

IMTS Steering Committee Meeting



America's Central Port District

Granite City, IL

November 13, 2019



ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN



Illinois Department of Transportation



Agenda

ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN

Updates:

- **IDOT Study: *Beneficial Use of Dredged Material***
- **IMTS Economic Value – *January***

Today's Presentation:

- **IMTS Commodity Flows**
- **Peer States Review**
- **Permitting Challenges**
- **Next Steps**



Beneficial Use of Dredged Material



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Beneficial Use of Dredged Material

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Background

Exploring possible uses of non-hazardous dredged materials

■ IDOT Uses

- » Roads
- » Ports
- » Intermodal facilities
- » Civic improvement programs

■ Other Uses

- » Beach nourishment
- » Habitat restoration
- » Shore protection
- » Agriculture

USACE Current Uses of Materials

- 90-95 percent of 300 million cubic yards is re-usable.
- 20-30 percent of 300 million cubic yards is being used beneficially





Research

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■ Objectives

1. Identify possible reuses of non-hazardous dredge materials for IDOT
2. Find the most economical environmentally friendly application for reuses of non-hazardous dredged material in Illinois
3. Investigate the origin, distribution, and frequency of dredge material production across Illinois
4. Find the existing limitations for reuse of dredged materials
5. Propose potential modifications to remove limitations to increase the reuse of non-contaminated dredged materials



Economic Impact



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Economic Value

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IMTS reliant
industry effects on
State's economy

Port contribution
to state economy



Port contribution
to regional
economy

Commodity Flows



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Commodity Flow Analysis

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Information Sources and Approach

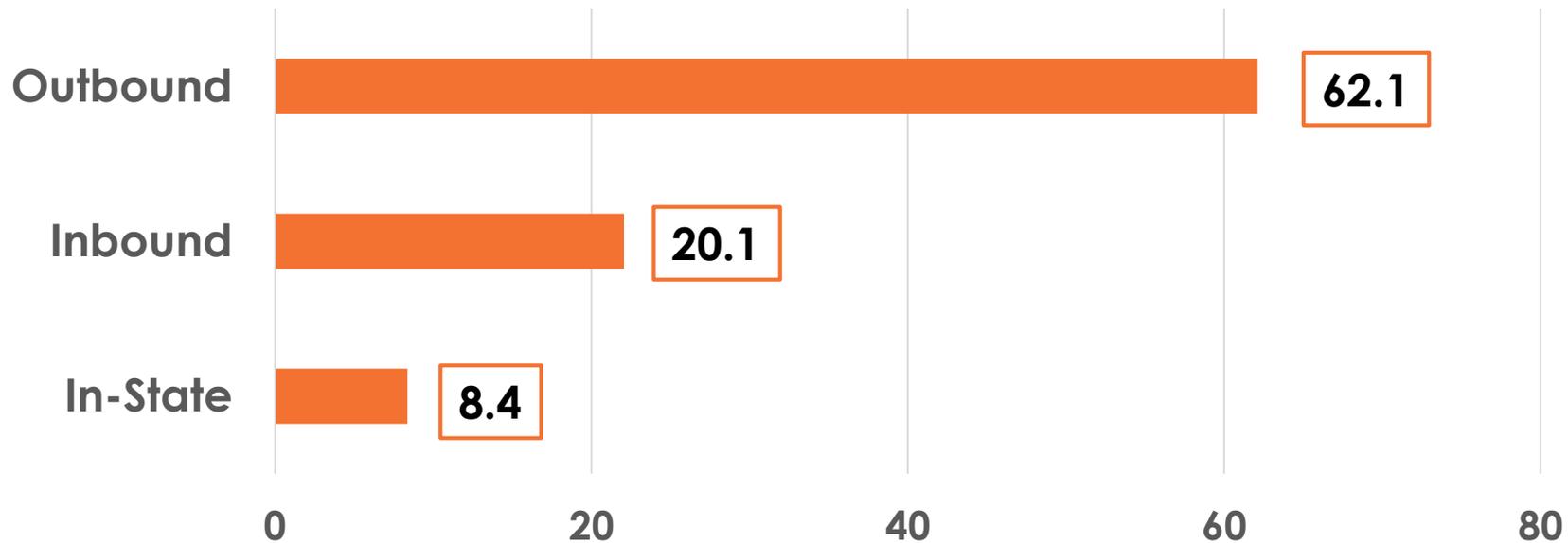
- **Army Corps of Engineers 2017 Waterborne Commence Statistics**
 - » State to state flows by commodity group
 - » Supplemental aggregate commodity flows for Mississippi and Ohio Rivers
 - » Commodity flows for Illinois Waterways and segments
 - ✓ Waterway segments: Illinois River, Chicago region segments, Kaskaskia, Waukegan, and Mississippi and Ohio Rivers
 - ✓ Commodity detail
 - ✓ Traffic type: Inbound, Outbound, Through, Local
 - ✓ Direction of flow: Upbound, Downbound
- **Input from Ports**
- **FHWA Freight Analysis Framework Database Forecasts**



Commodity Flow Overview

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- **2017 Commodity Flows by Direction in Millions of Tons:
Total 90.6 Million**



➔ **Tonnage is down 16% since 2014, almost entirely due to decline in outbound coal**



Illinois Waterway 2017 Freight Tonnage

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Total 2017 Tons by Waterway and Direction

Waterway	Direction		In-State	Total
	Inbound	Outbound		
Chicago Region	7,891	4,822	4,903	17,616
Illinois River	5,814	18,560	1,699	26,073
Kaskaskia River	786	599	0	1,385
Mississippi	3,019	21,206	348	24,573
Ohio	112	11,349	150	11,611
Other/NEC	2,451	5,578	1,274	9,303
Total	20,074	62,115	8,376	90,565

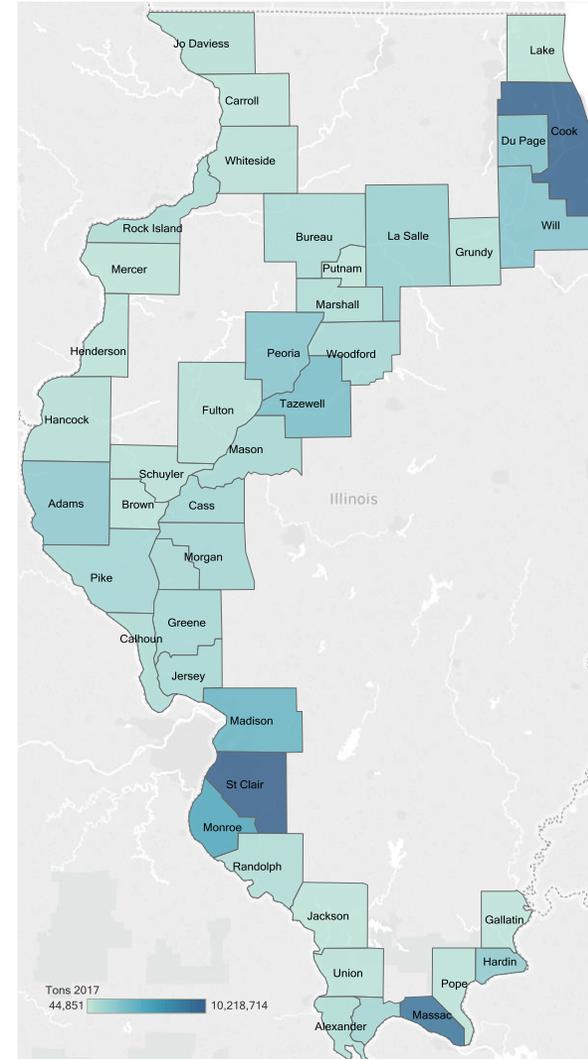


Illinois Waterway 2017 County Freight Tonnage

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The county distribution of total inbound and outbound tonnage shows the highest concentrations in:

- The Chicago region (Cook, Du Page and Will counties in the top 10 counties),
- Along the Illinois River
- In St. Clair and Monroe Counties along the Mississippi River.



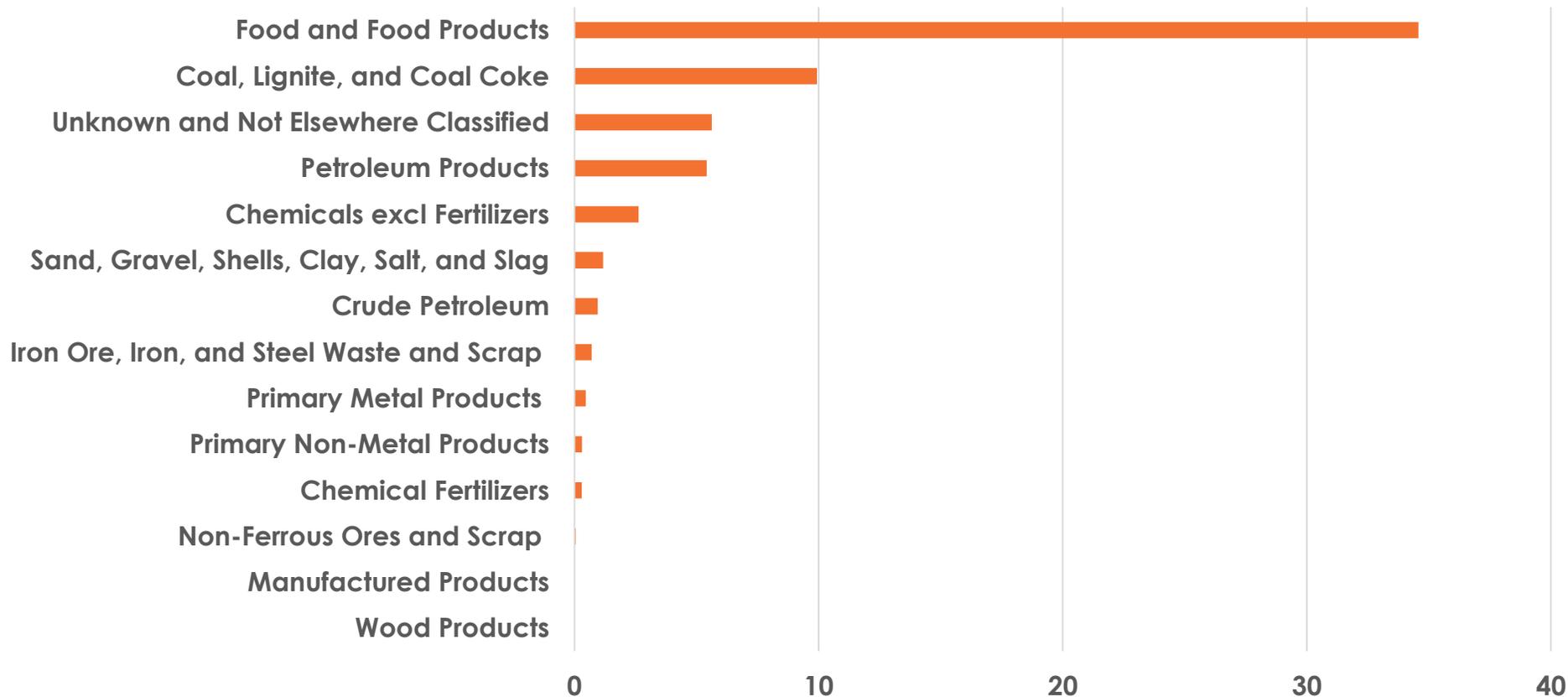
County	Direction Inb+Outb
St Clair	10,218,714
Cook	9,822,505
Massac	8,712,191
Monroe	5,227,550
Madison	4,153,713
Tazewell	3,315,711
Du Page	2,873,444
Will	2,759,053
Peoria	2,719,548
Adams	2,352,177
Hardin	2,160,555
La Salle	1,767,494
Pike	1,308,846
Cass	1,255,565
Pulaski	1,249,001
Morgan	1,232,156
Woodford	1,201,501
Greene	1,158,244
Mason	1,143,348
Jersey	1,086,565
Scott	1,042,192



Commodity Flow Analysis: Outbound

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■ Illinois Outbound Commodity Flows: 62.1 million tons

