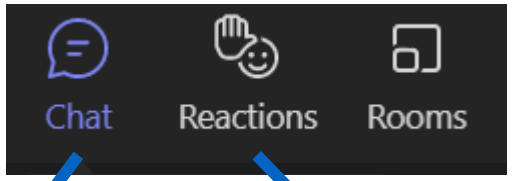
ALDOT Statewide Freight Plan Update

Freight Advisory Committee Meeting

August 11, 2022

Teams Webinar

- Please keep your computer audio or phones on “mute”.
- Click “Reactions” to raise your hand to speak.
- You may also ask questions or enter comments in the Chat window, and we will pause periodically during the presentation to address questions or comments.



Click “Chat” to ask a question or leave a comment

Click “Reactions” and raise your hand to indicate you’d like to speak

Agenda

- Plan Purpose and Background
- Freight Network
- Freight Generators
- Commodities and Flows
- Freight System Resilience
- Additional Discussion
- Next Steps

Plan Purpose and Background

Plan Purpose

- Update of the 2017 Statewide Freight Plan
- Integrate freight planning efforts statewide and provide input into the Statewide Transportation Plan
- Consider new federal freight planning requirements from the Infrastructure Investment and Jobs Act (IIJA)
- Engage statewide freight stakeholders (public and private sector) to better understand freight needs, challenges, and priorities
- Identify existing and future forecast deficiencies in the freight network, and develop programs and strategies to improve freight mobility and support the freight-based economy statewide

Mission

To promote the **efficient and safe movement of goods** in a manner that **increases economic competitiveness** and **promotes environmental responsibility** throughout the State of Alabama.

Goals

- **Improve reliability and reduce congestion** on the National Multimodal Freight Network (NMFN) within the state.
- **Improve connectivity between all modes** of freight transportation and address supply chain issues throughout the state.
- **Coordinate with Metropolitan Planning Organizations (MPOs)** and other agencies during the development/update of the Statewide Freight Plan.
- **Ensure a state of good repair** along freight network facilities throughout the state.

Goals

- **Improve economic benefits by supporting public and private sector investment** on the statewide freight network.
- **Promote the safety, security, efficiency, and resiliency** of multimodal freight transportation.
- Promote the use of **ITS technologies to improve the safety, efficiency, and reliability** on the statewide freight network.
- **Promote and enhance both the human and natural environment** while enhancing the performance of the statewide freight network.

Outcomes

- Establishment of **freight goals and performance measures**
- **Evaluation and assessment of the freight network**, including existing and projected commodity flows, interaction between modes, truck bottlenecks, and truck parking
- **Update Freight Investment Plan**
- Continued **coordination among the Freight Advisory Committee (FAC)**

Freight Advisory Committee (FAC) – Invited Members

- Alabama Railway Association
- Railroads - CSX, NS, BSNF, GWRR
- Huntsville & Madison County RR Authority
- Terminal Railway AL State Docks
- Southeast Association of Rail Shippers
- OnTrack North America
- Alabama Trucking Association
- Airport Authorities – Birmingham, Mobile, Montgomery, Huntsville-Madison County
- Alabama State Port Authority
- Port of Florence
- AL Dept of Commerce
- AL Law Enforcement Agency
- AL League of Municipalities
- ALDOT – Bureaus and Region Offices
- MPOs – Montgomery, Huntsville, Birmingham, South AL RPC
- FHWA
- Federal Motor Carrier Safety Administration
- Maritime Administration
- Poarch Band of Creek Indians

Your Role on the FAC

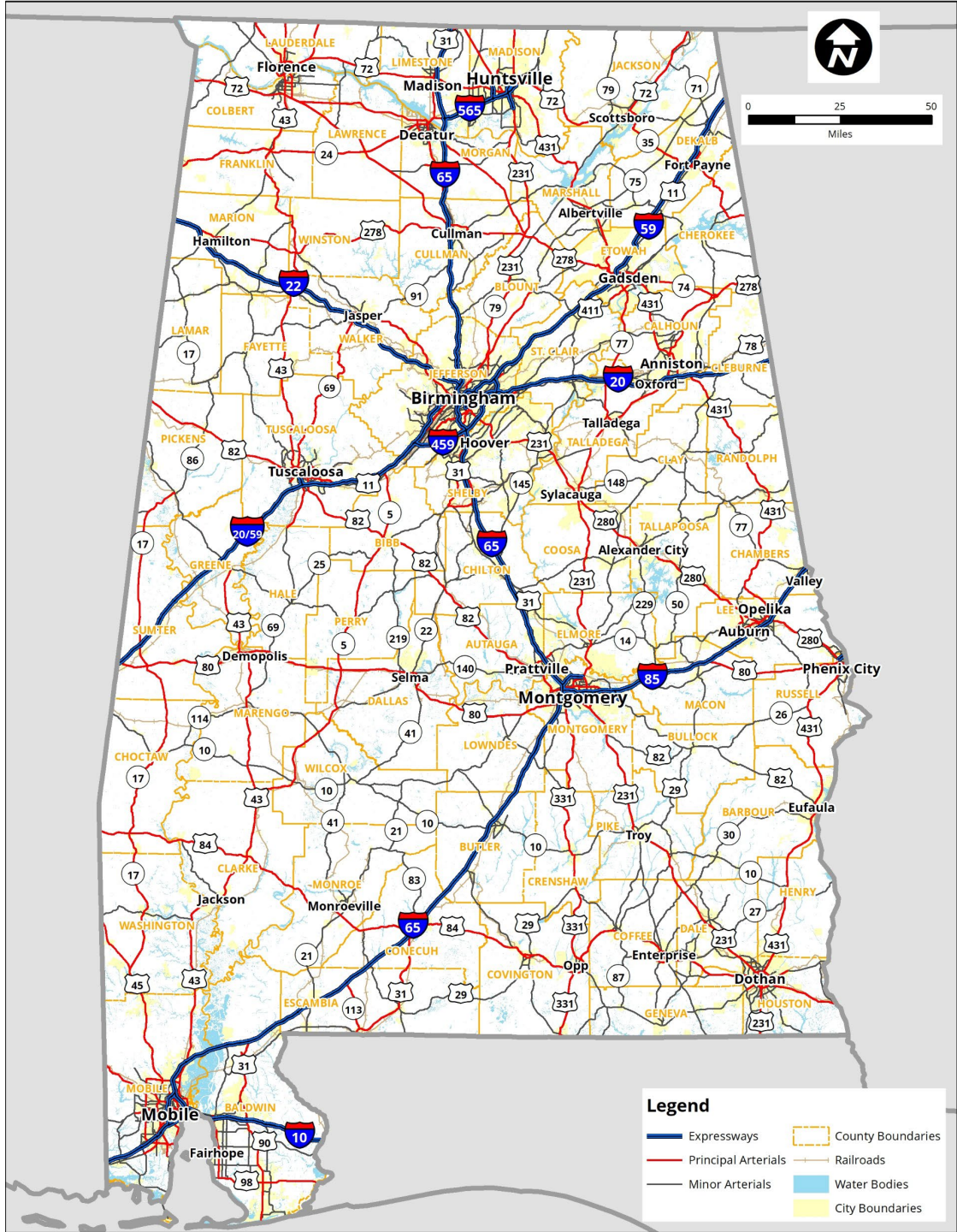
- Share your experiences with the freight network, including priorities and needs
- Provide guidance on freight program activities and projects
- Facilitate conversations among the state, regions, modal providers, and related agencies and organizations to improve freight mobility and position Alabama for continued economic growth

Freight Network

Alabama Roadway Network

Approximately 100,000 miles of centerline roadway, including 10,940 miles of state roadways

- 1,004 miles of interstates
- 9,720 miles of arterials
- 21,985 miles of collectors
- 67,462 miles of local roads



Source: 2020 Highway Statistics Series

National Highway Freight Network

- Developed under FAST Act to strategically direct Federal resources and policies to improve US highways on the freight network
- Eligible for funding from the National Highway Freight Program ($25.8M for Alabama in FY 2022)
- Delineated into primary and non-primary highway freight systems
- Over 1,700 miles of roadway within Alabama, including interstates and interstate bypasses
- Also includes intermodal connectors in Birmingham, Decatur and Mobile

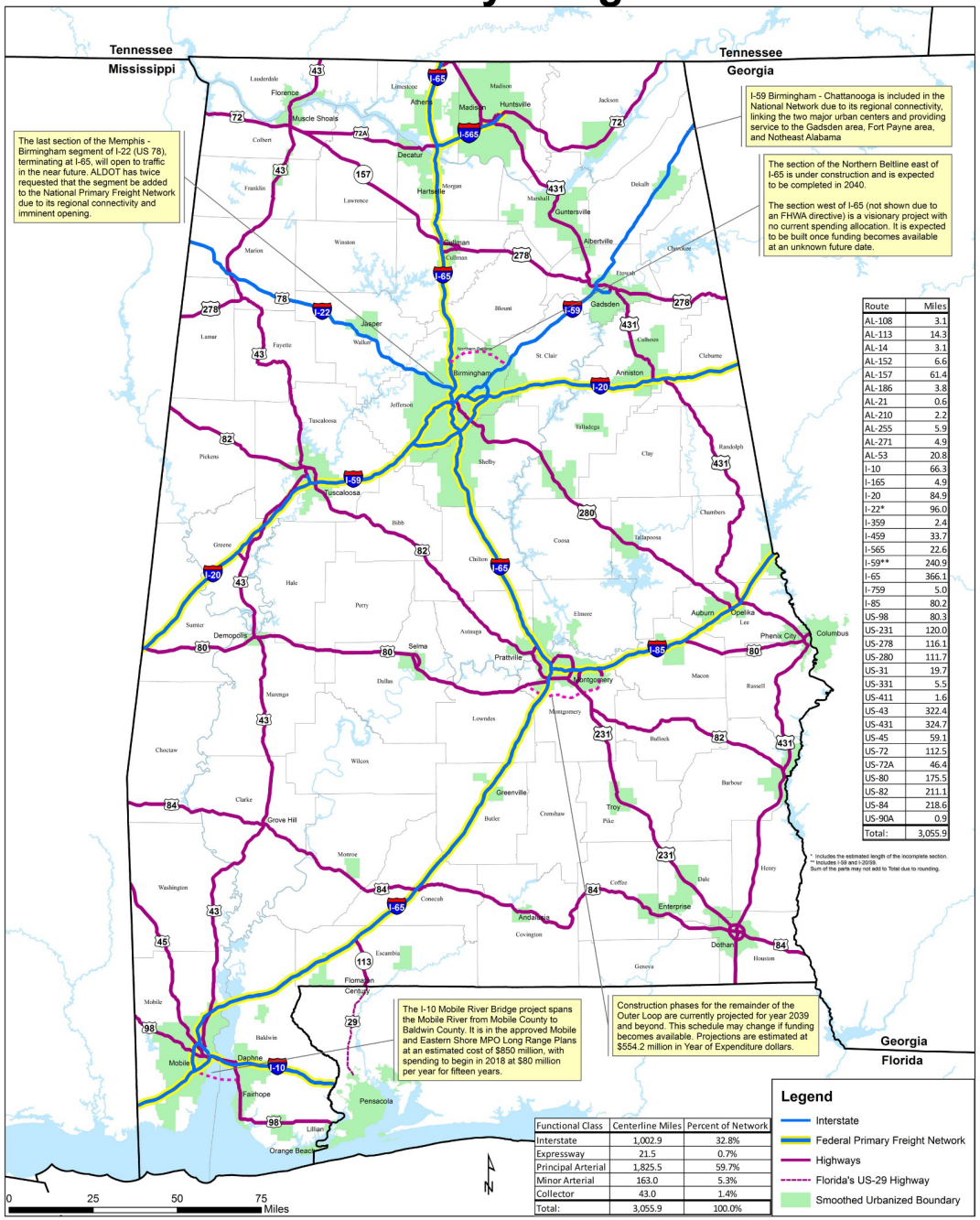
Source: 2020 Highway Statistics Series

Statewide Primary Freight Network

- Developed during previous Statewide Freight Plan Update
- Based on several factors, such as:
  - Presence on NFHN
  - Truck Traffic Characteristics
  - Connectivity to Major Industrial Facilities

