

CONTENTS



1. Introduction	1
1.1 Plan Overview	3
2. History and System Overview	5
2.1 Historical Timeline	6
2.1.1 Pre-European	7
2.1.2 European Settlement	7
2.1.3 19th Century	8
2.1.4 20th Century	9
2.1.5 WWII and Illinois' Waterways	10
2.2 The Illinois Marine Transportation System (IMTS)	12
2.2.1 Marine Highway System	12
2.3 Locks and Dams	19
2.3.1 How Locks and Dams Work	19
2.3.2 Locks and Dams Along the IMTS	20
2.4 Ferries and Cruises	22
2.4.1 Ferries	22
2.5 Recreational Uses	25
2.6 Importance of the System	25
2.6.1 Cargo Type	26

3. Public Port District Profiles 28

3.1 Public Port District Powers	29
3.2 Benefits of Public Port Districts	32
3.2.1 Economies of Scale	32
3.2.2 Effective Movement of Goods	32
3.2.3 Economic Development	32
Alexander-Cairo Port District	34
America's Central Port District	38
Havana Regional Port District	44
Heart of Illinois Regional Port District	48
Illinois International Port District	52
Illinois Valley Regional Port District	59
Jackson-Union Counties Regional Port District	63
Joliet Regional Port District	67
Kaskaskia Regional Port District	72
Massac-Metropolis Port District	81
Mid-America Intermodal Authority Port District	85
Mt. Carmel Regional Port District	89
Ottawa Port District	93
Seneca Regional Port District	97
Shawneetown Regional Port District	102



Southwest Regional Port District	106
Upper Mississippi River International Port District	110
Waukegan Port District	114
White County Port District.....	119

4. Economic Value 123

4.1 Commodity Flows	124
4.1.1 Commodity Flows in 2017	128
4.1.2 Commodity Flow Forecast	130
4.1.3 Food and Food Products	132
4.1.4 Coal	135
4.1.5 Primary Metal Products	137
4.1.6 Source of Data and Forecast	139
4.2 Industry and Carrier Profiles	140
4.2.1 Food and Food Products	140
4.2.2 Coal	144
4.2.3 Primary Metal Products	148
4.3 Carrier/Operator Profiles	150
4.3.1 Barge Carriers	151
4.3.2 Lake and Ocean Carriers	152
4.3.3 Facility Operators	154
4.3.4 Rail and Truck Carriers	155



4.4 Economic Impact Analysis 156

4.4.1 Marine Freight and Illinois 157

4.4.2 Goods Movement and the Economy 158

4.4.3 Methodology 159

4.4.4 Marine-Supportive and Related Impacts 160

4.4.5 State Level Impacts 162

4.4.6 Public Port District Impacts 165

5. Needs Assessment and Strategy Development 169

5.1 Peer State and Neighbor State Review 170

5.1.1 Peer State Analysis—Findings Related to MTS Planning and Funding Programs 170

5.1.2 Neighbor State Analysis—Findings Related to Dredging Programs 175

5.2 Programmatic Recommendations 178

5.2.1 IDOT Long-Range Transportation Plan 178

5.2.2 Illinois State Freight Plan 179

5.2.3 Recommendation #1: Re-Establish a Marine Section Within IDOT 180

5.2.4 Recommendation #2: Fully Integrate IMTS Modal System Planning Within IDOT 181

5.2.5 Recommendation #3: Fully Integrate Statewide IMTS Planning Across Public and Private Stakeholders 182

5.2.6 Recommendation #4: Improve Port District Structure and Appointment Process 183

5.2.7 Recommendation #5: Streamline Dredging Process 184

5.2.8 Recommendation #6: Strengthen Federal Agency and Multi-State Partnerships 185

5.2.9 Recommendation #7: Leverage Existing Illinois Funding to Meet Identified IMTS Needs 186

5.2.10 Recommendation #8: Establish Long-Term, Sustainable IMTS Funding Program 187



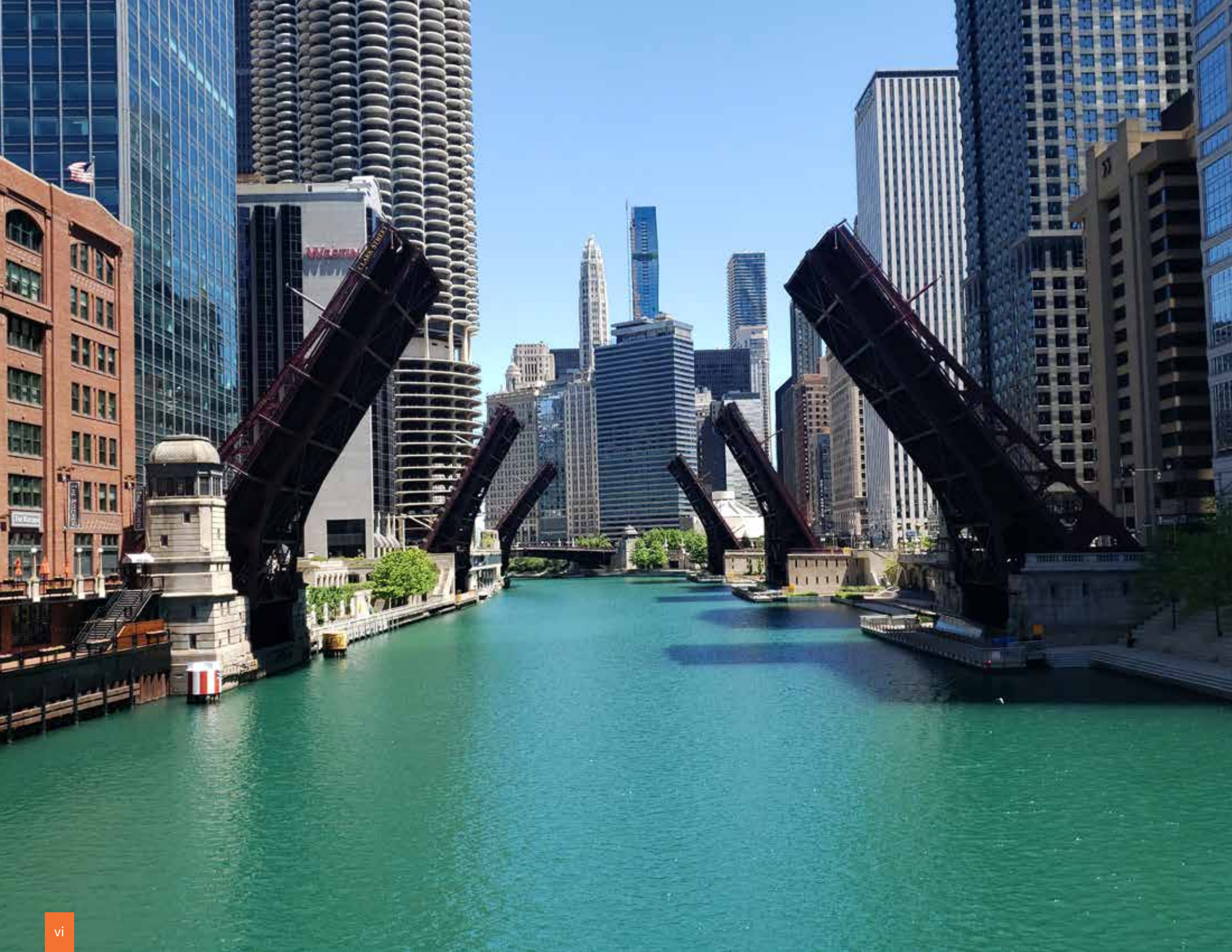
5.3 Critical Needs for the IMTS and ITS Stakeholders	188
5.4 Benefits of Action	189

6. Implementation of Programmatic Recommendations **191**

6.1 Implementation Partners	192
6.1.1 Illinois Department of Transportation (IDOT)	192
6.1.2 Illinois Department of Commerce and Economic Opportunity (DCEO)	192
6.1.3 Port Districts & Illinois Ports Association (IPA)	192
6.1.4 Illinois Department of Natural Resources (IDNR)	192
6.1.5 Illinois Environmental Protection Agency (IEPA)	192
6.1.6 Illinois Department of Agriculture (IDOA)	192
6.1.7 United States Army Corps of Engineers (USACE)	193
6.1.8 Metropolitan Planning Organizations and Regional Planning Agencies	193
6.1.9 United States Maritime Administration (MARAD)	193
6.1.10 United States Environmental Protection Agency (U.S. EPA)	193
6.1.11 State and Federal Legislative Branches (LEG)	193
6.2 Implementation Stakeholders	194
6.3 Implementation Partners Collaboration	194

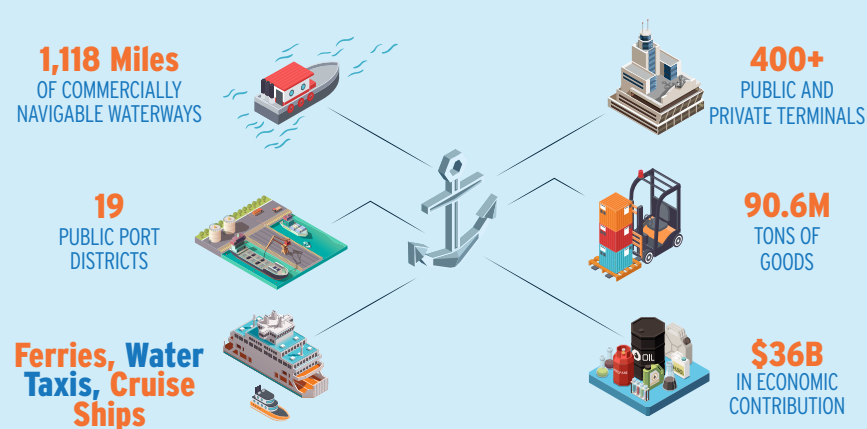
Photo Credit References **199**





INTRODUCTION

Illinois lies at the heart of the nation's transportation network. The state has one of the largest multimodal transportation networks in the country with thousands of miles of roads and rail, hundreds of airports, and numerous public transportation providers. Each of these modes plays an important role in the state's robust transportation system. However, one of the most important elements of the system has often been overlooked, the waterway system. The IMTS links the State of Illinois with the Atlantic Ocean via the Great Lakes and the St. Lawrence Seaway and with the Gulf of Mexico via the Mississippi River. This gives Illinois farmers, manufacturers, and businesses access to international and interstate markets. The system is vital to the state's economy transporting 90.6 million tons of goods, or 9% of Illinois' freight tonnage in 2017. Barges flow up and down the Mississippi, Illinois, Ohio, and Kaskaskia rivers, as well as through the Chicago Area Waterway System and Lake Michigan providing an affordable, efficient, and clean means of transporting goods.



¹ Total Illinois MTS mileage slightly exceeds the sum of river mileage due to the inclusion of navigable connecting segments, distance rounding, and other factors. The discrepancies are very small and do not impact the IMTS Plan.



The Illinois Department of Transportation (IDOT) as we know it today was established as an official state agency in 1972. IDOT is a dynamic agency that plans, programs, oversees, and supports multimodal projects across the state. When IDOT was established in the early 1970's, the Division of Water Resources was an integral part of the agency, and as such, IDOT played a major role in the marine transportation system. However, the Division of Water Resources was transferred to the Illinois Department of Natural Resources (IDNR) in 1995, and IDOT's focus on the marine system decreased. The Illinois Marine Transportation System Plan (IMTS Plan) has been undertaken to renew IDOT's commitment to supporting goods movement on the marine system as a mode and to reinvigorate planning and programming activities associated with goods movement.

The purpose of the IMTS Plan is to provide the State of Illinois a comprehensive understanding of the State's marine system from a commerce and transportation perspective. The IMTS Plan is a comprehensive plan that sets the foundation for the state and provides a vision for the IMTS.

The plan was developed by analyzing datasets, reports, and academic papers, as well as by conducting numerous interviews with port officials, terminal operators, businesses, and stakeholders. These activities were critical to provide an accurate holistic view of Illinois' waterway system.

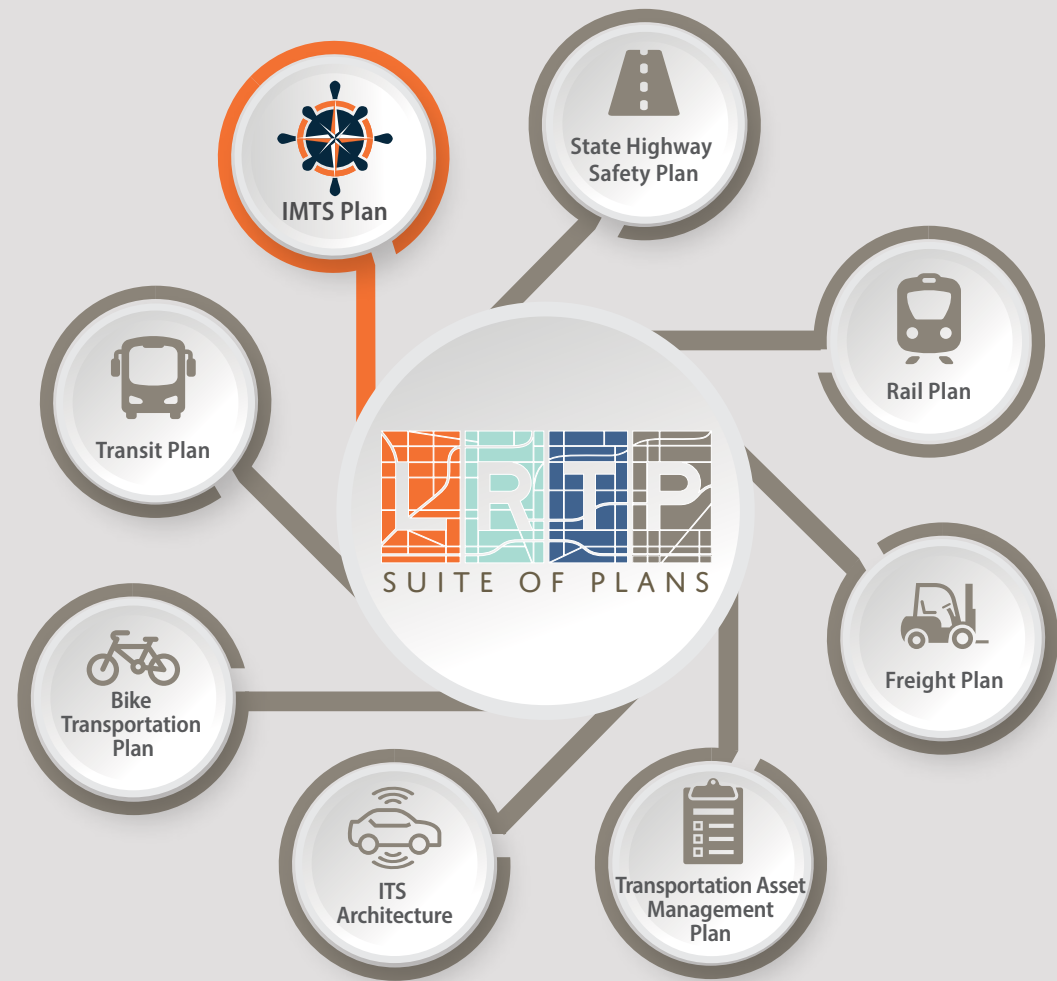
Additionally, the IMTS Plan was guided by a steering committee that was made up of a cross section of public, private, and industry organizations that have a vested interest in Illinois' waterway system. Each organization provided a different perspective on how it views the system and their vision on how the state should approach the waterway system moving forward. Over the course of a year, the committee worked collectively to provide policy and programmatic recommendations; these recommendations can be viewed in later chapters.

1.1 PLAN OVERVIEW

IDOT is a multimodal agency, and the IMTS Plan is one of many IDOT modal plans, the most recent addition to the suite of plans identified in IDOT's most recent Statewide Long-Range Transportation Plan (LRTP).

All IDOT plans are designed to provide progressive and action-oriented frameworks for Illinois' transportation system. Plan policies provide a framework to guide the sustainable development of an integrated system that is safe, efficient, and reliable; enhances quality of life; supports the economic prosperity of the state; and promotes data-driven, performance-based decision making.

Each mode faces different and unique challenges; the waterway system is no different. However, there remains an inherent set of linkages between each transportation mode IDOT supports. Chapter 5 of the IMTS Plan, *Needs Assessment and Strategy Development*, demonstrates the linkages between the goals of the LRTP and the actions IDOT intends to take to more fully integrate marine system planning and programming into the agency. The IMTS Plan analyzes several items including the waterway system, facilities and their conditions, statewide economic impact of ports, benefits of public investments in ports, and more.





THE PLAN IS ORGANIZED BY THE FOLLOWING CHAPTERS:

[1]

INTRODUCTION

[2]

HISTORY AND
SYSTEM OVERVIEW

[3]

PUBLIC PORT
DISTRICT PROFILES

[4]

ECONOMIC VALUE

[5]

NEEDS ASSESSMENT
AND STRATEGY
DEVELOPMENT

[6]

IMPLEMENTATION

HISTORY AND SYSTEM OVERVIEW

Throughout history, waterways have been the lifeblood of many people and civilizations. In prehistoric times, rivers provided hunter-gatherer societies with a reliable source of drinking water and fish. Over time humanity progressed away from the hunter-gatherer lifestyle to one centered around agriculture. The fertile lands along the banks of rivers provided for greater yields; additionally, early farmers manipulated the land through irrigation to expand the areas in which they could farm. These advancements led to the development of some of the great early civilizations which built large cities along river banks. With the expansion of civilizations, commerce between cities grew; once again rivers played an important role. Farmers and merchants could easily load their goods onto boats and sell their goods to buyers up and downstream. Waterways played an important role in the progress of humanity; in Illinois this was no different.



2.1 HISTORICAL TIMELINE

The following are important events in the history of Illinois' waterway system dating back to the previous millennia.

FIGURE 2.1 A Brief History of Illinois Waterways

1050-1150 A.D.



Cahokia Mounds

The Mississippian Culture builds Cahokia, the largest pre-Columbian city in North America, with 15,000 inhabitants. Located near the Mississippi River, a massive pyramid-like temple platform stood at the city's center.

1673



First Europeans Explore Illinois

Jacques Marquette and Louis Jolliet (aka Joliet) explore what is modern day Illinois. They traversed the Mississippi, Illinois, and the Chicago rivers. Along the way they interacted with many Native American tribes.

1779



DuSable Settles Chicago

Jean Baptiste DuSable settles along the banks of the Chicago River near Lake Michigan, where modern day Chicago is located. DuSable is widely attributed to be the founding father of Chicago.

1818



Illinois Statehood

Illinois is granted statehood. The Mississippi, Ohio, and Wabash rivers, as well as Lake Michigan create its distinct shape.

1848



Illinois & Michigan Canal Complete

The Illinois & Michigan Canal is completed; it connects the Illinois River to the Chicago River providing a direct route to the Great Lakes from the Mississippi River.

1878



4 1/2 Foot Channel Project

Congress authorizes the 4 1/2-foot channel project on the Upper Mississippi River. This would ensure there was a consistent depth along the river, allowing reliable navigation for vessels.

1900



Chicago Sanitary and Ship Canal Complete

The Chicago Sanitary and Ship Canal is officially opened. It replaced portions of the Illinois & Michigan Canal. It was not until 1907 that the canal was extended from Lockport to Joliet, connecting it to the Des Plaines River. Construction of the new canal required reversing the flow of the Chicago River.

1931



9-Foot Channel Navigation Project

Congress authorizes the 9-foot channel project on the Upper Mississippi River and Illinois River to encourage commerce along the river. A series of locks and dams were constructed to ensure a 9-foot depth.

1941



Navy Pier Transformed for Training

Navy Pier is used as a military training facility during WWII. By the end of the war a total of 60,000 troops were trained at the pier. Included in the 60,000 were 15,000 fighter pilots who trained landings and takeoffs on freshwater aircraft carriers that were stationed at the pier.

1942



Prairie Shipyard

The Prairie Shipyard in Seneca Illinois is commissioned to build Landing Ship Tanks. These watercrafts were used in the D-Day assault at Normandy, France.

1959



St Lawrence Seaway Opens

The St. Lawrence Seaway opens, officially linking the Gulf of Mexico to the Atlantic Ocean via the Illinois and Mississippi rivers and the Great Lakes.

2.1.1 PRE-EUROPEAN

For some 13,000 years before the State of Illinois was established, Native Americans occupied this region. The floodplains of the Mississippi, Illinois, and Ohio rivers and their tributaries offered abundant seed-bearing plants, game animals, fish, and waterfowl for hunter-gatherers. About 10,000 year ago, this secure food supply sustained the inhabitants of one of the first permanent villages in North America, at the Koster site near Kampsville in the “American Bottom” of southern Illinois. Millennia later, when Native people began cultivating maize (corn), the rich soil of the American Bottom was an ideal setting for the new way of life. Maize served as a staple food for the rapidly increasing population of the Mississippian culture, which created a complex chiefdom centered at the city of Cahokia, across the river from modern Saint Louis. A massive pyramid-like temple platform, known today as Monks Mound, loomed over the center of the largest Native city in North America. At its height (AD 1050-1150) Cahokia was inhabited by about 15,000 people—farmers, artisans, warriors, priests and chiefs.

2.1.2 EUROPEAN SETTLEMENT

In the late 1600s, a Jesuit missionary, Jacques Marquette, and Canadian fur trader, Louis Jolliet, embarked on an expedition commissioned by the Governor of New France (at this point in history, modern day Illinois was a French territory) to find a Northwest passage across North America¹. The expedition took them down the Upper Mississippi River. While on the expedition they encountered many Native American tribes. During their return trip, they were informed by Native Americans of a quicker route to Lake Michigan via the Illinois, Des Plaines, and Chicago rivers; however, they would need to go through the Chicago Portage (a swampy area that divides the Des Plaines and Chicago rivers). They crossed the portage and reached Lake Michigan where modern day Chicago is located². Jolliet had the foresight to recognize the potential of the Chicago Portage and reported “it would only be necessary to cut a canal through half a league of prairie to go in a bark by easy

navigation from Lake Erie to the Gulf of Mexico”³. Nearly 150 years later, his idea would come to fruition with the construction of the Illinois & Michigan Canal. Marquette and Jolliet were the first Europeans to explore the Illinois Country.⁴ In the years that followed many European traders settled along Lake Michigan and the rivers throughout Illinois.⁵

In the 1770s, Jean Baptiste DuSable, a man of French and African descent, would sail from France to New Orleans. He would follow the Mississippi River north and by 1779 finally settle on the northern banks of the Chicago River by Lake Michigan in modern day Chicago. Due to its strategic location along the river and lake, the settlement became an important trading post serving Native Americans, British, and French explorers. DuSable is widely viewed as the founder of Chicago. The city would be incorporated in 1837.



2.1.3 19TH CENTURY

Prior to the advent of railroads and the interstates, Illinois' rivers were the "highways" of their times. People from all backgrounds, origins, and ethnicities were able to thrive in part because of access to essential marine resources and waterways. For example, the Mississippi River was an important trade route allowing merchants to ship their goods. Mass produced commodities, specialized trades, and people from all nationalities became widely distributed as a result of an active network of river systems. These same routes that shipped goods, provided a key resource for enslaved, migrant, and immigrant populations in search of new opportunities. In this way, Illinois' waterways were particularly essential to the success of the newly formed state.

By 1848 the Illinois and Michigan Canal was complete. It connected the Chicago River with the Illinois River at LaSalle 96 miles away.⁶ When complete the Canal provided the first direct water route from the East Coast (via Erie Canal and Great Lakes) to the Gulf of Mexico.⁷ The canal helped make the City of Chicago a major freight hub due to the large amount of commerce it supported. By 1882, over a million tons of commodities flowed through the canal annually.⁸

In 1878, Congress authorized the 4 ½-foot channel project. This project tasked the Army Corps of Engineers to make navigation improvements along the Upper Mississippi River. This project changed a lot of the river's natural character. Despite the efforts, commerce along the Upper Mississippi River declined in years the followed.⁹

Construction on the Hennepin Canal (Illinois and Mississippi Canal) began in 1892 and was finished by 1907. The canal linked the Illinois River at Hennepin, to the Mississippi River at Rock Island. The motivation behind this was to provide a faster route for the industrial areas of the Upper Mississippi River to Chicago. The canal reduced the traveling distance between Chicago and Rock Island by 419 miles.¹⁰ However by the time the canal was opened, it was already obsolete due to railroad competition and its small size. By 1951, the canal was closed and today is used as a recreational area administered by the Illinois Department of Natural Resources.¹¹



2.1.4 20TH CENTURY

In 1900, the Chicago Sanitary and Ship Canal officially opened. There were two major motivations behind building the canal, one was to replace the Illinois & Michigan Canal, which by this time was all but obsolete due to its size. The building of the Chicago Sanitary and Ship Canal would once again provide Illinois a distinct competitive advantage in shipping as was done with the Illinois & Michigan Canal half a century earlier.

By the latter half of the 19th century, advances in ship design made the Illinois & Michigan Canal obsolete.¹² The existing Illinois & Michigan Canal was neither deep or wide enough to accommodate the new vessels size. The new Chicago Sanitary and Ship Canal was built nearly parallel to the Illinois & Michigan Canal. However, when complete the new canal did not allow for commercial navigation to the Illinois River¹³. At this point commercial navigation was only possible to Lockport from Chicago. In 1907, an extension of the

Canal was complete to make the Canal commercially navigable to the Des Plaines River. The Canal was an overall success and is still in use by commercial vessels to this day.

The other motivation behind the building the Canal was to reverse the flow of the Chicago River. During this time, raw sewage and industrial waste was discharged into the Chicago River. The river would then flow into Lake Michigan polluting the city's source of clean drinking water. By reversing the river's flow the sewage and waste would flow downstream ultimately into the Mississippi River.

While the Chicago Sanitary and Ship Canal provided relief to navigation and sanitation challenges that Chicago faced, in the years that followed it became apparent that the City still faced these issues. To address these issues, work on the Calumet- Sag

Channel (Cal-Sag Channel) began in 1911, the Cal-Sag Channel was complete by 1922. The Channel would provide relief to the to Chicago's sanitation challenges and provide commercial navigation to the industrial Calumet area, linking it to the Illinois Marine Transportation System (IMTS).¹⁴

In 1931, construction of the 9-Foot Channel Navigation Project on the Upper Mississippi River began. The project would channelize the Mississippi River 9 feet deep from St. Louis to Minneapolis. This was done to encourage commerce along the river. Prior to that point barges would need to unload their goods at St. Louis on to smaller boats. Besides dredging of the river, a series of locks and dams were built to ensure a 9-foot depth. Additionally, the 9-Foot Channel Navigation Project also channelized the Illinois Waterway from the Chicago Area Waterway System to the Illinois River's confluence with the Mississippi River.

SS EASTLAND DISASTER

One of the deadliest maritime disasters in U.S. history happened on July 24, 1915, along the banks of the Chicago River. The SS Eastland was docked near the Clark Street bridge and set to sail to Michigan City, Indiana, with nearly 2,500 passengers for a picnic hosted by Western Electric Company for employees, family, and friends. Moments before the Eastland was scheduled to depart, the crowded ship began to list back and forth and ultimately rolled over on its side just feet from the wharf and resulted in the loss of 844 lives.



Inland waterways are not commonly associated with being the location of shipyards; however, by 1945, nearly 12,000 shipyard workers called Seneca, Illinois home. Inland shipyards were commissioned to allow for coastal ports to focus on large vessels. The Prairie Shipyard located on the Illinois River was tasked with building Landing Ship Tanks. These ships were built to allow troops and equipment to land onto shores where no docks or piers were present. A total of 157 Landing Ship Tanks were built at the Prairie Shipyard, 23 of which were directly involved in the D-Day assault at Normandy. Today the Shipyard Industrial Park is located at the original site which is part of the Seneca Port District.¹⁵



Navy Pier played an important role in the war efforts of World War II. The U.S. Navy transformed the pier into a training facility. Sailors from across the country were sent to Chicago to receive training prior to being sent to war. Among the many training operations, the Navy operated two training aircraft carriers, the USS Wolverine and USS Sable on Lake Michigan on which pilots would practice takeoffs and landings. By the end of the war a total of 60,000 servicemen were trained at the pier. Included among them was former President George H. W. Bush.¹⁶

IDOT AND THE WATERWAY SYSTEM, PAST, PRESENT, AND FUTURE

The Illinois Department of Transportation (IDOT) can trace its roots with the Illinois waterway system back to 1823. In 1823, the Third General Assembly passed legislation to create the Illinois and Michigan Canal Commissioners. Their role was to survey possible canal routes for the Illinois and Michigan Canal.¹⁷ Between 1829 and 1917 the commission was dissolved, assembled, and reorganized several times under new names.¹⁸

In 1917, the Fiftieth General Assembly passed, and the governor signed, “The Civil Administrative Code of Illinois” more commonly known as the Consolidation Bill. The bill consolidated a number of state agencies into nine departments, one of which was the Illinois Department of Public Works and Buildings which would become the Illinois Department of Transportation 55 years later. Included in this consolidation were the Illinois Waterway Commission, Canal Commission, and River and Lakes Commission, which created the Division of Waterways, the second largest division within the Department behind the Division of Highways.¹⁹

During the 1920s and 1930s, the Division of Waterways was responsible for several activities including building levees, surveying the boundaries of Lake Michigan, compiling information on river and stream flows, approving plans for sewage discharge,

supervising the sale of water and electric power in Chicago, and working with the federal government on designing harbors along Lake Michigan.²⁰

On December 7th, 1941, Japan attacked Pearl Harbor and in an instant brought the United States into World War II. Thousands of brave men and women joined the armed forces to protect the country. Included in these were over 600 employees of the Department of Public Works and Buildings.²¹ The Department quickly joined the war effort. Director of Public Works and Buildings Walter A. Rosenfield estimated that 90 percent of departmental activities between 1942 and 1945 were related to the war effort.