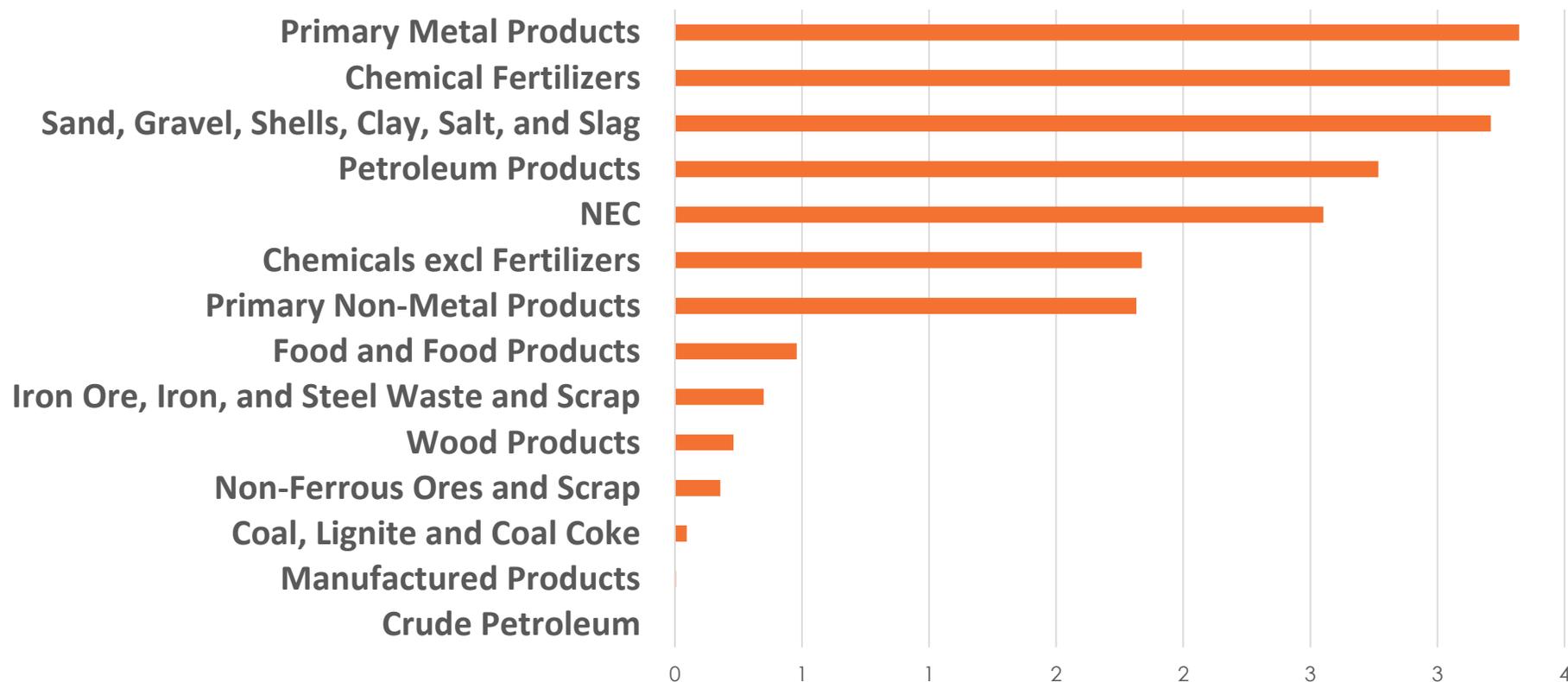




Commodity Flow Analysis: Inbound

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■ Illinois Inbound Commodity Flows: 20.1 million tons





Commodity Flow Analysis: In-State

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■ Illinois In-State Commodity Flows: 8.4 Million tons





Commodity Flow Forecast

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Forecast by Waterway

- **95 million tons in 2045**
 - » 4.6% cumulative growth
- **Decline in larger outbound tonnage offsets strong growth in inbound tonnage**

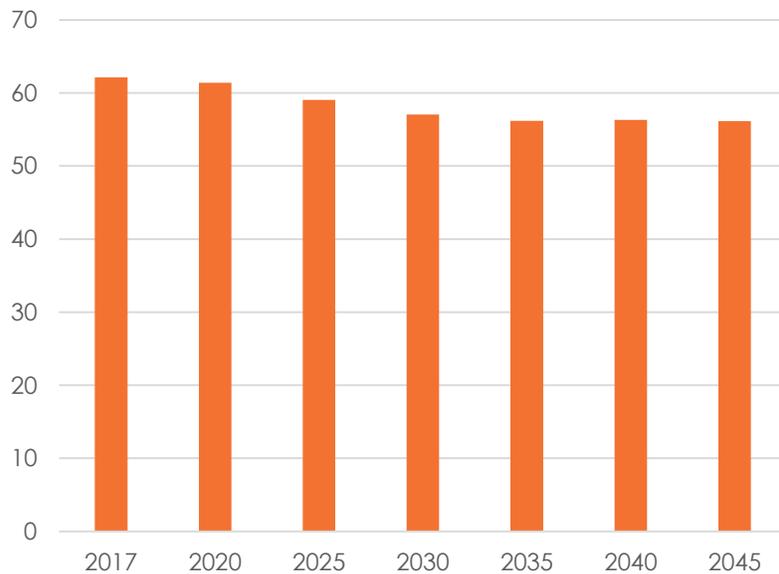
	2017	2045	2045-2017	% Change	Share of Change
Illinois Total	90,563	94,726	4,163	4.6%	100.0%
Inbound					
Illinois	20,074	28,584	8,510	42.4%	100.0%
Chicago Region	7,891	11,721	3,830	48.5%	45.0%
Illinois River	5,815	8,836	3,021	52.0%	35.5%
Kaskaskia River	786	968	182	23.2%	2.1%
Miss River	3,019	4,471	1,453	48.1%	17.1%
Ohio River	112	136	24	21.2%	0.3%
Other/NEC	2,451	2,451		0.0%	0.0%
Outbound					
Illinois	62,115	56,143	-5,973	-9.6%	100.0%
Chicago Region	4,822	5,206	384	8.0%	-6.4%
Illinois River	18,560	18,681	121	0.7%	-2.0%
Kaskaskia River	599	636	37	6.1%	-0.6%
Miss River	21,206	18,218	-2,988	-14.1%	50.0%
Ohio River	11,349	7,823	-3,526	-31.1%	59.0%
Other/NEC	5,578	5,578		0.0%	0.0%
In-State					
Illinois	8,375	10,000	1,625	19.4%	100.0%
Chicago Region	4,903	5,628	726	14.8%	44.6%
Illinois River	1,699	1,133	-566	-33.3%	-34.8%
Kaskaskia River					0.0%
Miss River	348	331	-17	-5.0%	-1.1%
Ohio River	150	106	-44	-29.7%	-2.7%
Other/NEC	1,274	1,274		0.0%	0.0%



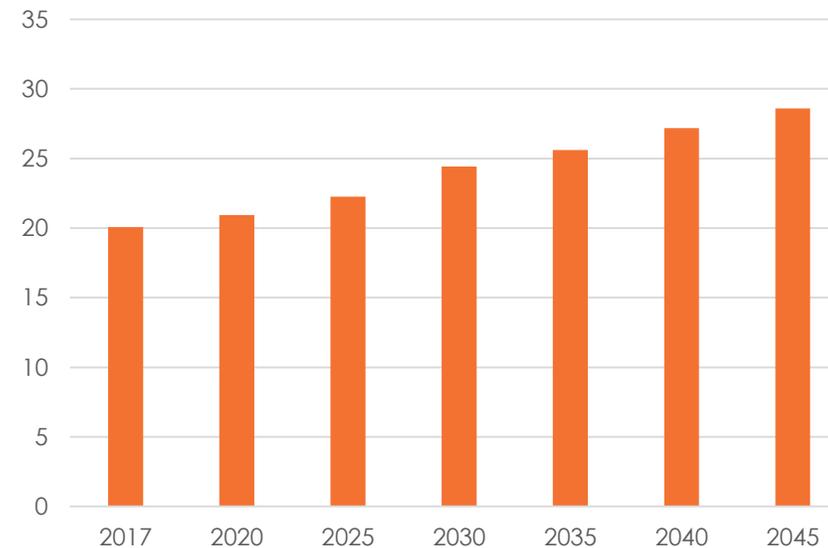
Total Forecasted Volumes

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Outbound Tons in Millions



Inbound Tons in Millions



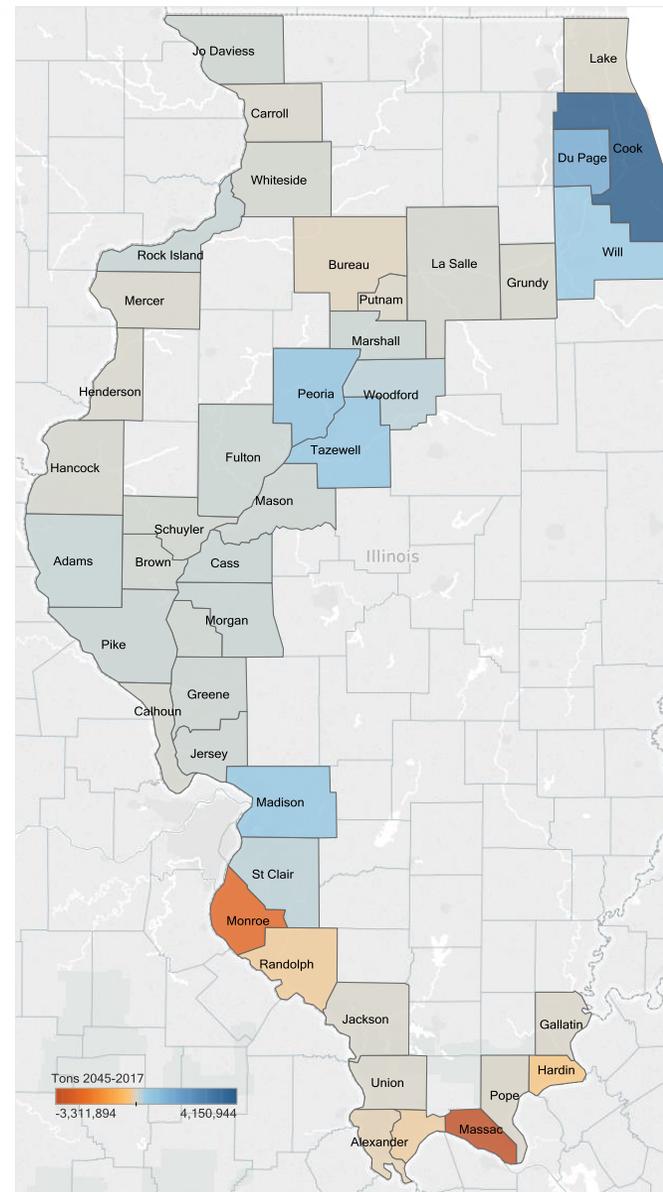
- Outbound volumes are double those of inbound but decline by 10%, while inbound volumes are projected to grow by 42%
- Changes are largely related to declines in energy product volumes



Growth in Volumes 2017 to 2045 by County

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- **Growth is highest in Chicago region and central Illinois counties.**
- **Declines are most significant in Lower Mississippi and Ohio River counties due to decreases in energy product volumes**



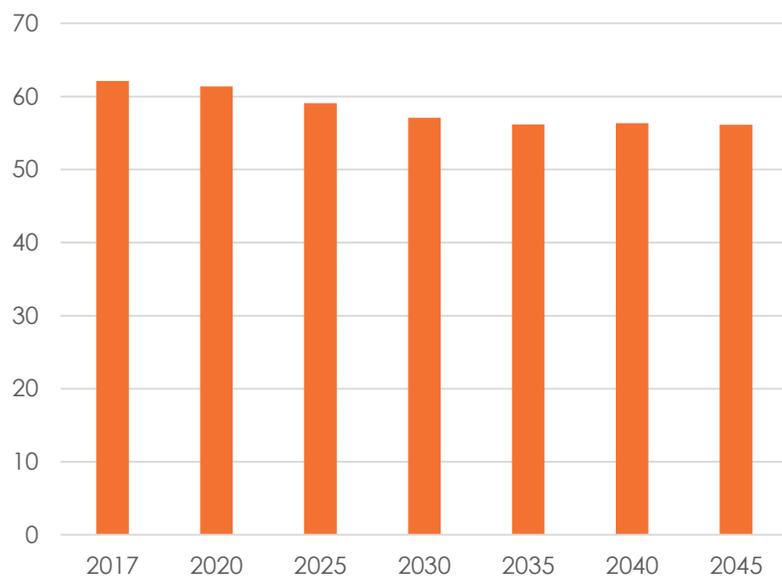
County	Inb+Outb
Increases > 100,000	
Cook	4,150,944
Du Page	1,431,021
Peoria	716,966
Tazewell	629,515
Madison	629,268
Will	464,989
Woodford	203,628
St Clair	191,767
Adams	137,515
Rock Island	126,827
Morgan	121,343
Cass	121,190
Pike	115,572
Fulton	110,287
Marshall	104,006
Decreases > 50,000	
Bureau	-53,536
Alexander	-95,824
Pulaski	-181,009
Randolph	-213,204
Hardin	-300,178
Monroe	-2,420,284
Massac	-3,311,894