Source: 2017 ALDOT Freight Plan

Statewide Primary Freight Network



Route	Miles
AL-108	3.1
AL-113	14.3
AL-14	3.1
AL-152	6.6
AL-157	61.4
AL-186	3.8
AL-21	0.6
AL-210	2.2
AL-255	5.9
AL-271	4.9
AL-53	20.8
I-10	66.3
I-165	4.9
I-20	84.9
I-22*	96.0
I-359	2.4
I-459	33.7
I-565	22.6
I-59**	240.9
I-65	366.1
I-759	5.0
I-85	80.2
US-98	80.3
US-231	120.0
US-278	116.1
US-280	111.7
US-31	19.7
US-331	5.5
US-411	1.6
US-43	322.4
US-431	324.7
US-45	59.1
US-72	112.5
US-72A	46.4
US-80	175.5
US-82	211.1
US-84	218.6
US-90A	0.9
Total:	3,055.9

* Includes the estimated length of the incomplete section.
** Includes I-59 and I-20/59.
Sum of the parts may not add to Total due to rounding.

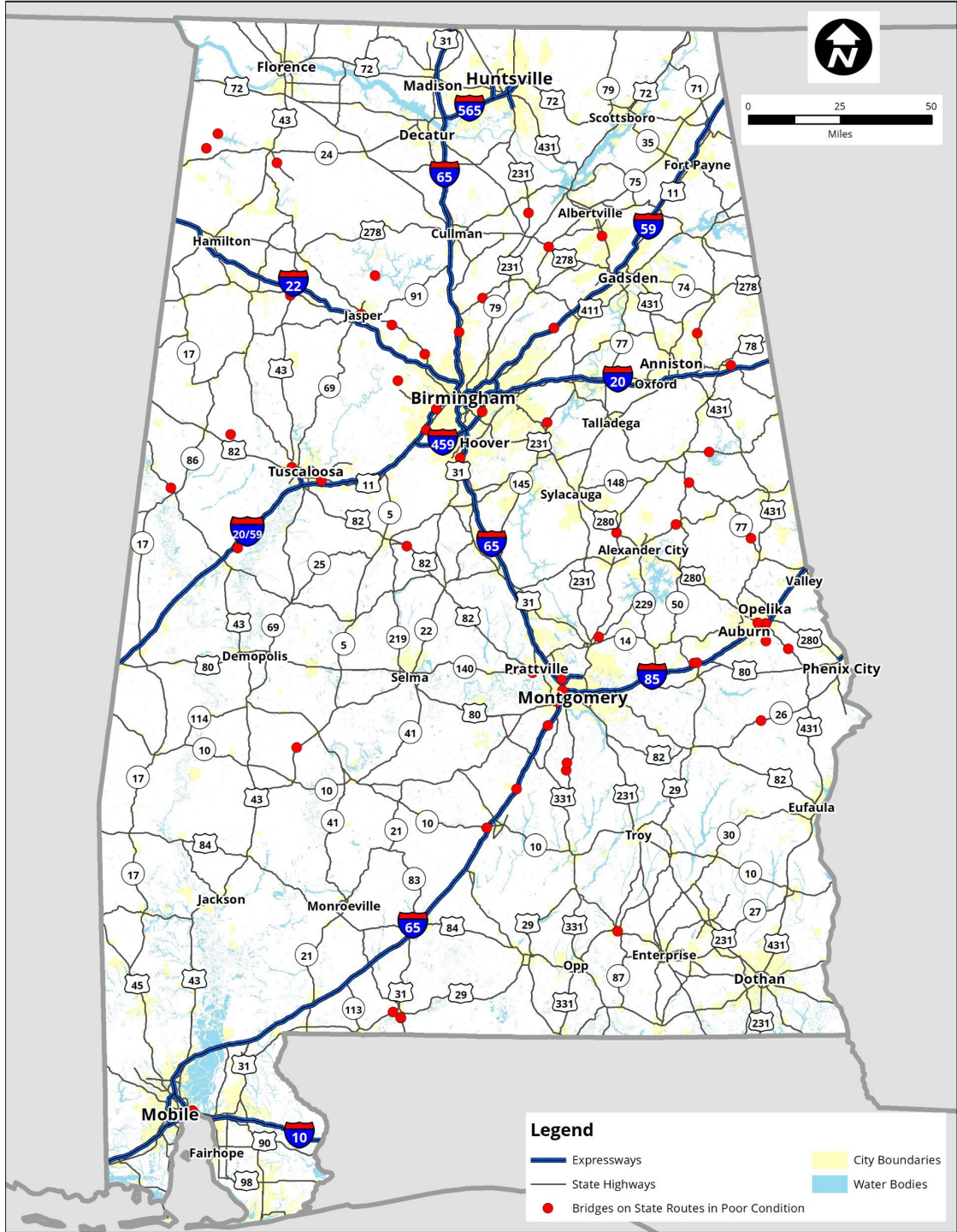
Functional Class	Centerline Miles	Percent of Network
Interstate	1,002.9	32.8%
Expressway	21.5	0.7%
Principal Arterial	1,825.5	59.7%
Minor Arterial	163.0	5.3%
Collector	43.0	1.4%
Total:	3,055.9	100.0%

Source: ALDOT Metropolitan Planning Section - 1/21/2016

Based on 2010 Census Data

Bridges

- Over 16,000 bridge structures in Alabama
  - Many bridges fall along NHFN routes, state routes, and other arterials which carry truck traffic
  - 5,429 along interstates, and US and state highways
  - Statewide, only 4% of bridges are in poor condition



Source: 2021 National Bridge Inventory (NBI)

Railroads

- Over 4,318 miles of railroads within Alabama
- Class I (3,022 miles) – Norfolk Southern, CSX, Burlington North & Santa Fe, and Canadian National/Illinois Central Railroad
- Class II (287 miles) – Alabama & Gulf Coast Railway (AGR)
- Class III (1,009 miles) – 27 shortline railroads
- CRISI Grant Applications
  - Alabama-USA Corridor - First phase would include improvements along 280 miles of railroad corridor linking Port of Mobile with McCalla Intermodal Facility in Birmingham.
  - Black Belt and Central Alabama Freight Rail Improvement Project – For two short railroads in north and south Alabama, operated by GWRR, would replace 24 miles of rail, resurface 20 crossings and turnouts, construct two rail cars storage sidings, and other infrastructure improvements.

Source: Federal Railroad Administration

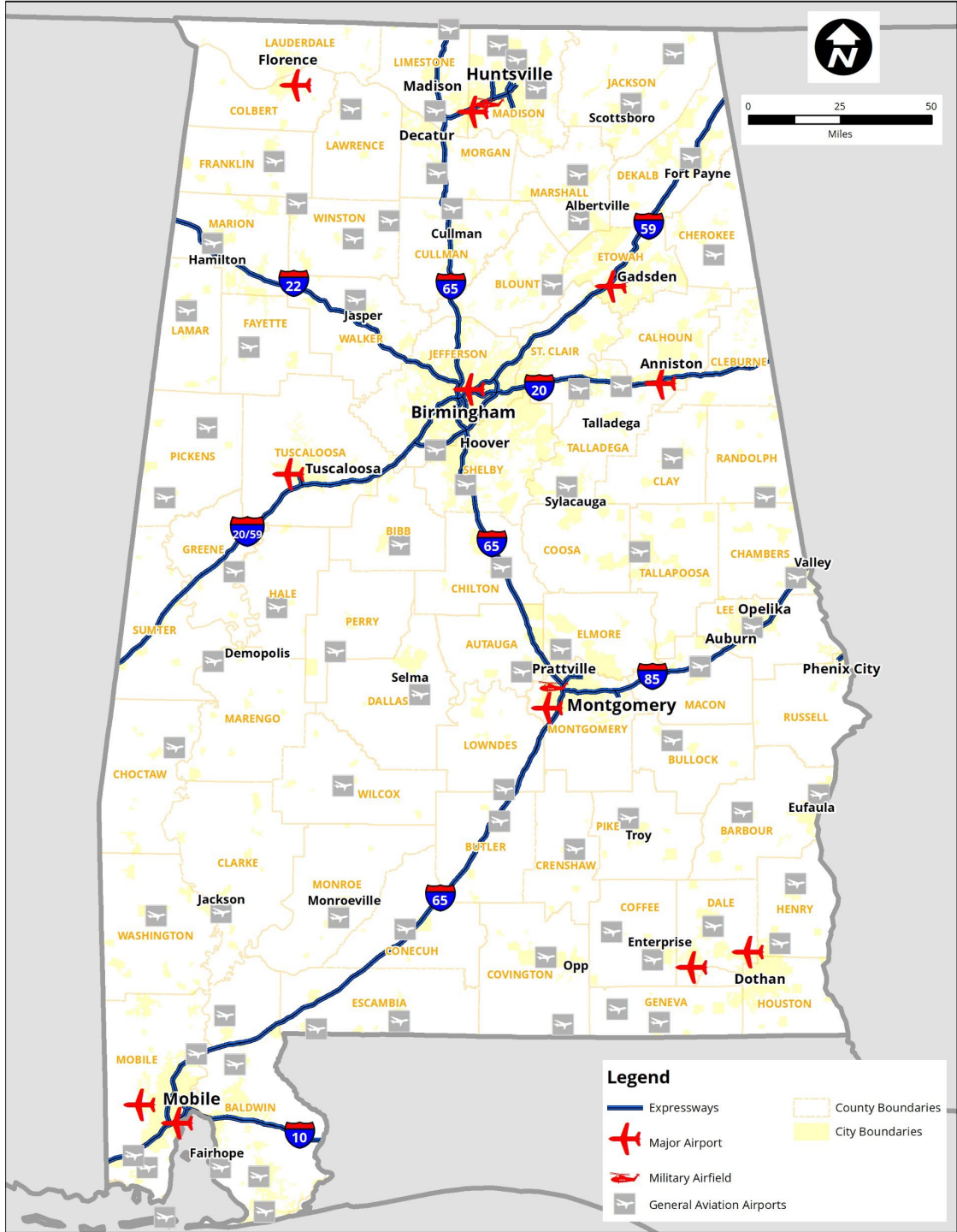
Ports

- Port of Mobile
  - Moves approximately 58 million tons of cargo annually
  - Access to I-10, I-65, five Class I railroads, and Mobile Aeroplex at Brookley
- Nine inland docks along 15,000 miles of navigable waterways, some with access to rail spurs and industrial facilities
  - Florence, Bridgeport, Cordova, Demopolis, Selma, Montgomery, Eufaula, Columbia, Axis