The Division of Waterways played a crucial role in the Department’s efforts. Enemy warships stalked the nation’s east and west coasts. This made inland water routes and shipyards ever more important. Throughout the war millions of military personnel and materials flowed through IMTS. The Division of Waterways was responsible for maintaining the bridges and lock systems along the rivers. Additionally, the Division was responsible for bridge blackouts. While enemy aircraft never attacked the United States mainland, these blackouts were conducted in an abundance of caution and to provide training for such an event.²²

On January 1st, 1972, the IDOT officially became a state agency. IDOT took over many of the transportation

responsibilities from the Department of Public Works and Buildings, including the Division of Waterways. In 1973, the Division of Waterways officially became known as the Division of Water Resources. The Division of Water Resources would continue to serve under IDOT for the next two decades.

In March 1995, the Division of Water Resources was transferred to the newly created Illinois Department of Natural Resources (IDNR). By transferring the Division to the IDNR, IDOT moved hundreds of employees to IDNR and in the subsequent decades became less involved in the IMTS.

In 2016, IDOT and IDNR staff met to discuss the two agencies roles in the IMTS. It became understood that IDOT would oversee the transportation aspect of the IMTS and IDNR would continue to oversee the recreational and flood control aspect. Since 2016, IDOT has begun creating a dialog with public and private sector IMTS stakeholders. Currently (2020), IDOT does not have an official division or bureau that is dedicated to the IMTS. The Department’s goal is to work toward reinvigorating its waterway activities. The Office of Planning and Programing has been taking the lead on waterway activities. This plan and its recommendations are setting the foundation for IDOT and its relationship with the IMTS.

2.2 THE ILLINOIS MARINE TRANSPORTATION SYSTEM (IMTS)

The IMTS is a vital part of Illinois' transportation network and is also an important part of the nation's waterway network. Illinois has a total of 87,110 miles of rivers and streams, of which 1,118 miles are commercially navigable waterways. The system transports 90.6 million tons of goods annually. The IMTS is made up of five commercially navigable waterways and Lake Michigan with 27 locks and dams throughout the system.²³

2.2.1 MARINE HIGHWAY SYSTEM

The U.S. Maritime Administration (MARAD) is the agency within the U.S. Department of Transportation (DOT) tasked with supporting the United States marine transportation network. Their role is to support shipping, port and vessel operation, national security, environment, and safety as it relates to marine transportation infrastructure. One of the key programs MARAD oversees is the Marine Highway Program. The program's goal is to expand the use of the nation's navigable waterways through the promotion of their benefits. The program's goals specifically are to:

- Develop and expand marine highway service options and facilitate their further integration into the current U.S. surface transportation system, especially where water-based transport is the most efficient, effective and sustainable option.
- Highlight the benefits, increase public awareness and promote waterways as a viable (in some cases a superior) alternative to "landside" shipping and transportation options.²⁴

The Marine Highway Program was created through the Energy Independence and Security Act of 2007. The Act required the DOT to create a program that would work to mitigate landside congestion. MARAD's 2011 report to Congress on the program stated that the program is "intended to expand the use of [the] inland, Great Lakes

Saint Lawrence Seaway System, intercostal, and coastal waterways for the transportation of freight (loaded in containers and trailers) and passengers to mitigate landside congestion, reduce greenhouse gas emissions per ton-mile of freight moved, and accomplish other objectives."²⁵

Today there are 25 designated Marine Highway Routes within the U.S. and overseas territories, 22 of which are in the continental United States. Within Illinois there are four designated routes including M-35, M-55, M-70, and M-90. The Marine Highway routes serve as relievers for landside routes. Their designated route name corresponds with the major interstate highway they compliment. **Figure 2.2** below shows the continental U.S. Marine Highway System.

FIGURE 2.2 National Marine Highway System



Source: WSP From USDOT Maritime Administration:
Marine Highway Route Descriptions

MISSISSIPPI RIVER

The Mississippi River flows 2,350 miles from its source at Lake Itasca in Minnesota to the Gulf of Mexico. The river defines the western boarder of Illinois flowing 580 miles from East Dubuque in the North, to Cairo in the South. Most the land along the river is rural farmland with large metropolitan areas of St. Louis, the Quad Cities, and Quincy being located along its shores. There are times when the river closes during major flood events and in winter months when the river freezes. However, while the river freezes in the northern and central parts of the state, it rarely freezes south of St. Louis.

The river is commercially navigable largely in part due to the 1930's River and Harbor Act that required a depth of 9 feet.²⁶ The 9-foot depth was created in part due to the lock and dam system built along the river. There are a total of 15 locks and dams along the Mississippi River. These locks and dams frequently require maintenance due to their age and condition. The Mississippi River moves 27 percent of the state's water borne freight tonnage, as shown in the table below.

MISSISSIPPI RIVER TONNAGE

Direction		Tonnage (000)	Percent of Statewide Total
Inbound	>	3,019	15%
Outbound	<.....	21,206	34%
In-State	<.....>	348	4%
TOTAL		24,573	27%

The river could fill over two Olympic-sized swimming pools each second. Average annual discharge is 204,800 cubic feet per second at Thebes, Illinois.²⁷

MISSISSIPPI RIVER FACTS

⇒ **15** Locks & Dams Total

⇒ **133** river miles

⇒ **9** feet deep (minimum depth)

⇒ **89** terminals

OHIO RIVER

The Ohio River flows 981 miles from its source at the confluence of the Allegheny and Monongahela Rivers in Pittsburgh, Pennsylvania, to its confluence with the Mississippi River at Cairo, Illinois. The river defines the southern border of Illinois following 128 miles from the confluence of the Wabash River to its confluence with the Mississippi River. The Ohio River is maintained to hold a 9-foot minimum depth channel. In addition, there are two locks and dams along the Ohio River that border the state. There is a great deal of coal that flows on the river due to large mining operations throughout Southern Illinois; however, in recent years there has been a decline in coal shipments due to industry changes, resulting in less demand, and forecasts show this decline will continue. Due to its location, the river does not close in winter months due to freezing. The Ohio River moves 13 percent of the state's water borne freight tonnage, as shown in table below.

OHIO RIVER TONNAGE

Direction		Tonnage (000)	Percent of Statewide Total
Inbound	>	112	1%
Outbound	<.....	11,349	18%
In-State	<.....>	150	2%
TOTAL		11,611	13%

OHIO RIVER FACTS

⇒ **2** Locks & Dams Total

⇒ **128** river miles

⇒ **9** feet deep
(minimum depth)

⇒ **34** terminals

ILLINOIS RIVER

The Illinois River flows 273 miles through the state. It forms at the confluence of the Des Plaines and Kankakee Rivers and joins the Mississippi River near Grafton, Illinois. The Illinois River connects the Gulf of Mexico via the Mississippi River to the Great Lakes and St Lawrence Seaway via the Chicago Area Waterway System (CAWS). The Illinois River is maintained to have a 9-foot channel. In addition, there are a total of five locks and dams along the Illinois River. These locks and dams often require maintenance due to their age and condition. Maintenance occasionally will require a lock to close disrupting the movement of goods. Additionally, there are times when the river closes due to natural events such as flooding and freezing. The Illinois River moves 29 percent of the state's water borne freight tonnage, as shown in table below.

ILLINOIS RIVER TONNAGE

Direction		Tonnage (000)	Percent of Statewide Total
Inbound	>	5,814	29%
Outbound	<.....	18,560	30%
In-State	<.....>	1,699	20%
TOTAL		26,073	29%

ILLINOIS RIVER FACTS

⇒ **5** Locks & Dams Total

⇒ **273** river miles

⇒ **9** feet deep
(minimum depth)

⇒ **137** terminals

KASKASKIA RIVER

The Kaskaskia River is the second longest river within Illinois and flows 325 miles from near Champaign, Illinois, to its confluence with the Mississippi River in southeastern Illinois; however, only 36 miles of the river is commercially navigable. The commercially navigable segment is maintained to have a 9-foot channel from the Mississippi River to Fayetteville, Illinois, and includes one lock and dam. In years prior, the Army Corps of Engineers considered closing the river permanently to commercial navigation due to costs of maintaining the channel. However, such a closure would result in significant economic impacts to the region, therefore the river has remained open. This is the case because the river is the only economically viable means of transporting certain commodities to the region. Certain industries would not be able to operate in the region if they needed to rely on other modes of transportation. The Kaskaskia River moves 2 percent of the state's water borne freight tonnage, as shown in table below.

KASKASKIA RIVER TONNAGE

Direction		Tonnage (000)	Percent of Statewide Total
Inbound	>	786	4%
Outbound	<.....	599	1%
In-State	<.....>	--	0%
TOTAL		1,385	2%

KASKASKIA RIVER FACTS

- ⇒ **1** Lock & Dams Total
- ⇒ **325** miles (36 river miles commercially navigable)
- ⇒ **9** feet deep (minimum depth)
- ⇒ **3** terminals

CHICAGO AREA WATERWAY SYSTEM

Six separate waterways create the Chicago Area Waterway System (CAWS). These include the Des Plaines River, Chicago River (South and North Branches), Chicago Sanitary and Ship Canal, Calumet Saganashkee Channel, Little Calumet River, and Calumet River. Being in the Chicago metropolitan area the system provides waterway access to large intermodal facilities and many existing industrial areas.²⁸ Additionally, due to it flowing through the heart of Chicago, there are also many recreational and tourism opportunities along the system.

Additionally, it is important to note that Asian Carp (invasive species) have low populations below Brandon Road Lock and Dam circa Joliet Illinois. These carps compete with native species in waterways where they are already present. Three repetitive electric barriers in the Waterway near Romeoville Illinois and miles of fencing assist in preventing any further spread.

The State of Illinois has and continues to work with federal and state partners to further reduce populations of Asian carps throughout the Illinois River and CAWS to prevent their spread to, and beyond, Brandon Road Lock and Dam which is approximately 15 miles downstream from the electric barrier system.

CHICAGO AREA WATERWAY SYSTEM TONNAGE

Direction		Tonnage (000)	Percent of Statewide Total
Inbound	>	7,891	39%
Outbound	<.....	4,822	8%
In-State	<.....>	4,903	59%
TOTAL		17,616	19%

CHICAGO AREA WATERWAY SYSTEM FACTS

⇒ **3** Locks & Dams Total

⇒ **1** Lock*

⇒ **95** river miles

⇒ **9** feet deep
(minimum depth)

⇒ **141** terminals

*Chicago Harbor Lock

LAKE MICHIGAN

Lake Michigan is the second largest by volume of the five Great Lakes and through the Great Lake System provides access to the Atlantic Ocean via the Saint Lawrence Seaway. Illinois has 63 miles of coastline along the south-western portion of the lake²⁹. Additionally, the state's jurisdiction extends into the lake and covers 1,500 square miles of the lake. Shipping of goods is limited in winter months due to large portions of the lake freezing. The vessels that travel on Lake Michigan are larger than the ones on the inland river system. However, unlike coastal ports, the size of vessels that can access Lake Michigan is limited due to the size of the locks along the Saint Lawrence Seaway. In addition to large vessels that move commodities through the lake, there are also recreational and tourism vessels that provide cruises throughout the Great Lakes.

LAKE MICHIGAN TONNAGE

Direction	Tonnage (000)	Percent of Statewide Total
Lakewise	1,433	1.6%
Overseas	6,162	6.9%
TOTAL	7,595	8.5%

Lake Michigan volumes are a subset of freight moving into or out of Illinois ports on Lake Michigan and connecting waterways

LAKE MICHIGAN FACTS

- ⇒ **63** miles of coastline
- ⇒ State jurisdiction extends **1,500** square miles into the lake
- ⇒ **2** terminals

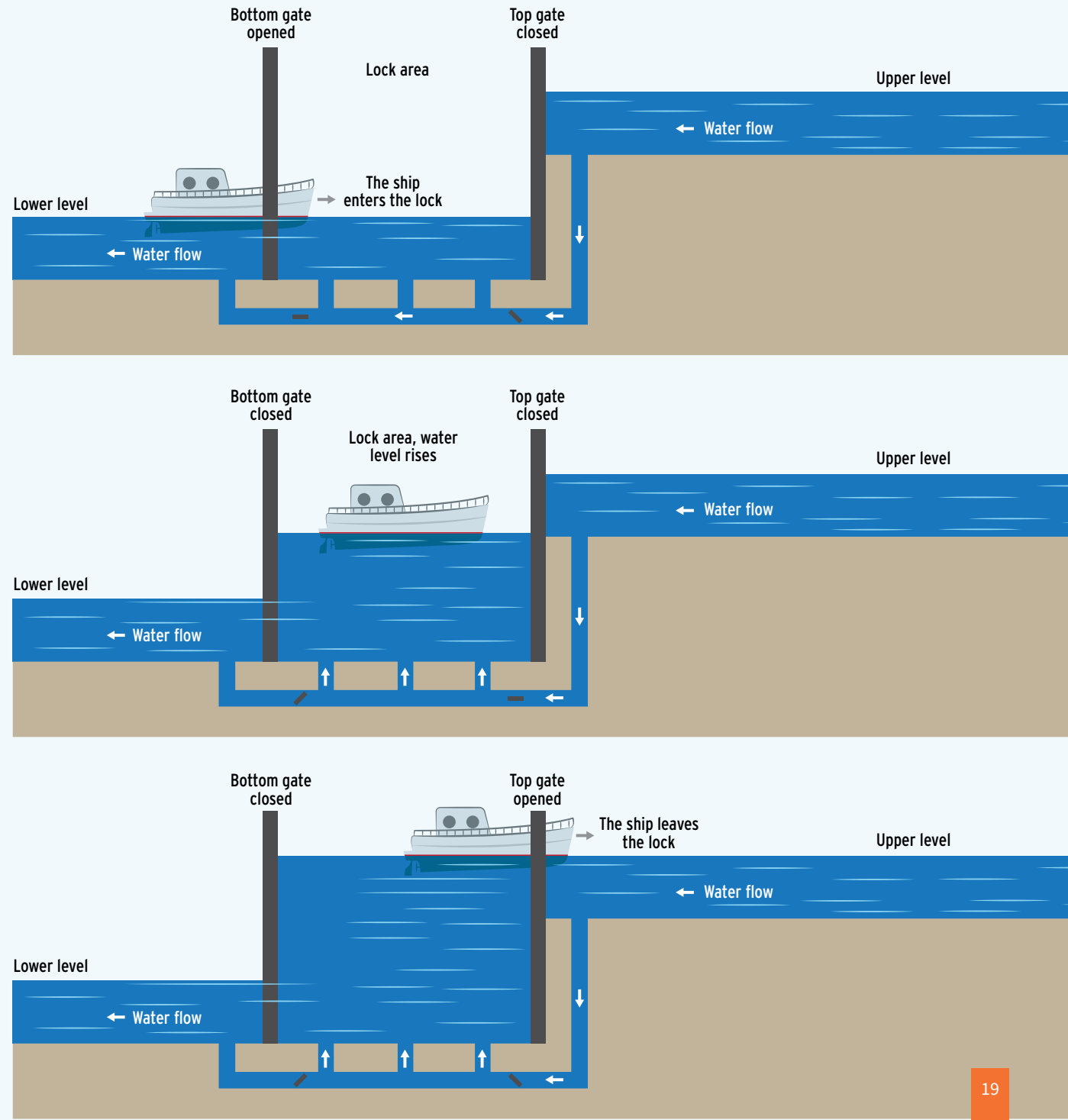
2.3 LOCKS AND DAMS

Locks and dams play a pivotal role in Illinois' waterway system, as they allow boats and barges to navigate along the system. River levels, especially along the Mississippi, Illinois, Ohio, and Kaskaskia rivers, constantly fluctuate. During times of flooding, rivers swell becoming fast and turbulent. On the opposite end of the spectrum, during times of droughts, water levels can drop to a point that the rivers become non-navigable. Most commercial inland river vessels require a minimum of a 9 foot-depth to navigate. Locks and dams were built along the Upper Mississippi, Illinois, Ohio, and Kaskaskia rivers, as well as the canal system to ensure that there is a constant 9-foot depth. It is important to note that the locks and dams along the navigable waterways within the state are not used for flood control.³⁰

2.3.1 HOW LOCKS AND DAMS WORK

Locks and dams are the main reason certain waterways are commercially navigable. They essentially create a step-by-step way to move vessels along the river system. By damming the river, water behind the dam creates a slack water pool which is higher than the river in front of it. This ensures a certain depth of that section of the river. Locks allows a vessel to move up to the height of the dammed pool. Locks allows a vessel to move up to the height of the dammed pool. **Figure 2.3** illustrates a boat going up river through a lock.

FIGURE 2.3 Barge going through a Lock and Dam



2.3.2 LOCKS AND DAMS ALONG THE IMTS

The Army Corps of Engineers operates a total of 27 locks and dams within the IMTS. There are 15 lock and dam facilities along the Mississippi River. The Illinois River and CAWS have nine lock and dam facilities. The Ohio River has two lock and dam facilities, and the Kaskaskia River has one lock and dam. **Table 2.1** details all the locks and dams on navigable waterways in Illinois.

FIGURE 2.4 Locks and Dams in Illinois

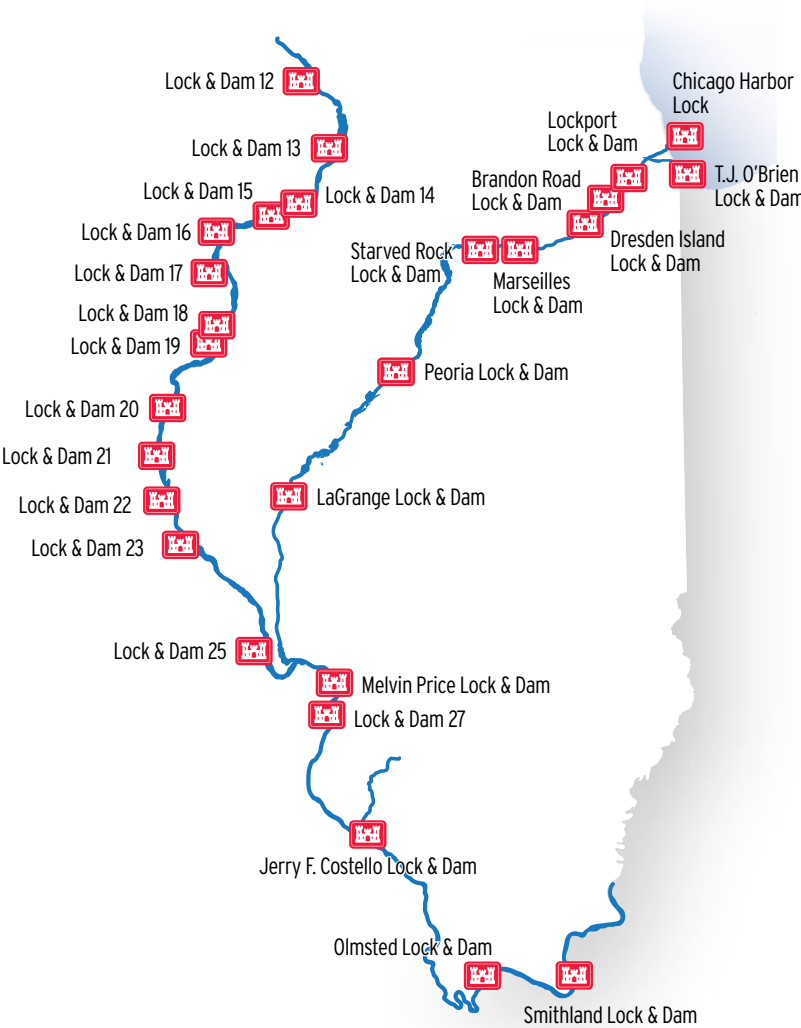


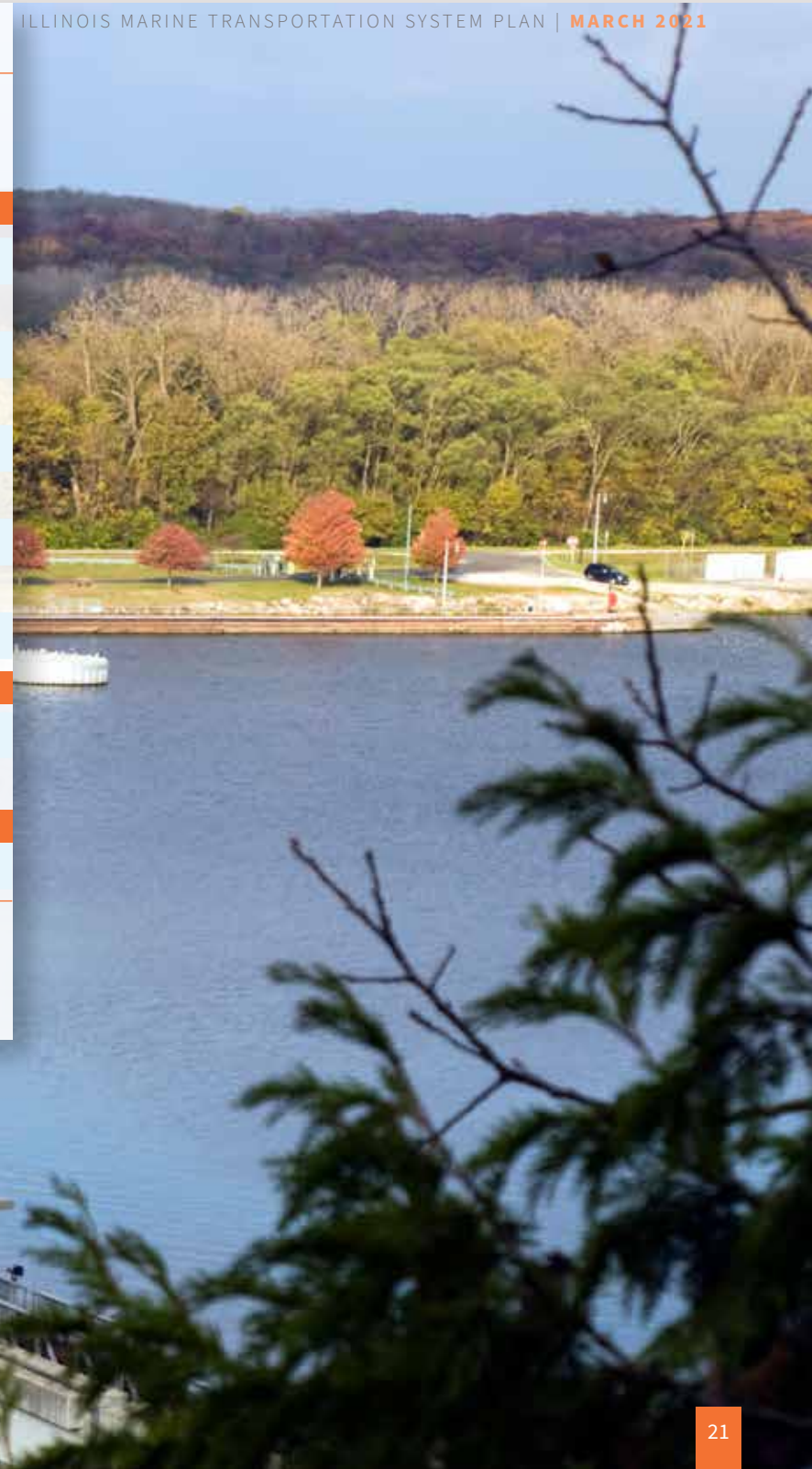
TABLE 2.1 Locks and Dams in Illinois

NAME	LOCATION [RIVER BANK]	RIVER MILEPOINT	CORP DISTRICT
Mississippi River			
12	Bellevue, Iowa [R]	567	Rock Island
13	Fulton, Illinois [L]	522	Rock Island
14	Pleasant Valley, Iowa [R]	493	Rock Island
15	Rock Island, Illinois [L]	483	Rock Island
16	Illinois City, Illinois [L]	457	Rock Island
17	New Boston, Illinois [L]	437	Rock Island
18	Gladstone, Illinois [L]	410	Rock Island
19	Keokuk, Iowa [R]	364	Rock Island
20	Canton, Missouri [R]	343	Rock Island
21	Quincy, Illinois [L]	325	Rock Island
22	New London, Missouri [R]	301	Rock Island
24	Clarksville, Missouri [R]	273	St. Louis
25	Winfield, Missouri [R]	241	St. Louis
Melvin Price	Alton, Illinois [L]	201	St. Louis
Chain of Rocks / 27	Granite City, Illinois [L]	185.5	St. Louis



NAME	LOCATION [RIVER BANK]	RIVER MILEPOINT	CORP DISTRICT
Illinois River and CAWS: River Milepoint from Grafton, Illinois			
Chicago Harbor	Chicago [R]	327 [Main]	Chicago
T.J. O'Brien	Chicago [R]	327 [South]	Chicago
Lockport	Lockport [L]	291	Chicago
Brandon Road	Joliet [R]	286	Rock Island
Dresden Island	Morris [L]	272	Rock Island
Marseilles	Marseilles [L]	245	Rock Island
Starved Rock	Ottawa [R]	231	Rock Island
Peoria	Creve Coeur [L]	158	Rock Island
LaGrange	Versailles [R]	80	Rock Island
Ohio River: River Milepoint from Pittsburgh Point			
Smithland	Hamlettsburg [L]	919	Louisville
Olmsted	Olmsted [L]	964	Louisville
Kaskaskia River			
Kaskaskia	Modoc [R]	0.8	St. Louis

Source: WSP from Army Corps of Engineers Rock Island, St Louis, Louisville, and Chicago Districts Data



2.4 FERRIES AND CRUISES

While Illinois' vast waterway network is used for commercial shipping of materials and goods, it also plays a pivotal role in transporting people. Services such as ferries, cruises, and water taxis provide residents and visitors a means of transportation along the IMTS for logistical and recreational purposes. These services are located throughout Illinois from Chicago to the Metro-East and Savanna to Peoria. They are critical to local and regional economies; they connect communities which would otherwise be isolated from each other and provide an influx of tourism dollars along the rivers and Lake Michigan.

2.4.1 FERRIES

Ferries are an important part of Illinois' transportation network. They allow individuals to access areas that otherwise would not be accessible or would require a long route due to the lack of bridges in the area. All the ferries in the state are in Southern Illinois. Specifically, there are several ferries in and near Calhoun County, Illinois. Calhoun County sits in between the Mississippi and Illinois Rivers which makes it a peninsula, isolated from Missouri and Illinois. There are no bridges connecting the County to Missouri and only one bridge (Hardin, Illinois) connecting it to the state east of the Illinois River. Due to this lack of accessibility, there are several ferries that provide service to the county and areas nearby. Additionally, there are two other ferry services in southern Illinois as shown in **Figure 2.5**. There are a total of seven ferry services in Illinois, three are run or supported by IDOT and four are private services. Details on the ferries that service Illinois as of 2020, are indicated on the following page. Ferries can occasionally be closed due to unsafe conditions including high winds, flooding, and ice.

FIGURE 2.5 Ferries in Illinois



Source: WSP from Illinois Department of Transportation Data

IDOT-Supported Ferries

THE KAMPSVILLE FERRY

The Kampsville Ferry is located at Illinois River Mile 32 and is owned and operated by IDOT. The ferry spans the Illinois River providing a crossing for Illinois State Route 108 between Kampsville, Illinois, and Greene County, Illinois.

THE BRUSSELS FERRY

The Brussels Ferry is located at Illinois River Mile 3.5 and is owned and operated by IDOT. The ferry spans the Illinois River connecting Illinois State Route 100 in Jersey County, Illinois, to the tip of Calhoun County, Illinois.

CAVE-IN-ROCK FERRY

The Cave-in-Rock Ferry is located at Ohio River Mile 881. This ferry is operated privately by Lonnie Lewis but funded by both the Kentucky Transportation Cabinet and IDOT. The ferry spans the Ohio River connecting Illinois State Route 1 in Hardin County, Illinois, and Kentucky Route 91 in Crittenden County, Kentucky.

Non-IDOT Ferries

GOLDEN EAGLE FERRY

The Golden Eagle Ferry is located at Mississippi River Mile 228.5 and is privately owned and operated. The ferry spans the Mississippi River connecting Calhoun County, Illinois, with St. Charles County, Missouri.

WINFIELD FERRY

The Winfield Ferry is located at Mississippi River Mile 240.5 and is privately owned and operated. The ferry spans the Mississippi River connecting Calhoun County, Illinois, with Lincoln County, Missouri.

GRAFTON FERRY

The Grafton Ferry is located at Mississippi River Mile 218.5 and is owned by the New Bourbon Regional Port Authority, a port authority within Missouri, however it is privately operated. The ferry spans the Mississippi River connecting Jersey County, Illinois, with St. Charles County, Missouri. The ferry is located just south of the confluence of the Mississippi and Illinois Rivers.

STE. GENEVIEVE-MODOC FERRY

The Ste. Genevieve-Modoc Ferry is located at Mississippi River Mile 125.5 and is privately owned and operated. The ferry spans the Mississippi River connecting Modoc, Randolph County, Illinois, with Ste. Genevieve, Genevieve County, Missouri.