Small Net Declines in Outbound Volumes

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Outbound Tons in Millions



Growth is led by Food and Food Products

Large declines are in Energy Products

Commodity Detail in Thousands of Tons

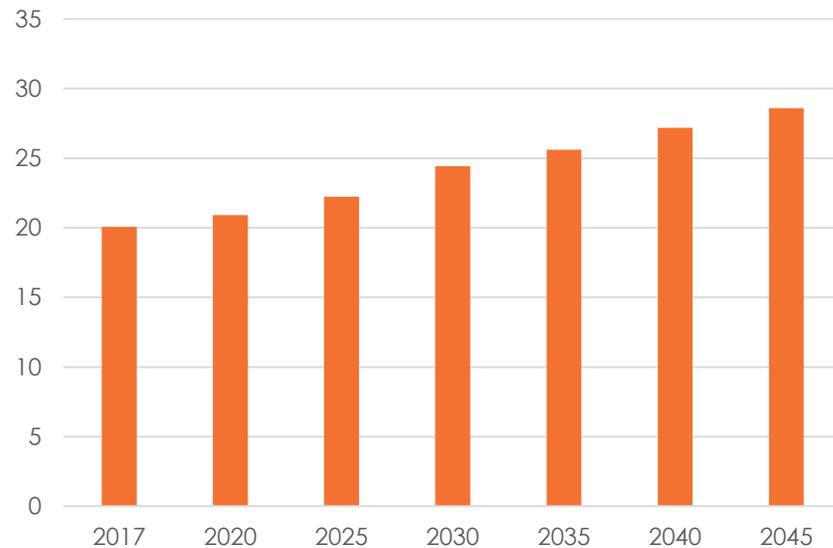
	2017	2045	Growth
Total	62,115	56,143	-5,973
Food and Food Products	34,567	36,009	1,442
Primary Metal Products	463	1,027	565
Primary Non-Metal Products	311	691	380
Iron Ore, Iron, and Steel Waste and Scrap	706	1,055	349
Chemical Fertilizers	297	502	205
Sand, Gravel, Shells, Clay, Salt, and Slag	1,167	1,348	181
Non-Ferrous Ores and Scrap	45	46	1
Wood Products	0	0	0
Manufactured Products	0	0	0
NEC	5,628	5,628	0
Crude Petroleum	953	932	-21
Chemicals excl Fertilizers	2,624	2,357	-267
Petroleum Products	5,417	3,938	-1,479
Coal, Lignite and Coal Coke	9,936	2,609	-7,327



Growth in Inbound Volumes

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Inbound Tons in Millions



Growth is led by Primary Non-Metallic Products, Fertilizers, and Chemicals

Declines are in Energy Products

Commodity Detail In Thousand of Tons

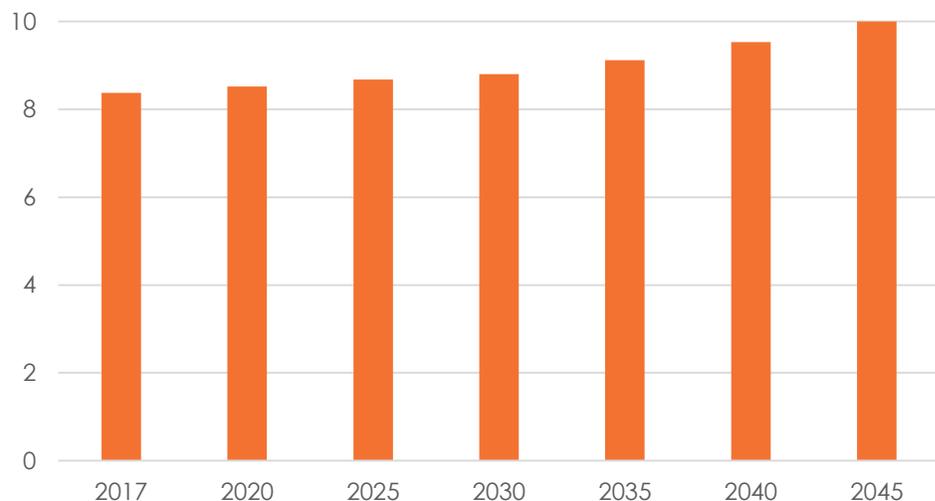
	2017	2045	Growth
Total	20,074	28,584	5,457
Primary Non-Metallic Products	1,815	4,084	4,992
Chemical Fertilizers	3,285	5,432	3,158
Chemicals excl Fertilizers	1,837	3,038	1,766
Food and Food Products	479	841	608
Wood Products	230	432	374
Non-Ferrous Ores and Scrap	178	286	143
Iron Ore, Iron, and Steel Waste and Scrap	349	474	28
Crude Petroleum	0	0	0
Manufactured Products	4	4	-4
Coal, Lignite and Coal Coke	46	12	-149
Sand, Gravel, Shells, Clay, Salt, and Slag	3,210	3,891	-1,167
NEC	2,551	2,551	-2,551
Primary Metal Products	3,322	5,318	-3,322
Petroleum Products	2,768	2,221	-4,406



Growth in In-State Volumes

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Inbound Tons in Millions



Growth is led by Primary Metal Products; and Sand, Gravel, Shells, Clay, Salt, and Slag

Declines are in Energy Products

Commodity Detail In Thousand of Tons

	2017	2045	Growth
Total	8,375	10,000	1,625
Primary Metal Products	1,105	2,453	1,348
Sand, Gravel, Shells, Clay, Salt, and Slag	3,291	4,341	1,050
Iron Ore, Iron, and Steel Waste and Scrap	270	403	133
Chemical Fertilizers	183	310	127
Food and Food Products	1	2	0
NEC	1,274	1,274	0
Chemicals excl Fertilizers	363	326	-37
Petroleum Products	897	631	-266
Coal, Lignite and Coal Coke	990	260	-730



Commodity Flow Forecast: Outbound Highlights

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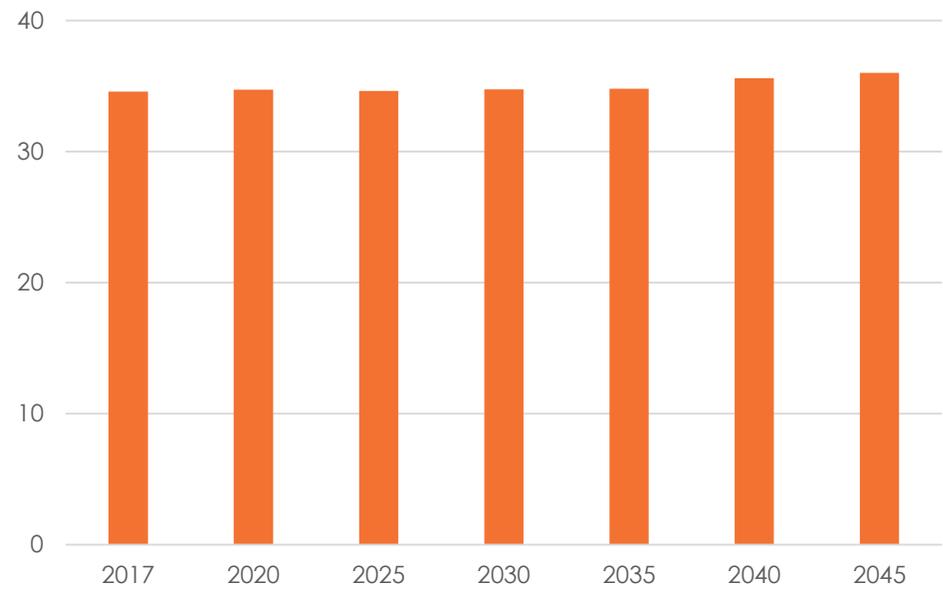
- **Forecasts of Top Outbound Commodities**
 - » Food
 - » Coal



Outbound Food and Food Products

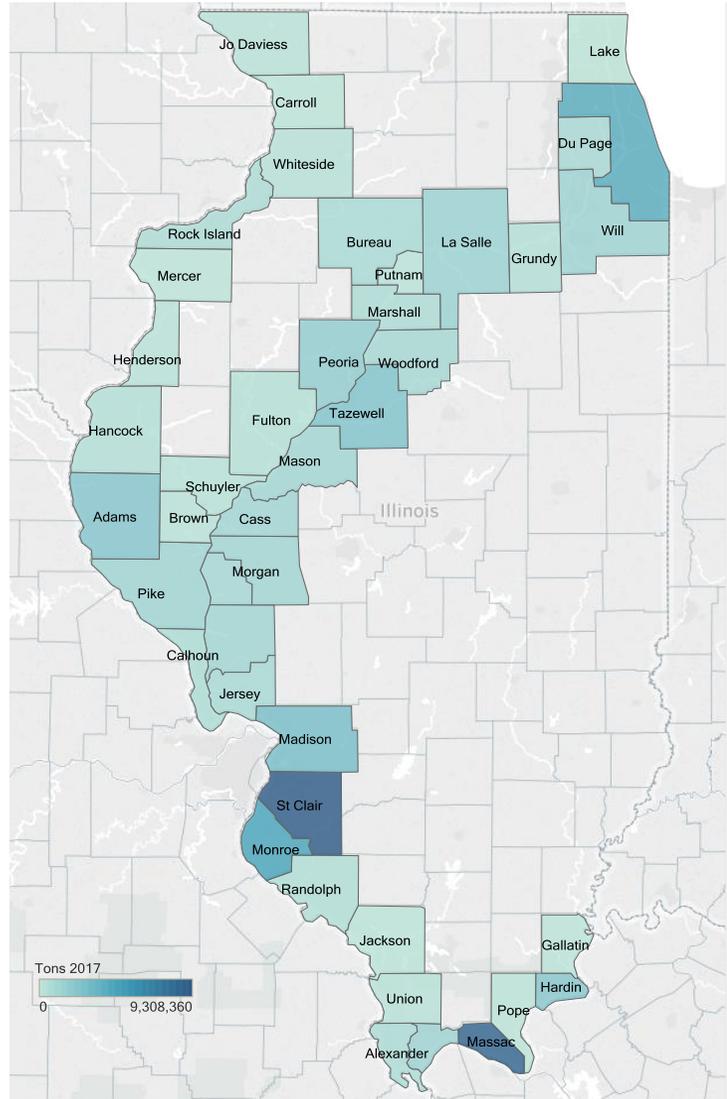
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Volume Forecast Millions of Tons



Growth Through 2045: **4.2%**

2017 County Distribution



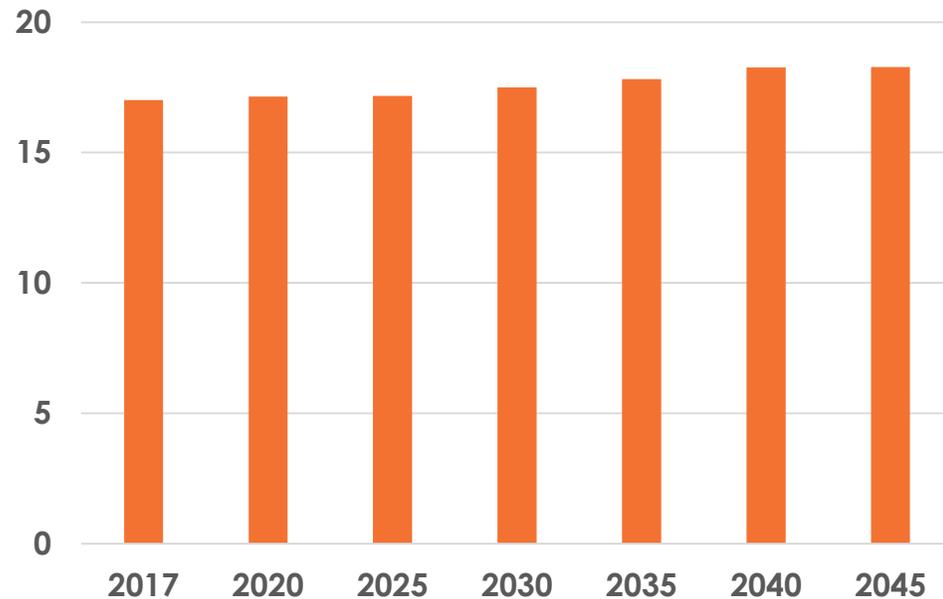
County	County Name	Direction
17163	St Clair	7,141,257
17127	Massac	3,835,178
17001	Adams	2,188,346
17119	Madison	2,159,587
17179	Tazewell	2,016,135
17143	Peoria	1,373,940
17149	Pike	1,139,136
17017	Cass	1,074,703
17137	Morgan	1,050,446
17061	Greene	1,018,229
17171	Scott	922,433
17069	Hardin	917,481
17125	Mason	864,207
17203	Woodford	764,715
17197	Will	588,106
17083	Jersey	628,991
17099	La Salle	620,866
17161	Rock Island	626,179
17153	Pulaski	539,434
17123	Marshall	517,989
17133	Monroe	503,236
17013	Calhoun	496,021
17067	Hancock	426,230
17031	Cook	360,290
17011	Bureau	376,120
17057	Fulton	277,835
17003	Alexander	290,351
17169	Schuyler	254,036
17195	Whiteside	280,918
17009	Brown	214,524
17071	Henderson	229,781
17063	Grundy	188,974
17181	Union	170,370
17085	Jo Daviess	146,583
17043	Du Page	70,919
17155	Putnam	76,009
17131	Mercer	60,318
17157	Randolph	53,952
17077	Jackson	41,951
17015	Carroll	28,479
17059	Gallatin	17,686
17151	Pope	15,107