Source: Bureau of Transportation Statistics

Airports

- 11 major airports
- Birmingham, Huntsville, and Montgomery airports handle the most air cargo, along with airports at military installations
- BIL provides $15B for airport projects, including runways, taxiways, terminal, airport-transit connections and roadway projects ($28.2M for Alabama in FY 2022)

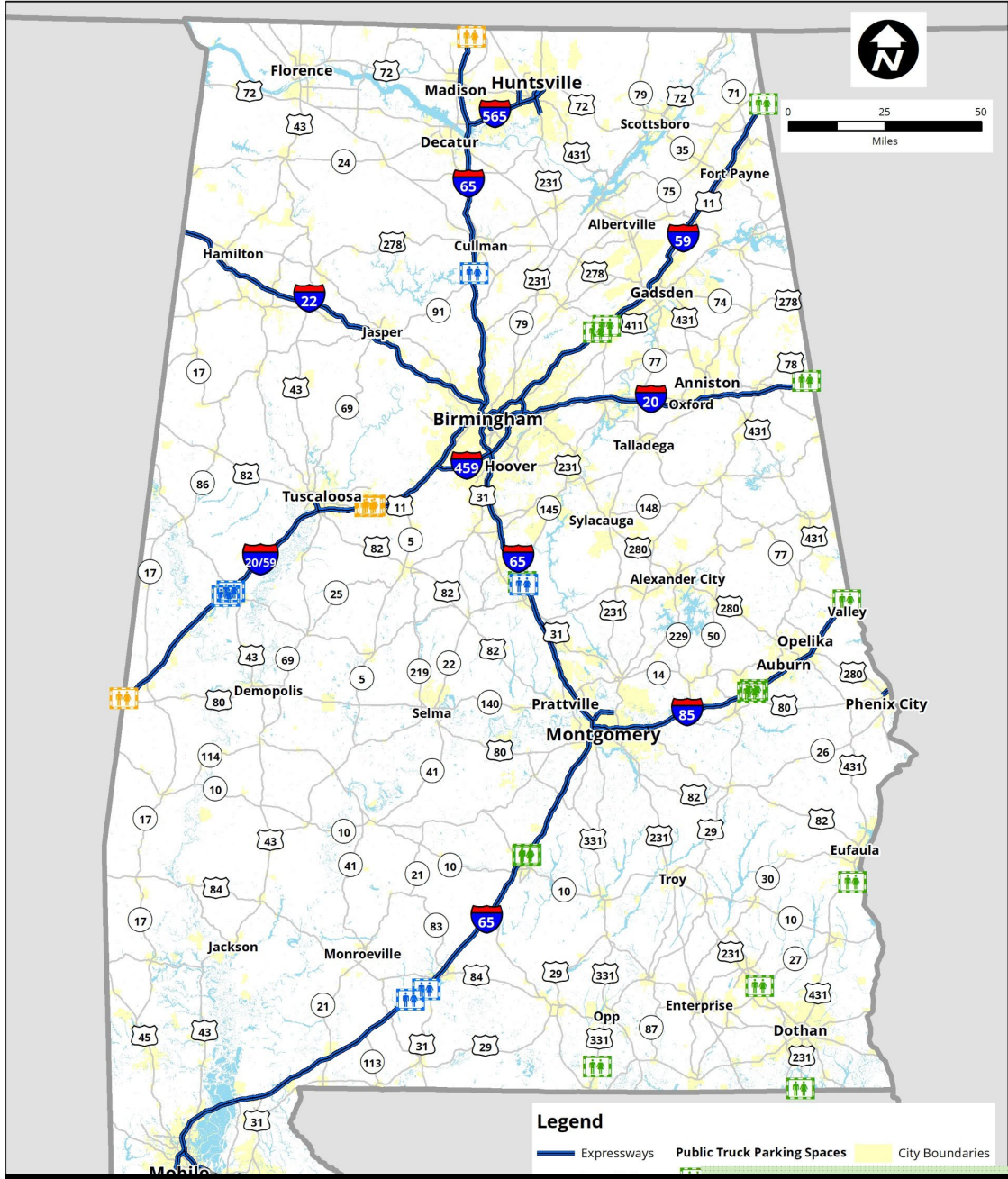


Source: Federal Aviation Administration

Truck Parking

Public Truck Parking

- Approximately 720 truck parking spaces at rest areas and welcome centers along interstates
- Most truck parking at Grand Bay Welcome Center (Mobile) – 96 spaces
- No public truck parking along I-22
- Conducting inventory at other locations, such as weigh stations and private truck stops, to assess truck parking needs across the state
- *Where is truck parking a challenge? Are there specific corridors or areas with a lack of sufficient truck parking spaces?*

