivalent	5 years or more	None			
49-1011	First-line supervisors of mechanics, installers, and repairers	High school diploma or equivalent	Less than 5 years	None			
11-9021	Construction managers	Bachelor's degree	None	Moderate-term			

Scenario Impacts on Workforce Training Needs of Sector (2045)

Sector-Industry Drivers of Scenario Workforce Training Demand (2045)



Integrating into Broader Analysis: Blueprint for Economic Development



Summary

- ✓ Identify Available Resources, Capabilities
- ✓ Demonstrate Common Freight Usage
- ✓ Methods to Improve Stakeholder Engagement
- ✓ Logical Linkages to Integrate Processes

**Data might seem daunting,
but resources exist to simplify the task**

Resources Already Available to the State

- Transearch
- Vfreight
- IMPLAN
- TREDIS
- Freight Finder

FREE RESOURCES

- IPEDS
- O*NET
- US Army Corps Data
- CENSUS' LEHD Data

Additional

- Data Axle (formerly INFOUSA)



Thank You

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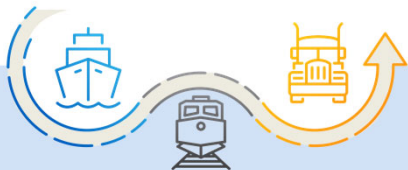
Matt Yates

Matt Yates is the VP of the Louisville Riverport Authority, where he handles new investment, Foreign Trade Zone, and daily operations. He has worked in economic development for a decade, previously working in Louisville Forward, and under the CFO for the city of Louisville. He resides in South End Louisville with his wife, son, and daughter where he is active in the local community ministries, his kid's sports, and making frequent trips to the lake.

matt.yates@louisvilleriverport.com



Questions



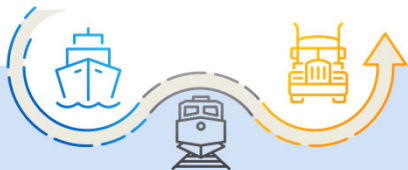
KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY



Kentucky Summit on Economic Development Strategies to Leverage Kentucky Riverports and Freight Network

Recap

Opening Session	March 24, 10:00 to 10:45 am
2021 Changes in Federal Transportation & Trade Policies	March 24, 1:00 to 1:45 pm
What's New in the Neighborhood? Updates from Adjacent State Ports	March 24, 2:00 to 3:00 pm
Forecasting the Future of KY's Freight Economy	March 25, 10:00 to 11:45 am
How will the Future of Freight Impact Other Modal Operations?	March 25, 1:30 pm to 2:30 pm
Port Infrastructure Needs & KY's Funding Process	March 25, 3:00 to 4:00 pm
Economic Development & Riverport Markets	March 26, 10:00 am to 12:00 pm



KENTUCKY RIVERPORTS, HIGHWAY & RAIL FREIGHT STUDY