Cruises

The cruise industry is commonly associated with large ocean going vessels. However, there is an emerging market for Great Lakes and River cruises. Many companies offer several cruise packages ranging from 7 to 16 day trips with port of calls within Illinois. Cruises allow individuals to view the beauty Illinois has to offer from a perspective often not seen by many. The two main waterways that have cruise activity on them are Lake Michigan and the Mississippi River.

Additionally, throughout the IMTS there are many commercial watertaxis, passenger sightseeing and tour vessels. Unlike the cruises which can take multiple days, these services allow same day experiences and are located across the state and are specifically prevalent in the Chicago area. It is important to note that these services are a vital part of the local economies and encourage tourism.

GREAT LAKE CRUISES

Great Lake cruises depart or arrive in Chicago. Vessels that sail the Great Lakes range in size from being able to accommodate 80 to 200 guests. Cruises sail all five Great Lakes and provide connections to notable ports of call including Mackinac Island, Detroit, Niagara Falls (Port Colborne), Toronto, Montreal, and New York City among many others.

MISSISSIPPI RIVER CRUISES

Mississippi River cruises can span the entire river from St. Paul, Minnesota, to New Orleans, Louisiana, or portions of the river as in options to cruise the Upper Mississippi River departing from Alton, Illinois. These cruises make many stops at towns during trips.

2.5 RECREATIONAL USES

Illinois' waterways provide the state a great economic and logistical advantage compared to other states. The state has 1,118 miles of navigable waterways; however, this designation is for commercial vessels. In addition to the 1,118 miles, the state has 87,110 miles of rivers, streams, and additional bodies of water within its borders.³¹ While many of these bodies of water are not commercially navigable, they are utilized by recreational vessels. These lakes, streams and rivers add great value to Illinoisan's quality of life.

2.6 IMPORTANCE OF THE SYSTEM

The IMTS is an important part of the Illinois economy; however, it also has other direct and indirect benefits to the state as described in the following section.

Congestion Relief

The IMTS provides benefits to the State's transportation network that often goes unrecognized. For example, one 15 barge tow removes 1,050 large semi tractor-trailers off Illinois roads which is also the equivalent of the equivalent of 216 rail cars and six locomotives. As commerce continues to rise, truck traffic is expected to increase and the IMTS can serve an important role in continuing to mitigate congestion.

Environmental Impact

Climate change is an ever-growing reality that is facing the nation. CO2 emissions are a leading contributor to climate change. Some point out that barges may be a cleaner mode of transportation, emitting 90% less grams of CO2 per ton mile than trucks and 27% less grams of CO2 per ton mile than rail.³²

Fuel Efficiency

Inland barges provide the best ton mile per gallon among all modes of transportation. Ton-miles per gallon is how many miles one ton of freight is carried per gallon. Inland barges are nearly 4.5 times more efficient than truck freight and 1.3 times more efficient than rail.³³

Safety

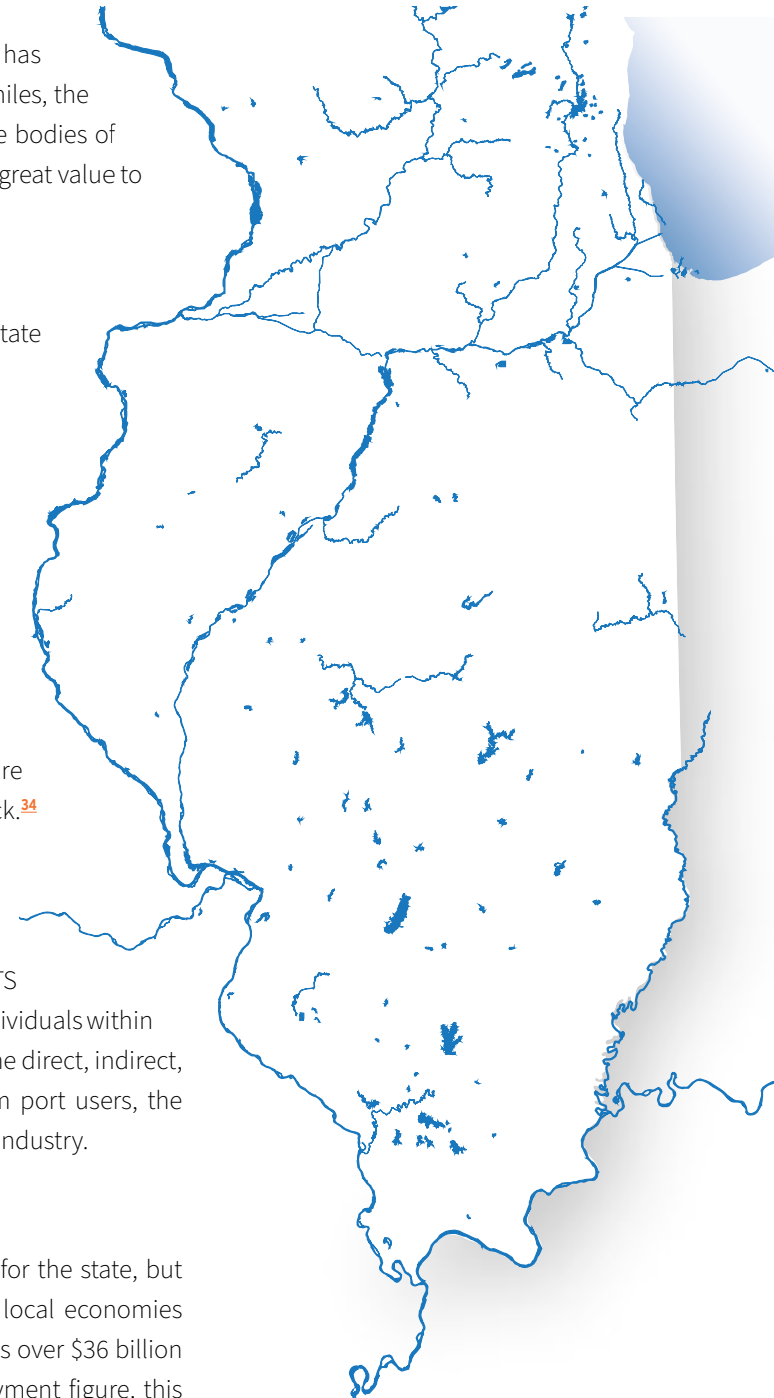
Inland barges are one of the safest means of moving freight for operators and the public. On a million ton-mile basis, there are 21.9 rail fatalities and 79.3 truck fatalities for every one fatality on the waterways system associated with the transportation of goods. Similarly, for every injury per million ton-mile on the waterways, there are 80.9 injuries on rail and 696.2 injuries on truck.³⁴

Employment

The IMTS supports a great deal of jobs throughout the state. In total, the IMTS contributes to the employment of 166,628 individuals within the state. This employment figure includes the direct, indirect, and induced employment by the IMTS from port users, the marine industry, and the marine supporting industry.

Economy

The IMTS is not only a big economic driver for the state, but it also has a large impact on regional and local economies within the state. Overall, the IMTS contributes over \$36 billion to the state's economy. As with the employment figure, this includes the direct, indirect and induced effect of the system on Illinois' economy.



2.6.1 CARGO TYPE

When it comes to cargo there are many different types, shapes, sizes, and physical characteristics. Depending on the type of cargo, specific vessels, terminals, and handling equipment may be required. In general, Illinois' waterborne cargo is classified into the following types:

|||||||

Dry Bulk

Dry bulk cargo includes commodities that are consistent in nature, for example grain, coal, or iron ore. This type of cargo is transported unpacked in large volumes and must be stored separately from other commodities. Terminals usually only handle a couple of commodities due to the requirement not to cross contaminate products. In addition, barges that transport dry bulk are usually used specifically for that commodity. In the case where a barge is to be used to haul a different commodity, it often goes through a thorough cleaning to prevent contamination.

|||||||

Liquid Bulk

Liquid bulk cargo includes commodities that are consistent in nature, for example petrochemicals, liquid fertilizer, and fuels. Terminals usually only handle a couple of commodities due to the requirement not to cross contaminate products. In addition, liquid bulk can be hazardous. In these cases, terminals are required to be outfitted with specialized equipment, security features, and staff to safely handle the material. Likewise, specialized barges are used to safely transport liquid bulk.

|||||||

Break Bulk

Break bulk cargo are goods that are shipped as single units, for example precast concrete forms, large industrial machinery, and bulk steel. Terminals that handle break bulk require the use of fixed and mobile equipment to load and offload goods in a timely manner.

|||||||

Container on Barge

Currently, container on barge is a relatively uncommon mode of transporting goods throughout the United States and Illinois. However, in recent years there has been a lot of discussion in the industry on implementing this means of shipping goods. Essentially, a vessel or barge is retrofitted to be able to transport a container. These containers are already a common means to transport goods via international ocean going vessels, rail, and trucks. Due to the benefits of shipping via inland waterway, there is promise that container on barge could become a reality in the near future.



Endnotes

- 1.....http://www.museum.state.il.us/muslink/nat_amer/post/htmls/hi_explore.html
- 2.....<https://nativeheritageproject.com/2012/12/30/marquette-and-jolliet-1673-expedition/>
- 3.....<http://drupal.library.cmu.edu/chicago/node/132>
- 4.....<https://www2.illinois.gov/dnrhistoric/Research/Pages/Timeline.aspx>
- 5.....http://www.museum.state.il.us/muslink/nat_amer/post/htmls/ec_trade.html
- 6.....<http://www.encyclopedia.chicagohistory.org/pages/626.html>
- 7.....<https://www.dnr.illinois.gov/recreation/greenway-sandtrails/Pages/IMCanal.aspx>
- 8.....<http://www.encyclopedia.chicagohistory.org/pages/626.html>
- 9.....https://www.mvp.usace.army.mil/Portals/57/docs/Public%20Affairs/Brochure/Navigation/2019_9_Foot_Channel_Brochure_WEB.pdf?ver=2020-03-06-112124-033
- 10.....<https://www.dnr.illinois.gov/Parks/About/Pages/HennepinCanal.aspx>
- 11.....<https://www.dnr.illinois.gov/Parks/About/Pages/HennepinCanal.aspx>
- 12.....<https://interactive.wttw.com/ten/modern-marvels/reversal-chicago-river>
- 13.....Illinois Waterway HAER NO. IL-164, p.14
- 14.....<http://cdn.loc.gov/service/ll/usrep/usrep180/usrep180208/usrep180208.pdf>
- 15.....<https://www.chicagotribune.com/news/ct-xpm-2014-06-07-ct-d-day-prairie-shipyard-20140607-story.html>
- 16.....<https://uicarchives.library.uic.edu/history-of-uic/navy-pier-1914-1946/>
- 17.....https://www.lewisu.edu/imcanal/johnlamb/John_M_Lamb_Collection.pdf Page12
- 18.....https://www.lewisu.edu/imcanal/johnlamb/John_M_Lamb_Collection.pdf page 12
- 19.....History of the Illinois Department of Transportation, 1903-2013
- 20.....History of the Illinois Department of Transportation, 1903-2013
- 21.....History of the Illinois Department of Transportation, 1903-2013
- 22.....History of the Illinois Department of Transportation, 1903-2013, Pg28
- 23.....The tonnage figures shown in the following pages do not include Not Elsewhere Classified (NEC) volumes which represent the difference between state totals reported by the Army Corps of Engineers and volumes that can be attributed to specific waterways. A full breakout of statewide tonnage volumes with NEC volumes can be viewed in Chapter 4 and Appendix E.
- 24.....<https://www.maritime.dot.gov/grants/marine-highways/marine-highway>
- 25.....<https://www.maritime.dot.gov/sites/marad.dot.gov/files/docs/intermodal-systems/marine-highways/3051/maradamhreporttocongress.pdf>
- 26.....<https://www.mvr.usace.army.mil/Missions/Navigation/NESP/The-9-foot-Channel-Project/>
- 27.....<http://www.umbra.org/facts.htm>
- 28.....The CAWS definition within this plan differs slightly from Illinois Administration Code title 35 § 301.247, which doesn't include the Des Plaines River as part of the CAWS.
- 29.....University of Illinois, The Illinois Coast of Lake Michigan
- 30.....<https://www.mvr.usace.army.mil/Media/News-Stories/Article/476805/why-do-we-have-locks-and-dams/>
- 31.....<http://nationalwaterwaysfoundation.org/documents/Final%20TTI%20Report%202001-2014%20Approved.pdf>
- 32.....<http://nationalwaterwaysfoundation.org/documents/Final%20TTI%20Report%202001-2014%20Approved.pdf>
- 33.....<http://nationalwaterwaysfoundation.org/documents/Final%20TTI%20Report%202001-2014%20Approved.pdf>
- 34.....<http://nationalwaterwaysfoundation.org/documents/Final%20TTI%20Report%202001-2014%20Approved.pdf>

PUBLIC PORT DISTRICT PROFILES

Port districts are an important part of Illinois' waterway system. They are a special-purpose unit of local government created by the Illinois General Assembly to support and facilitate use of the waterways for the transport of goods. As of 2020, there are a total of 19 public port districts in existence in the state. Their goal is to encourage the use of the waterways to transport goods, provide for economies of scale, effectively move goods, and provide economic development and job creation within their districts. While the main intent is to encourage the use of the waterways, a few districts promote airport activities and have little to do with waterways. The geographic size of each district can vary, from covering the limits of a single municipality to covering multiple counties. Each district is governed by a board of directors that consists of appointees by the governor and the local government(s) each district encompasses.

Each port district is unique, faces different challenges, and uses different approaches to encouraging waterway use. Several port districts own and lease property. They support their tenants by improving rail, road, and waterway infrastructure for cooperative use. These ports districts reinvest their revenue into the port to maintain state of good repair, attract more businesses and continue growth. Additionally, there are many port districts which do not own or operate any property, most of which are actively looking for development opportunities.



3.1 PUBLIC PORT DISTRICT POWERS

Each public port district shown in **Table 3.1**, has unique and specific enabling legislation, however, there are similar powers afforded to each. It is important to note that many public port districts were created with the intention of trying to foster economic development within their regions, however, federal law supersedes state and local laws. Below are commonly held powers each port district enjoys:

- Issue permits: for the construction of all wharves, piers, dolphins, booms, weirs, breakwaters, bulkheads, jetties, bridges or other structures of any kind, over, under, in, or within 40 feet of any navigable waters within the port district, or for the deposit of rock, earth, sand or other material, or any matter of any kind or description in said waters
- Prevent or remove obstructions, including the removal of wrecks
- Locate and establish dock lines and shore or harbor lines
- Regulate the anchorage, moorage and speed of water borne vessels and establish and enforce regulations for the operation of bridges. (Mid-America, Ottawa and Upper Mississippi do not)

- Acquire, own, construct, lease and maintain water terminal facilities and transportation facilities within the port district
- Fix and collect just, reasonable and nondiscriminatory charges for the use of such facilities. The charges so collected shall be used to defray the reasonable expenses of the port district and to pay the principal of and interest on any revenue bonds issued by the district

Additionally, some districts have the following powers:

- Police their physical property, adjacent waterways and to exercise police powers in respect to the enforcement of any rule or regulation provided by the ordinances of the district and to employ and commission police officers and other qualified persons to enforce the same
- Build, construct, repair, and maintain levees



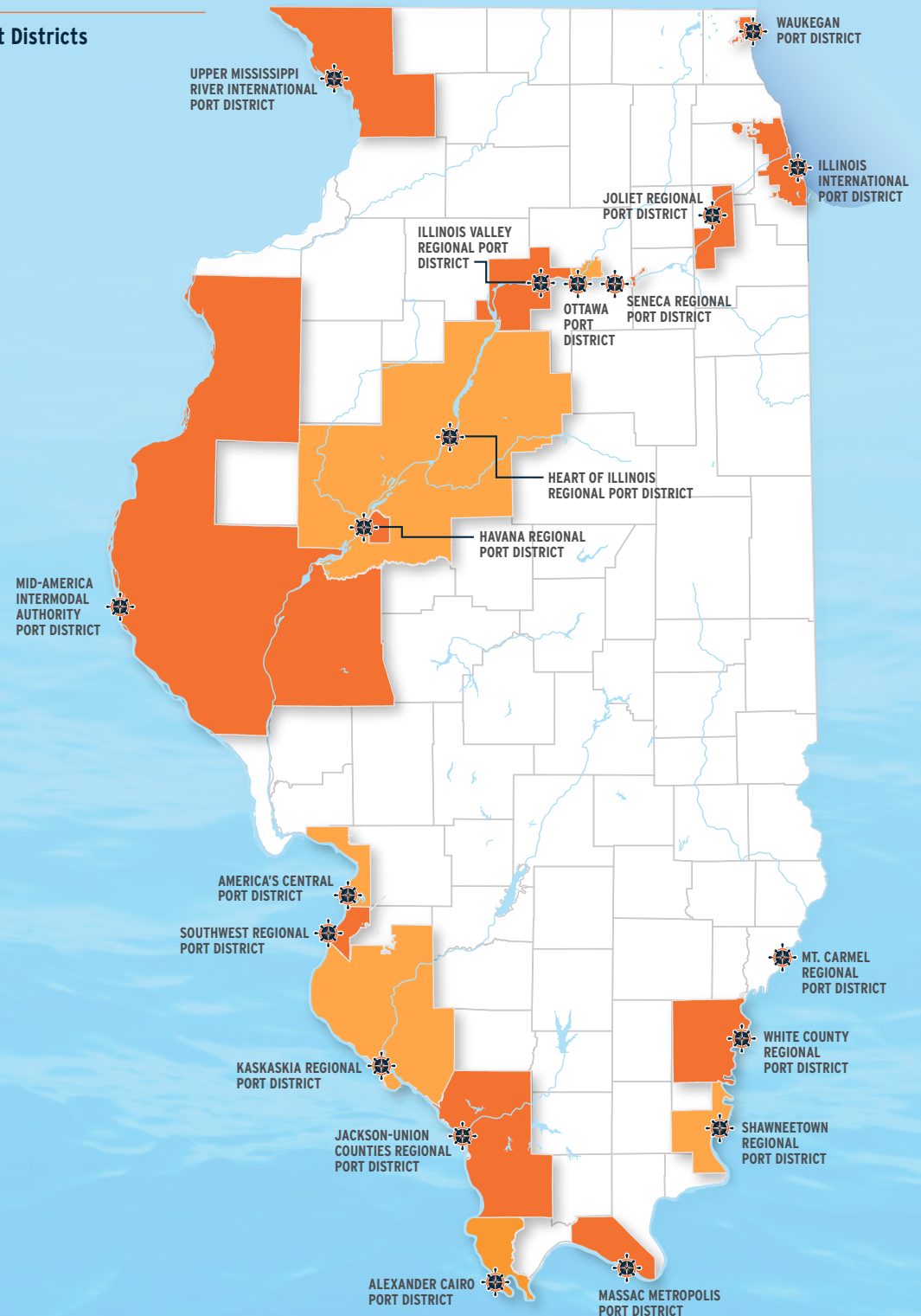
TABLE 3.1 Public Port District Listing

PUBLIC PORT DISTRICT	DATE ESTABLISHED	AUTHORIZATION	PUBLIC PORT DISTRICT	DATE ESTABLISHED	AUTHORIZATION
 Alexander-Cairo	2010	70 ILCS 1801/10	 Mid-America Intermodal Authority	1998	45 ILCS 165/10, and 70 ILCS 1831/10
 America's Central	1959	70 ILCS 1860/3	 Mt. Carmel Regional	1969	70 ILCS 1835
 Havana Regional	1967	70 ILCS 1805/1	 Ottawa	2011	70 ILCS 1837/10
 Heart of Illinois Regional	2003	70 ILCS 1807/10	 Seneca Regional	1961	70 ILCS 1845/3
 Illinois International	1951	70 ILCS 1810/3	 Shawneetown Regional	1961	70 ILCS 1850/3
 Illinois Valley Regional	1971	70 ILCS 1815/3	 Southwest Regional	1961	70 ILCS 1855/3
 Jackson-Union Counties Regional	1976	70 ILCS 1820/3	 Upper Mississippi River International	2009	70 ILCS 1863/3
 Joliet Regional	1957	70 ILCS 1825/3	 Waukegan	1955	70 ILCS 1865/3
 Kaskaskia Regional	1965	70 ILCS 1830/3	 White County	1971	70 ILCS 1870/1
 Massac-Metropolis	2009	70 ILCS 1831/10			

3. PUBLIC PORT DISTRICT PROFILES

There are a total of 19 port districts within Illinois encompassing either all or a portion of 37 counties. The size of port districts range from the smallest boundaries of a single municipality (Mt. Carmel Regional Port District) to the largest which makes up 10 counties (Mid-America Intermodal Authority Port District). **Figure 3.1** shows all the port districts within the state. The remainder of this chapter provides a profile for each port district. Each profile highlights the port district's history, multimodal connections, top commodities and tonnage, list of terminals, economic impact, and port district capital needs. Likewise, for port districts that own property, information regarding these properties is included in the respective profiles.

FIGURE 3.1 Illinois Port Districts



3.2 BENEFITS OF PUBLIC PORT DISTRICTS

Port districts provide a number of benefits to the State of Illinois and the communities they govern. As previously stated, they are a special unit of local government created by the Illinois General Assembly which have many powers which can be leveraged to encourage the use of the waterway system for the transport of goods. By transporting goods via the waterway port districts can provide economies of scale to effectively move goods, ultimately providing economic development through job creation.

3.2.1 ECONOMIES OF SCALE

A majority of commodities that are moved on the IMTS are bulk commodities, predominately food products, sand and gravel, chemicals, and fertilizers. Transporting these bulk commodities can become very costly. Trucks cannot move the same volume of goods that barges can. One 15 barge tow is equivalent to 1,050 large semi-tractor trailers. Additionally, while rail is a cheaper means to transport bulk goods than truck, the rail infrastructure must be in place or relatively close to allow for the transport of the bulk goods. Port districts utilize the waterways to provide for the cost-effective movement of goods via a variety of types of vessels that can hold a large volume of goods.

In addition to the benefits mentioned above, port districts provide economies of scale in the capital infrastructure they provide their tenants. The ability to on-load and off-load commodities onto barges

and vessels requires specialized infrastructure and equipment that is costly. These capital infrastructure needs create a barrier to entry for businesses that would use the IMTS to ship and receive commodities. Instead of each business building their own infrastructure, the port district fills that role and leases their property to businesses. By doing so, port districts remove the barrier to entry by providing the infrastructure and equipment needed to ship and receive commodities via the IMTS. This also allows for economies of scale, allowing for multiple businesses to be port district tenants and utilize the infrastructure and equipment that the port district has built.

3.2.2 EFFECTIVE MOVEMENT OF GOODS

There are a total of 1,118 miles of commercially navigable inland waterways within the IMTS. The IMTS is connected to the Atlantic Ocean via the Great Lakes and the St. Lawrence Seaway and to the Gulf of Mexico via the Mississippi River. These connections allow bulk goods to effectively move to markets domestically and internationally. As mentioned above, the economies of scale allow for the effective movement of goods through the IMTS. Port districts can act as a catalyst to facilitate the movement of these goods by investing in capital infrastructure that assists in the movement of goods via the IMTS.

Additionally, moving goods on the waterway allows for greater volumes of goods to be moved at a time. As previously mentioned, a 15 barge tow is equivalent to

216 rail cars and six locomotives or 1,050 semi tractor-trailers. Moving goods via the waterway provides environmental benefits due to the fuel efficiency by volume as compared to the other modes. In addition, moving goods via the waterway is safer due to the lack of conflicts with other vehicles when compared to truck and rail.

3.2.3 ECONOMIC DEVELOPMENT

Terminal facilities and the industries supporting them greatly contribute to Illinois' economy. As mentioned in Chapter 1, the IMTS contributes \$36 billion to the state. This contribution is generated through a number of direct, indirect and induced effects from the IMTS, which will be further explained in Chapter 4. However, of the \$36 billion statewide economic contribution, activity within the 19 port districts accounts for \$24.5 billion of that as shown in **Table 3.2**. It is important to note that the \$24.5 billion in contribution to the state's economy encompasses all activity within the port districts and not only port-owned property.

TABLE 3.2 **Economic Contribution of All Port Districts**

Employment	Income (\$M)	Value Added (\$M)	Output (\$M)
113,938	\$7,118.781	\$11,814.14	\$24,586.66

Source: WSP Analysis

3. PUBLIC PORT DISTRICT PROFILES

Six of the 19 public port districts within the state own property and lease and/or operate that property. These port districts generate a great amount of economic development and significantly contribute to the state and local economies. These 6-port districts contribute a total of 6,675 jobs and generate \$1.5 billion in economic contribution to the state as shown in **Table 3.3**.

TABLE 3.3 **Economic Impact of Port District Owned Property**

Employment	Income (\$M)	Value Added (\$M)	Output (\$M)
6,675	\$457.2	\$742.3	\$1,557.1

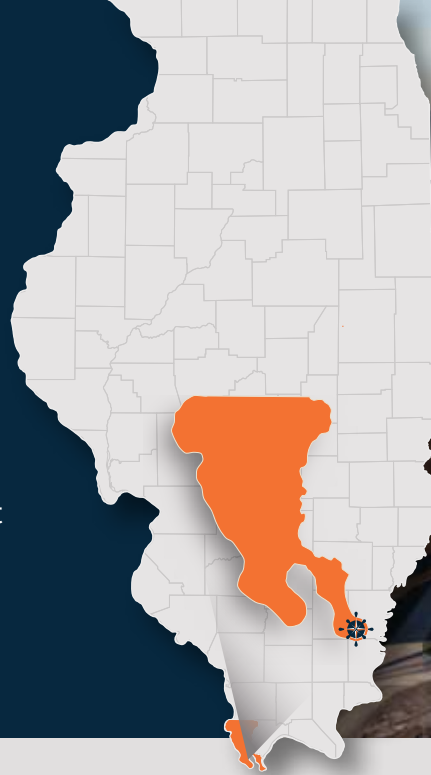
Source: WSP Analysis

Being a special unit of local government, port districts have many powers (as mentioned in section 3.1) that allow them to provide economic development through the establishment and operation of terminal facilities. As shown in **Tables 3.2** and **3.3**, port districts provide great economic contributions to the state and the geographic regions where they reside. There are several port districts that currently do not own or operate any terminal facilities within their jurisdiction. However, through local support and the powers provided to them through the General Assembly they have the ability to try to attract economic development within their jurisdictions.



ALEXANDER-CAIRO PORT DISTRICT

The Alexander-Cairo Port District is located in Southern Illinois, at the confluence of the Mississippi and Ohio rivers. The Port District's boundaries consist all of Alexander County.



Port District Biography

Being located at the confluence of the Mississippi and Ohio rivers, the Alexander-Cairo Port District was created in 2010 with the goal of attracting the marine industry to Alexander county. The Alexander-Cairo Port District currently does not own or operate a public port. However, the Port District has been working with the City of Cairo and the Cairo Public Utility Company to establish a public port on the western side of Cairo. The City of Cairo owns approximately 190 acres of land at the location.

2010



Alexander-Cairo Port District was created

2014



City of Cairo and the Cairo Public Utility Company publish a conceptual site design and scoping study for a public port terminal in Cairo.

2020



Illinois Legislature approves \$40 million toward planning, design and construction of a new port terminal

Multimodal Connections

HIGHWAY



Several interstates, state routes, and US highways traverse the port district, these include I-57, I-55, IL-3, IL-127, IL-146, US 51, and US 60.

RAIL



Two Class I railroads provide service and own track within the port district these include Union Pacific (UP) and Canadian National (CN). In addition, Norfolk Southern (NS) and Burlington Northern Santa Fe (BNFS) have an agreement with Canadian National to utilize their track.

WATER



The Mississippi River flows 60 miles along the western border of the district. This portion of the river is part Marine Highway 55. The Ohio River flows 6.5 miles along the eastern border of the district, this portion of the river is designated as Marine Highway 70.

AIR



Cairo Regional Airport - CIR (Cairo, IL)

LOCKS and DAMS



Olmsted Locks and Dam - Located near the district



Port District Top Commodities:

1

FOOD



2

PETROLEUM
PRODUCTS

3

COAL



2017 Commodities by County (inbound, outbound, in-state):

ALEXANDER COUNTY

476 THOUSAND TONS

ALEXANDER CAIRO PORT DISTRICT

List of Terminals (Public and Private)

- 1 American Commercial Barge Line, Cairo Fleet
- 2 Bunge Corp
- 3 Waterfront Services Co. Cairo, Illinois
- 4 Waterfront Services Co. Cairo Dock



Economic Impact

It is estimated that marine cargo activity being handled within the Alexander-Cairo Port District directly or indirectly supports 456 jobs within the state. These workers earn an estimated \$29.1 million in wages and contribute approximately \$47.5 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	256	130	70	456
Income	\$15.3M	\$8.2M	\$5.6M	\$29.1M
Value Added	\$27.6M	\$11.9M	\$8.0M	\$47.5M
Output	\$59.9M	\$26.8M	\$13.6M	\$100.3M



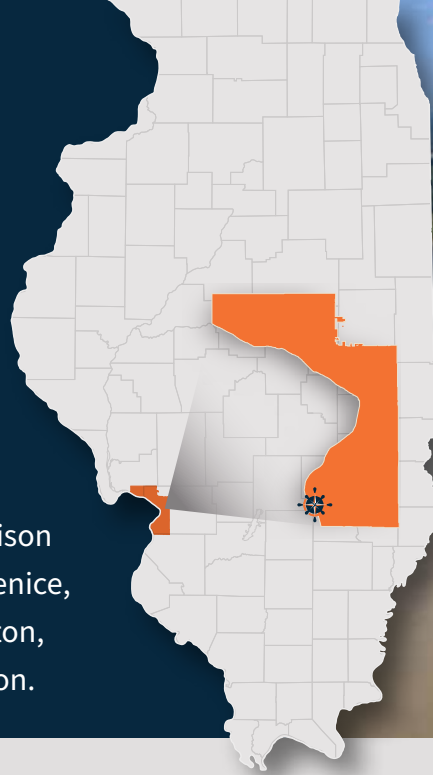
CAPITAL NEEDS

The Port District is in the process of developing a new port on the western side of Cairo along the Mississippi River. A total of 190 acres of land that will be transformed into a state of the art port which will handle grain, coal, and liquid products.