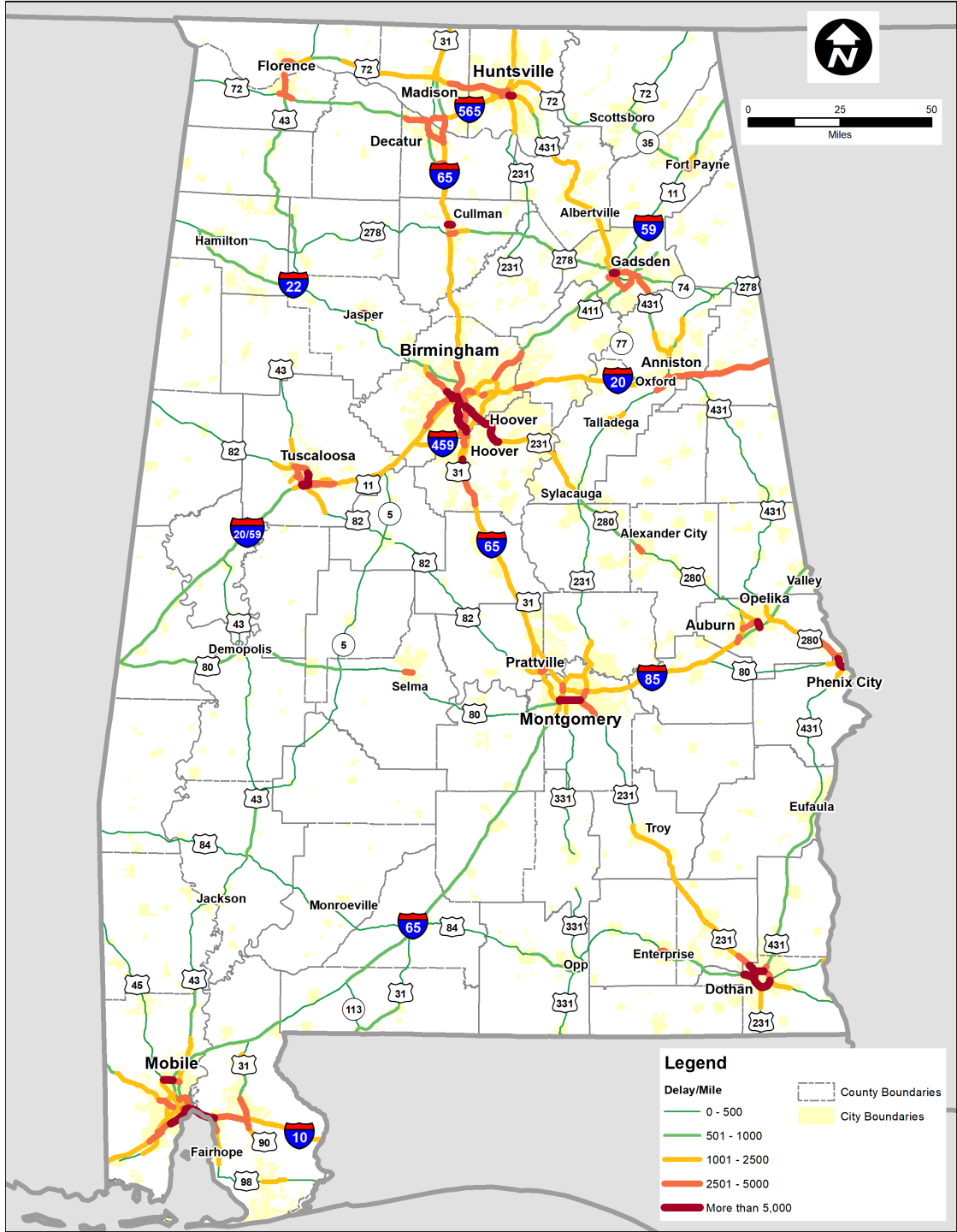


Source: ALDOT

Truck Bottlenecks

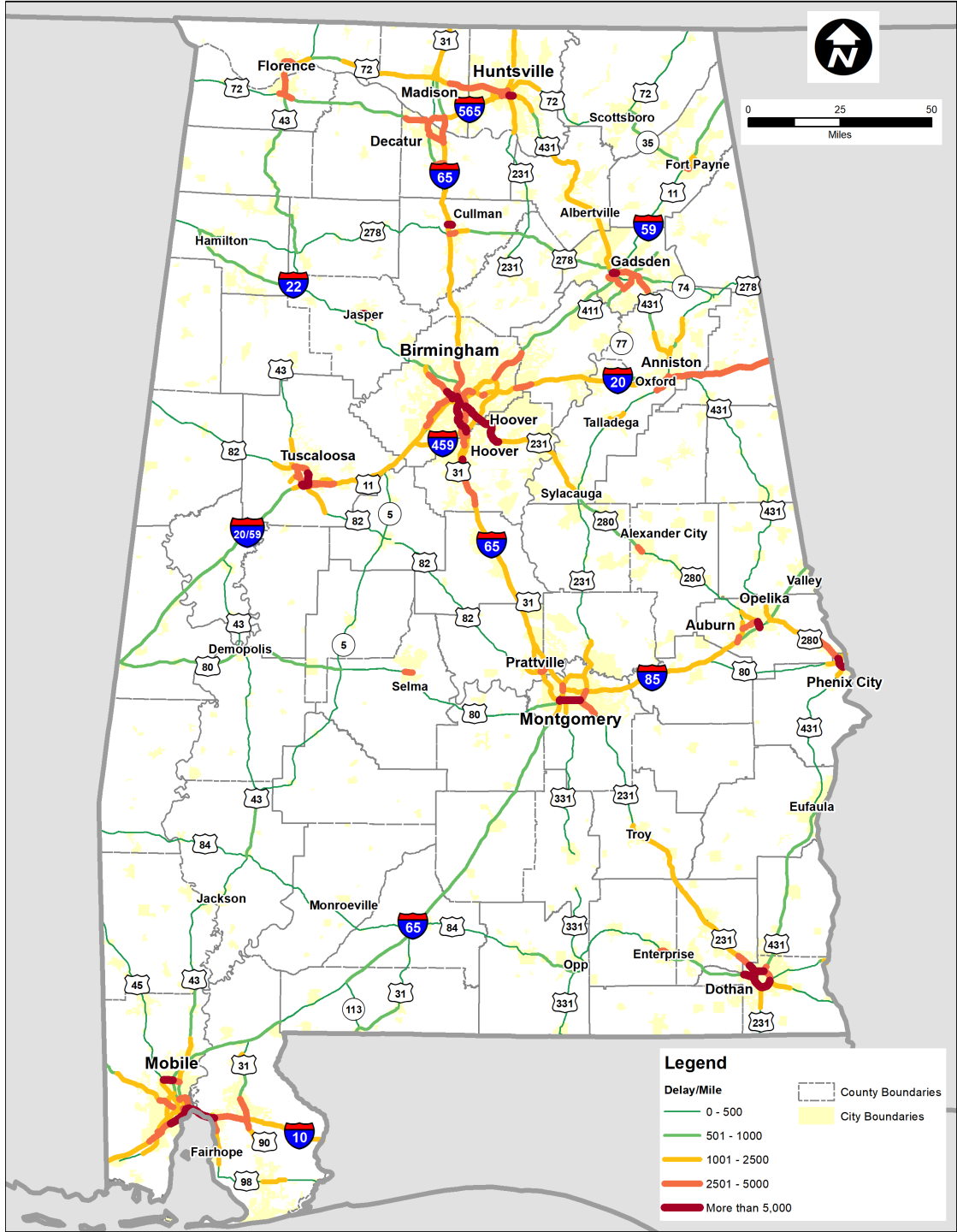
FHWA Freight Mobility Trends

- Based on 2021 traffic data
- Measured by Delay per Mile
- Shows bottlenecks along segments of roadways
- Most significant truck bottlenecks in and around cities, including Birmingham, Mobile, Montgomery, and Dothan
- Also shows truck bottlenecks along interstates and highways between cities
  - I-65 – From Decatur to Birmingham to Montgomery
  - I-20 – From Tuscaloosa to Birmingham to Georgia
  - I-85 – From Montgomery to Georgia
  - US 431 – From Gadsden towards Huntsville
  - US 231 – From Dothan to Troy



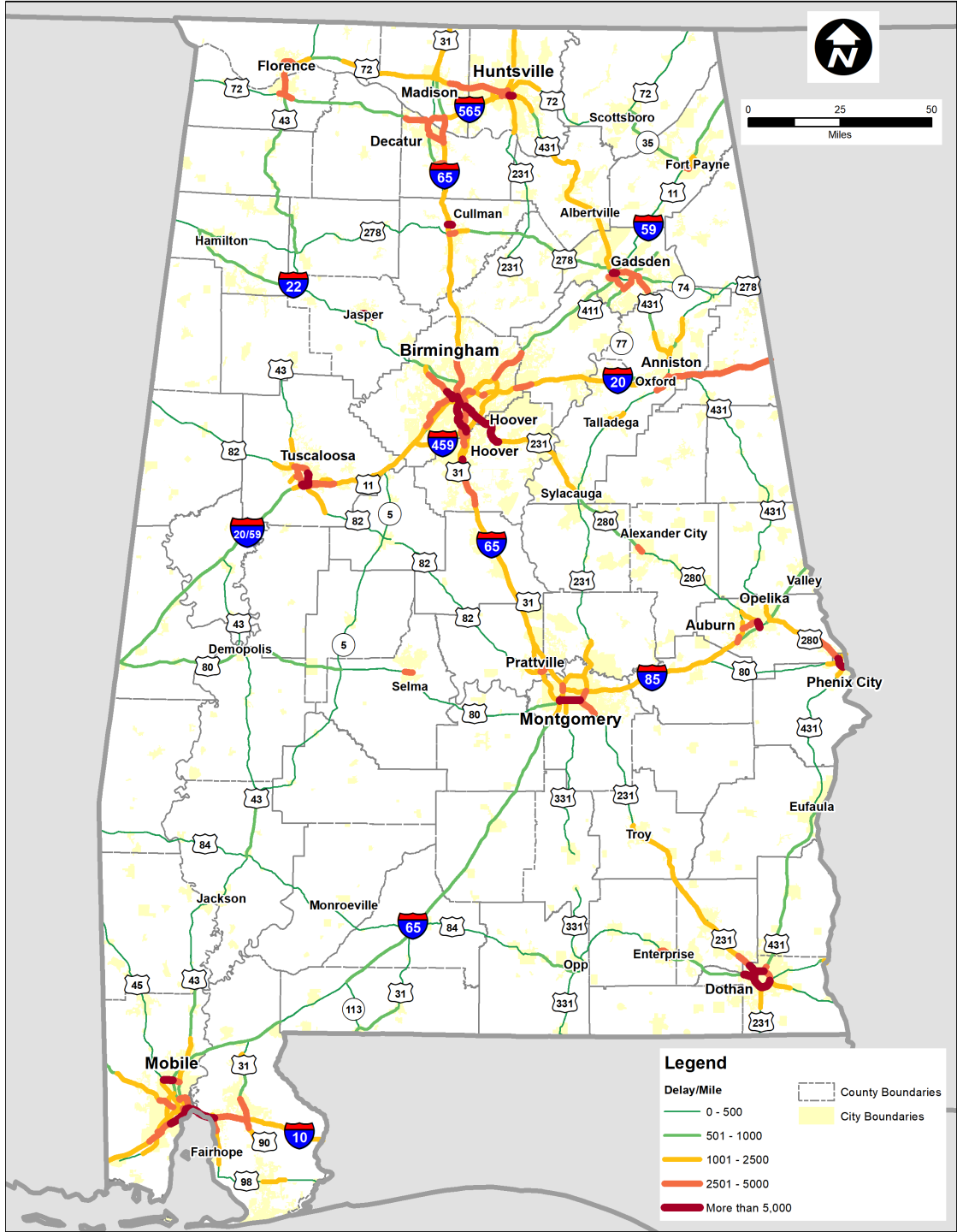
Truck Bottlenecks

Top 25 Freight Bottlenecks based on Delay/Mile in Alabama (2021)					
Rank	Urban Area	Road	Beginning Intersection	Ending Intersection	Delay/Mile
1	Mobile area	I-10	US-98 to	Old Spanish Trail	8743.00
2	Birmingham	I-65	1st Ave North	US-31	7909.00
3	Birmingham	I-65	12th CT N	1st Ave N	7494.00
4	Birmingham	I-65	Oxmoor Road	Lakeshore Pky	7241.00
5	Birmingham	I-65	Lakeshore Pky	Montgomery Hwy	6137.00
6	Birmingham	I-65	County Rd 52	1st St S	6076.00
7	Mobile	I-10	Old Spanish Trail	I-65	5603.00
8	Birmingham	I-65	Montgomery Hwy	John M Harbert III Fwy	5564.00
9	Tuscaloosa	I-20/I-59	I-359	McFarland Blvd E	5154.00
10	Mobile area	I-10	US-98	Old Spanish Trail	4843.00
11	Birmingham	I-20/I-59	I-20/I-59 Interchange	US-31	4813.00
12	Birmingham	I-59	Liles Ln	Chalkville Rd	4511.00
13	Birmingham	I-65	I-459/I-65 Interchange		4436.00
14	Tuscaloosa	I-20/I-59	Skyland Blvd E	McFarland Blvd E	4250.00
15	Birmingham	I-65	Decatur Hwy	Oxmor Road	3905.00
16	Gadsden	AL-77	3rd St W/I-11	Steele Station Road	3893.00
17	Tuscaloosa	AL-13	Fosters Ferry Road	University Blvd	3871.00
18	Tuscaloosa	I-20/I-59	McFarland Blvd	Skyland Blvd	3575.00
19	Birmingham	I-65	1st St	16th Ave	3517.00
20	Birmingham	I-65	16th Ave	1st St	3501.00
21	Birmingham	I-20	Dawson St	Kelley Creek Rd	3491.00
22	Tuscaloosa	I-359	15th St	Skyland Blvd	3328.00
23	Mobile	US-98	I-65	Shelton Beach Rd	3208.00
24	Mobile	I-10	Theodore Dawes Rd	Government Blvd	3182.00
25	Gadsden	AL-77	Steele Station Rd	3rd St SW	3096.00