Commodity Flow Forecast: Outbound Highlights

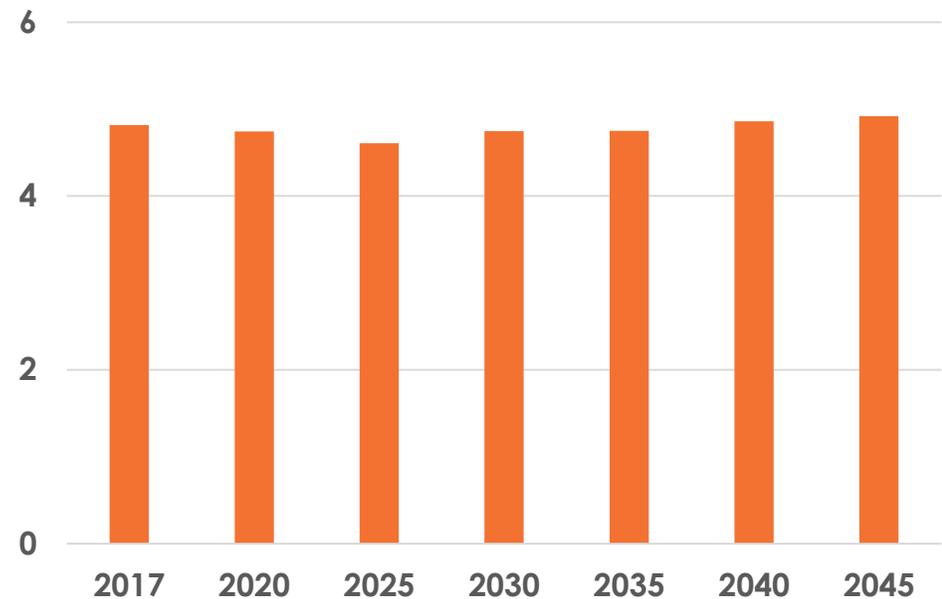
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Corn Millions of Tons



Growth Through 2045: **7.5%**

Soybeans Millions of Tons



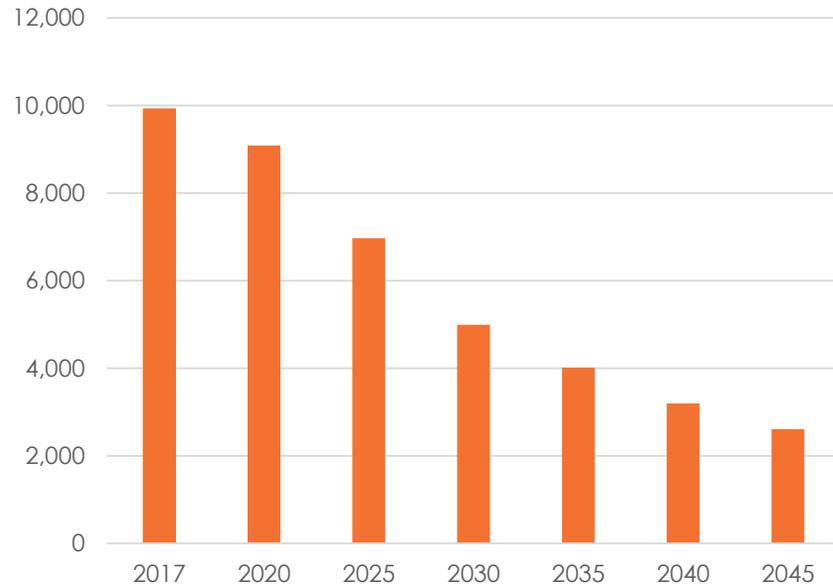
Growth Through 2045: **2.2%**



Outbound Coal

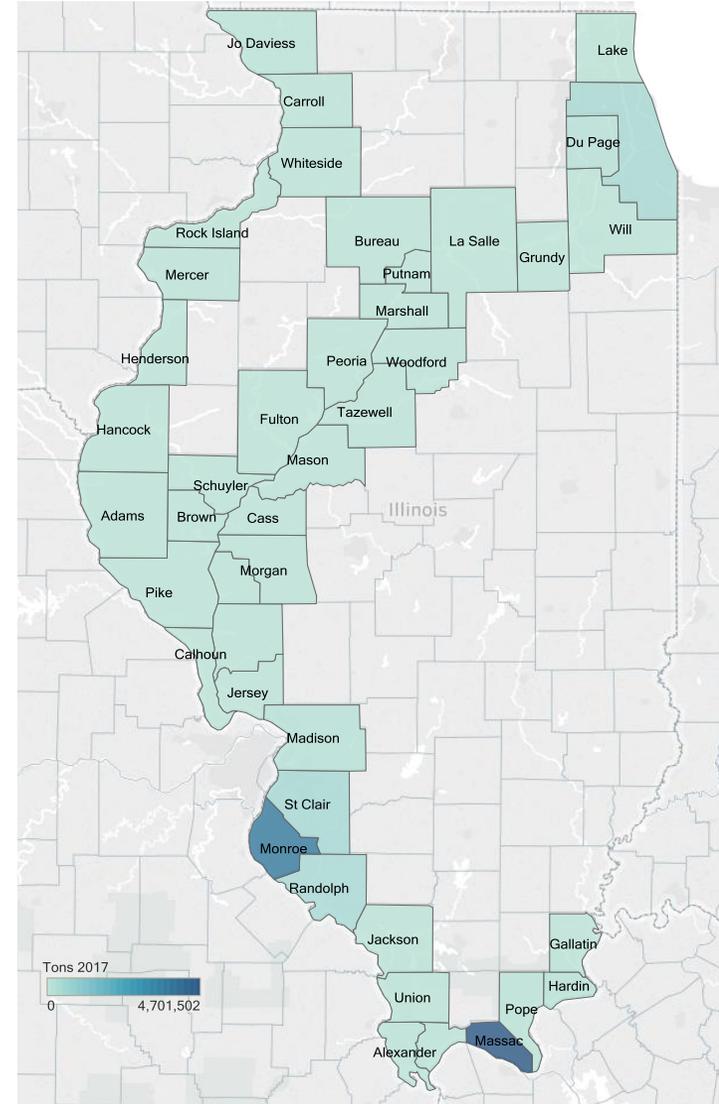
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Volume Forecast Tons 000



Decline Through 2045: **74%**

2017 County Distribution



County	County Name	Direction
17127	Massac	4,701,502
17133	Monroe	3,643,094
17163	St Clair	419,438
17157	Randolph	390,577
17031	Cook	362,782
17119	Madison	126,842
17043	Du Page	71,410
17069	Hardin	68,939
17153	Pulaski	40,533
17085	Jo Daviess	40,389
17003	Alexander	21,817
17181	Union	10,007
17083	Jersey	9,612
17013	Calhoun	7,580
17099	La Salle	4,579
17197	Will	4,338
17011	Bureau	2,774
17077	Jackson	2,464
17063	Grundy	1,394
17059	Gallatin	1,329
17151	Pope	1,135
17015	Carroll	807
17179	Tazewell	647
17155	Putnam	561
17143	Peoria	441
17125	Mason	277
17203	Woodford	245
17123	Marshall	166
17057	Fulton	89
17001	Adams	53
17149	Pike	7
17017	Cass	7
17137	Morgan	7
17061	Greene	6
17171	Scott	6
17169	Schuyler	2
17009	Brown	1
17067	Hancock	0
17071	Henderson	0
17131	Mercer	0
17161	Rock Island	0
17195	Whiteside	0



Commodity Flow Forecast: Inbound Highlights

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- **Forecasts of Top Inbound Commodities**
 - » Primary Non-Metallic Products
 - » Chemical Fertilizers

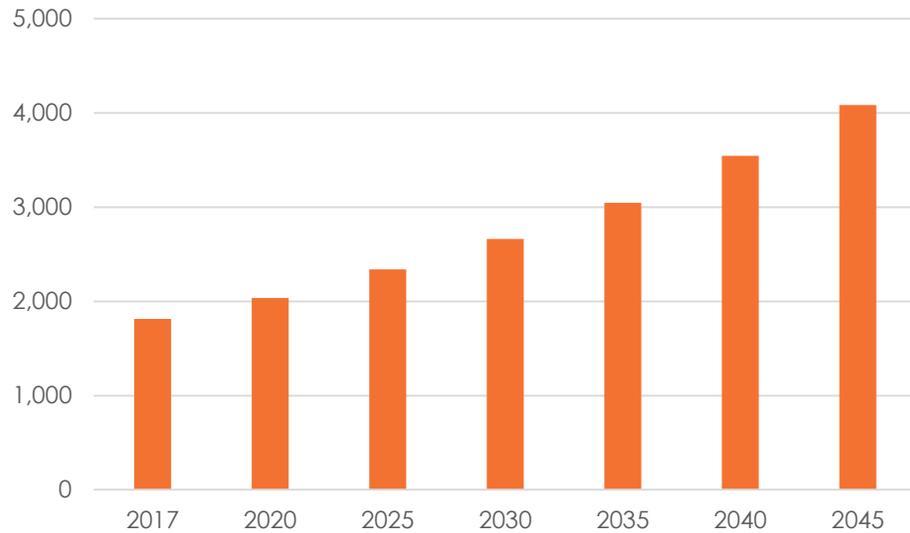




Inbound Non-Metallic Mineral Products

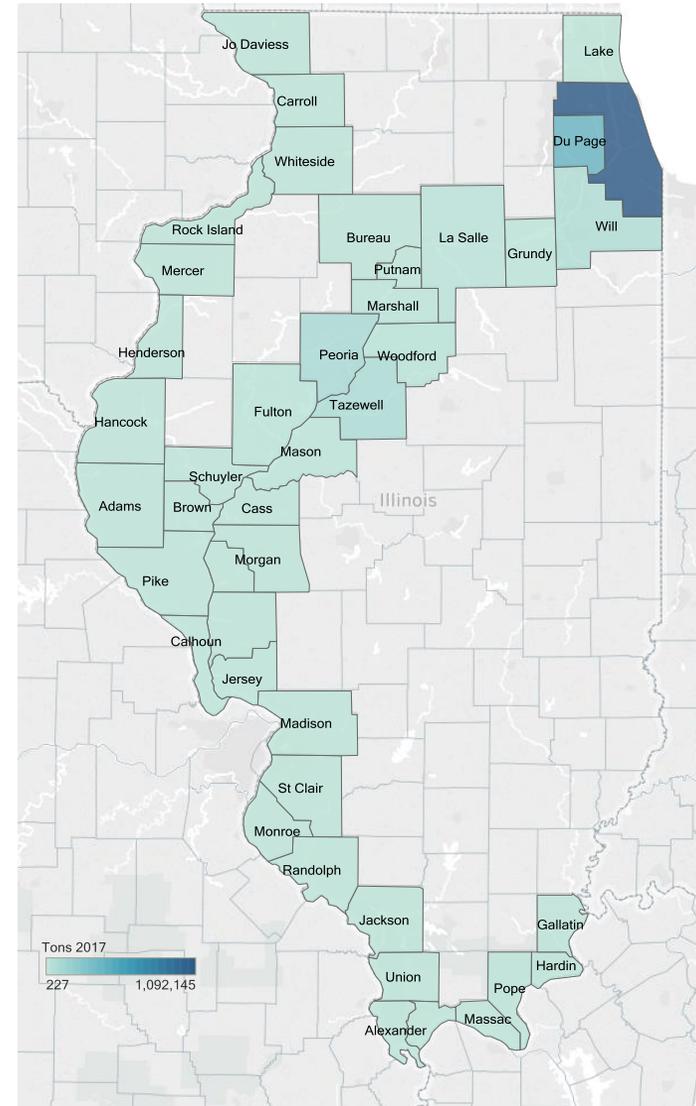
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Volume Forecast Tons 000