Estimated Total Cost: \$75 Million

AMERICA'S CENTRAL PORT DISTRICT

America's Central Port District is located in Southwestern Illinois, in the St. Louis metropolitan area. It's boundaries consist of the following townships within Madison and Jersey Counties: Granite City, Venice, Nameoki, Chouteau, Wood River, Alton, Godfrey, Elsah, and the City of Grafton.



Port District Biography

Strategically located in Southwestern Illinois, the Port District has the benefit of being in one of the nation's largest metropolitan areas and access to its vast interstate network. The Port District owns 1,200 acres of mixed use land on the east bank of the Mississippi River and Chain of Rocks Channel spanning across the municipalities of Granite City, Madison and Venice, Illinois. The property includes over 1.9 million sq. ft. of warehouse space, over 50,000 sq. ft. of office space, several development sites and 150 apartments. The Port has two main harbor facilities (Granite City Harbor & Madison Harbor) capable of transloading a variety of dry, liquid and break-bulk cargoes.

1959



Illinois Legislature creates the Tri-City Regional Port District (America's Central Port).

1977



The port district is designated a grantee of Foreign Trade Zone (FTZ) No. 31. This designation gives companies that are approved to operate within the FTZ an economic advantage as they can reduce the costs of importing.

2000



President Clinton signed the National Defense Authorization Act of 2001. This act provides the transfer of 752 acres of the Charles Melvin Price Support Center to the Port District. The transfer doubled the acreage of the port district.

2011



The Port District rebrands itself from Tri-City Regional Port District to its current name of America's Central Port District. This was an initiative to provide a clear message to the world of who, what and where the Port owns and manages.

2015



The Port District completed construction of the Madison Harbor project. The new harbor is located south of Lock 27, and added 9,600 feet of rail track, a new rail/ truck/ barge terminal and general cargo barge dock. The \$50-million project was the largest the Port undertook since its establishment.

Multimodal Connections

HIGHWAY



Several interstates, state routes, and US highways traverse the port district. These include I-55, I-270, IL-3, IL-100, IL-111, IL-140, IL-143, IL-162, and US 67. Included within these routes are a total of 5.92 Critical Urban Freight Corridor miles within the port district

RAIL



Six class I railroads provide service within the port district these include, Union Pacific (UP), Norfolk Southern (NS), Kansas City Southern (KCS), Burlington Northern Santa Fe (BNSF), Canadian National (CN), and CSX Transportation (CSXT). Additionally, a regional carrier Terminal Railroad (TRRA) and two shortlines Alton & Southern Railway and Port Harbor Railroad (PHRR) provide services to the district.

WATER



The Mississippi River flows 37 miles along the port district's western border, the river is part of Marine Highway 35 and Marine Highway 55.

AIR

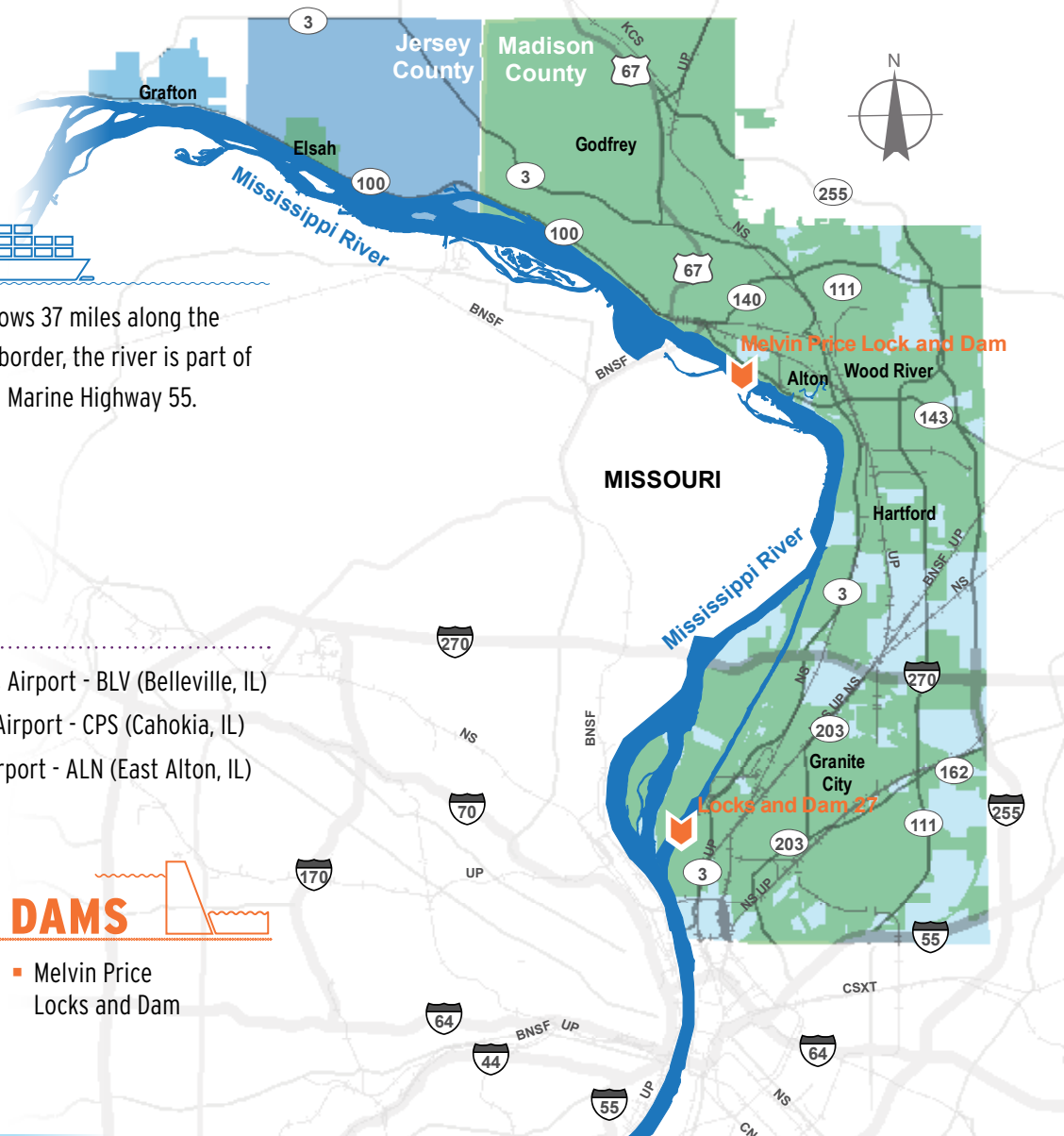


- MidAmerica St. Louis Airport - BLV (Belleville, IL)
- St. Louis Downtown Airport - CPS (Cahokia, IL)
- St. Louis Regional Airport - ALN (East Alton, IL)

LOCKS and DAMS



- Locks and Dam #27
- Melvin Price Locks and Dam



Port District Top Commodities:

1

FOOD



2

FERTILIZER



3

PETROLEUM
PRODUCTS

2017 Commodities by County* (inbound, outbound, in-state):

MADISON COUNTY
4.4 MILLION TONS

JERSEY COUNTY
NO TONNAGE

*Note America's Central Port District does not encompass the entirety of the listed counties.

AMERICA'S CENTRAL PORT DISTRICT



List of Terminals (Public and Private)

- | | | | |
|-----------|--|-----------|---|
| 1 | Bluff City Minerals, Alton Sand Dock | 16 | America's Central Port, SCF Lewis & Clark Marine, Fleeting |
| 2 | Ardent Mills, LLC | 17 | America's Central Port, SCF Lewis & Clark Marine, Red Dock |
| 3 | Koch Fertilizer Storage And Terminal, Wood River Terminal | 18 | America's Central Port, SCF Lewis & Clark Marine , White Dock |
| 4 | Conoco Phillips, Wood River Refinery Docks No. 4 | 19 | America's Central Port, US Steel Dock |
| 5 | Conoco Phillips, Wood River Refinery Docks No. 3 | 20 | America's Central Port, SCF Lewis & Clark Marine, Midcoast Dock |
| 6 | Conoco Phillips, Wood River Refinery Docks No. 2 | 21 | America's Central Port, SCF Lewis & Clark Marine , Madison Harbor |
| 7 | Conoco Phillips, Wood River Refinery Docks No. 1-4 | 22 | Beelman River Terminals, Venice |
| 8 | Conoco Phillips, Wood River Refinery Docks No. 1 | | |
| 9 | The Premcor Refining Group, National Maintenance & Repair, Hartford Plant Dock | | |
| 10 | Marathon Ashland Pipe Line, Jaco Landing Dock | | |
| 11 | Phoenix Terminal Co. Dock | | |
| 12 | Wood River Pipe Line Co. Dock | | |
| 13 | Conoco Phillips, Wood River Product and Marine Terminal Dock | | |
| 14 | America's Central Port, Roll-on/Roll-off Dock | | |
| 15 | Petroleum Fuel And Terminal Co., Granite City Dock | | |

Economic Impact

It is estimated that marine cargo activity being handled within America's Central Port District directly or indirectly supports 11,980 jobs within the state. These workers earn an estimated \$765.5 million in wages and contribute approximately \$1.3 billion towards the State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	9,009	1,051	1,921	11,980
Income	\$557.6M	\$70.5M	\$117.7M	\$765.5M
Value Added	\$947.9M	\$117.7M	\$196.9M	\$1,262.5M
Output	\$1,982.3M	\$265.8M	\$343.4M	\$2,591.5M

Port-Owned Property Economic Impact

Independent of the port district economic analysis, the economic impacts of on-port tenants are presented below. These impacts are centered around the employment of businesses on port property's ranging from manufacturers, distribution centers, and transportation companies, to nonprofits and small businesses. These impacts represent the activities of marine, and non-marine businesses to show the diversity of port activity.

EMPLOYMENT	2,468
INCOME	\$162.9M
VALUE ADDED	\$269.6M
OUTPUT	\$555.1M

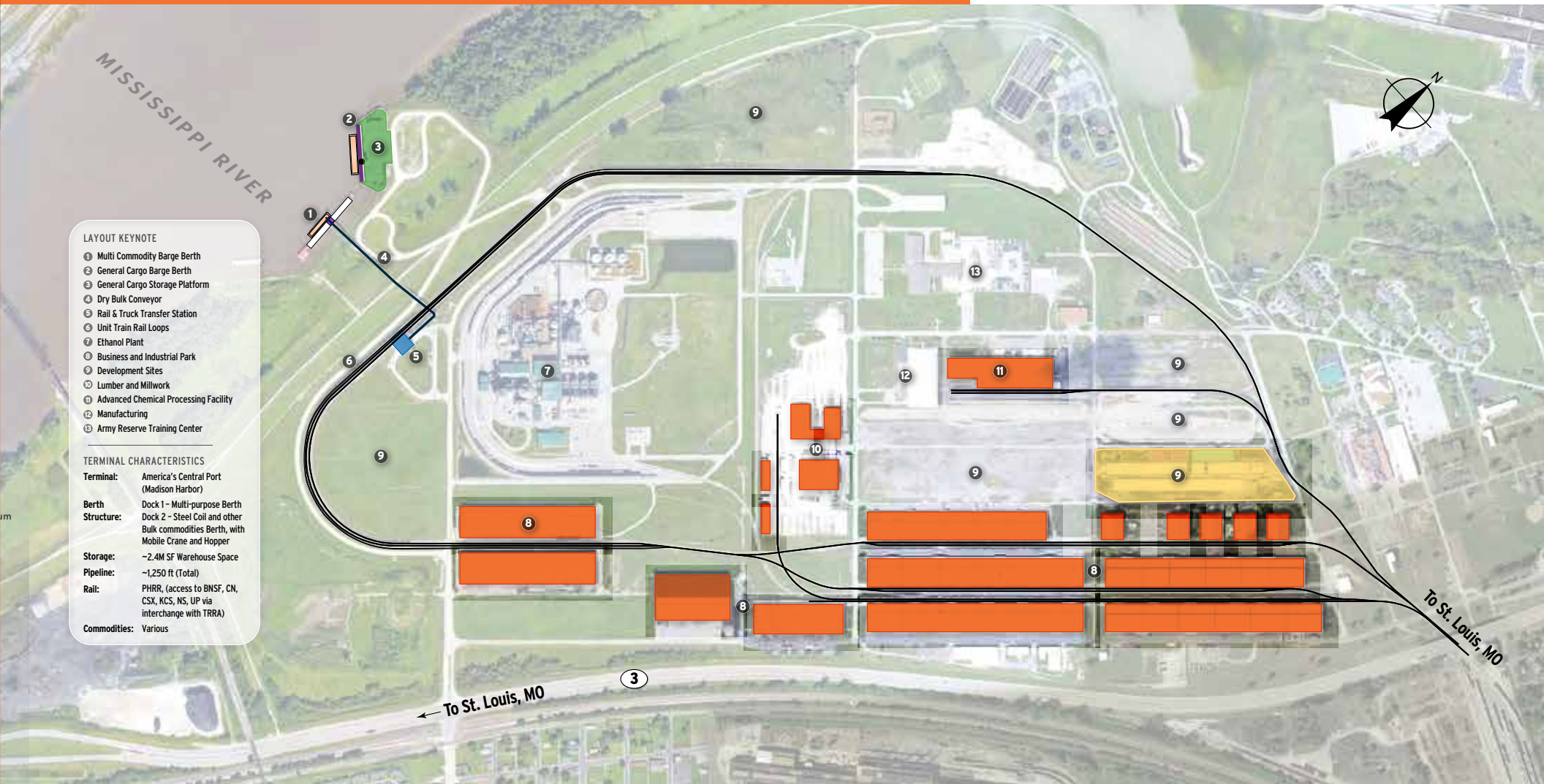
CAPITAL NEEDS

The Port District has many improvement and expansion projects planned. The port is planning to develop an intermodal facility which will include the need for expanded rail, road, and water access, additional land will need to be acquired for the development of the facility. In addition, the Port requires several improvements including upgrading a general cargo dock, revitalizing rail track, and multiple road reconstruction.

Estimated Total Cost: \$162 Million

America's Central Port District (Madison Harbor)

America's Central Port District South Terminal is located along the Mississippi River and Chain of Rocks Canal and is served by Norfolk Southern Railroad. The property houses several tenants which handle many products including steel coils, lumber and millwork, ethanol, and various break bulk products. The terminal has two docks one which is a multi-purpose berth, and the other is used for steel coils and other break bulk commodities. The site has roughly 2.4 million square feet of warehouse space.



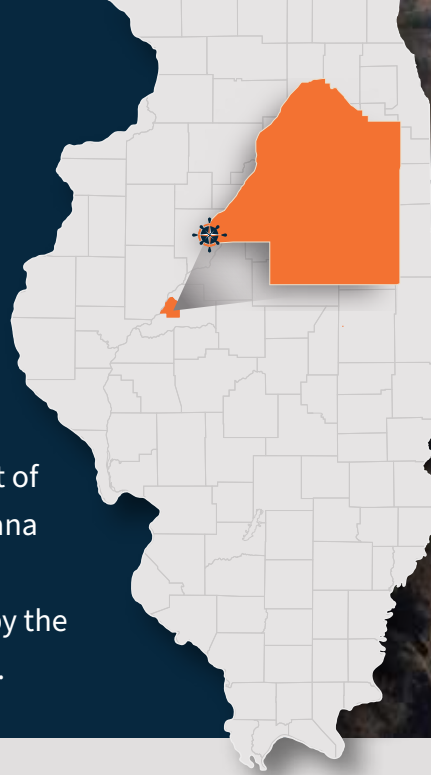
America's Central Port District (Granite City Harbor)

America's Central Port (Granite City Harbor) is located along the Chain of Rocks Canal and is served by Norfolk Southern Railroad. The property houses several tenants which handle many products including fertilizer, grain, asphalt, and steel. The terminal has seven docks one which handles fertilizer, two which handle grain, two which handle steel and general cargo, one roll-on/roll-off dock, and one which handles asphalt. The site has 3,700 square feet of warehouse space, and has storage capacity to handle 827,000 barrels of asphalt and coal tar, 25,000 tons of grain, and 300,000 CF for fertilizer.



HAVANA REGIONAL PORT DISTRICT

The Havana Regional Port District is located in Central Illinois, approximately 40 miles northwest of Springfield and 37 miles southwest of Peoria. Its boundaries consist of Havana Township of Mason County. Havana Regional Port District is surrounded by the Heart of Illinois Regional Port District.



Port District Biography

The Port District is encircled by the Heart of Illinois Regional Port District; it utilizes the airport powers provided by its statute. The Port District does not own or operate any marine facilities, however it owns and operates the Havana Regional Airport which has one turf runway.

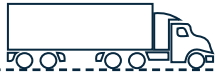
1990



The Havana Regional Port District was created.

Multimodal Connections

HIGHWAY



Several state routes and US highways traverse the port district, these include IL-78, IL-97, and US 136.

RAIL



The Illinois and Midland Railroad (IMRR) a short-line railroad provides service through the port district.

WATER



The Illinois River flows 7 miles along the western border of the port district, the river is part of Marine Highway 55.

AIR

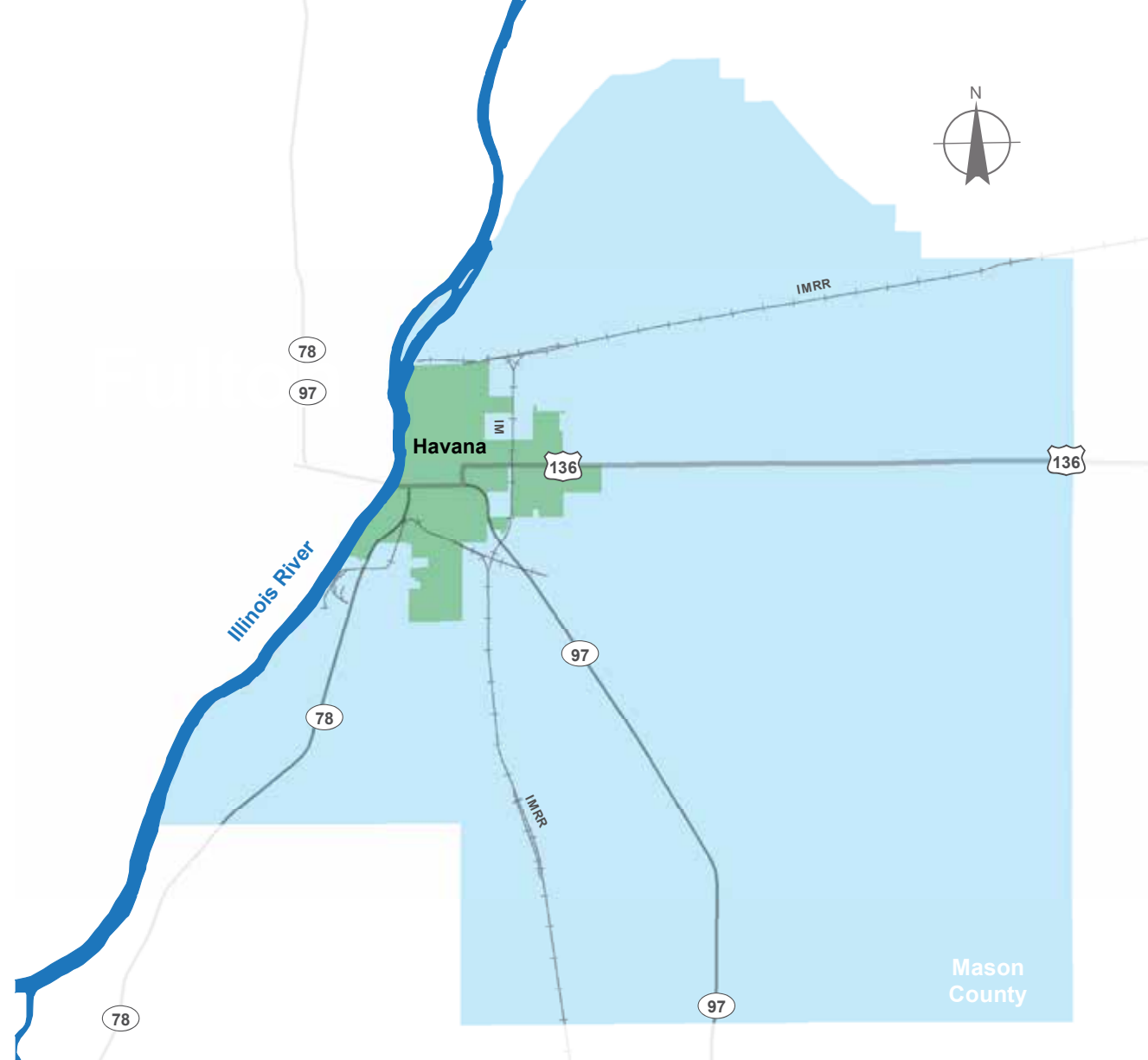


- Havana Regional Airport - 910 (Havana, IL)
- General Downing Peoria Intl Airport - PIA (Peoria, IL)

LOCKS and DAMS



- There are no locks and dams



Port District Top Commodities:

1

FOOD



2

CHEMICALS



3

SAND
& GRAVEL



2017 Commodities by County* (inbound, outbound, in-state):

MASON COUNTY
1.3 MILLION TONS

*Note Havana Regional Port District does not encompass the entirety of Mason County

HAVANA REGIONAL PORT DISTRICT

List of Terminals (Public and Private)

- 1 SCH Terminal Co., Havana Coal Transfer Plant Dock
- 2 Cargill Aghorizon, Havana North Terminal Grain Docks
- 3 Cargill Aghorizon, Havana Terminal Grain Docks
- 4 Cargill Aghorizon, Havana South Terminal Grain Docks
- 5 ADM/Growmark, Havana North Terminal Grain Dock
- 6 ADM/Growmark, Havana Terminal Grain Docks
- 7 ADM/Growmark, Havana South Terminal Grain Dock
- 8 Imperial Valley Terminal, Havana Dock
- 9 Dynegy Midwest Generation, Havana Power Station Wharf



Economic Impact

It is estimated that marine cargo activity being handled within the Havana Regional Port District directly or indirectly supports 1,384 jobs within the state. These workers earn an estimated \$89.4 million in wages and contribute approximately \$148.3 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	987	111	286	1,384
Income	\$59.4M	\$7.5M	\$22.5M	\$89.4M
Value Added	\$103.5M	\$12.7M	\$32.1M	\$148.3M
Output	\$229.9M	\$28.7M	\$54.7M	\$313.3M

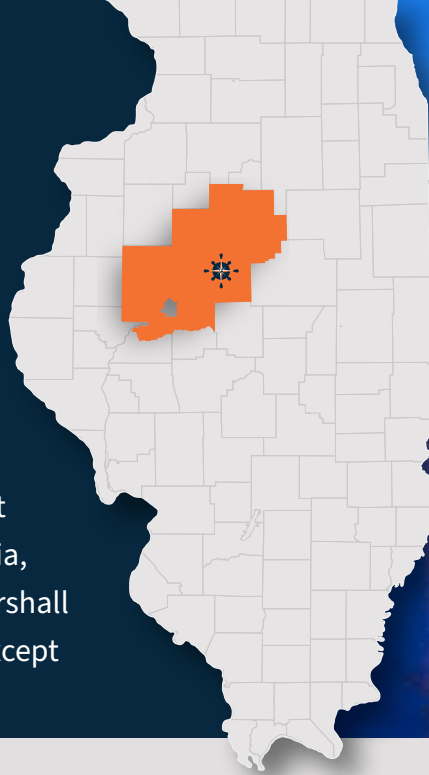


CAPITAL NEEDS

The Havana Regional Port District does not own or operate any terminal facilities. If the port district were to construct a terminal a major investment would be required. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars.

HEART OF ILLINOIS REGIONAL PORT DISTRICT

The Heart of Illinois Regional Port District, branded as TransPORT, is located in Central Illinois. The Port District's boundaries consist of Peoria, Fulton, Tazewell, Woodford, and Marshall Counties and all of Mason County except for Havana Township.



Port District Biography

The Port District's strategic location in Central Illinois provide it a great logistical advantage. Central Illinois is one of the state's most productive regions for agriculture with corn and soybeans being the greatest produced commodities. In addition, located within the Port District is Peoria's metro area, one of the state's largest urban centers. It is home to Fortune 500 firms, Caterpillar, Komatsu America, Liberty Steel, two significant regional healthcare systems, and numerous professional technical services (finance, legal, engineering) companies. The Port District is the northern most point on the Illinois River to have year round access and is part of Foreign-Trade Zone #114. The Port District spans both urban and rural communities providing the district diverse industry and potential for growth.

1939



Construction was complete on the Peoria Lock and Dam

2003



Heart of Illinois Regional Port District was created

2004



Peoria Lock and Dam was added to the National Register of Historic Places

2020



US Army Corps of Engineers Peoria Lock and Dam receives Major Maintenance Program funding

Multimodal Connections

HIGHWAY



Several interstates, state routes, and US highways traverse the port district, these include I-39, I-74, I-155, I-474, IL 8, IL 9, IL 17, IL 26, IL 29, IL 78, IL 89, IL 91, IL 95, IL 97, IL 100, IL 116, IL 117, IL 122, US 24, and US 136. Included within these routes are a total of 12.62 Critical Urban Freight Corridor miles and 16.89 Critical Rural Freight Corridor miles within the port district.

RAIL



Four class I railroads provide service within the port district, these include Union Pacific (UP), Canadian National (CN), Burlington Northern Santa Fe (BNSF), and Norfolk Southern (NS). Additionally the following class III railroads provide services to the district: Toledo Peoria and Western (TPW), Tazewell and Peoria Railroad (TZPR), Keokuk Junction (KJRY), Illinois & Midland Railroad (IMRR), and Iowa Interstate railroad (IAIS).

WATER



The Illinois River flows 90.5 miles through the port district and is part of Marine Highway 55.