Truck Bottlenecks

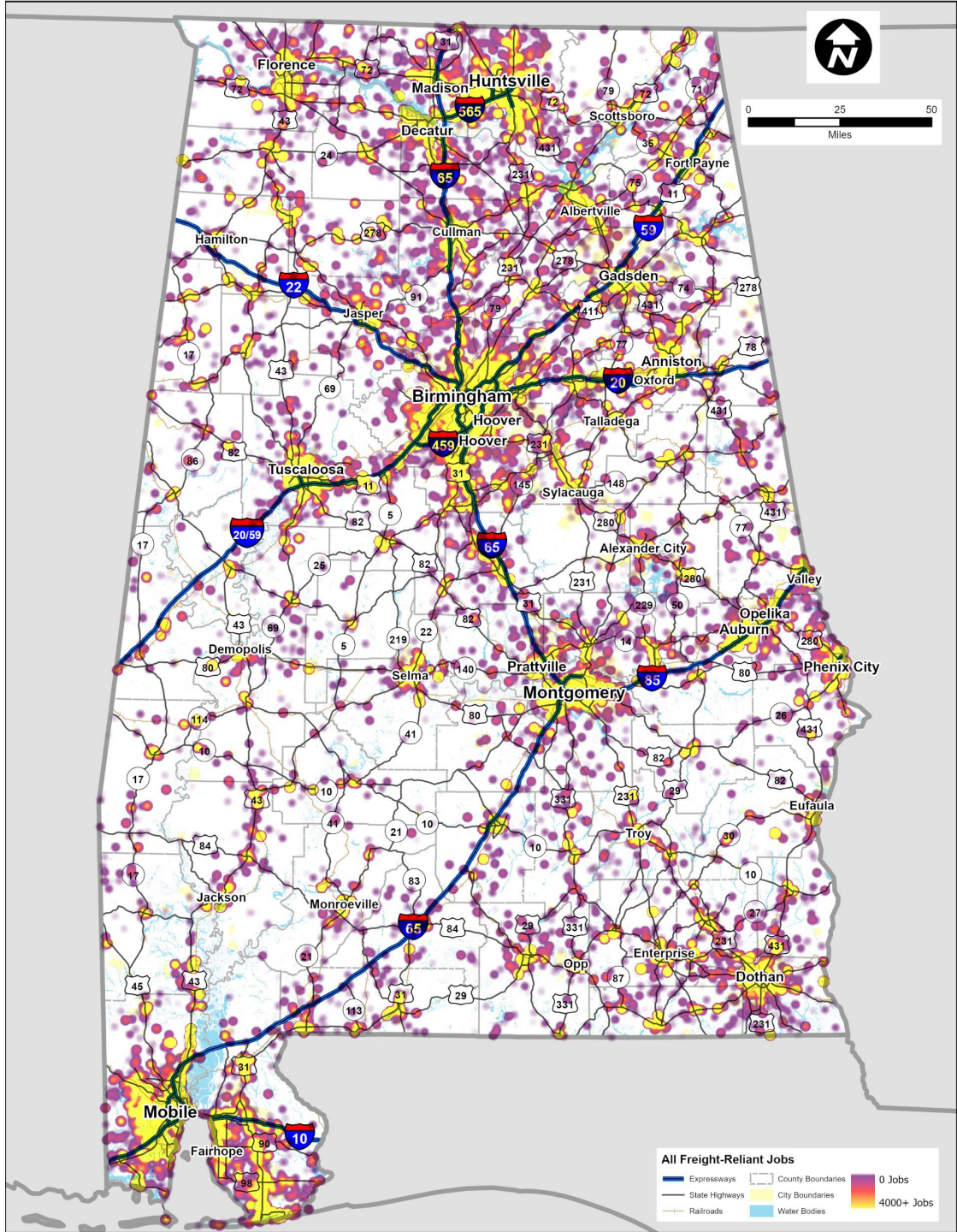
- *Do you observe truck bottlenecks in these areas?*
- *Are there additional bottlenecks along highways or at intermodal facilities?*
- *Where are some areas or portions of the freight network where freight bottlenecks will grow or worsen over the next several years?*



Freight Generators

Freight-Related Job Centers

- Based on analysis of agriculture, utility, construction, manufacturing, and wholesale and retail trade employment across the state
- Greatest concentration of freight-related employment in Birmingham, Mobile, Montgomery, Huntsville, and Dothan; along some interstate corridors; and across northern, southeast, and southwest Alabama



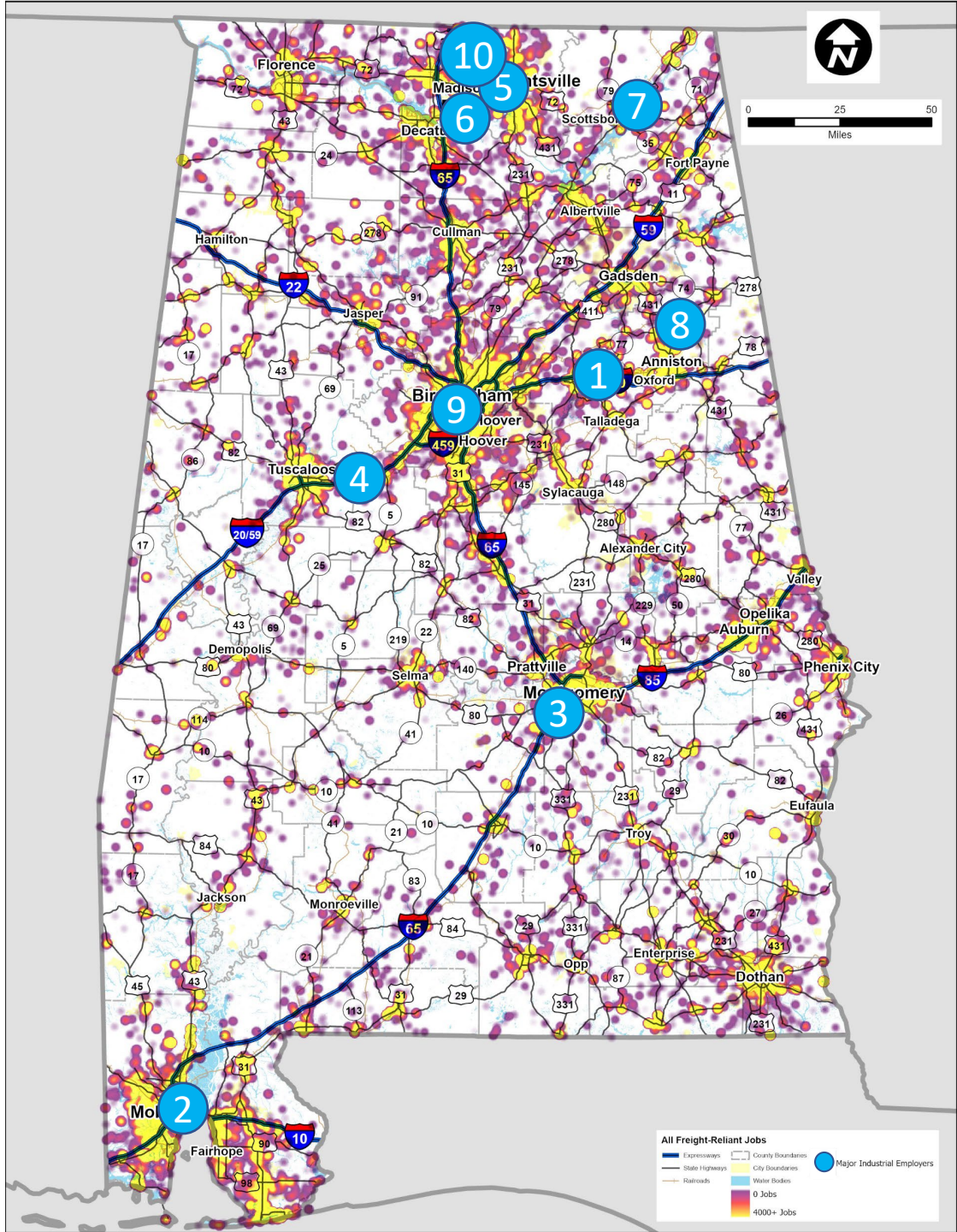
Source: Longitudinal Employer-Household Dynamics (US Census Bureau)

Freight-Related Jobs and Major Industrial Employers

Rank	Company	Employees	City
1	**Honda Manufacturing of Alabama, LLC**	4,500	Lincoln
2	**Austal USA**	4,000	Mobile
3	**Hyundai Motor Manufacturing Alabama, LLC**	3,000	Montgomery
4	**Mercedes-Benz US International, Inc.**	3,000	Vance
5	**Dynetics, Inc.**	2,500	Huntsville
6	**The Boeing Co.**	2,500	Huntsville
7	**Maples Industries, Inc.**	2,350	Scottsboro
8	**Calderys**	2,300	Jacksonville
9	**Buffalo Rock Co.**	2,200	Birmingham
10	**Mazda Toyota Manufacturer USA**	1,800	Huntsville

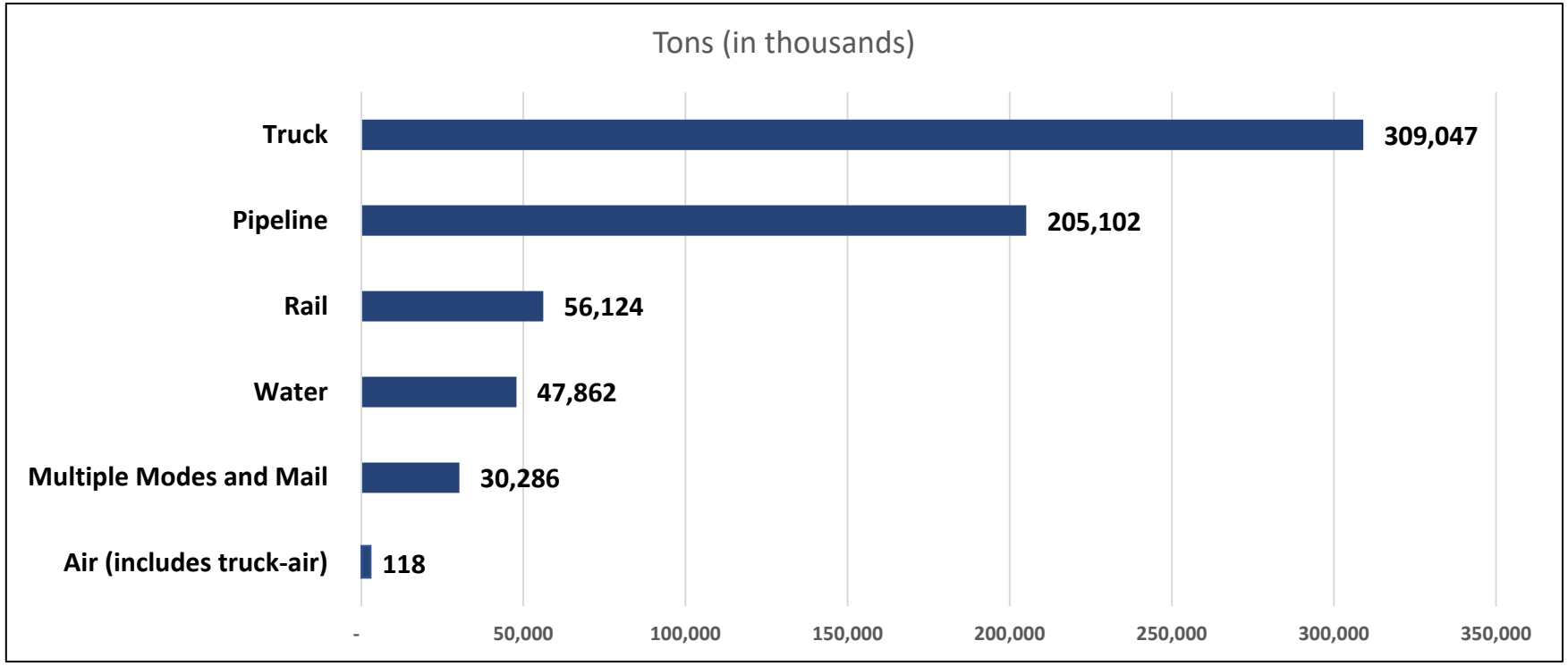
Where are other significant freight generators? Are there new or planned developments that will generate significant freight volumes in the coming years? How is the increase in e-commerce affecting freight mobility?