Growth Through 2045: **125%**

2017 County Distribution



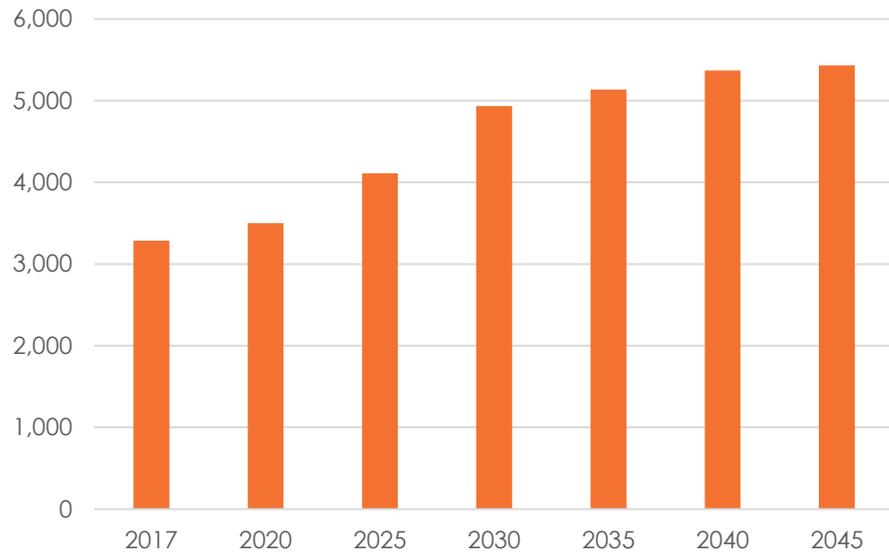
County	County Name	Direction
17031	Cook	Inbound 1,092,145
17043	Du Page	394,704
17143	Peoria	92,483
17179	Tazewell	75,749
17197	Will	61,663
17203	Woodford	23,744
17099	La Salle	17,284
17057	Fulton	13,778
17123	Marshall	11,270
17083	Jersey	8,179
17125	Mason	7,781
17063	Grundy	6,856
17013	Calhoun	4,942
17011	Bureau	2,017
17155	Putnam	633
17137	Morgan	385
17017	Cass	380
17149	Pike	341
17009	Brown	291
17169	Schuyler	280
17061	Greene	273
17171	Scott	227
17001	Adams	
17003	Alexander	
17015	Carroll	
17059	Gallatin	
17067	Hancock	
17069	Hardin	
17071	Henderson	
17077	Jackson	
17085	Jo Daviess	
17119	Madison	
17127	Massac	
17131	Mercer	
17133	Monroe	
17151	Pope	
17153	Pulaski	
17157	Randolph	
17161	Rock Island	
17163	St Clair	
17181	Union	
17195	Whiteside	



Inbound Chemical Fertilizer

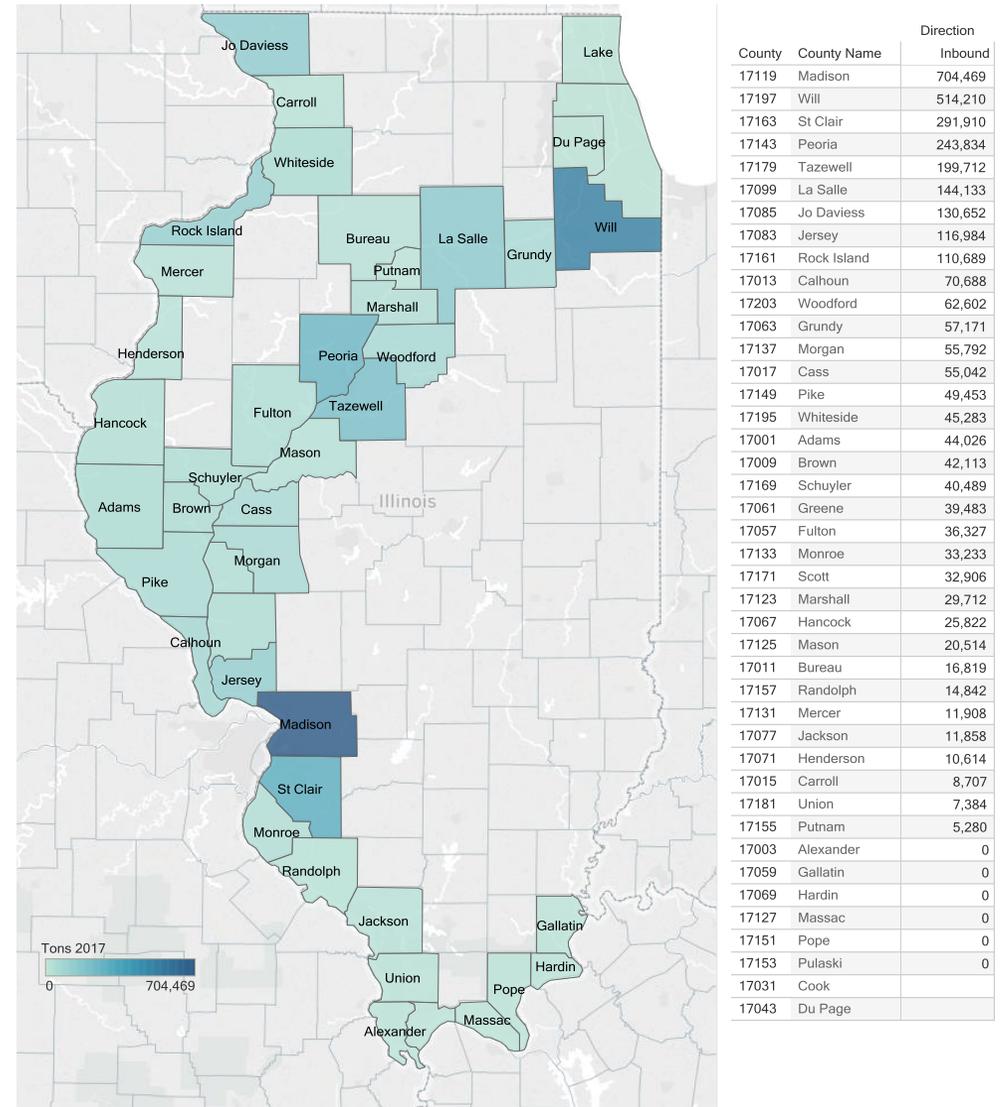
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Volume Forecast Tons 000



Growth Through 2045: **65%**

2017 County Distribution





Commodity Flow Forecast: In-State Highlights

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- **Forecasts of Top In-State Commodities**
 - » Sand, Gravel, Shells, Clay, Salt, and Slag
 - » Petroleum Products

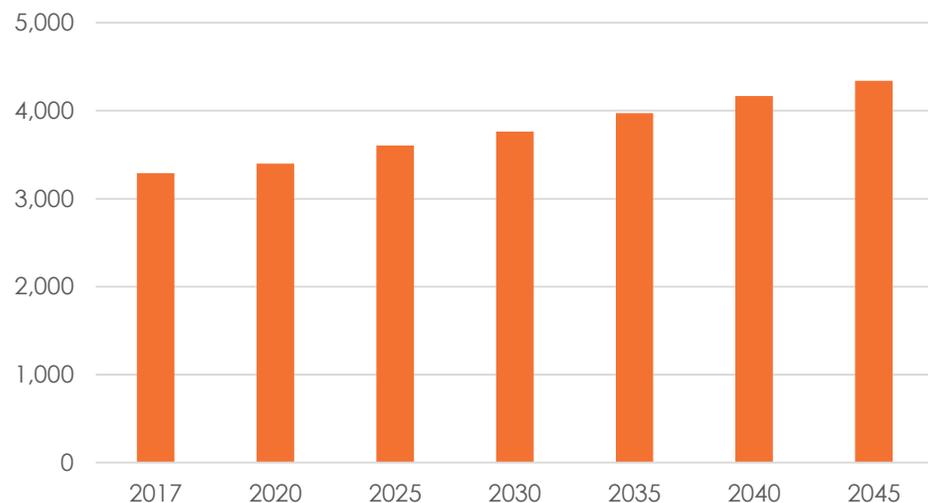




Commodity Flow Forecast: In-State Highlights

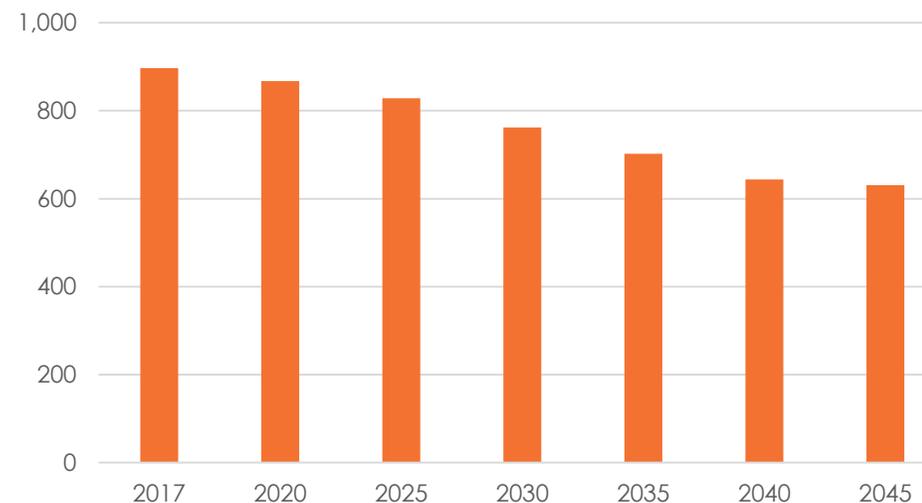
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Sand, Gravel, et al Forecast Tons 000



Growth Through 2045: **32%**

Petroleum Products Forecast Tons 000



Decline Through 2045: **30%**



Peer States Review



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Peer States Review

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GOAL: Identify best practices to help IDOT best address system needs

Key points of comparison

- » DOT structure
- » Port governance
- » Funding and financial assistance
- » Technical assistance
- » Advocacy

Use findings to inform maritime system recommendations

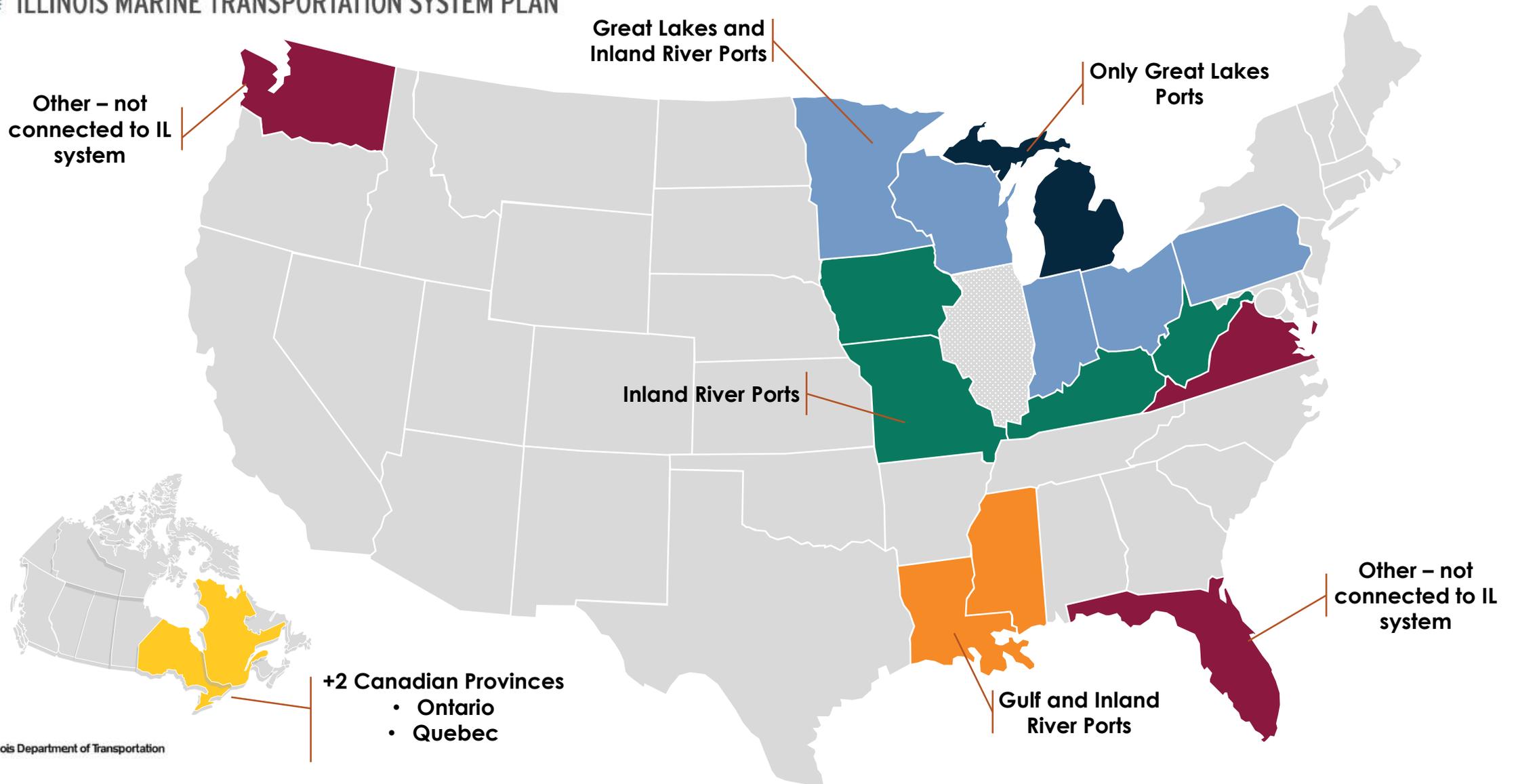
- » Policy
- » Programs
- » Partnerships and advocacy