LOCKS and DAMS

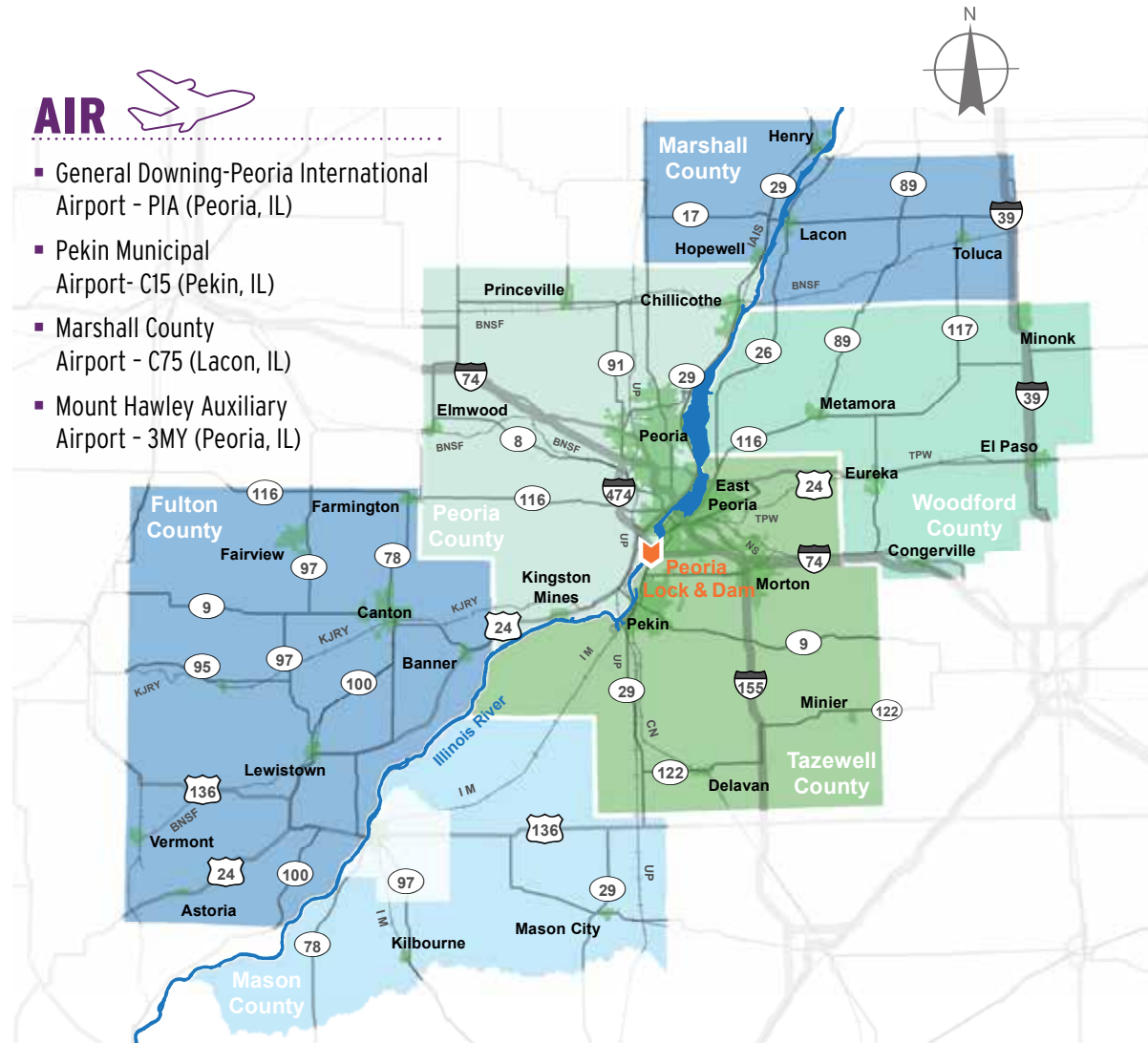


- Peoria Lock and Dam

AIR



- General Downing-Peoria International Airport - PIA (Peoria, IL)
- Pekin Municipal Airport- C15 (Pekin, IL)
- Marshall County Airport - C75 (Lacon, IL)
- Mount Hawley Auxiliary Airport - 3MY (Peoria, IL)



Port District Top Commodities:

1

FOOD



2

CHEMICALS



3

FERTILIZER



2017 Commodities by County* (inbound, outbound, in-state):

FULTON COUNTY
NO TONNAGE

TAZEWELL COUNTY
3.7M TONS

MARSHALL COUNTY
866K TONS

WOODFORD COUNTY
1.3M TONS

PEORIA COUNTY
3M TONS

MASON COUNTY
1.3M TONS

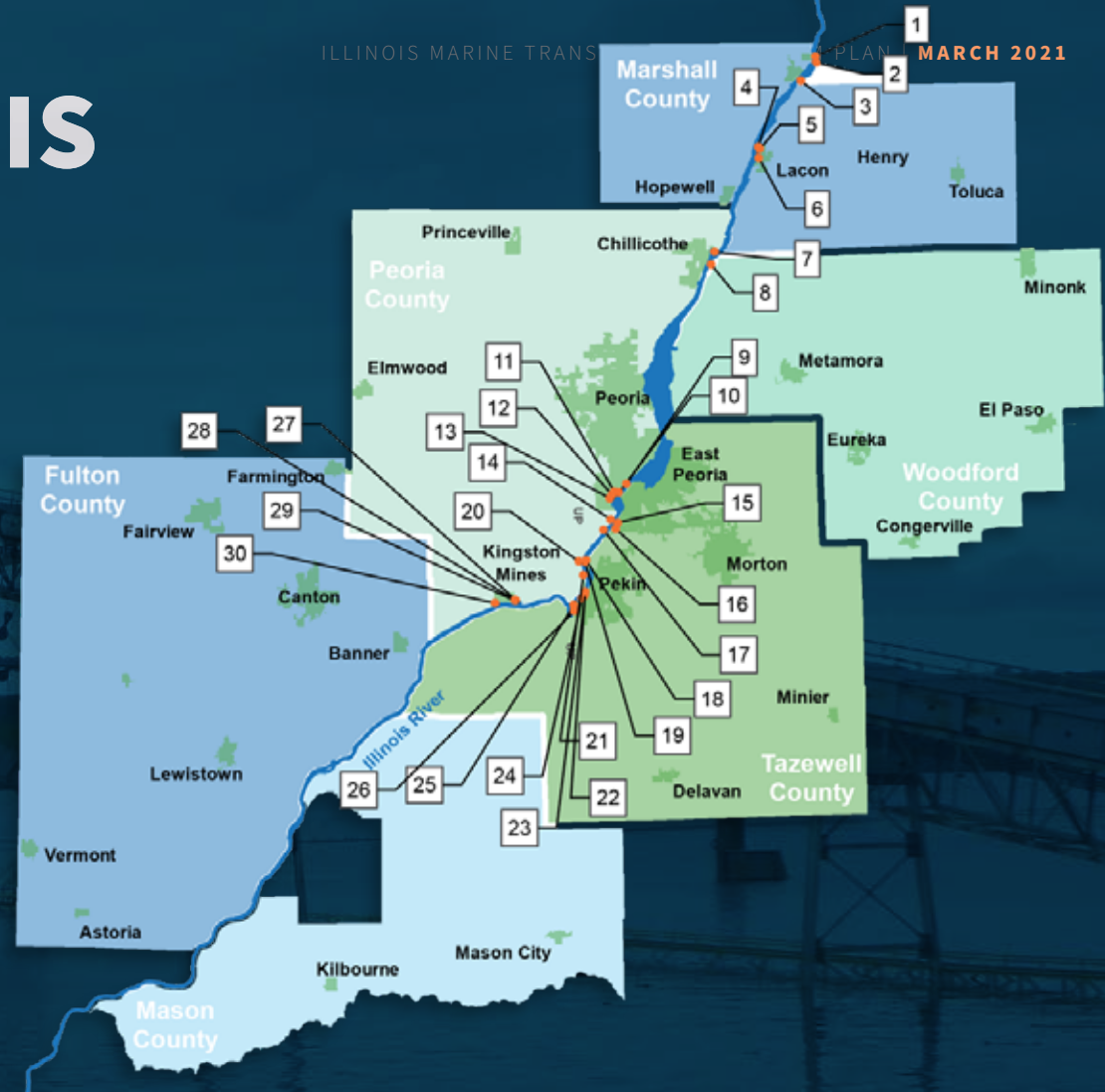
*Note Heart of Illinois Regional Port District does not encompass the entirety of Mason County

HEART OF ILLINOIS REGIONAL PORT DISTRICT

List of Terminals (Public and Private)

- 1 Ozinga Materials, Inc., Henry Terminal
- 2 Koch Nitrogen Co., Henry Terminal Dock
- 3 ADM/Growmark River System, Henry Grain Elevator Dock
- 4 Midwest Foundation Corp., Lacon Mooring Dock
- 5 Adm/Growmark River System, Lacon Grain Elevator Wharf
- 6 Cargill Aghorizons, Lacon Grain Elevator Dock
- 7 Galena Road Gravel, Chillicothe Dock
- 8 Louis Dreyfus Corp., Chillicothe Grain Elev
- 9 ADM/Growmark River System, Peoria Terminal Wharf
- 10 Artco Fleeting Services, Peoria Dock And Fleet Moorings
- 11 J & L Dock Facilities Wharf
- 12 Peoria Barge Terminal Wharf
- 13 Peoria River Terminal Wharf
- 14 Central Illinois Freight Handling Corp. Dock
- 15 ADM/Growmark, Creve Coeur Grain Dock
- 16 Koch Nitrogen Co., North Pekin Terminal Barge Dock
- 17 Keystone Steel & Wire Co., Dock
- 18 Mosaic, Pekin
- 19 Terra Industries, Pekin
- 20 Vistra Energy
- 21 Cargill Crop Nutrition, Pekin Terminal Dock

- 22 Semmaterials, Pekin Asphalt Plant Dock
- 23 Garvey Marine, Pekin Left Bank Fleet Mooring
- 24 CHS, Pekin Grain Elevator Dock
- 25 Pacific Ethanol, Pekin
- 26 American Milling Co., Pekin Grain Elevator Dock
- 27 CF Industries, Peoria Warehouse No. 1 Dock
- 28 CF Industries, Peoria Warehouse No. 2 Dock
- 29 CF Industries, Peoria Warehouse Docks
- 30 CF Industries, Kingston Mines Terminal Dock



Economic Impact

It is estimated that marine cargo activity being handled within the Heart of Illinois Regional Port District directly or indirectly supports 27,624 jobs within the state. These workers earn an estimated \$1.6 billion in wages and contribute approximately \$2.7 billion towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	21,583	2,285	3,756	27,624
Income	\$1,270.2M	\$153.8M	\$254.2M	\$1,678.2M
Value Added	\$2,151.8M	\$259.4M	\$365.9M	\$2,777.1M
Output	\$4,562.4M	\$585.9M	\$649.3M	\$5,797.6M

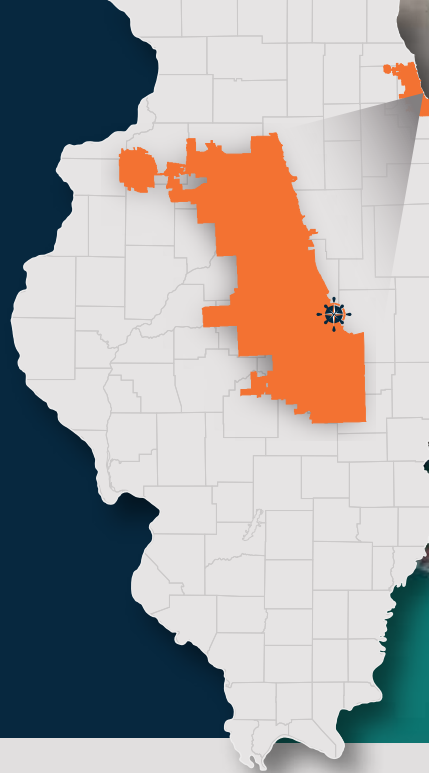


CAPITAL NEEDS

The Heart of Illinois Port District does not own or operate any terminal facilities. If the port district were to construct a terminal a major investment would be required to include heavy cranes, dredging, and storage facilities. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars.

ILLINOIS INTERNATIONAL PORT DISTRICT

The Illinois International Port District is located in Northeastern Illinois and encompasses the entire city limits of Chicago.



Port District Biography

The Port District has a rich history that can be dated back to early nineteen hundred, over the course of its history it has been an important part of the industrial and economic development of the City of Chicago and the surrounding areas. The Port District owns three locations in the southeast side of Chicago totaling 1,690 acres these include, Iroquois Landing, Lake Calumet Harbor, and Harborside International Golf Center.

1913



Illinois Legislature passed law allowing the City of Chicago to acquire, develop, own and operate port facilities within the city limits.

1921



Illinois Legislature passed the Lake Calumet Harbor Act, the act allowed the City of Chicago to construct a harbor, having a basin and slips.

1946



Congress authorized the Cal Sag Project to facilitate barge traffic between Lake Michigan, the Illinois and Mississippi Rivers.

1951



Chicago Regional Port District was created to oversee harbor and port development.

1952



Chicago Regional Port District was established as an independent municipal corporation and granted the district roughly 1,500 acres of marshland at Lake Calumet. In the following years, construction began of a turning basin, docks, grain elevators, and public terminals.

1978



The Port District acquired an additional 190 acres at the mouth of the Calumet River. This site was named Iroquois Landing and construction of two new terminal sheds was complete.

1985



Illinois International Port District Act was signed into law, this act created a political subdivision and municipal corporation by the name of the Illinois International Port District, and widened the districts responsibilities.

1994



Illinois International Port District Act was amended to allow for the District to operate recreational facilities, the Port District would develop Harborside International Golf Center.

Multimodal Connections

HIGHWAY



Several interstates, state routes, and US highways traverse the port district, these include I-55, I-57, I-90, I-94, I-290, IL 1, IL 19, IL 50, IL 64, US 12, and US 41. Included within these routes are a total of 20.8 Critical Urban Freight Corridor miles within the port district.

RAIL



Six class I railroads provide service within the port district, these include Burlington Northern Santa Fe (BNSF), Union Pacific (UP), Canadian National (CN), Norfolk Southern (NS), CSX Transportation (CSXT), and Canadian Pacific (CP).

WATER



The Port District has 28 miles of coastline along Lake Michigan, the lake is part of Marine Highway 90. Additionally the following navigable waterways flow through the port district the Chicago Sanitary & Ship Canal and the Chicago River 10 miles, the Chicago River North Branch 6.5 miles, and the Calumet River and Channel 13.5 miles. These waterways are part of Marine Highway 55.*

AIR

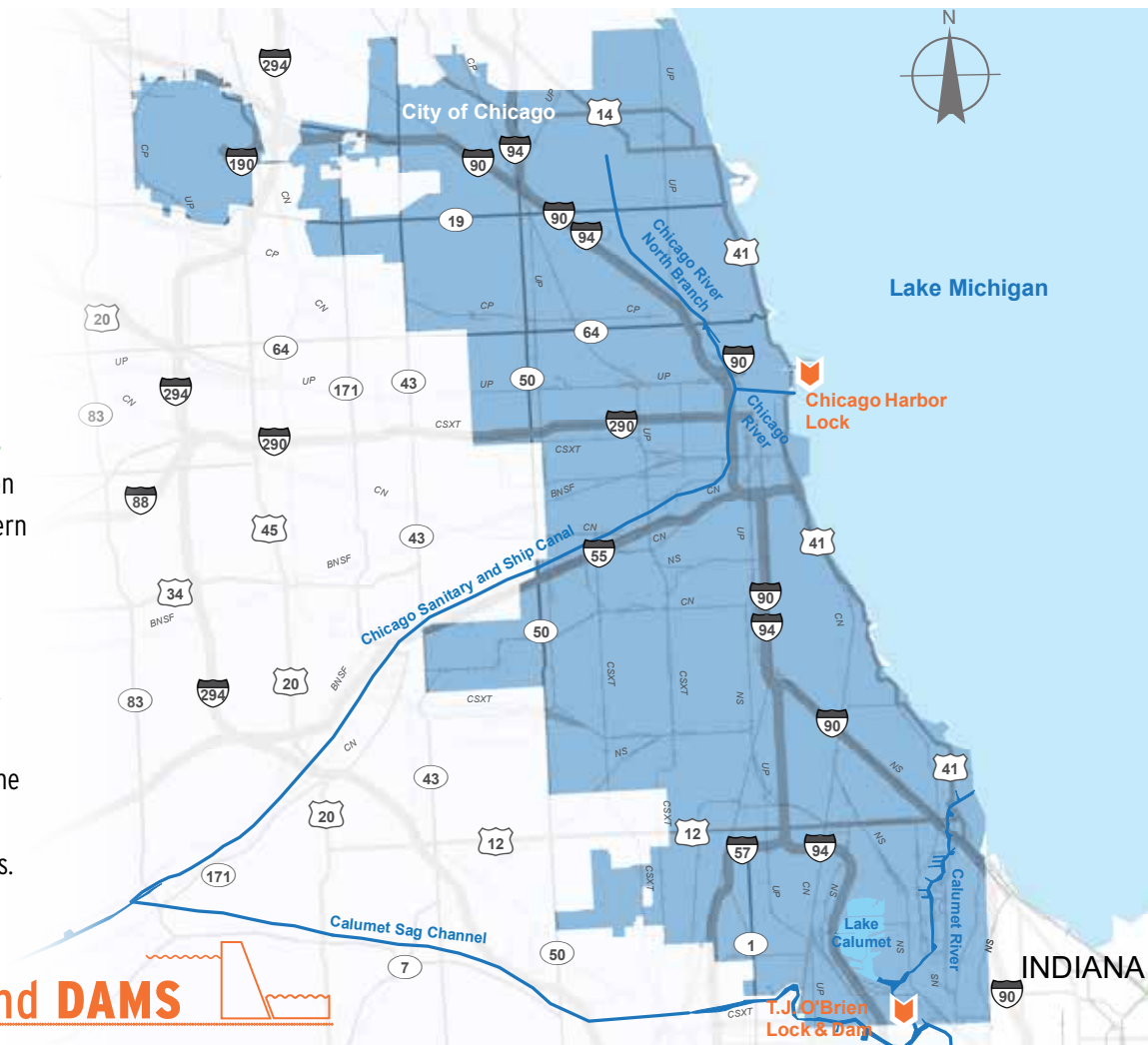


- Chicago O'Hare International - ORD (Chicago, IL)
- Chicago Midway International Airport - MDW (Chicago, IL)

LOCKS and DAMS



- Chicago Harbor Lock
- T.J. O'Brien Lock & Dam



Port District Top Commodities:

1

SAND
& GRAVEL

2

PETROLEUM
PRODUCTS

3

METAL
PRODUCTS



2017 Commodities by County** (inbound, outbound, in-state):

COOK COUNTY

13.9 MILLION TONS

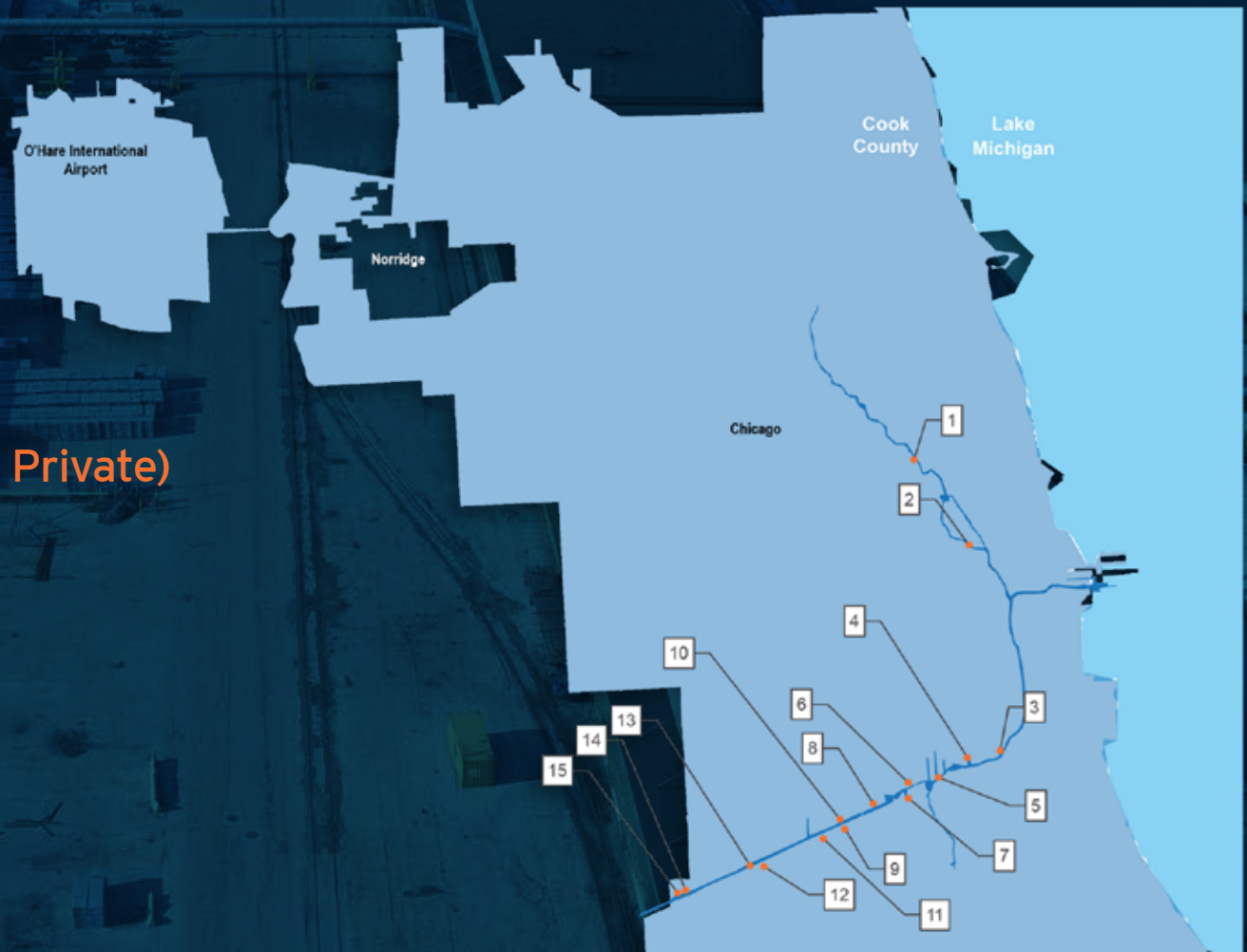
*Commercial navigation on the North Branch of the Chicago River is limited north of the North Avenue Bridge

**Illinois International Port District does not encompass the entirety of Cook County

ILLINOIS INTERNATIONAL PORT DISTRICT

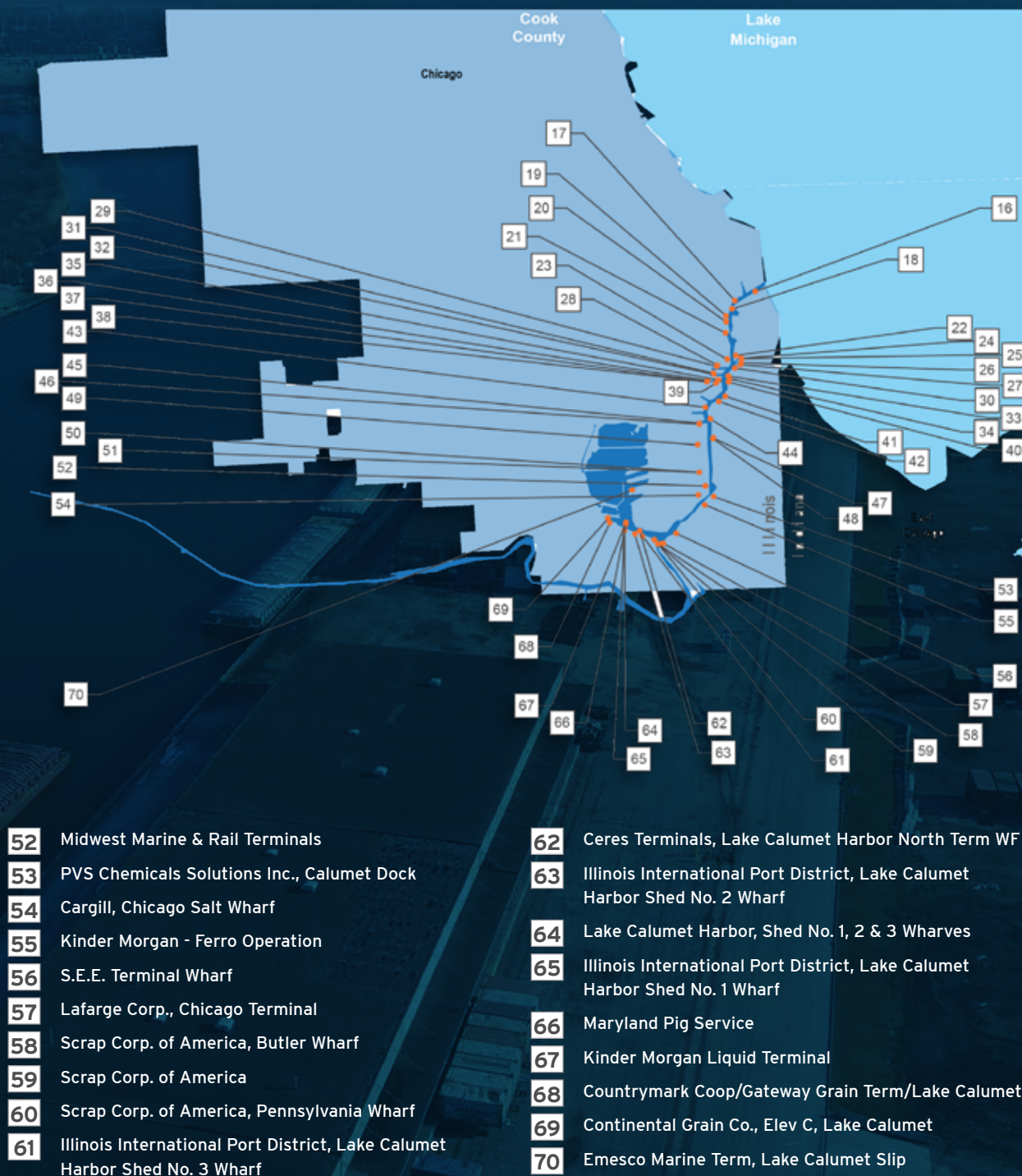
List of Terminals (Public and Private)

- | | | | |
|-----------|--|-----------|--|
| 1 | Midwest Marine & Rail Term - Northside | | |
| 2 | Prairie Material Yard 32 | | |
| 3 | Midwest Marine & Rail - Chinatown Terminal | | |
| 4 | Welsch Ready Mix | | |
| 5 | E. A. Cox Construction Co. Wharf | | |
| 6 | Cozzi Iron & Metal Wharf | | |
| 7 | Barge Term Trucking/Damen Ave Yard, Sante Fe Slip | | |
| 8 | Domino Sugar Corp., Chicago Wharf | | |
| 9 | Ameropan Oil Corp., 33rd St. Terminal Dock | | |
| 10 | Prolerized Chicago Corp. Wharf | | |
| 11 | Prairie Material Yard 33 | | |
| 12 | Ameropan Corp., Bell Oil Terminal Wharf | 16 | Iroquois Landing Terminal |
| 13 | Reliable Asphalt Corp. Wharf | 17 | Scrap Processing Wharf |
| 14 | Mobil Oil Corp., Cicero Avenue Dock | 18 | North American Salt Co., Chicago Plant Wharf |
| 15 | Citgo Petroleum Corp., Cicero Compound Plant Wharf | 19 | The Brown 95th Street Wharf |



List Of Terminals (Cont'd)

- 20** Holcim, Inc.
- 21** Cozzi Calumet River Wharf
- 22** Morton Salt, Calumet River Wharf
- 23** Kcbx Terminals Co., Loading Wharf.
- 24** S. H. Bell Co., Chicago Terminals
- 25** S. H. Bell Co., Chicago Terminal, North Slip
- 26** S. H. Bell Co., Chicago Terminal, Middle Slip
- 27** S. H. Bell Co., Chicago Terminal, South Slip
- 28** KCBX South
- 29** KCBX Terminals Co., Barge-Unloading Slip
- 30** S. H. Bell Co., Chicago Terminal, Barge Wharves
- 31** E L G Metals Inc.
- 32** TPG Chicago Dry Dock
- 33** Carmeuse Lime, North Wharf
- 34** Carmeuse Lime
- 35** Midwest Marine Terminals Inc.
- 36** General Mills, Rialto Grain Elevator Wharf
- 37** General Mills, Chicago Cereal Plant Wharf
- 38** General Mills, Inc.
- 39** Calumet Transload Facility
- 40** Carmeuse Lime, South Wharf
- 41** Speciality Steel Products Wharf
- 42** Arcelormittal
- 43** Acme Steel Co., Furnace Plant, North Warf
- 44** Acme Steel Co., Furnace Plant, South Warf
- 45** Heckett Multiserv/Plant 45 Whf & Semet Solvay Slip
- 46** Asphalt Operating Services of Chicago, LLC (Aosc)
- 47** Reserve Marine Terminal (Vulcan Dock)
- 48** LTV Steel Co., Chicago Plant Wharf
- 49** Horsehead Resource Development Co., Chicago Wharf
- 50** Cargill, Chicago Wharves
- 51** Cargill, Chicago Mooring Wharf



Economic Impact

It is estimated that marine cargo activity being handled within the Illinois International Port District directly or indirectly supports 22,851 jobs within the state. These workers earn an estimated \$1.4 billion in wages and contribute approximately \$2.4 billion towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The table to the right breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	16,881	1,977	3,993	22,851
Income	\$1,067.7M	\$133.7M	\$283.2M	\$1,484.6M
Value Added	\$1,800.7M	\$227.4M	\$405.9M	\$2,434.0M
Output	\$3,850.2M	\$515.0M	\$703.5M	\$5,068.8M

Port-Owned Property Economic Impact

Independent of the port district economic analysis, the economic impacts of on-port tenants are presented below. These impacts are centered around the employment of businesses on port property: ranging from restaurants, golf courses, and youth organizations, to manufacturers and barge operators. These impacts represent the activities of marine and non-marine businesses to show the diversity of port activity.

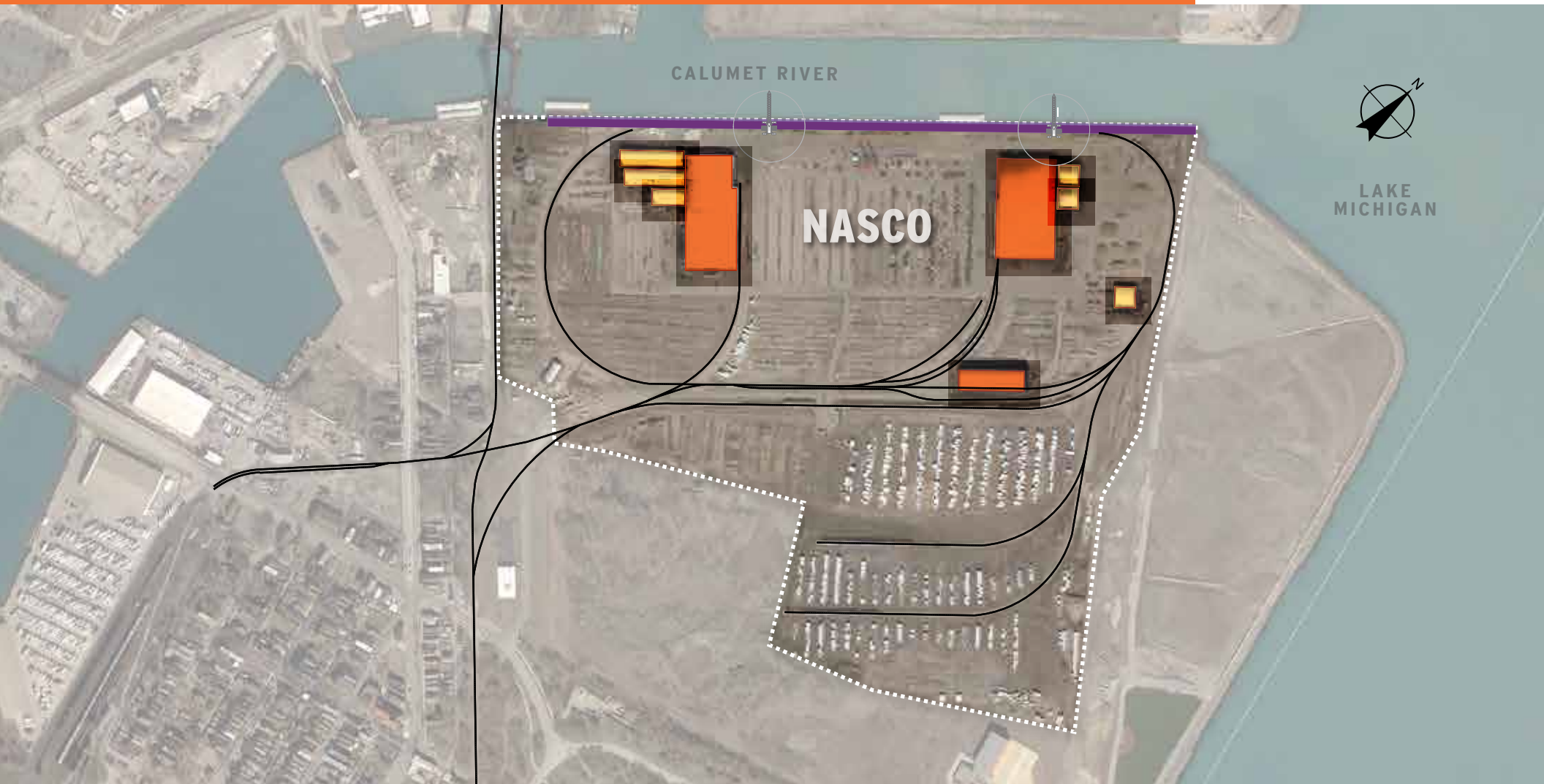
EMPLOYMENT	Iroquois Landing	585	2,765
	Lake Calumet	2,180	
INCOME	Iroquois Landing	\$40.7M	\$196.1M
	Lake Calumet	\$115.4M	
VALUE ADDED	Iroquois Landing	\$71.3M	\$322.7M
	Lake Calumet	\$251.4M	
OUTPUT	Iroquois Landing	\$110.8M	\$731.4M
	Lake Calumet	\$620.6M	

CAPITAL NEEDS

The Port District has many capital and maintenance needs which will require tens of millions dollars to address them. As of early 2021, the Port District is amidst a master planning process. This process will help the Port District better understand its investment needs. Capital improvements and needs will be a component of the master plan.