Source: Industry Select



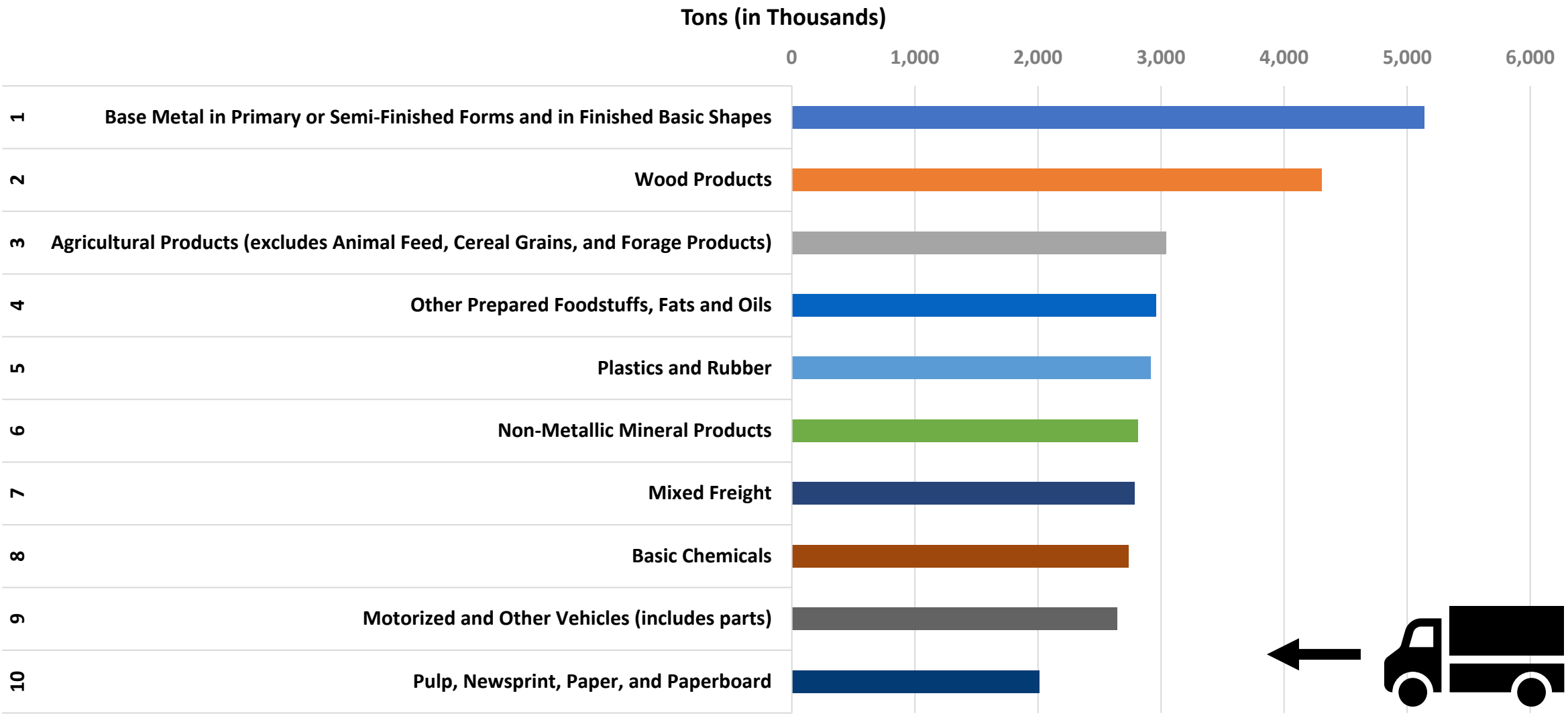
Commodities and Flows

Commodity Flow by Mode



Source: Freight Analysis Framework 5.3

Top Commodities by Truck - Inbound



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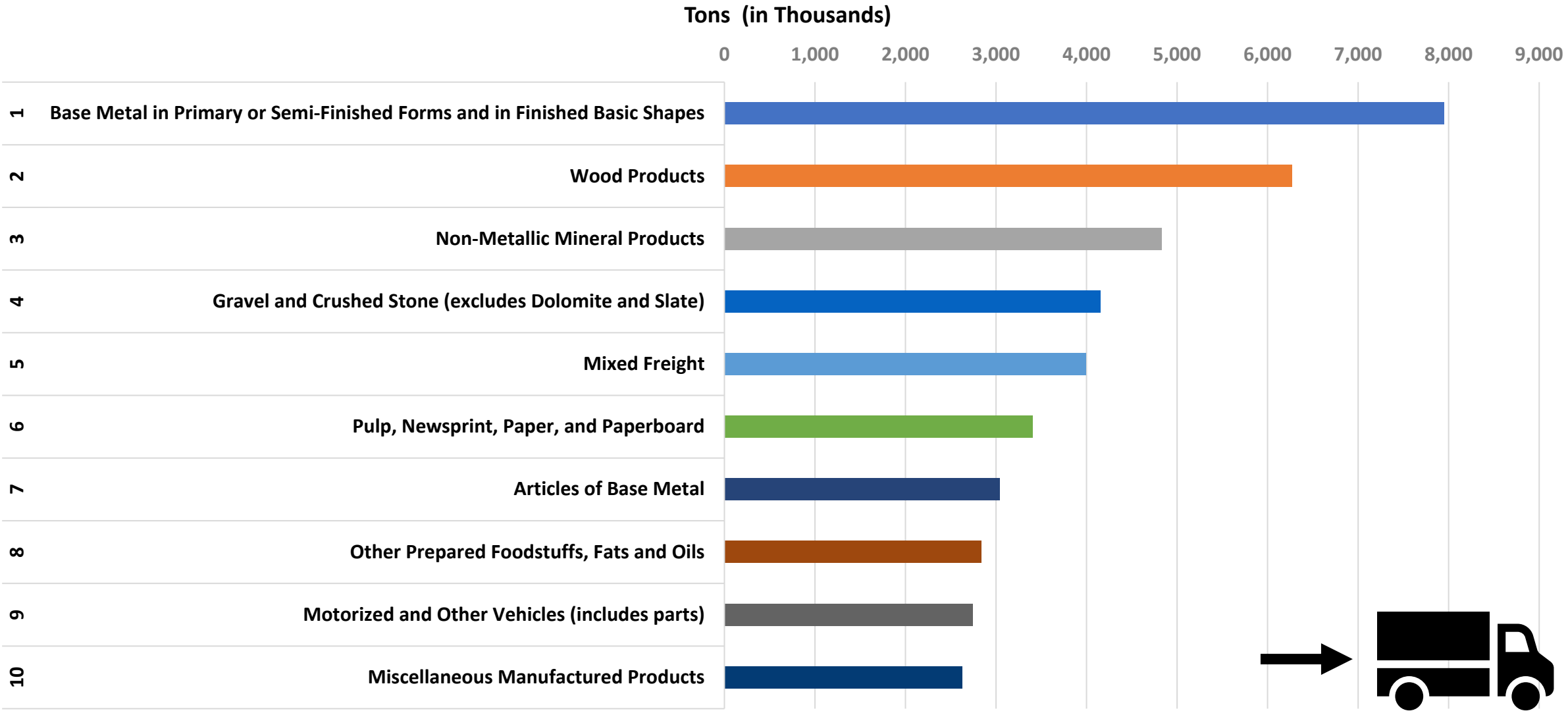
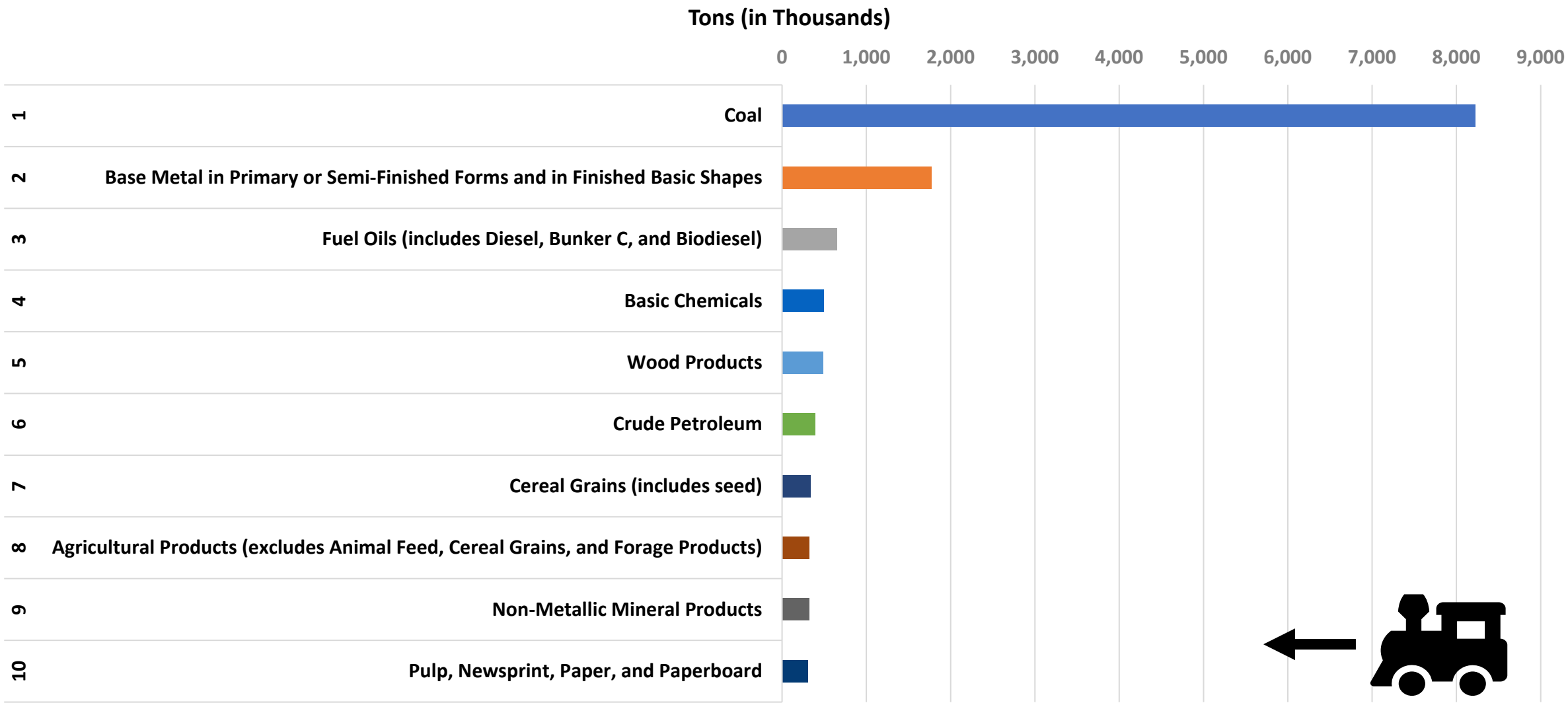