There is no “**ONE-SIZE FITS-ALL**” solution



Peer States Review

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Peer States Review – DOT Structure

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Secondary Lens:

- State level organization
- DOT role in maritime planning
- Maritime Division or staff
- Alternative lead agency

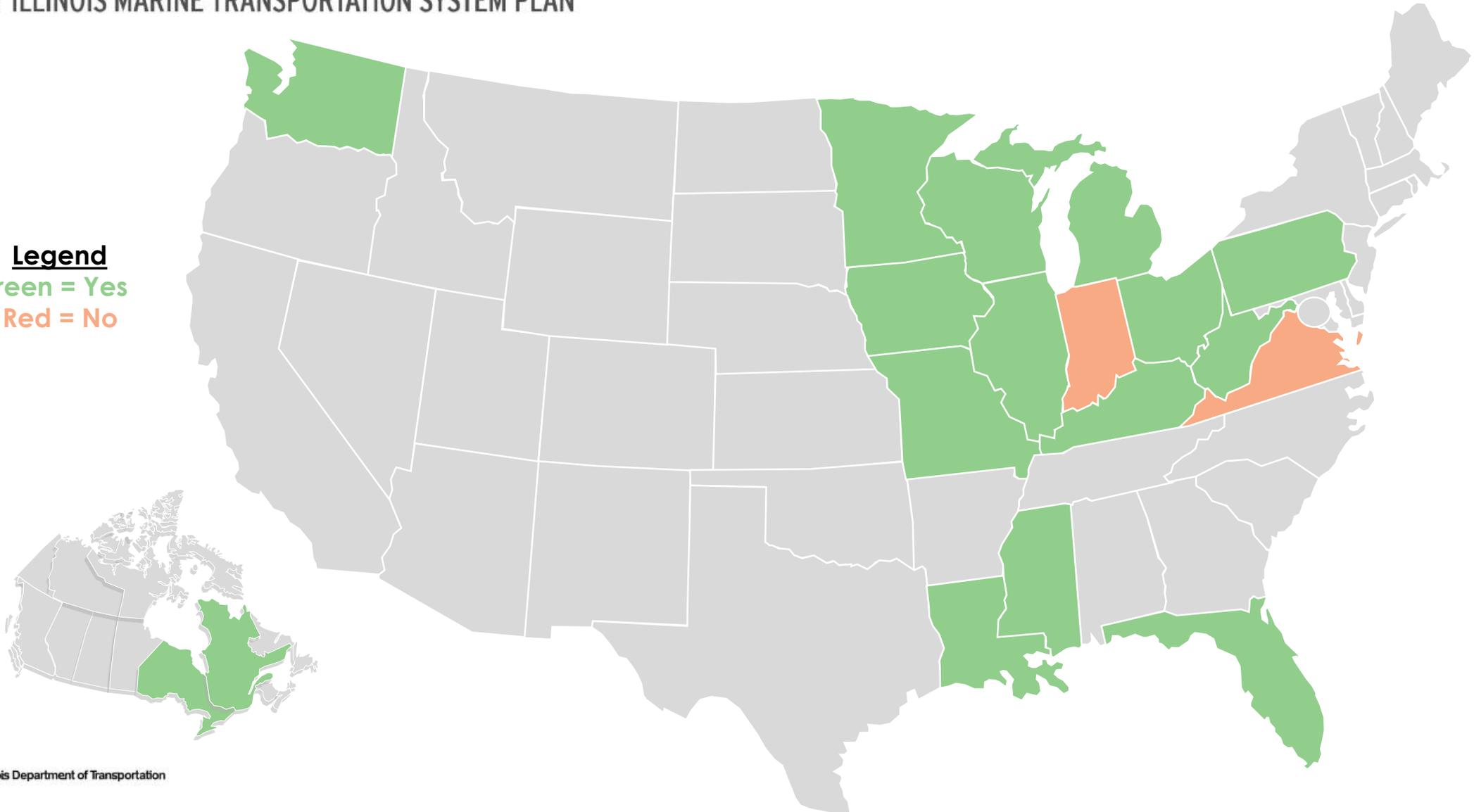




Peer States Review – DOT Role in Maritime Planning

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Legend
Green = Yes
Red = No

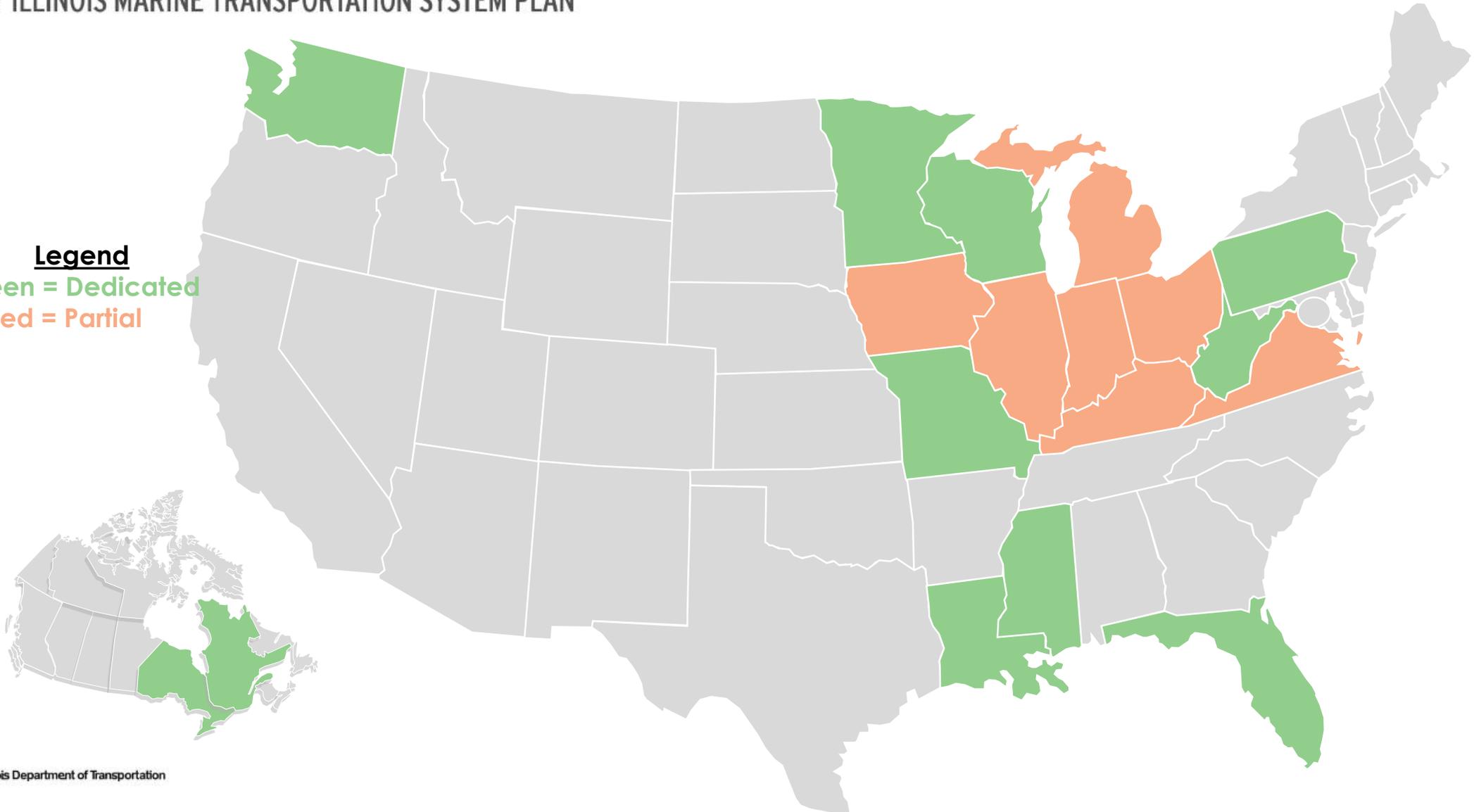




Peer States Review – Maritime Division or Staff

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Legend
Green = Dedicated
Red = Partial

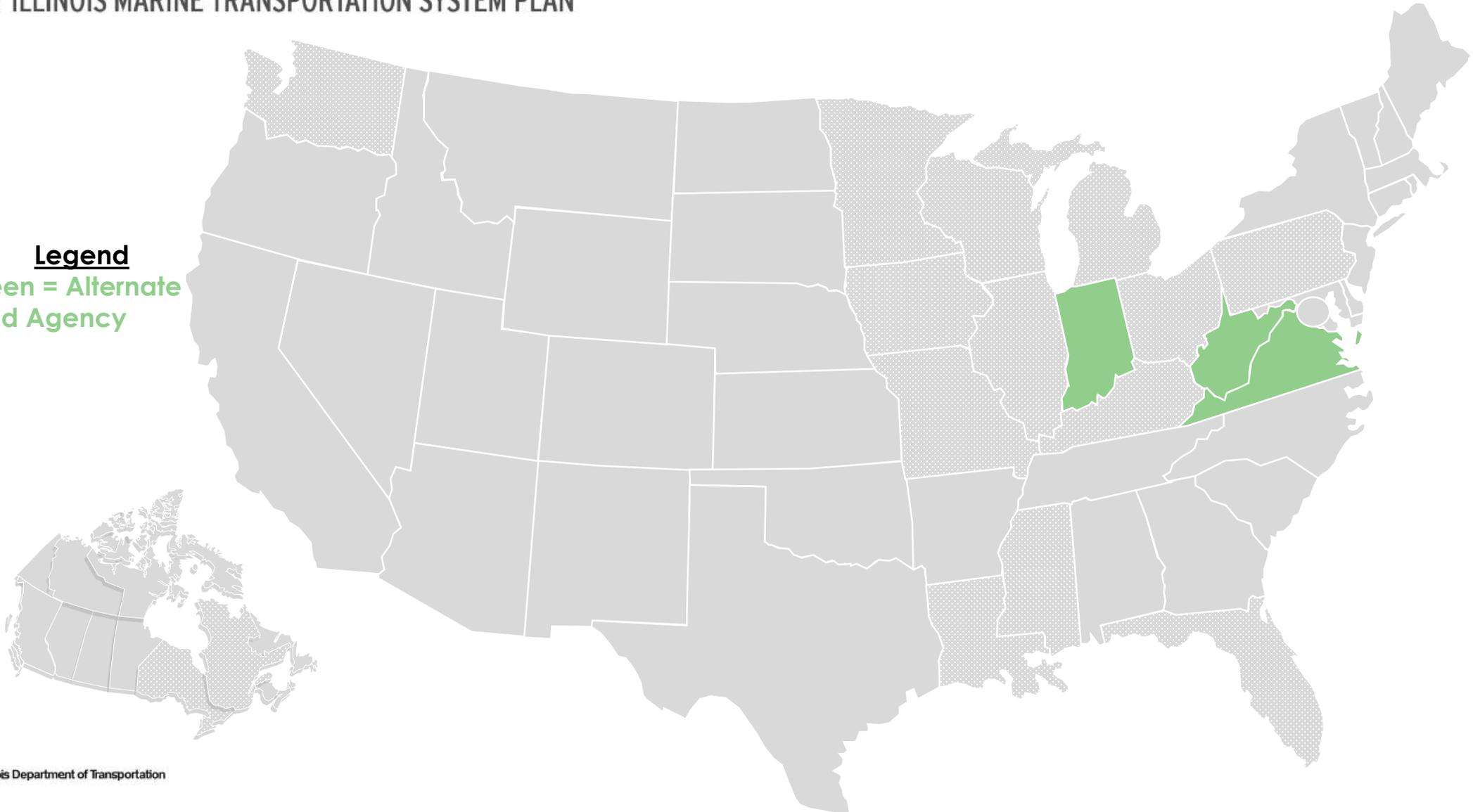




Peer States Review – Alternate Lead Agency

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Legend
Green = Alternate
Lead Agency