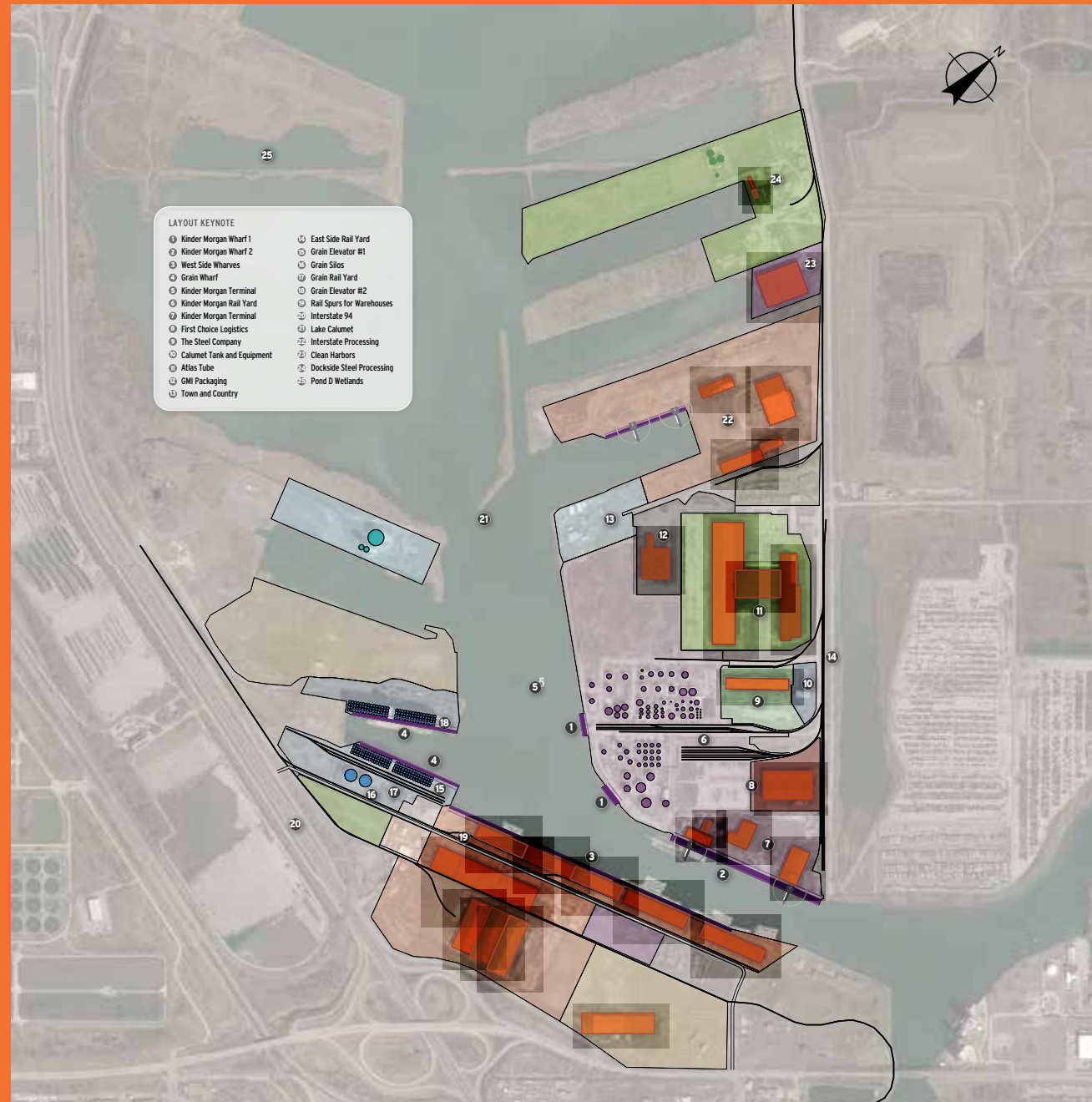
Iroquois Landing Terminal

Iroquois Landing is a 190-acre site located along the mouth of the Calumet River and Lake Michigan. The site has one major tenant North American Stevedoring Company which mainly handles steel, iron and lumber products. Located on the site are three warehouses which combined boast over 251 thousand square feet of storage space, additionally there are six canopy structures with over 72 thousand square feet of space. The site has 3,000 linear feet of berthing space which can accommodate both barges and large ships, this is due to the waterway having a navigation channel of 27 feet. Additionally, the site has a rail loop which can hold more than 135 railcars and has access six Class I railroads via interchange service provided by the South Chicago and Indiana Harbor Railway.



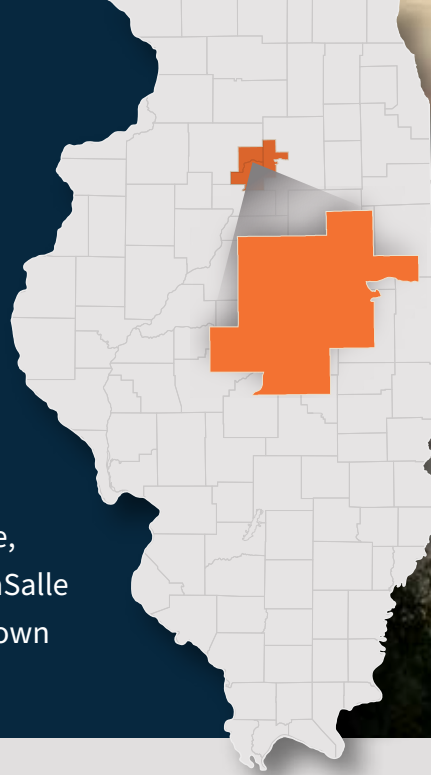
Calumet Lake Terminal

Lake Calumet is a 1,500 acre site located roughly six miles south of Lake Michigan and is situated on the Calumet River and Lake Calumet. The site has roughly 25 tenants who handle a diverse array of products including, but not limited to petroleum, chemicals, cement, iron, and sugar. There are several warehouses located on the site including four transit sheds that total 400,000 square feet of space. The transit sheds are located along the Calumet River and provide nearly 3,000 linear feet of berthing space for ships and barges. Additionally, there are 86 liquid storage tanks which have a capacity to store 741,116 barrels. The site has access to several modes of transportation including Chicago Rail Link which links into six Class I railroads, immediate access to interstate 94, and the Calumet River which is channelized 27 feet to the site.



ILLINOIS VALLEY REGIONAL PORT DISTRICT

The Illinois Valley Regional Port District is located in North-Central Illinois. The Port District boundaries consist of Putnam County and the townships of LaSalle, Peru, Utica, Eden and Dimmick in LaSalle County and Hall, Selby and Leppertown townships in Bureau County.



Port District Biography

The Port District is strategically located in North-Central Illinois. One of its key advantages is having interstate 80, one of the nation's most important freight corridors cross through the district within miles of the Illinois River. Additionally, being in Northcentral Illinois there is an abundance of agriculture production that takes place that utilizes the river. The district has a robust network of state and U.S highways that provide access to river facilities. Included in the highway system is Interstate 39 which is part of an international interstate system stretching from Winnipeg, Canada, to the Gulf of Mexico.

1933



Construction was completed on the Starved Rock Lock and Dam

1971



Illinois Valley Regional Port District was created

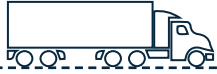
2004



Starved Rock Lock and Dam was added to the National Register of Historic Places

Multimodal Connections

HIGHWAY



Several interstates, state routes, and U.S. highways traverse the port district, the include I-39, I-80, I-180, US 6, IL-18, IL-26, IL-29, IL-71, IL-89, and IL-251. Included within these routes are a total of 0.73 Critical Rural Freight Corridor miles within the port district.

RAIL



Two class I railroads provide service throughout the port district these include, Burlington Northern Santa Fe (BNSF) and Norfolk Southern (NS). Iowa Interstate Railroad (IAIS), a class II railroad and Illinois Railway (IR) provide service as well.

WATER



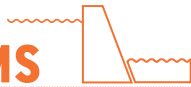
The Illinois River flows 38.5 miles through the port district, the river is part of Marine Highway 55.

AIR

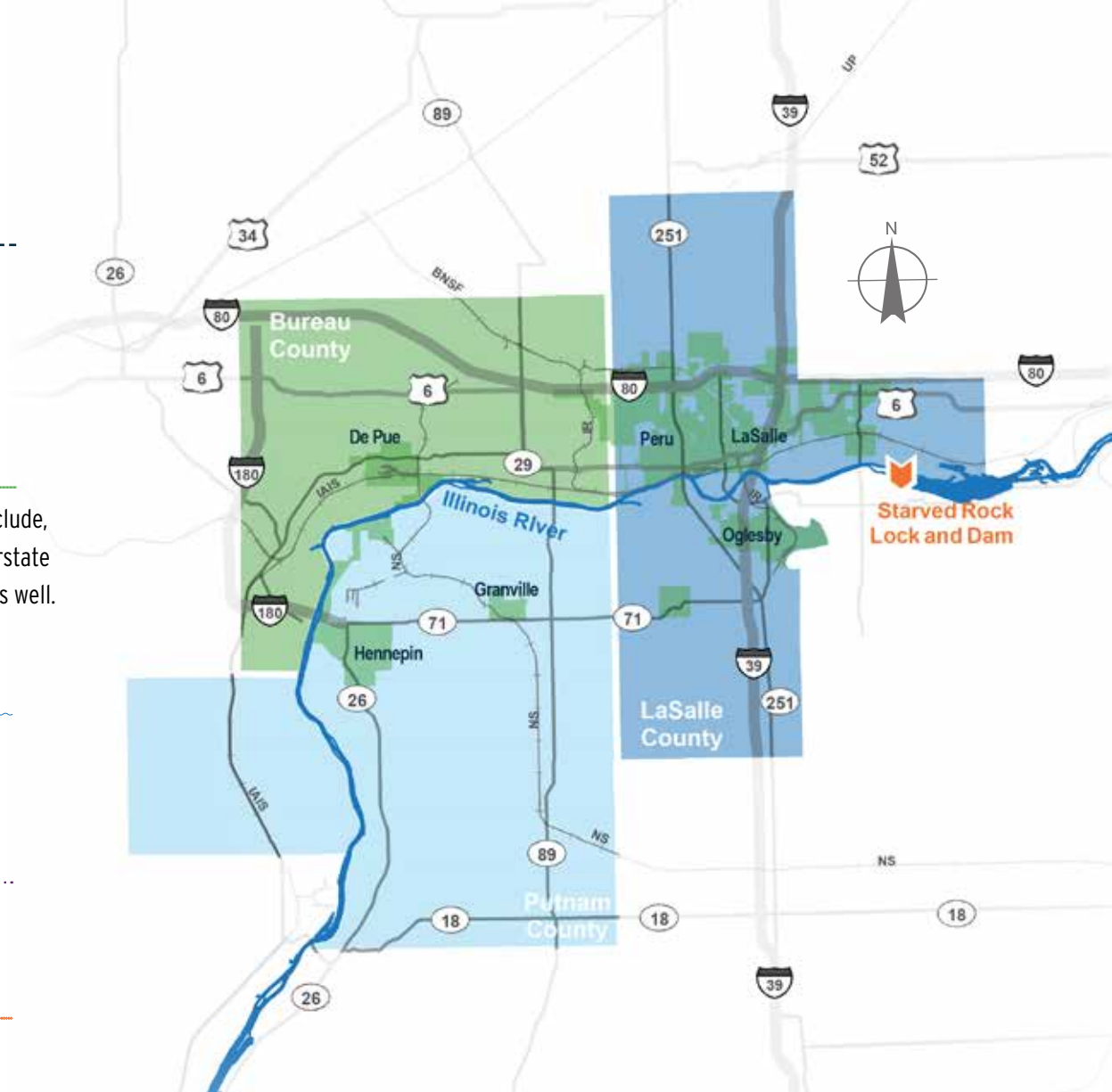


- Illinois Valley Regional Airport - VYS (Peru, IL)

LOCKS and DAMS



- The Starved Rock Lock and Dam



Port District Top Commodities:

1

PETROLEUM
PRODUCTS



2

FOOD



3

COAL



2017 Commodities by County* (inbound, outbound, in-state):

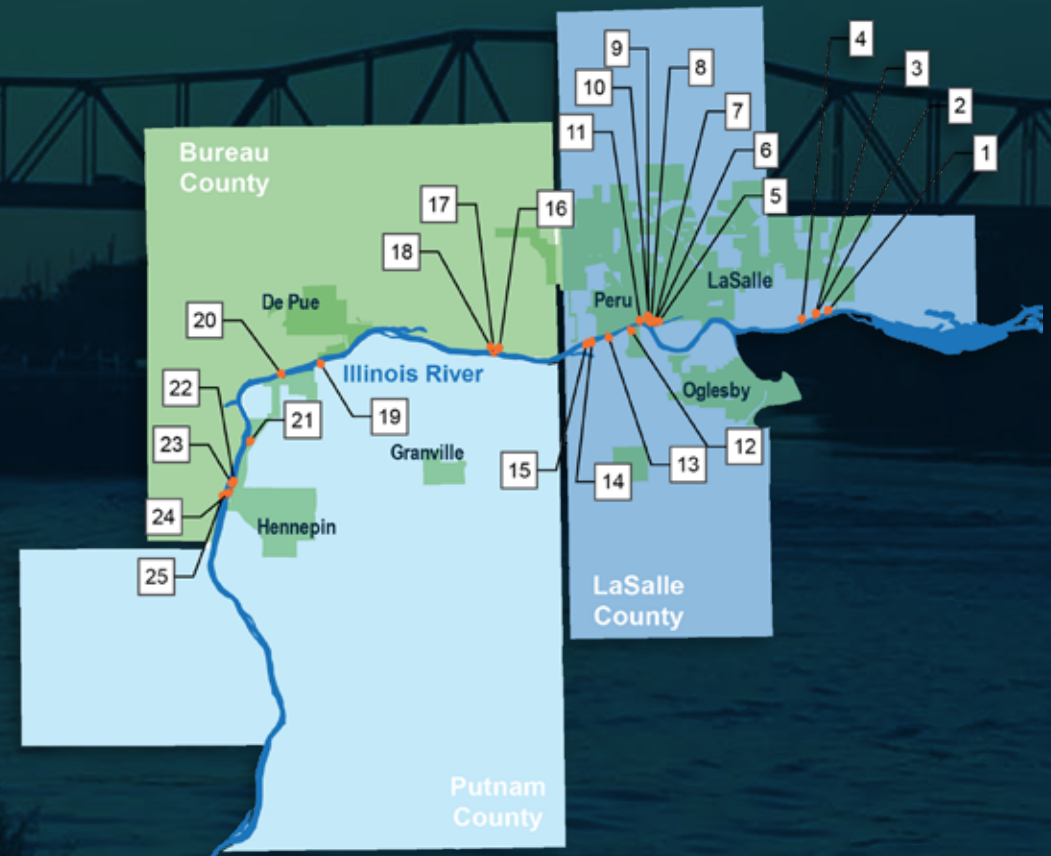
BUREAU COUNTY
**1.1 MILLION
TONS**

PUTNAM COUNTY
**230 THOUSAND
TONS**

LASALLE COUNTY
**2.2 MILLION
TONS**

*Note Illinois Valley Regional Port District does not encompass the entirety of the listed counties

ILLINOIS VALLEY REGIONAL PORT DISTRICT



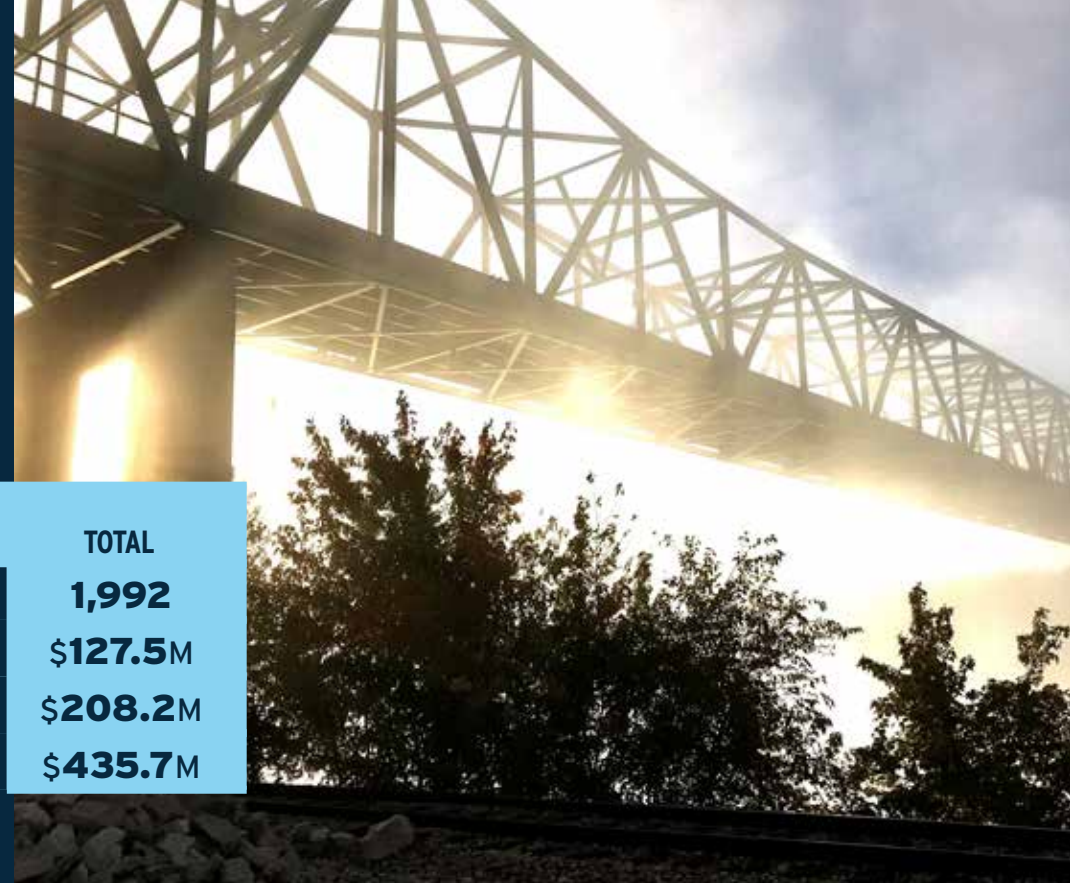
List of Terminals (Public and Private)

- | | | | |
|-----------|--|-----------|--|
| 1 | Consolidated Grain & Barge Co., Utica Terminal Grain Dock | 16 | ADM/Growmark River System, Spring Valley Grain Elevator Dock |
| 2 | Consolidated Grain & Barge Co., Utica Terminal Grain Dock | 15 | Cargill Aghorizons, Spring Valley Grain Elevator Dock |
| 3 | Consolidated Grain & Barge Co., Utica Terminal Dock | 18 | Cargill Aghorizons, Spring Valley North Grain Elevator Dock |
| 4 | Utica Terminal Dock | 19 | Tri-con Materials, Inc. |
| 5 | ADM/Growmark River System, LaSalle Grain Elevator Dock | 20 | Dynegy Midwest Generation, Hennepin Power Station Coal Dock |
| 6 | ADM/Growmark River System, LaSalle Grain Bulk Materials Dock | 21 | Terminal Express, Dry Cargo Dock |
| 7 | ADM/Growmark River System, LaSalle Docks | 22 | Terminal Express, Liquid Fertilizer Dock |
| 8 | Consolidated Grain And Barge Co., Peru Terminal Dock | 23 | ADM/Growmark River System, Hennepin Grain Elevator Dock |
| 9 | QLF | 24 | Cargill Aghorizons, Hennepin Grain Elevator Dock |
| 10 | Flint Hills Chemical Corp., Peru Plant Dock | 25 | Consolidated Grain And Barge Co., Hennepin Terminal Dock |
| 11 | Helena | | |
| 12 | Mertel Multi-Modal facility | | |
| 13 | River Docks, Barge Wharf | | |
| 14 | CHS/Northern Partners, Peru Terminal Dock | | |
| 15 | CF Industries, Peru Nitrogen Terminal Dock | | |

Economic Impact

It is estimated that marine cargo activity being handled within the Illinois Valley Port District directly or indirectly supports 1,992 jobs within the state. These workers earn an estimated \$127.5 million in wages and contribute approximately \$208.2 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	1,345	204	443	1,992
Income	\$82.3M	\$13.5M	\$31.7M	\$127.5M
Value Added	\$141.0M	\$21.9M	\$45.3M	\$208.2M
Output	\$309.6M	\$49.4M	\$76.7M	\$435.7M

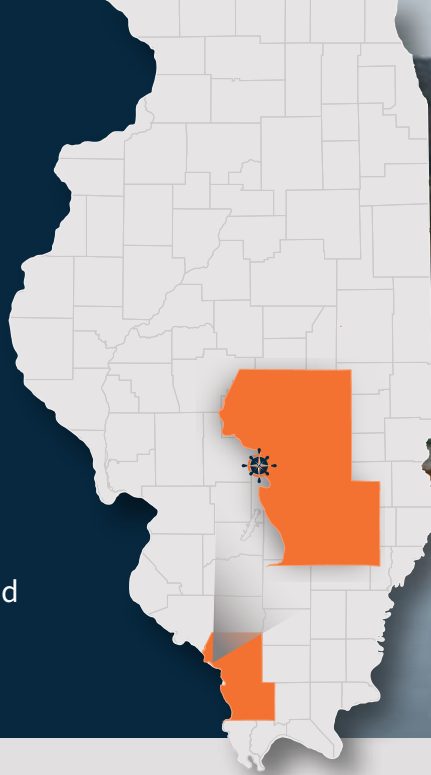


CAPITAL NEEDS

The Illinois Valley Port District does not own or operate any terminal facilities. If the port district were to construct a terminal a major investment would be required. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars.

JACKSON-UNION COUNTIES REGIONAL PORT DISTRICT

The Jackson-Union Counties Regional Port District is located in Southern Illinois. The Port District's boundaries consist all of Jackson and Union Counties.



Port District Biography

The Port District is strategically located in Southern Illinois, along the Mississippi River. The Port District has many great advantages including a robust network of state and U.S. highways that provide easy access throughout the district. Additionally, there are no locks and dams located south of the district, the nearest lock and dam to the north is Lock and Dam #27 in Granite City. Due to this fact shippers receive reduced costs by not having to travel through locks to deliver goods.



1976

Jackson-Union Counties Regional Port District was created.

Multimodal Connections

HIGHWAY



Several interstates, state routes, and US highways traverse the port district, these include I-57, I-24, IL-3, IL-13, IL-127, IL-136, IL-146, IL-149, and US 51.

RAIL



Two class I railroads provide service within the port district these include, Canadian National (CN) and Union Pacific (UP).

WATER



The Mississippi River flows 43 miles along the port district's western border, the river is part of Marine Highway 55.

AIR

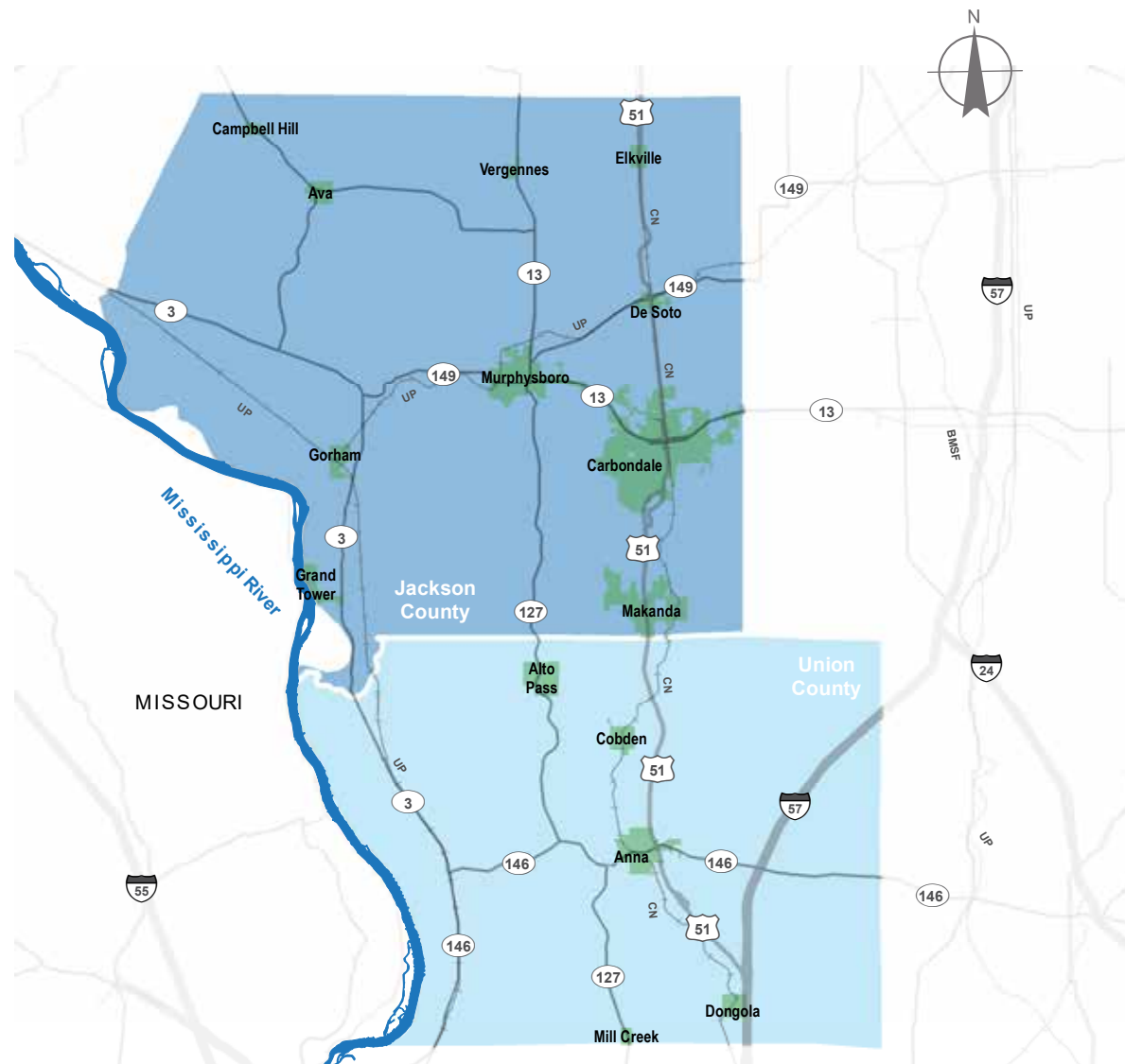


- Southern Illinois Airport - MDH (Carbondale, IL)

LOCKS and DAMS



- None



Port District Top Commodities:

1

FOOD



2

PETROLEUM
PRODUCTS

3

CHEMICALS



2017 Commodities by County (inbound, outbound, in-state):

UNION COUNTY
NO TONNAGE

JACKSON COUNTY
327 THOUSAND TONS

JACKSON-UNION COUNTIES REGIONAL PORT DISTRICT

List of Terminals (Public and Private)

- 1** Kinder Morgan Energy Partners, Cora Terminal Dock and Fleet MO
- 2** Gavilon Grain, Cora
- 3** Bunge North America, Fountain Bluff Dock



Economic Impact

It is estimated that marine cargo activity being handled within the Jackson-Union Regional Port District directly or indirectly supports 453 jobs within the state. These workers earn an estimated \$28.1 million in wages and contribute approximately \$47.7 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

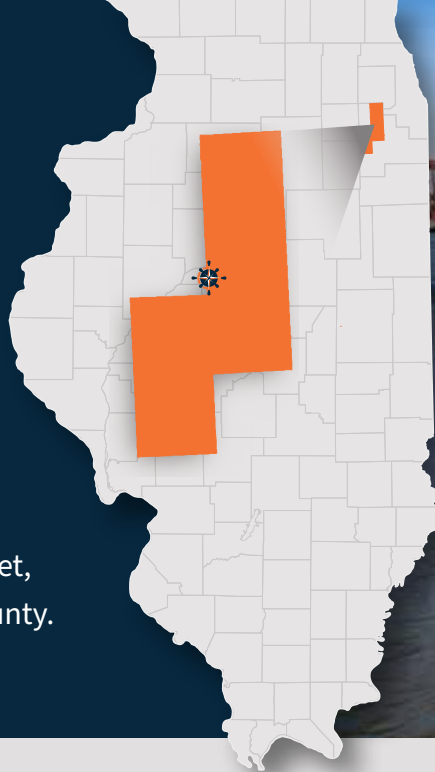
	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	356	39	58	453
Income	\$21.8M	\$2.6M	\$3.7M	\$28.1M
Value Added	\$37.9M	\$4.5M	\$5.3M	\$47.7M
Output	\$80.8M	\$10.1M	\$9.6M	\$100.5M

CAPITAL NEEDS

The Jackson-Union Counties Regional Port District does not own or operate any terminal facilities. If the port district were to construct a terminal a major investment would be required. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars.