Source: Freight Analysis Framework 5.3

Top Commodities by Rail - Inbound



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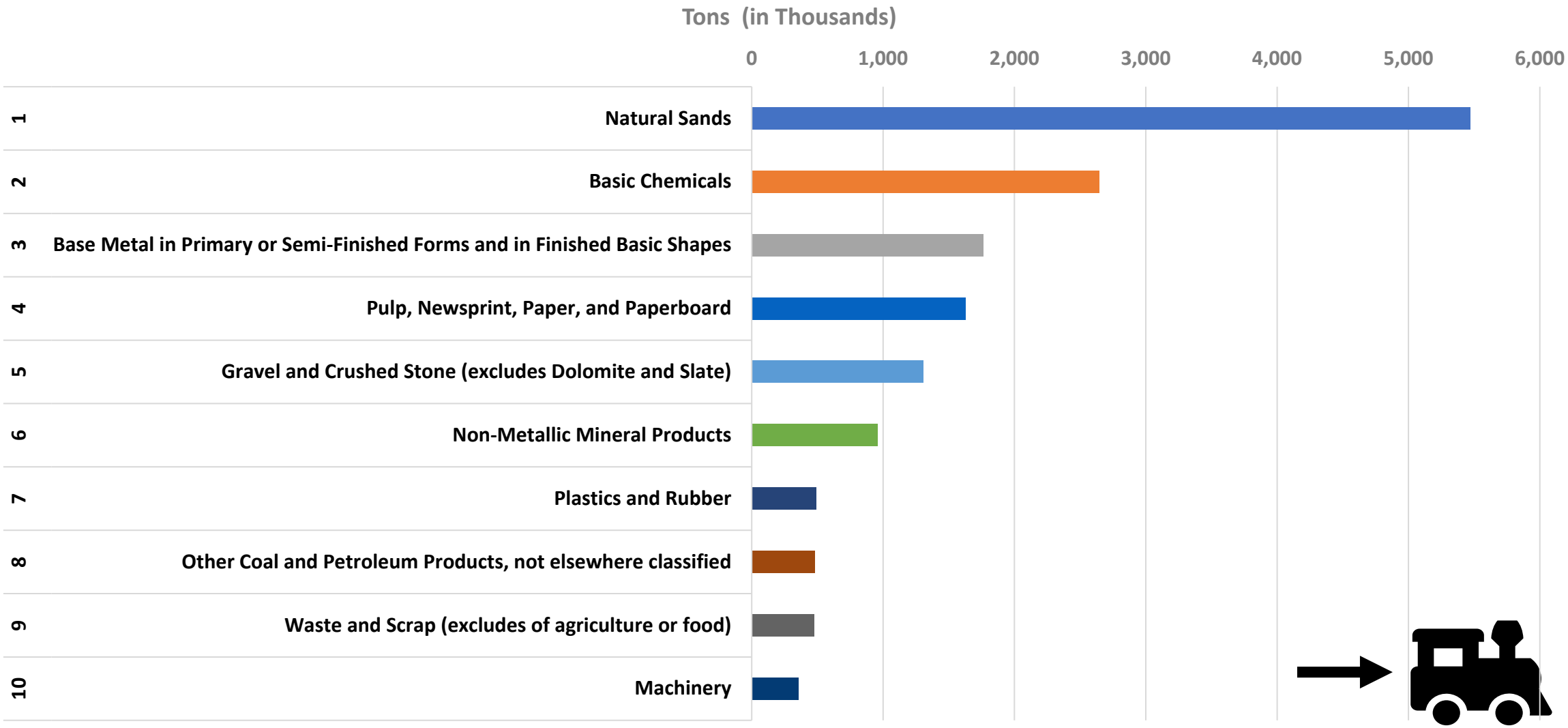
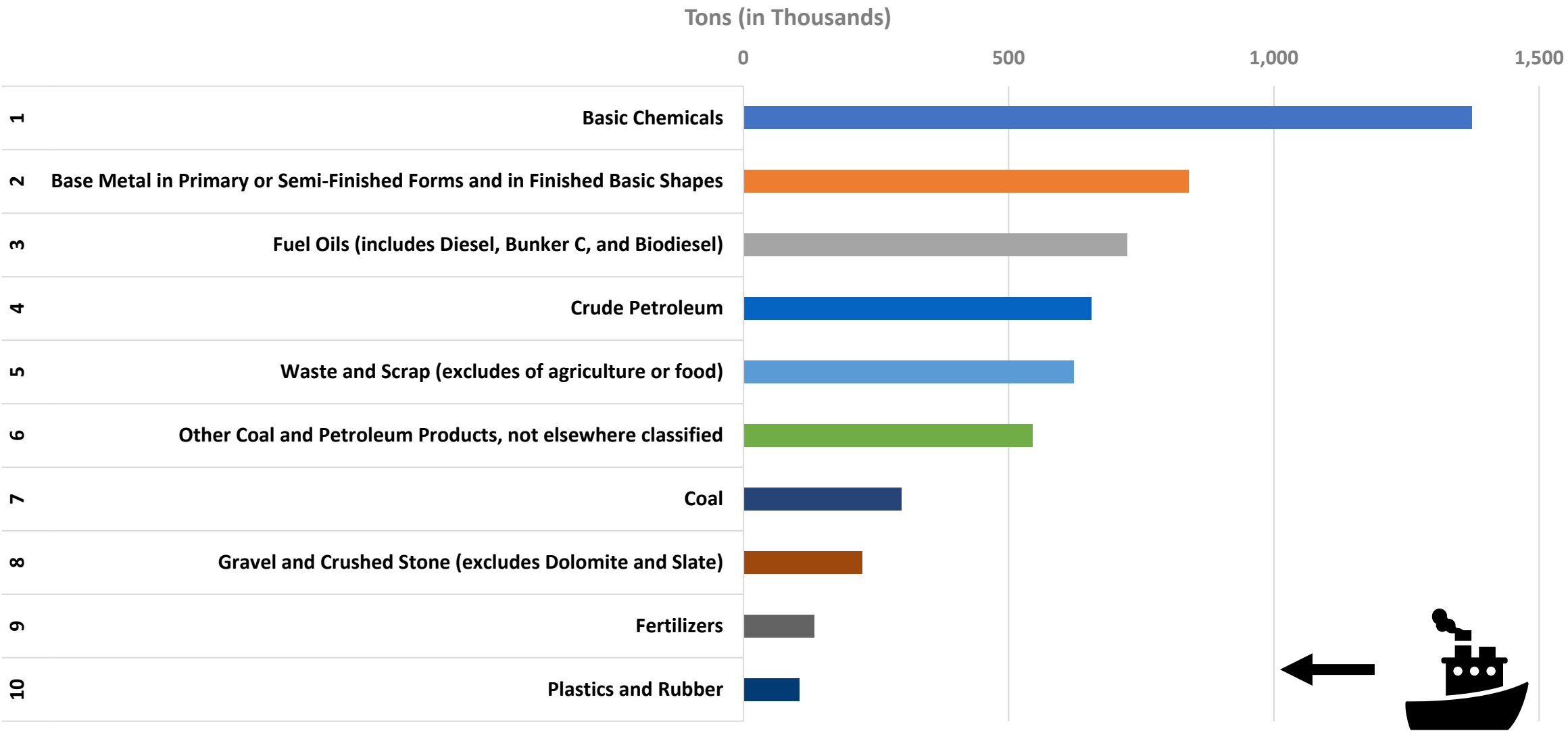
Top Commodities by Rail - Outbound