Peer States Review – Port Governance

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Secondary Lens:

- State-owned ports
- Locally owned ports
- Singular legislation
- State level Water Transportation Advisory Board

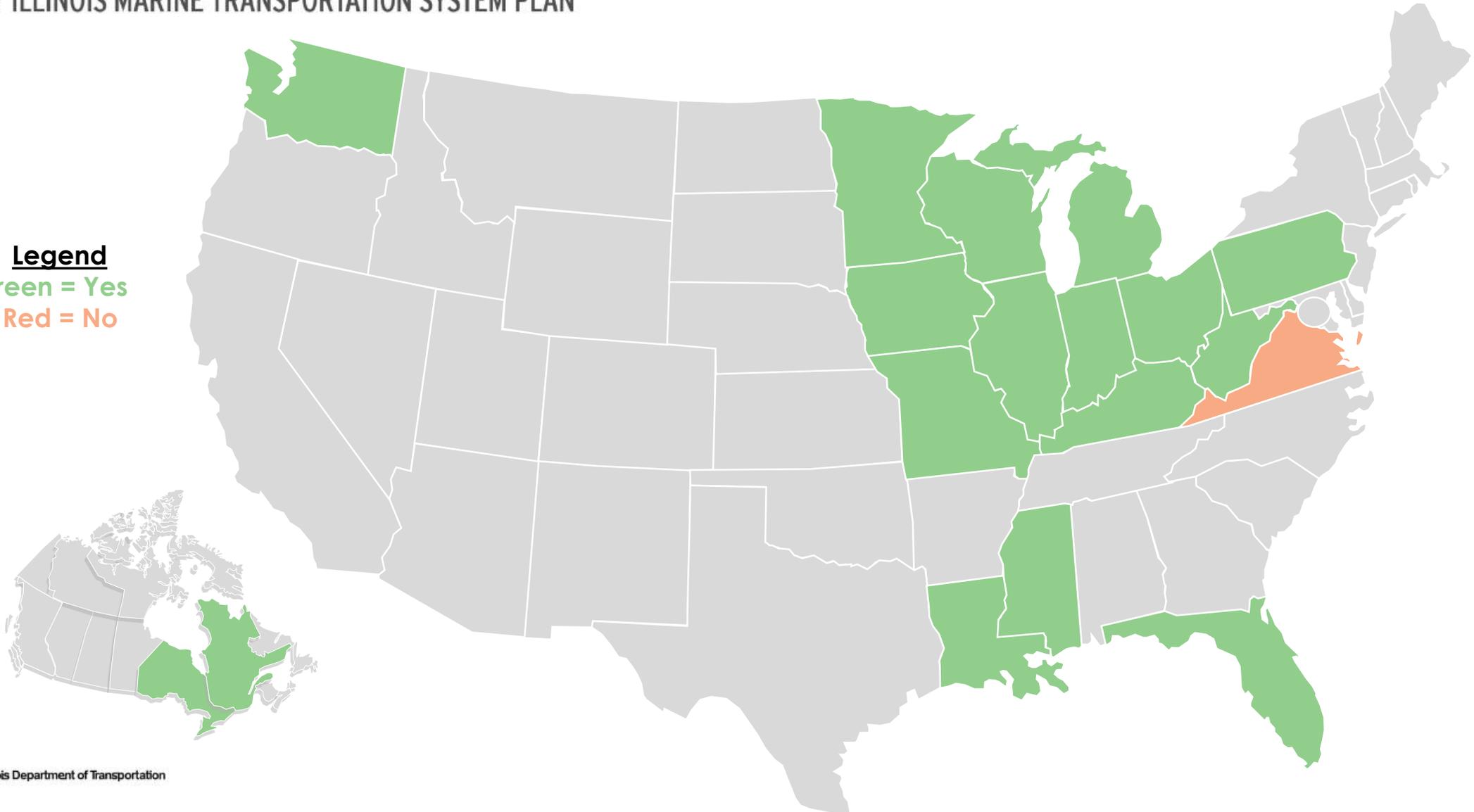




Peer States Review – Locally Owned Ports

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Legend
Green = Yes
Red = No

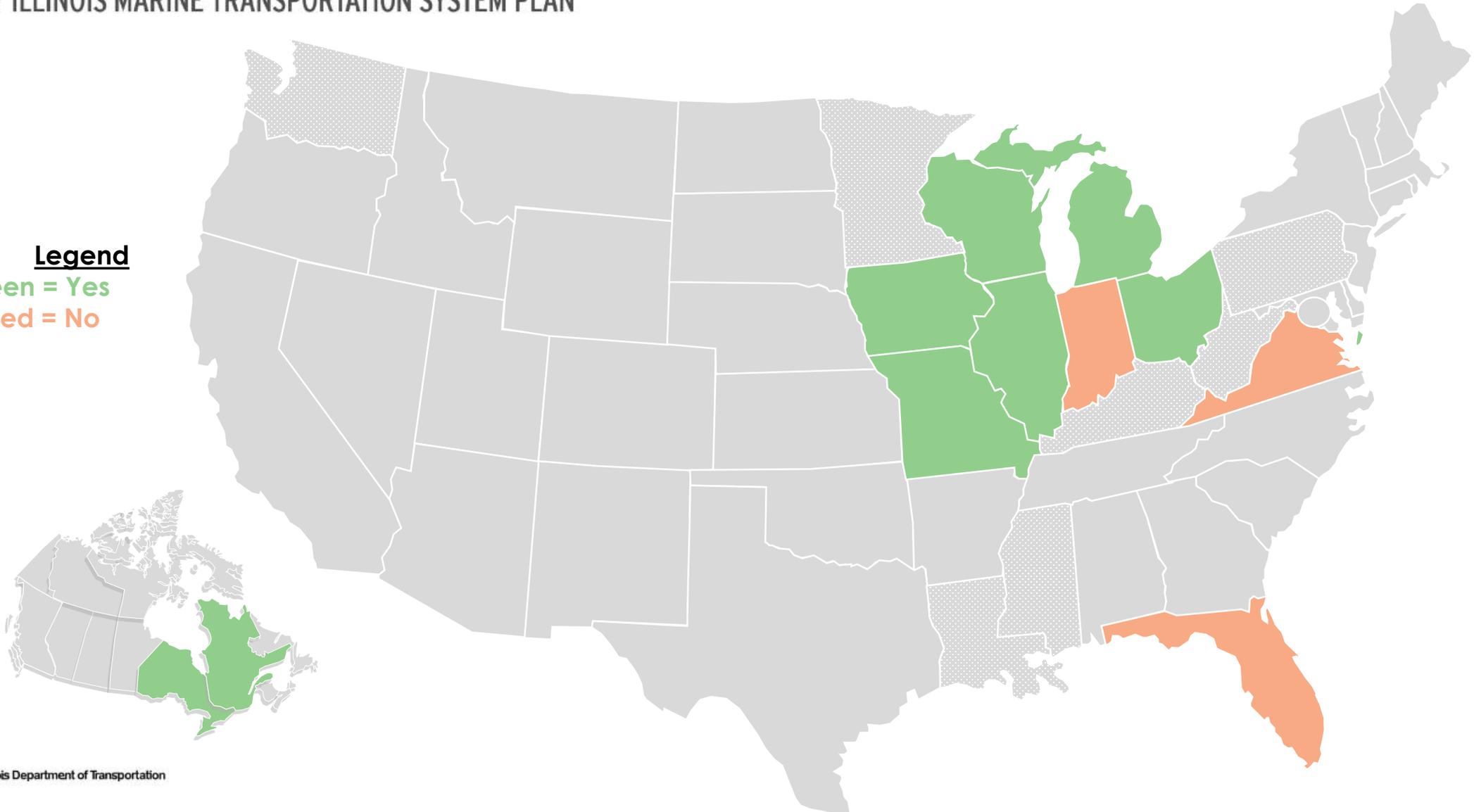




Peer States Review – Singular Legislation

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Legend
Green = Yes
Red = No





Peer States Review – Funding and Financing

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Secondary Lens:

- Financial Assistance (Grants) - Operations
- Financial Assistance (Grants) - Capital Needs
- Financial Assistance (Loans) - Capital Needs
- Eligibility for State Funding