JOLIET REGIONAL PORT DISTRICT

The Joliet Regional Port District is located in northeastern Illinois, its boundaries consist of the townships of DuPage, Lockport, Joliet, Troy and Channahon within Will County.



Port District Biography

The Port District is located in the Chicago metro area with access to a number of interstates, rail lines, and intermodal freight facilities. The Port District owns and operates Lewis University Airport, the airport is situated on 732 acres and is equipped with two runways.

1933



Construction was complete
on the Brandon Road and
Lockport Lock and Dam

1957



The Joliet Regional Port
District was created

1989



Port district acquired the
Lewis University Airport

Multimodal Connections

HIGHWAY



Several interstates, state routes, and US highways traverse the port district, these include I-55, I-80, I-355, IL 7, IL 53, IL 171, US 52, US 30, and US 6. Included within these routes are a total of 10.82 Critical Urban Freight Corridor miles within the port district.

RAIL



Four class I railroads provide service within the port district, these include CSX Transportation (CSXT), Union Pacific (UP), Canadian National (CN), and Burlington Northern Santa Fe (BNSF).

LOCKS and DAMS



- Lockport Lock and Dam
- Brandon Road Lock and Dam
- Dresden Island Lock and Dam (Located near the district)

WATER

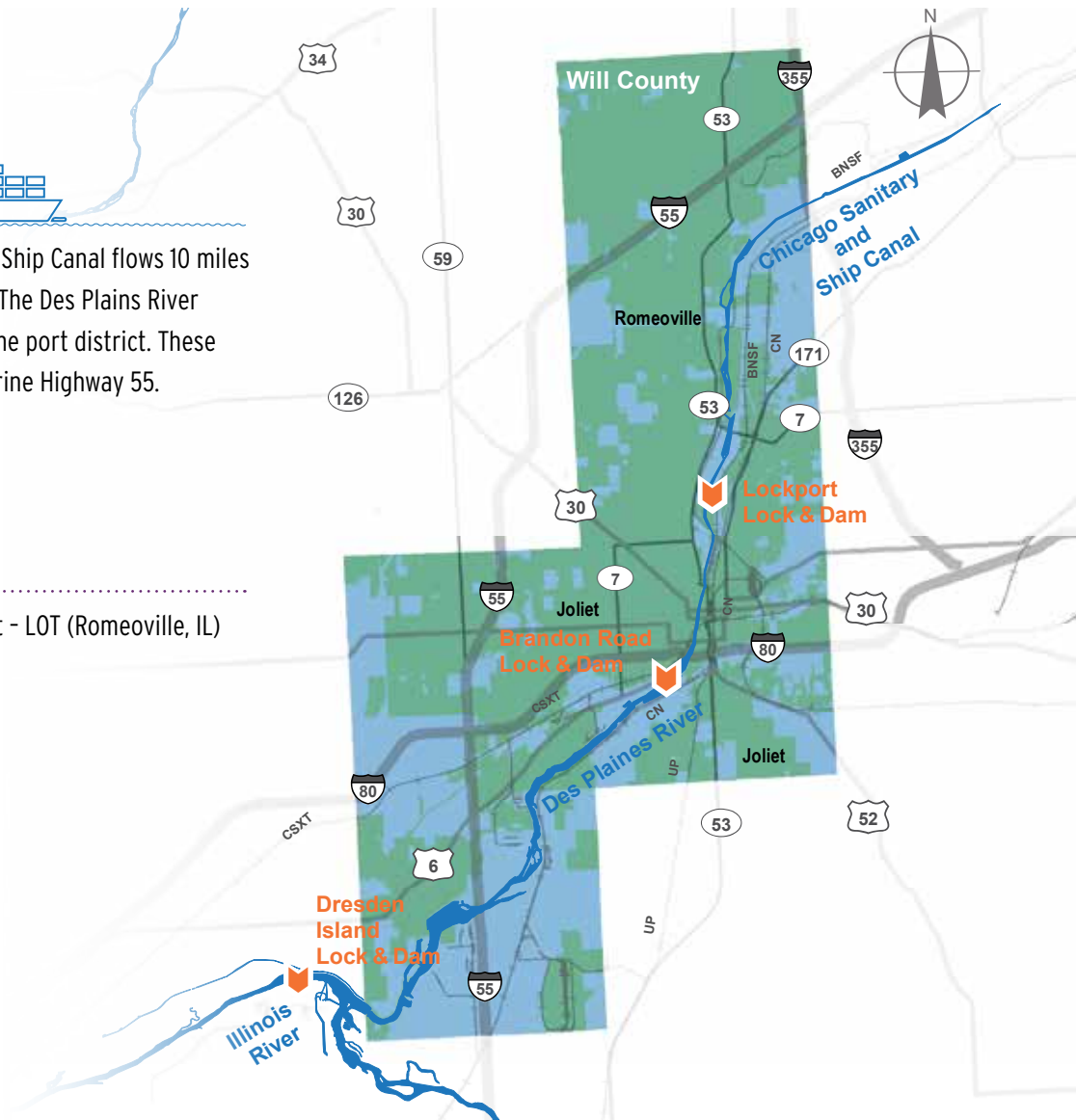


The Chicago Sanitary and Ship Canal flows 10 miles through the port district. The Des Plaines River flows 15.5 miles through the port district. These waterways are part of Marine Highway 55.

AIR



- Lewis University Airport - LOT (Romeoville, IL)



Port District Top Commodities:

1

PETROLEUM
PRODUCTS



2

FOOD



3

CHEMICALS



2017 Commodities by County* (inbound, outbound, in-state):

WILL COUNTY
3.2 MILLION TONS

*Note Joliet Regional Port District does not encompass the entirety of the listed counties

JOLIET REGIONAL PORT DISTRICT

List Of Terminals (Public And Private)

- 
- | | | |
|---|---|---|
| 1 Austeel Lemont Co. Wharf | 25 Flint Hills Resources, LLC | 33 Loders Croklaan, Joliet Plant Dock |
| 2 Kaiser Lemont Wharf | 26 Stepan Co., Millsdale Plant Barge Dock | 34 Dow Chemical Co., Joliet Plant Styrene Dock |
| 3 Noramco - Chicago | 27 Illinois Marine Towing, Inc., Channahon | 35 Dow Chemical Co., Joliet Plant East Dock |
| 4 Citgo Petroleum Corp. Lemont | 28 Exxon Mobil Refining & Supply Co. Wharf | 36 Dow Chemical Co., Joliet Plant West Dock |
| 5 Scarpelli Materials, Inc. Terminal #301 | 29 Material Distribution Docks | |
| 6 Unocal Corp., Chicago Carbon Plant Wharf | 30 BASF Corp., Joliet Polystyrene Plant Dock | |
| 7 Commonwealth Edison Co./Will County Gen Sta Coal WH | 31 IMTT - Channahon | |
| 8 Material Service Corp., Lockport Marine Repair Basin | 32 Interstate Chemical Co., Alport Terminal Dock | |
| 9 Unknown | | |
| 10 Material Service Corp., Lockport Sand And Stone Wharf | | |
| 11 Material Service Corp., Lockport Wharves | | |
| 12 Continental Grain Co., Lockport Grain Elev Dock | | |
| 13 Cargill, Lockport Grain Elevator Dock | | |
| 14 BL Duke Recycling | | |
| 15 Seeler Industries, Inc. Three Rivers Term Div. | | |
| 16 Prairie Creek Grain Company, Inc. | | |
| 17 Ozinga Illinois | | |
| 18 Middle River Marine | | |
| 19 Unknown | | |
| 20 Centerpoint Intermodal Center - Joliet/Elwood | | |
| 21 Canal Terminal Co., Channahon Asphalt Terminal Dock | | |
| 22 Cf Industries, Channahon Terminal Dock | | |
| 23 Northfield Block Co., Channahon Terminal Dock | | |
| 24 Unknown | | |

Economic Impact

It is estimated that marine cargo activity being handled within the Joliet Regional Port District directly or indirectly supports 11,320 jobs within the state. These workers earn an estimated \$709.4 million in wages and contribute approximately \$1.1 billion towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The table to the right breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	8,824	921	1,575	11,320
Income	\$540.4M	\$62.1M	\$107.0M	\$709.4M
Value Added	\$906.9M	\$105.0M	\$153.7M	\$1,165.6M
Output	\$1,867.9M	\$237.2M	\$272.5M	\$2,377.7M

Port-Owned Property Economic Impact

Independent of the port district economic analysis, the economic impacts of on-port tenants are presented below. These impacts are centered around the employment of businesses on port property: ranging from restaurants, golf courses, and youth organizations to manufacturers and barge operators. These impacts represent the activities of marine, and non-marine businesses to show the diversity of port activity.

EMPLOYMENT	279
INCOME	\$20.4M
VALUE ADDED	\$30.9M
OUTPUT	\$44M

CAPITAL NEEDS

The Joliet Regional Port District does not own or operate any terminal facilities. If the port district were to construct a terminal a major investment would be required. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars.

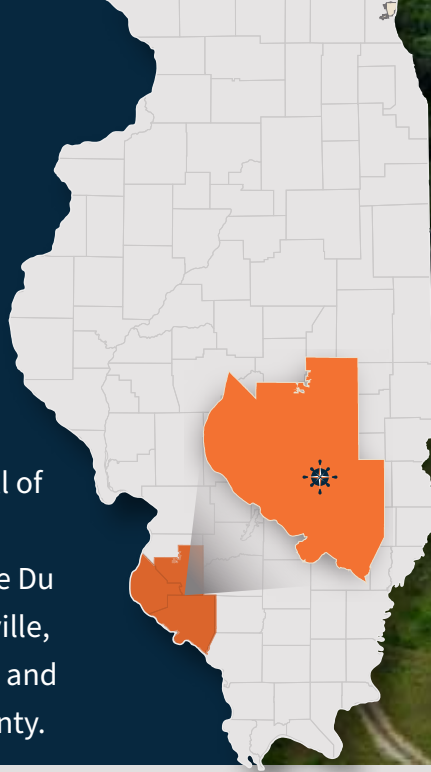
Lewis University Airport

The Lewis University Airport is owned and operated by the Joliet Regional Port District, the airport is located 43 miles southwest of downtown Chicago. The airport has 14 hangars which total 293 thousand square feet and a terminal building that is approximately 15 thousand square feet. The airport has two paved runways one which is 6,500 feet long and another which is 5,697 feet long.



KASKASKIA REGIONAL PORT DISTRICT

The Kaskaskia Regional Port District is located in Southwestern Illinois, just south of St. Louis, Missouri. Its boundaries consist of all of Monroe and Randolph Counties and Freeburg, Millstadt, Smithton, Prairie Du Long, New Athens, Marissa, Fayetteville, Engleman, Mascoutah, Shiloh Valley and Lenzburg Townships of St. Clair County.



Port District Biography

Being located in Southwestern Illinois the Port District provides the area great economic benefits, it encompasses portions of the Mississippi River and surrounds the 36 navigable miles of the Kaskaskia River. The Port District owns four properties along the Kaskaskia River. These include terminals near New Athens, Baldwin, Fayetteville, and Evansville along the Kaskaskia River, and the Kellogg dock along the Mississippi River.

1965



Kaskaskia Regional Port District was created.

1966



The Army Corps of Engineers began work on the Kaskaskia River Navigation Project, the project canalized the lower half (36 miles) of the Kaskaskia River from Fayetteville south to the confluence with the Mississippi River.

1973



Construction of the Jerry F. Costello Lock and Dam was complete.

2020



12th largest inland port in the US by volume.

Multimodal Connections

HIGHWAY



Several interstates and state routes traverse the port district, these include I-64, I-255, IL-3, IL-4, IL-13, IL-154, IL-155, IL-156, IL-158, and IL-159.

RAIL



Four class I railroads provide service within the port district these include, Union Pacific (UP), Canadian National (CN), Norfolk Southern (NS), and CSX Transportation (CSXT).

WATER



The Mississippi River flows 73.5 miles along the port district's western border, this portion of the river is designated as Marine Highway 5. The Kaskaskia River flows through the port district and is commercially navigable for 36 miles to Fayetteville, IL.

AIR

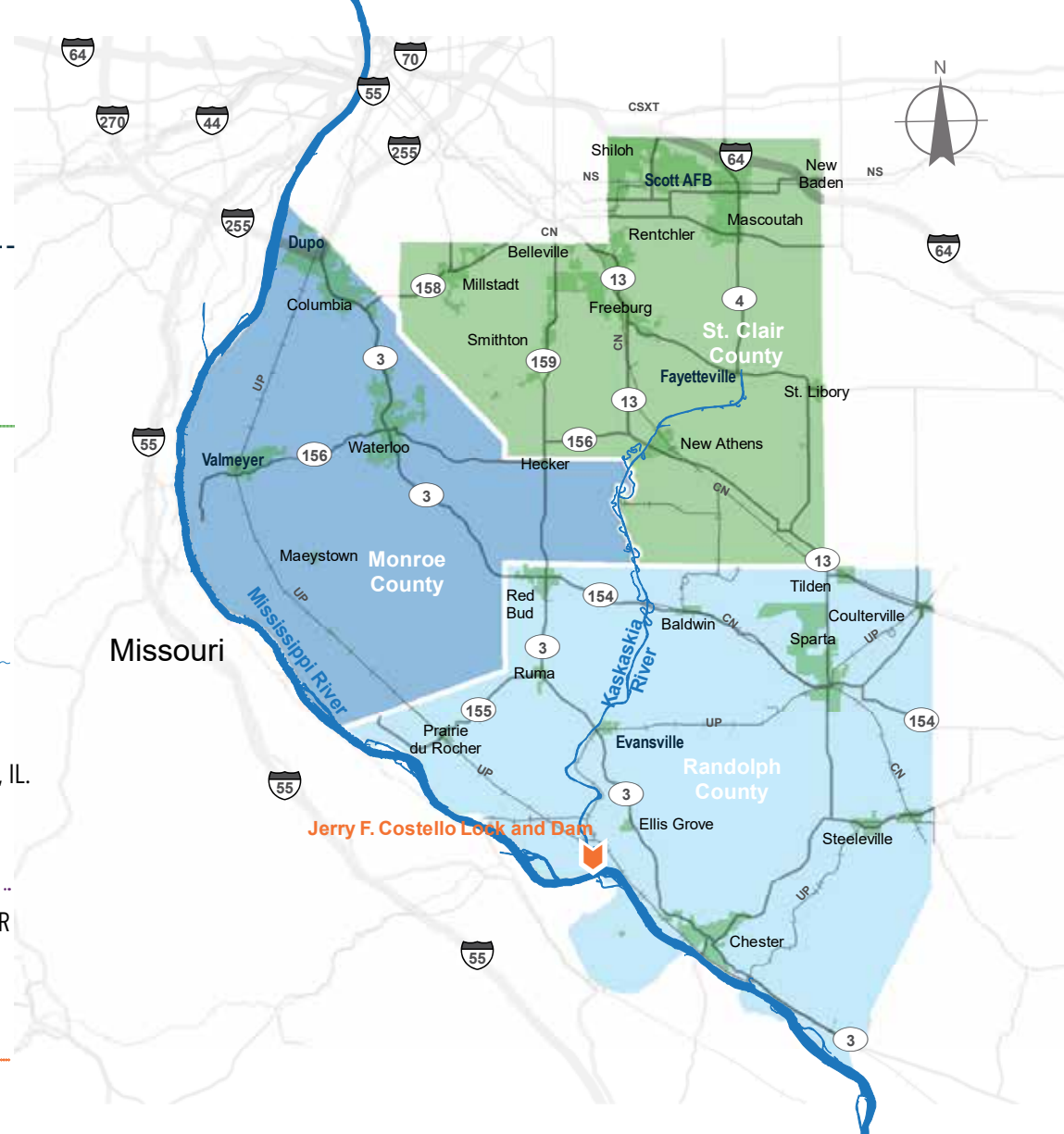


- MidAmerica St. Louis Airport - BLV (Belleville, IL)
- Sparta Community Airport - SAR (Sparta, IL)

LOCKS and DAMS



- Jerry F. Costello Lock and Dam



Port District Top Commodities:

1

SAND
& GRAVEL

2

FOOD

3

FERTILIZER



2017 Commodities by County* (inbound, outbound, in-state):

MONROE COUNTY
**173 THOUSAND
TONS**

RANDOLPH COUNTY
**5.1 MILLION
TONS**

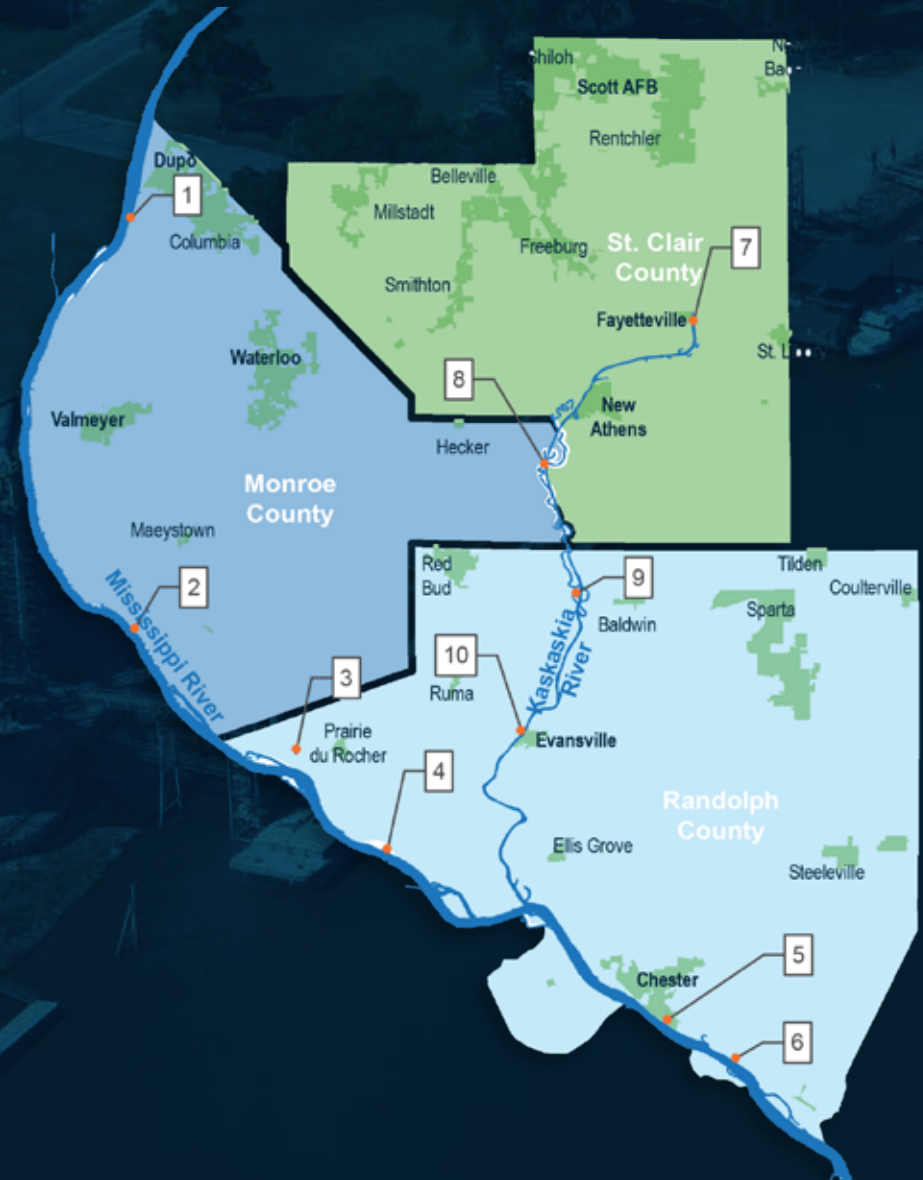
ST. CLAIR COUNTY
**11 MILLION
TONS**

*Note Kaskaskia Regional Port District does not encompass the entirety of the listed counties

KASKASKIA REGIONAL PORT DISTRICT

List of Terminals (Public and Private)

- 1 Luhr Bros., River Docks
- 2 Gateway FS, Kempers Landing Terminal Dock
- 3 Mississippi Lime Co. Prairie Du Rocher, II
- 4 Kaskaskia Regional Port District, Kellogg Dock
- 5 Conagra Foods, Chester Grain Elevator Wharf
- 6 Knight Hawk Coal, Lone Eagle Dock And Fleet Mooring
- 7 Kaskaskia Regional Port District, Fayetteville Terminal
- 8 Kaskaskia Regional Port District, Dock No. 1
- 9 Kaskaskia Regional Port District, Dock No. 2
- 10 Gateway FS, Evansville Elevator Dock



Economic Impact

It is estimated that marine cargo activity being handled within the Kaskaskia Regional Port District directly or indirectly supports 7,219 jobs within the state. These workers earn an estimated \$455.6 million in wages and contribute approximately \$765.2 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The table to the right breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	5,811	622	787	7,219
Income	\$365.0M	\$42.0M	\$48.7M	\$455.6M
Value Added	\$623.3M	\$71.2M	\$70.6M	\$765.2M
Output	\$1,286.9M	\$160.9M	\$131.1M	\$1,578.8M

Port-Owned Property Economic Impact

Independent of the port district economic analysis, the economic impacts of on-port tenants are presented below. These impacts are centered around the employment of businesses on port property: ranging from restaurants, golf courses, and youth organizations, to manufacturers and barge operators. These impacts represent the activities of marine, and non-marine businesses to show the diversity of port activity.

EMPLOYMENT	Evansville	15	321
	KRPD 1	23	
	KRPD 2	282	
INCOME	Evansville	\$15.4M	\$320.6M
	KRPD 1	\$23.4M	
	KRPD 2	\$281.8M	
VALUE ADDED	Evansville	\$15.4M	\$320.6M
	KRPD 1	\$23.4M	
	KRPD 2	\$281.8M	
OUTPUT	Evansville	\$15.4M	\$320.6M
	KRPD 1	\$23.4M	
	KRPD 2	\$281.8M	

CAPITAL NEEDS

There are several planned improvements at multiple locations throughout the Port District. Planned rail improvements at KRPD Terminal #1 will allow the terminal to accommodate coal byproducts. Additionally, there are planned upgrades at KRPD Terminal #2, these upgrades will allow the terminal to handle offloading of Urea and enhance roadway conditions.

Estimated Total Costs: \$24.5 Million

Kaskaskia Regional Port District Dock 1 (KRPD1)

KRPD 1 is a limestone terminal situated on 103 -acres along the Kaskaskia River in New Athens, IL. The terminal is owned by the Kaskaskia Regional Port District. The terminal has a train loop which can handle 125 car unit trains, which is served by the Canadian National Railroad. The terminal has one 10,500 square foot covered storage structure. Additionally, the terminal has a roll-on/roll-off ramp to receive oversized equipment.



Kaskaskia Regional Port District Dock 2 (KRPD2)

KRPD 2 is situated on 450-acres along the Kaskaskia River in Baldwin, IL, of which 120 are developed or suited for development. The terminal is owned by the Kaskaskia Regional Port District and has two tenants, the Material Works and Gateway FS. The Material Works is a steel processing company which occupies a 286 thousand square foot warehouse, steel coils are unloaded via a 50-ton overhead crane. Gateway FS has three fertilizer storage bins which can hold roughly 203 thousand cubic feet of product. The terminal has a 40-car capacity rail track that is serviced by Canadian National.



Evansville Terminal

The Evansville Terminal is situated on 11-acres along the Kaskaskia River in Evansville, IL. The Kaskaskia Regional Port District owns the river bank and a bar and grill with a recreational boat dock. The grain terminal is owned and operated by Gateway FS. The terminal receives shipments of wheat, corn, and soybeans via truck and transfer them by barge. There are six concrete silos located at the terminal that have a storage capacity of 48 thousand cubic feet and three steel silos that have a storage capacity of 182 thousand cubic feet. The terminal does not have rail access.



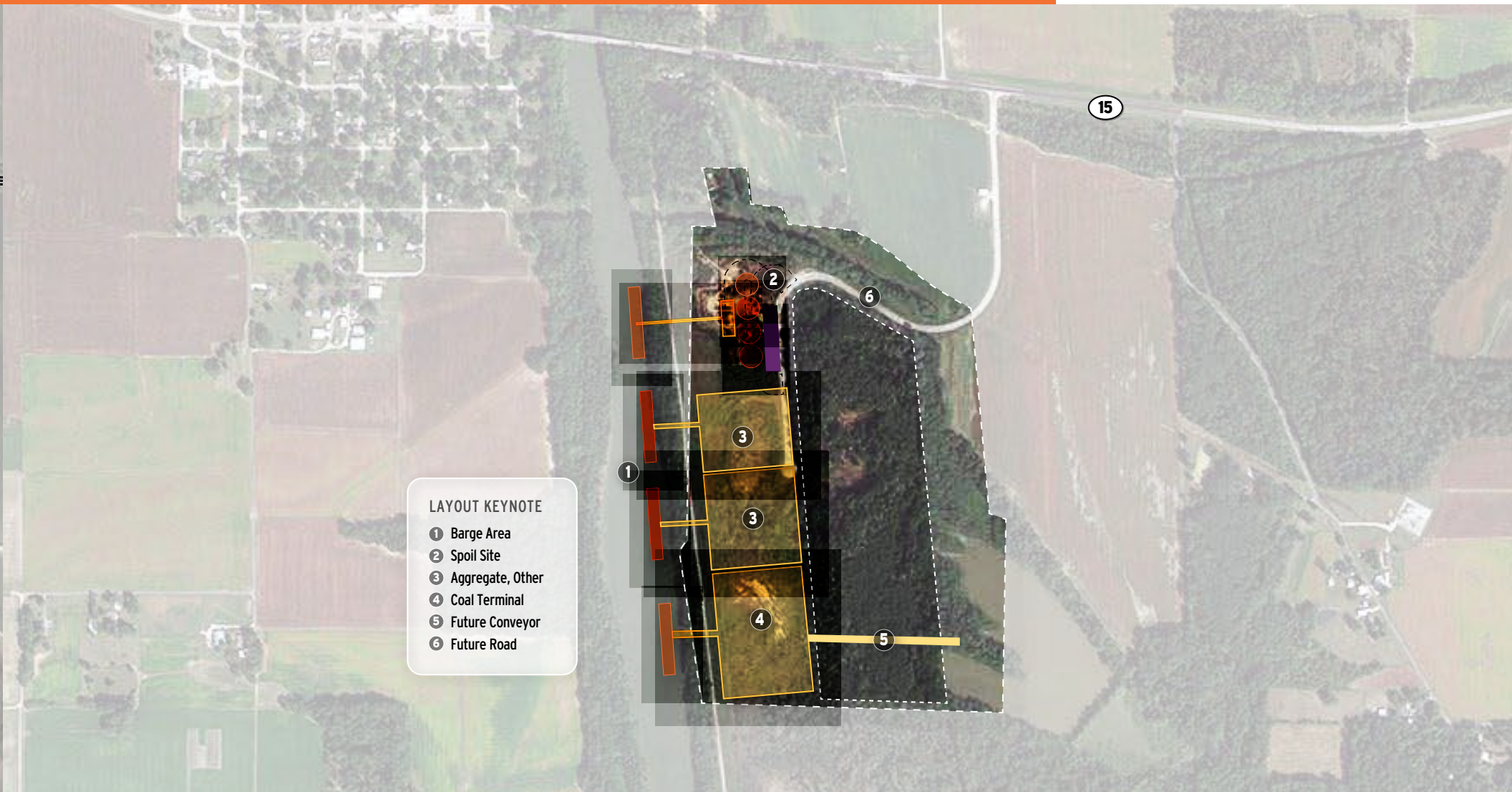
Kellogg Dock

The Kellogg Dock is situated on 117-acres along the Mississippi River in unincorporated Randolph County. The dock is operated as a joint venture between Kinder Morgan and Slay Industries, and is set up as a coal outbound dock, however can be modified for other commodities. The dock is a rail to barge facility capable of receiving and loading at a rate of 4,000 tons per hour, and has a storage capacity of 1,000,000 tons of coal. The dock has a rail yard on the dry side of the levee which can hold 450 train cars, and is serviced by the Union Pacific Railroad.