Source: Freight Analysis Framework 5.3

Top Commodities by Water - Inbound



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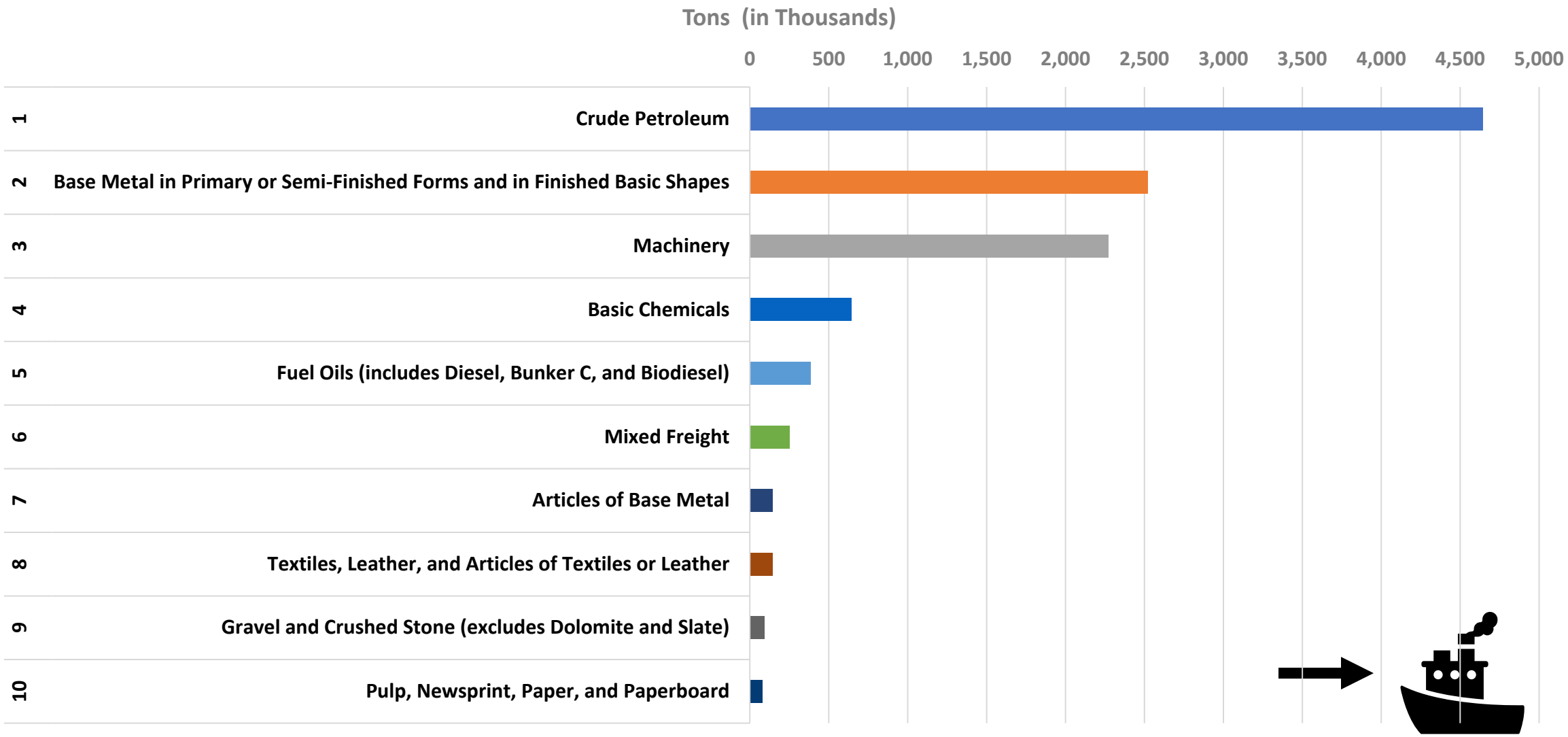
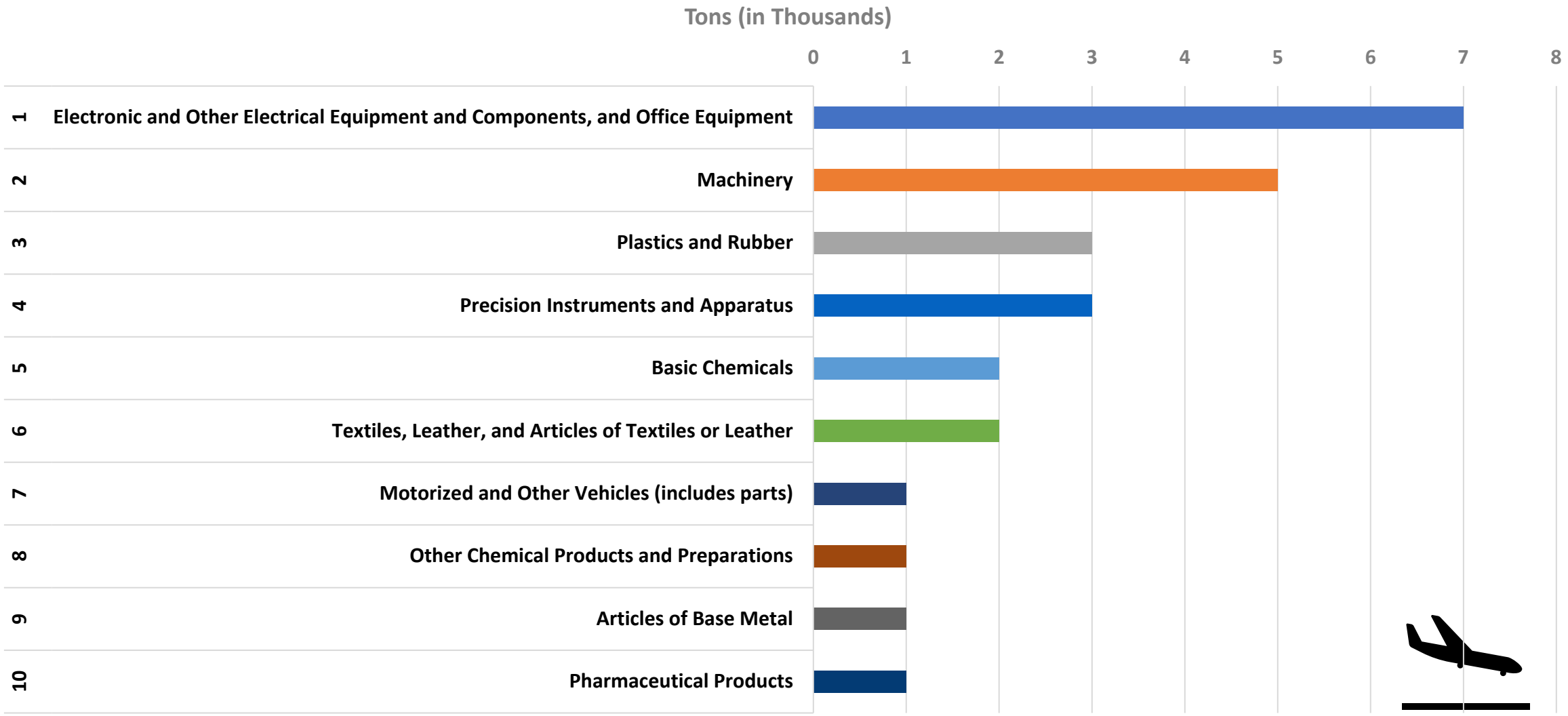
Top Commodities by Water - Outbound



Source: Freight Analysis Framework 5.3

Top Commodities by Air - Inbound



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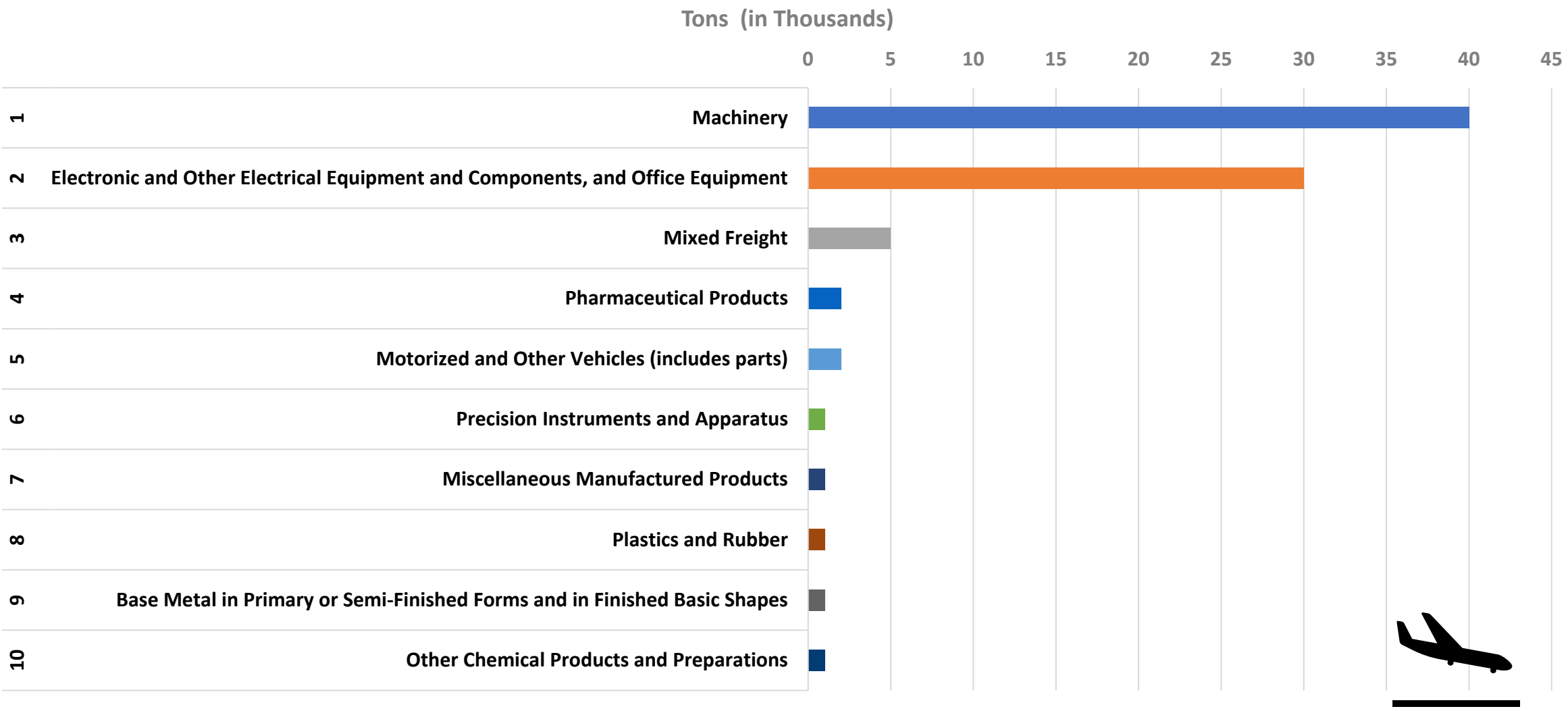
Top Commodities by Air – Outbound



Source: Freight Analysis Framework 5.3

Freight System Resilience

Freight System Resilience

- Freight System Resilience: the ability of the freight transportation network system to reduce the impacts of disruptions and maintain freight mobility
- Common sources of disruption:
  - *Extreme Weather/Natural Disasters – Hurricanes/tropical storms, flooding, tornadoes, ice, extreme heat, etc.*
  - *People-Induced – Crashes, construction, demand surges, disruptions in the supply chain, pandemics, etc.*
  - *Institutional – Asset management and aging infrastructure, limited funding, increasing traffic congestion, etc.*
  - *Economics – Market conditions, technology disruptions, environmental factors, recession, trade agreements, etc.*

Source: Network Rail

Freight System Resilience

- *How do severe weather events, tropical storms, flooding, or other natural disasters impact freight mobility?*
- *What are the greatest threats to the supply chain?*
- *What are other causes of disruptions within the freight network?*

Source: CBS News

Additional Discussion

Additional Discussion

IIJA-related inquiries:

- *Do you have concerns about the impact of freight on local air quality? Where is this the greatest concern?*
- *Have you observed impacts upon flooding and stormwater runoff, particularly in heavy industrial areas?*
- *Do you have any concerns about the development of industrial areas and freight movement related to natural habitats?*

Source: Schoel

Next Steps

- Incorporate your feedback today into assessment of freight needs
- Coordinate with additional stakeholders as needed, including MPOs and ALDOT Region offices
- Develop draft Freight Plan
- Present draft program of projects to FAC this fall
- Finalize Freight Investment Plan

Thank You!

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