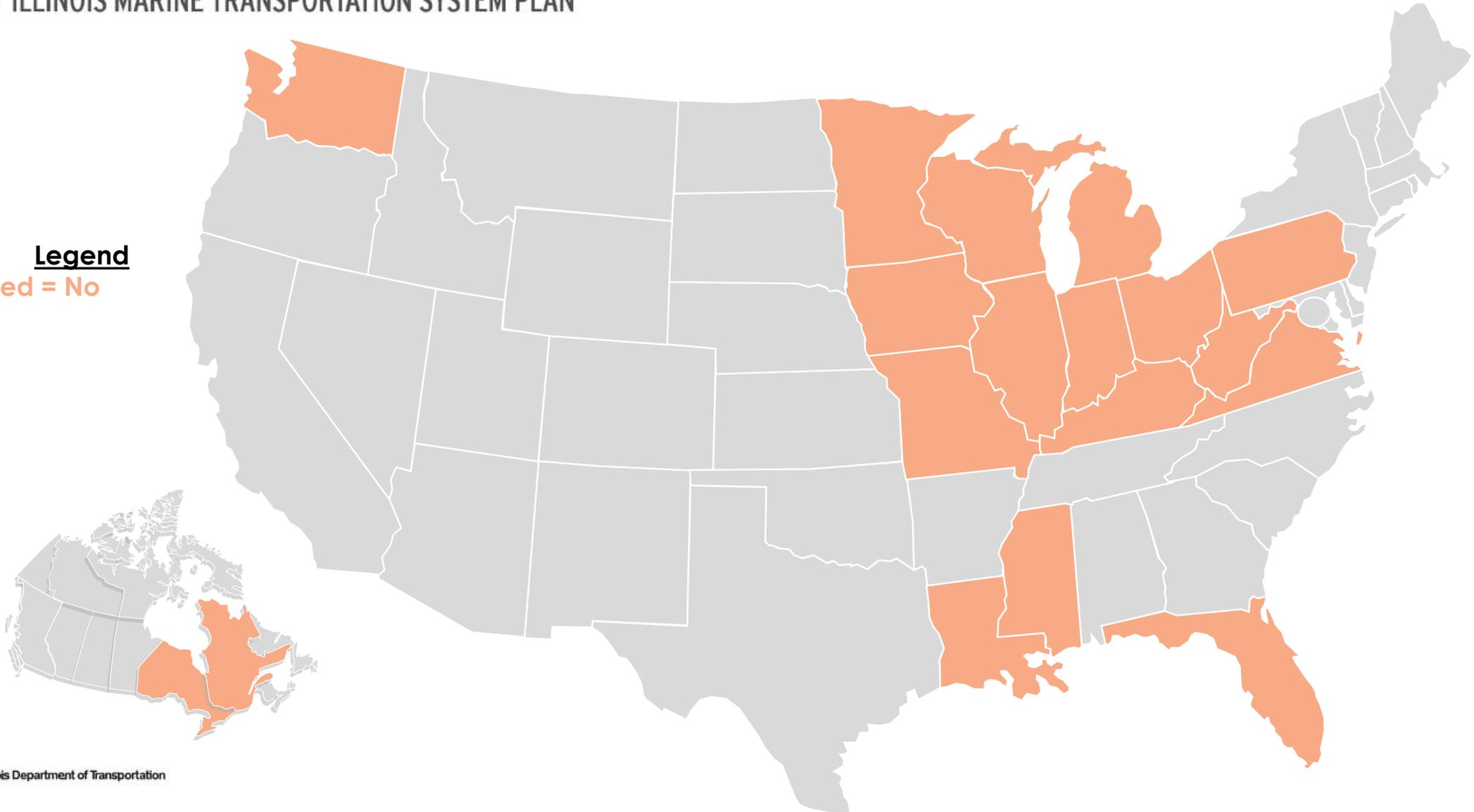




Peer States Review – Financial Assistance (Grants)-Operations

ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN

Legend
Red = No

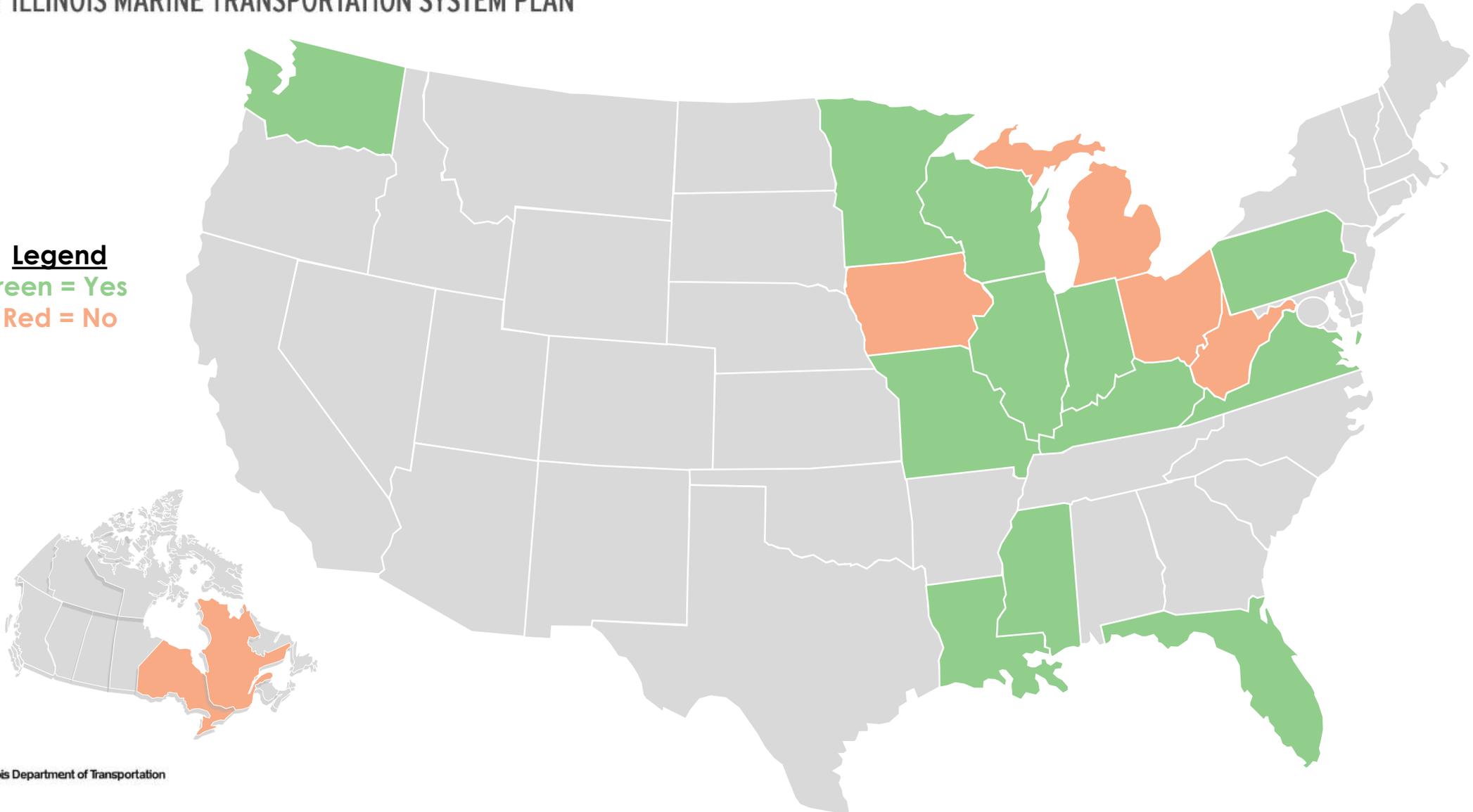




Peer States Review – Financial Assistance (Grants)- Capital Needs

ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN

Legend
Green = Yes
Red = No

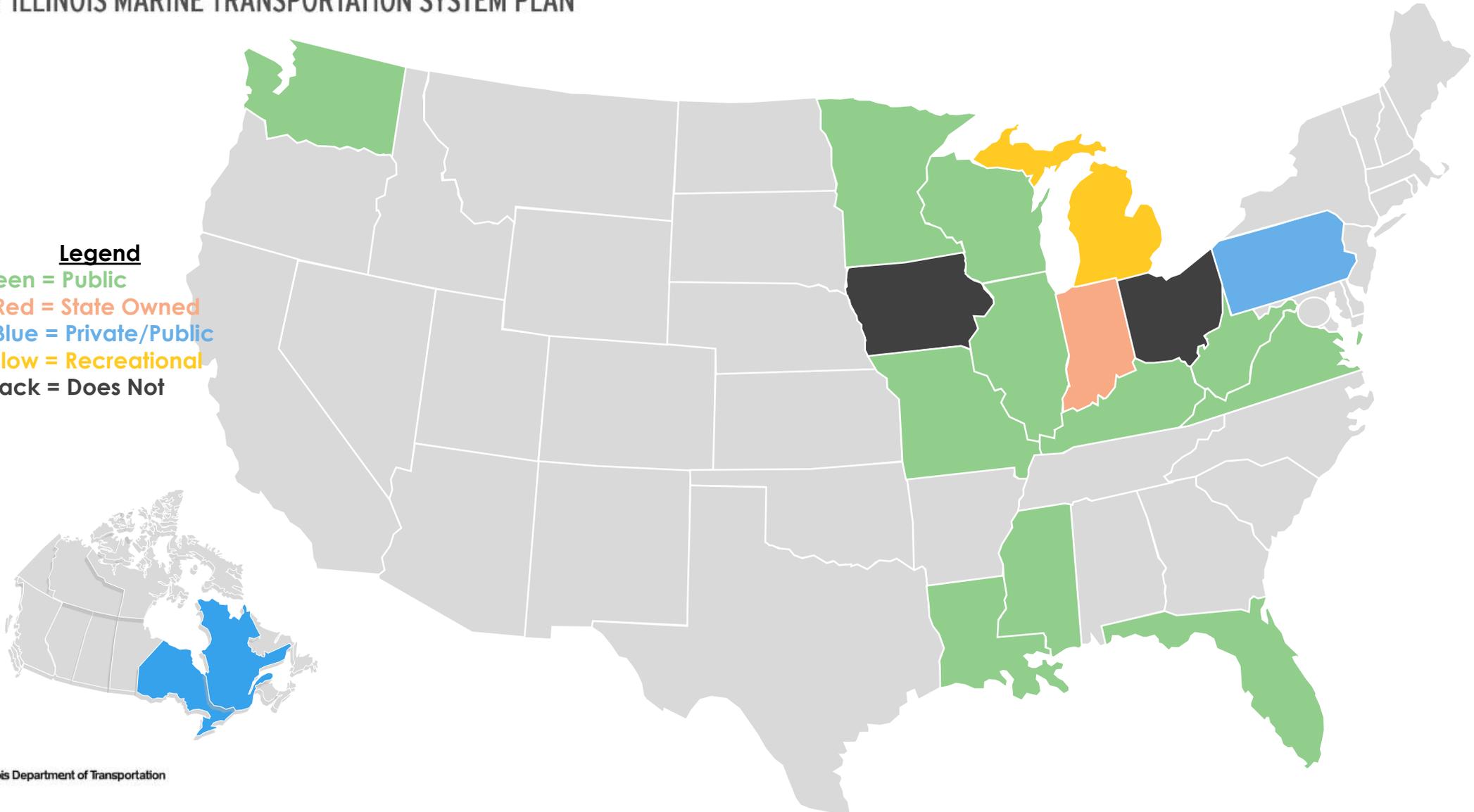




Peer States Review – Eligibility for State Funding

ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN

- Legend**
- Green = Public
 - Red = State Owned
 - Blue = Private/Public
 - Yellow = Recreational
 - Black = Does Not





Peer States Review – Assistance

ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN

Secondary Lens:

- Technical Assistance
- Marketing/ Advocacy





Permitting Challenges

ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN



Challenges

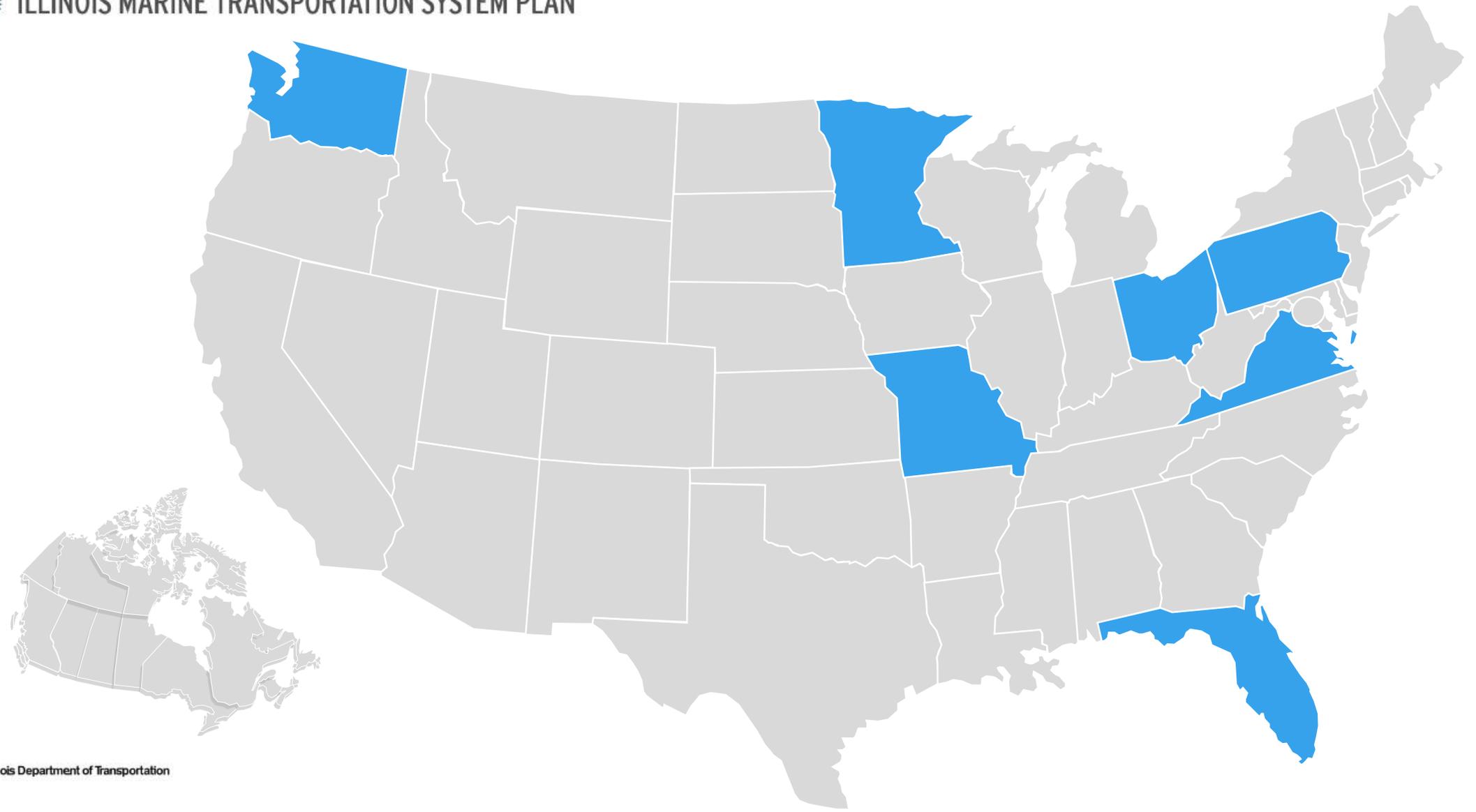
- Costs
- Timeframes
- Advocacy
- Expiration
 - Peer States Review will now include exploration of neighboring states dredging permitting processes





Peer States Review – Potential Case Study States

ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN



Questions/Feedback



ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN



Illinois Department of Transportation



Next Steps

ILLINOIS MARINE TRANSPORTATION SYSTEM PLAN



Facilities Inventory



Prepare Inventory of Carriers and Operators



Commodity Flows



Port Profiles

Develop Industry Profiles

Complete Economic Impact Analysis

Develop Programmatic Recommendations

Complete Peer State Review

Continue Stakeholder Outreach

Draft Plan - February