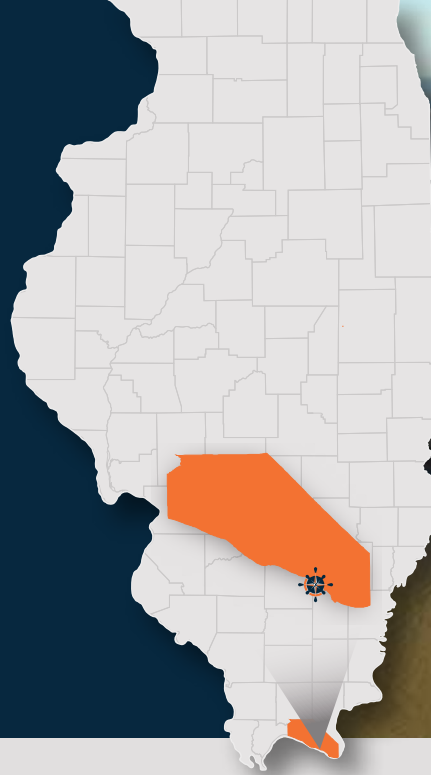
Fayette Terminal

The Fayetteville terminal is situated on 124-acres along the Kaskaskia River in Fayetteville, IL. The site does not have any infrastructure in place outside of an access road and is open for development. The site is ideally suited for a grain terminal, truck terminal, aggregate yard, scrap steel yard, bulk commodities, or container yard. The Kaskaskia Regional Port District is actively looking for tenants and interested parties should contact the port district. The terminal is entirely above the 500-year floodplain. It is located within 15 miles of an interstate.



MASSAC-METROPOLIS PORT DISTRICT

The Massac-Metropolis Port District is located in Southern Illinois. The Port District's boundaries consist all of Massac County.



Port District Biography

The Port District is strategically located along the Ohio River, it is one of the few districts in the state located along the Ohio River. The Port District is mainly rural and with a heavy presence of agriculture. Additionally, Paducah, Kentucky, a larger metropolitan area is located just across the river with multiple bridges connecting it to the Port District. These elements provide the Port District a unique advantage from over others in the state.

1929



Construction was complete on
lock and dam #52

2009



Massac-Metropolis Port District
was created

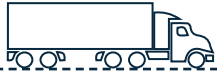
2019



Demolition began on lock and dam
#52, the lock and dam was replaced by
the Olmsted Lock and Dam a few miles
outside of the Port District

Multimodal Connections

HIGHWAY



Several interstates, state routes, and US highways traverse the port district, these include I-24, IL 145, IL 169, and US 45.

RAIL



Three class I railroads traverse the district, these include Union Pacific (UP), Burlington Northern Santa Fe (BNSF) and Canadian National (CN).

WATER



The Ohio River flows 26.5 miles along the port district's southern border, the river is part of Marine Highway 70.

AIR

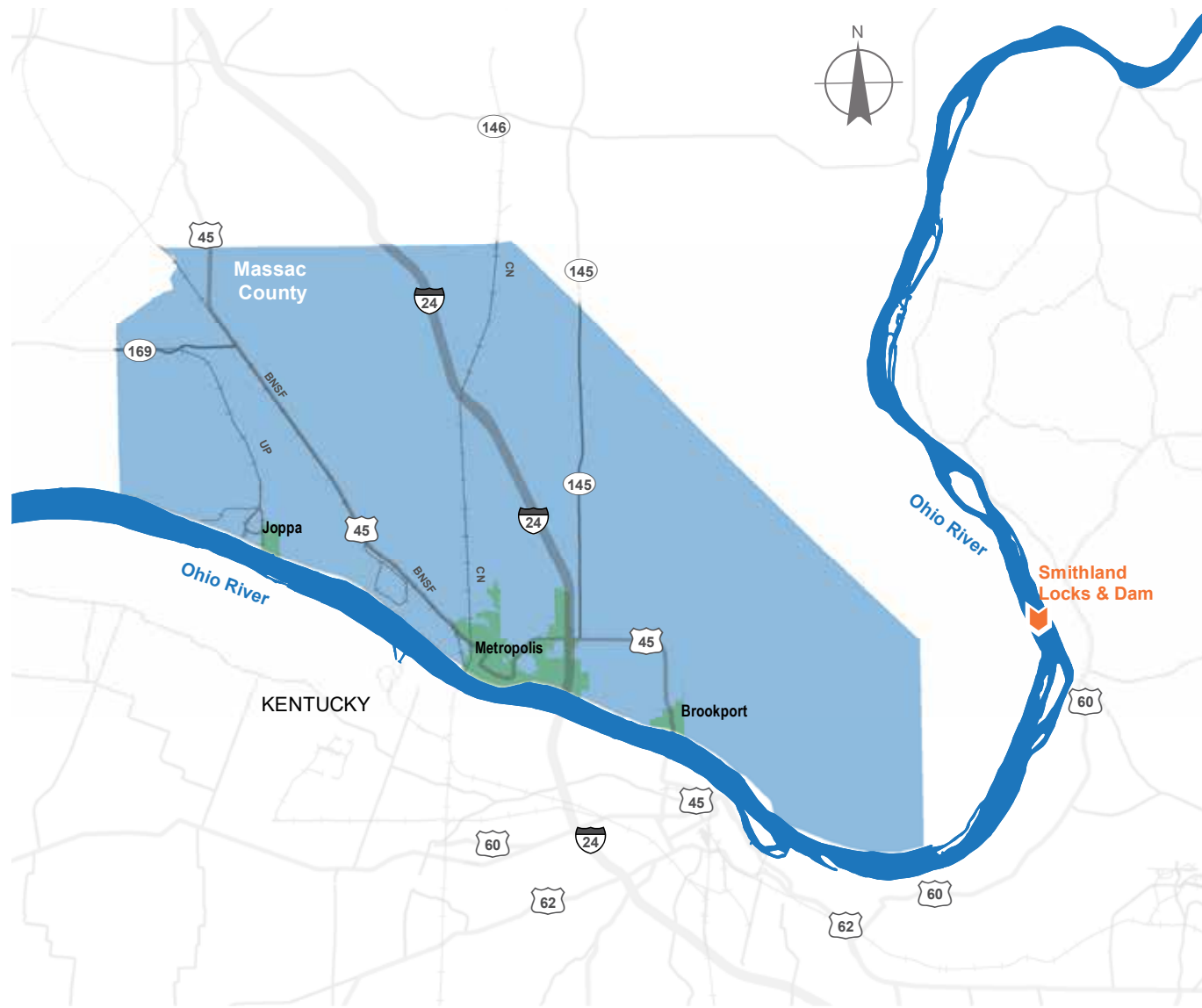


- Metropolis Municipal Airport - M30 (Metropolis, IL)

LOCKS and DAMS



- Smithland Locks & Dam - Located near the district



Port District Top Commodities:

1

COAL



2

FOOD



3

CHEMICALS



2017 Commodities by County (inbound, outbound, in-state):

MASSAC COUNTY
8.7 MILLION TONS

MASSAC- METROPOLIS PORT DISTRICT

List of Terminals (Public and Private)

- 1 Kotter Ready-Mix Inc
- 2 Cook Terminal Metropolis III
- 3 Elec Energy Steam Plant Joppa
- 4 Lafarge Corp



Economic Impact

It is estimated that marine cargo activity being handled within the Massac-Metropolis Port District directly or indirectly supports 2,557 jobs within the state. These workers earn an estimated \$153.1 million in wages and contribute approximately \$280.2 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	2,031	236	290	2,557
Income	\$119.5M	\$16.0M	\$17.7M	\$153.1M
Value Added	\$227.4M	\$27.1M	\$25.7M	\$280.2M
Output	\$490.0M	\$261.2M	\$48.0M	\$599.2M



CAPITAL NEEDS

The Massac-Metropolis Port District does not own or operate any terminal facilities. If the port district were to construct a terminal a major investment would be required. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars.

MID-AMERICA INTERMODAL AUTHORITY PORT DISTRICT

Mid-America Intermodal Authority Port District is located in Western Illinois, it's boundaries consist of Adams, Brown, Cass, Hancock, Pike, Schuyler, Henderson, Warren, Morgan, Mercer, and Scott Counties.



Port District Biography

Of all the port districts in the state, the Mid-America Intermodal Authority Port District is the largest by area, comprised of eleven counties, and unlike many port districts it has the advantage of being located on both the Mississippi and Illinois rivers. The port district is also associated with the Mid-America Port Commission, which is a three-state compact between Illinois, Missouri and Iowa whose goal is to foster economic growth in the tri-state area by developing intermodal ports on the Mississippi and Illinois rivers making the region a strong logistics location. The Commission has decided that a location in Quincy, Illinois would be the best location for a port. The port district has acquired land and is in the process of planning a port facility.

1935 - 1957



Construction on the LaGrange Lock and Dam and Locks and Dams # 17, 18, 19, 20, 21, and 22 were complete.

1998



The state legislature created the Mid-America Intermodal Authority Port District.

1999



The State of Illinois entered a three-state compact with Missouri and Iowa to form the Mid-America Port Commission.

Multimodal Connections

HIGHWAY



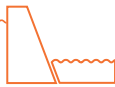
Several interstates, state routes, and US highways traverse the port district, these include I-72, I-172, IL-17, IL-78, IL-94, IL-96, IL-110 (Chicago-Kansas City Expressway) US 24, and US 67. US 61 known as the Avenue of the Saints is in Missouri, which is 5 miles west of the port district. Included within these routes are a total of 79.55 Critical Rural Freight Corridor miles within the port district.

RAIL



Three class I railroads provide service within the port district these include, Burlington Northern Santa Fe (BNSF), Kansas City Southern (KCS), and Norfolk Southern (NS). Keokuk Junction Railway (KJRY) and Burlington Junction Railway (BJRY), class III railroads provide service through the port district as well.

LOCKS and DAMS



- Lock and Dam #17
- Lock and Dam #18
- Lock and Dam #19
- Lock and Dam #20
- Lock and Dam #21
- Lock and Dam #22
- Lock and Dam #24 - Located near the district
- LaGrange Locks and Dam

WATER

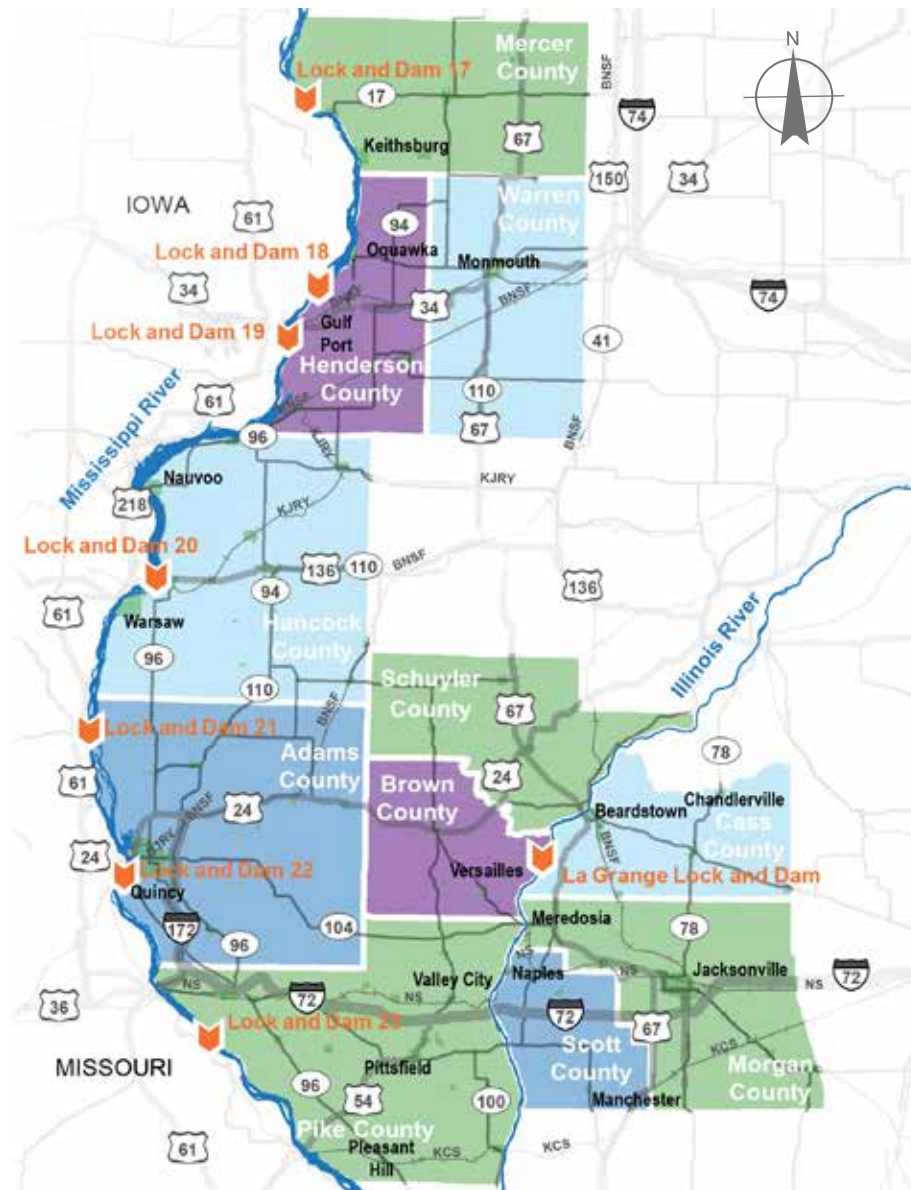


The Mississippi River flows 172 miles along the western border of the port district, the river is part of Marine Highway 35. The Illinois River flows 70.5 miles through the port district, the river is part of Marine Highway 55.

AIR



- Quincy Regional Airport - UIN (Quincy, IL)
- Mt. Sterling Municipal Airport - I63 (Mt. Sterling, IL)
- Jacksonville Municipal Airport - IJX (Jacksonville, IL)
- Beardstown Municipal Airport - K06 (Beardstown, IL)



Port District Top Commodities:

1

FOOD



2

CHEMICALS



3

FERTILIZER



2017 Commodities by County (inbound, outbound, in-state):

ADAMS COUNTY
2.3M TONS

MERCER COUNTY
80K TONS

BROWN COUNTY
NO TONNAGE

MORGAN COUNTY
1.3M TONS

CASS COUNTY
1.3M TONS

PIKE COUNTY
1.4M TONS

HANCOCK COUNTY
457K TONS

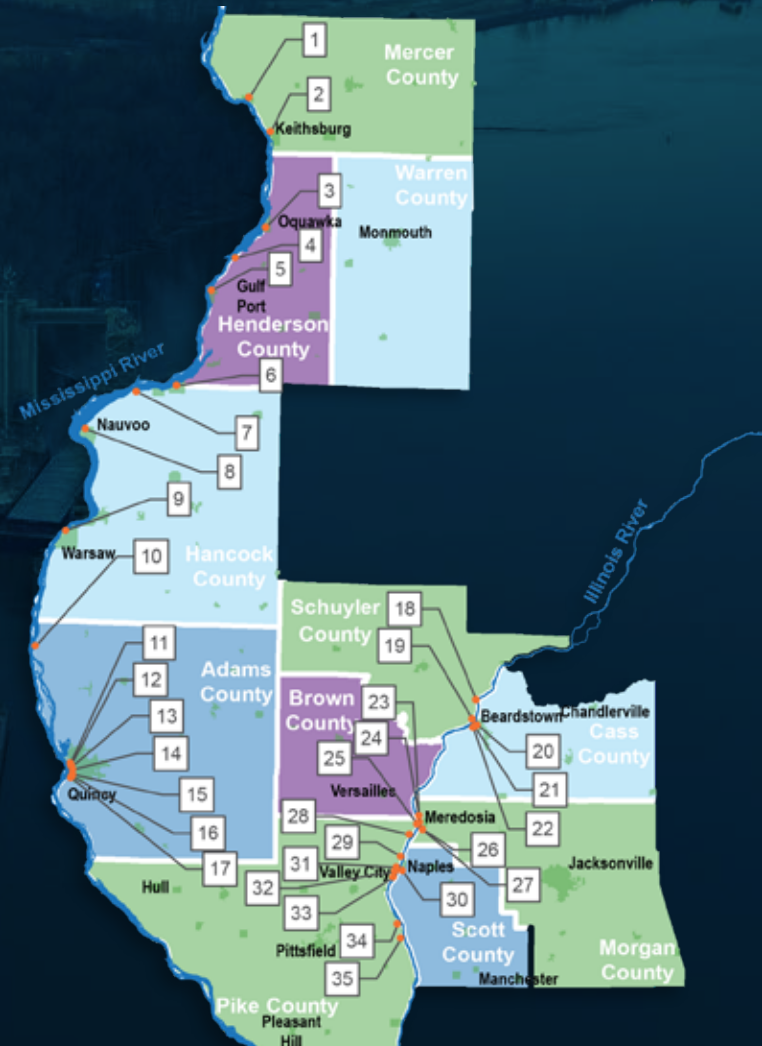
SCHUYLER COUNTY
398K TONS

HENDERSON COUNTY
242K TONS

SCOTT COUNTY
1.1M TONS

MID-AMERICA INTERMODAL AUTHORITY PORT DISTRICT

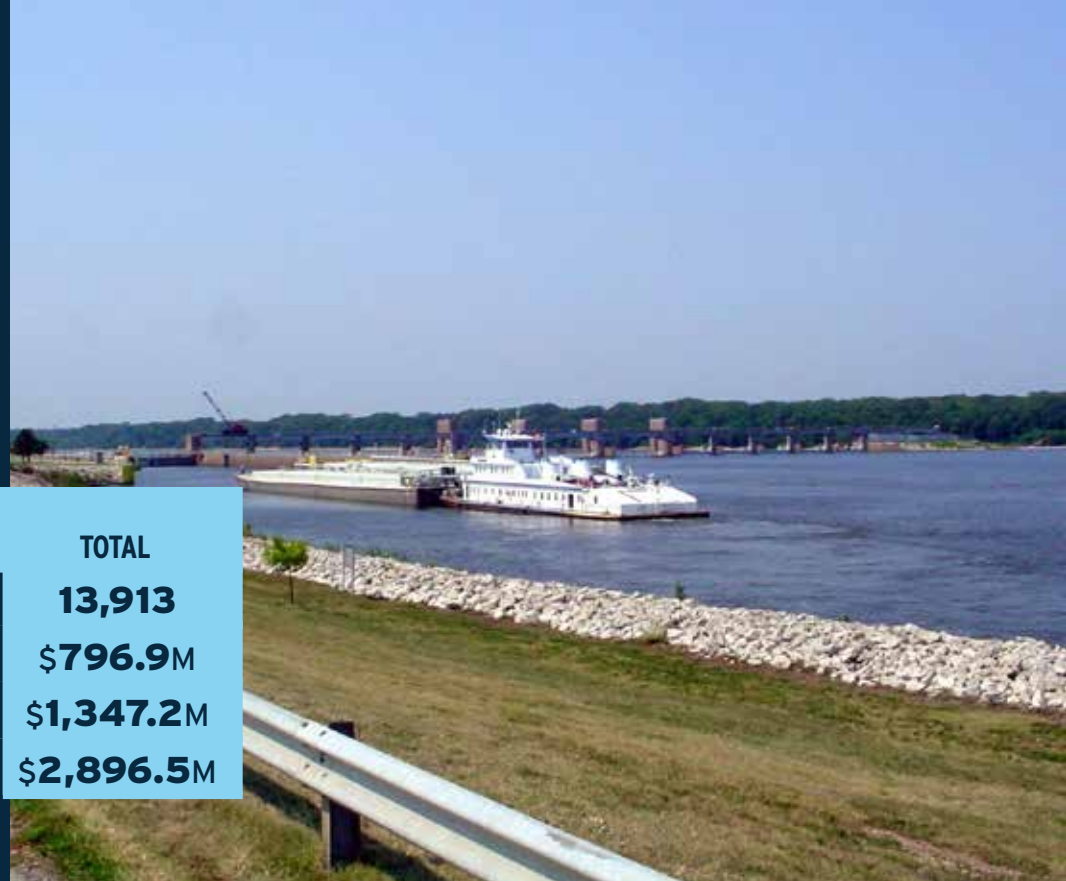
List of Terminals (Public and Private)

- 
- 1** Cargill Aghorizons, New Boston
 - 2** ADM/Growmark, Keithsburg Wharf
 - 3** Consolidated Grain & Barge, Oquawka
 - 4** Consolidated Grain & Barge
 - 5** Consolidated Grain & Barge, Gladstone
 - 6** Consolidated Grain & Barge, Dallas City
 - 7** Trammo Terminal, Niota
 - 8** Consolidated Grain & Barge
 - 9** Ursa Farmers Cooperative Co., Warsaw Division Elevator Dock
 - 10** Ursa Farmers Cooperative Co., Meyer Division, Grain Elevator Dock
 - 11** ADM/Quincy Dock
 - 12** ADM/Alliance, Quincy Dock
 - 13** ADM/Quincy, Dock
 - 14** Canton Marine Towing Co., Quincy Dock And Fleet Moorings
 - 15** Quincy Municipal Barge Terminal Wharf
 - 16** ADM/Quincy, Meal Dock
 - 17** ADM/Quincy, Meal Dock
 - 18** ADM/Growmark River System, Beardstown Terminal Dock
 - 19** Logsdon Tug Service, Beardstown Fleet Moorings
 - 20** Logsdon Sand & Gravel Co., Beardstown Dock
 - 21** Cargill Aghorizons, Beardstown Grain Elevator Dock
 - 22** Clarkson Grain Co., Beardstown Dock
 - 23** Meredosia Terminal Wharf And Pier
 - 24** Cargill Aghorizons, Meredosia Grain Elevator Dock
 - 25** Ameren Energy Generating, Meredosia Power Station, Coal Dock
 - 26** Ameren Energy Generating, Meredosia Power Station, Docks
 - 27** Ameren Energy Generating, Meredosia Power Station Fuel Oil Dock
 - 28** Trammo Terminal, Meredosia
 - 29** ADM/Growmark River System, Naples Grain Elevator Dock
 - 30** Consolidated Grain And Barge Co., Naples Elevator Grain Dock
 - 31** Consolidated Grain And Barge Co., Docks
 - 32** Consolidated Grain And Barge Co., Naples Fertilizer Dock
 - 33** Osage Marine Services, Naples Fleet Moorings
 - 34** Central Stone Co., Florence Dock
 - 35** Cargill Aghorizons, Florence Grain Elevator Dock

Economic Impact

It is estimated that marine cargo activity being handled within the Mid-America Intermodal Authority Port District directly or indirectly supports 13,913 jobs within the state. These workers earn an Estimated \$796.9 million in wages and contribute approximately \$1.3 billion towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	11,080	1,114	1,719	13,913
Income	\$616.1M	\$75.2M	\$105.5M	\$796.9M
Value Added	\$1,066.8M	\$127.7M	\$152.7M	\$1,347.2M
Output	\$2,332.1M	\$288.4M	\$276.0M	\$2,896.5M



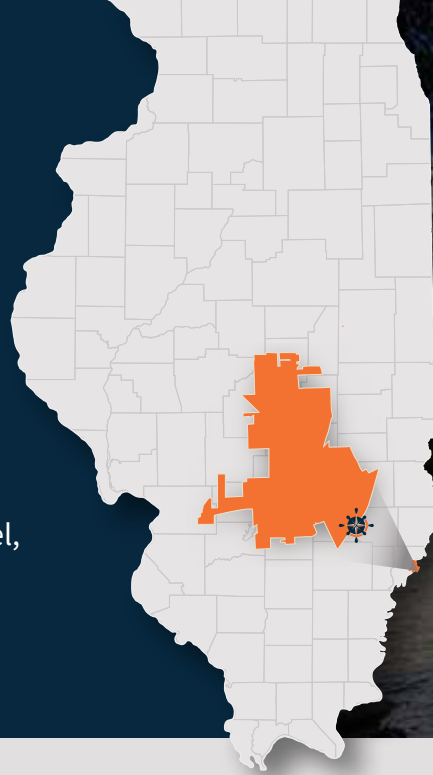
CAPITAL NEEDS

The Port District is developing a terminal south of Quincy, Illinois along the Mississippi River. The multimodal facility will provide transloading between barge, truck and rail. The facility will be capable to handle container on barge, dry bulk, liquid and roll-on roll-off.

Estimated Total Costs: \$11.9 Million

MT. CARMEL REGIONAL PORT DISTRICT

The Mt. Carmel Regional Port District is located in Southeastern Illinois. Its boundaries consist of all the limits of the City of Mt. Carmel, Illinois.



Port District Biography

The Port District is located on the Wabash River which is not commercially navigable. The Port District was established to show support for the channelization of the Wabash River. Between 1967 and 1975 there were a total of eight United States Senate and House Public Works Committee resolutions that authorized studies for the establishment of navigation of the Wabash River and its tributaries. By 1977, the Army Corps of Engineers (Louisville District) completed the final study and found that channelization of the lower Wabash River was economically unjustified.

1971



Mt. Carmel Regional Port District was created.

Multimodal Connections

HIGHWAY

Several state routes traverse the port district, these include IL-1 and IL-15.

RAIL

Norfolk Southern (NS) a One Class I railroad provides service within the port district.

WATER

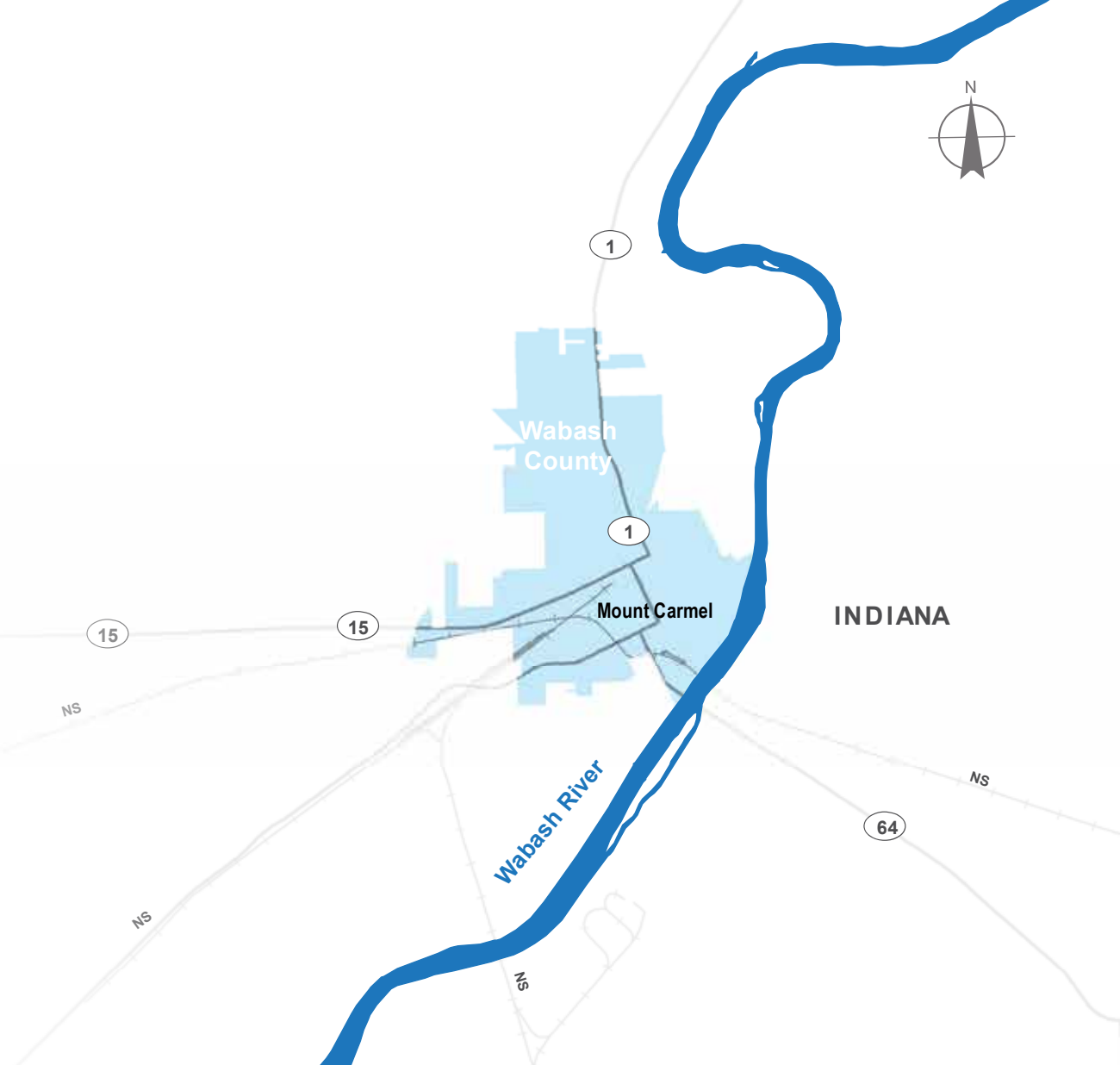
The Wabash River flows 1.5 miles along the port district eastern border, the river does not have a navigation channel and does not support commercial navigation.

AIR

- Mt. Carmel Municipal Airport - AJG (Mt. Carmel, IL)

LOCKS and DAMS

- None



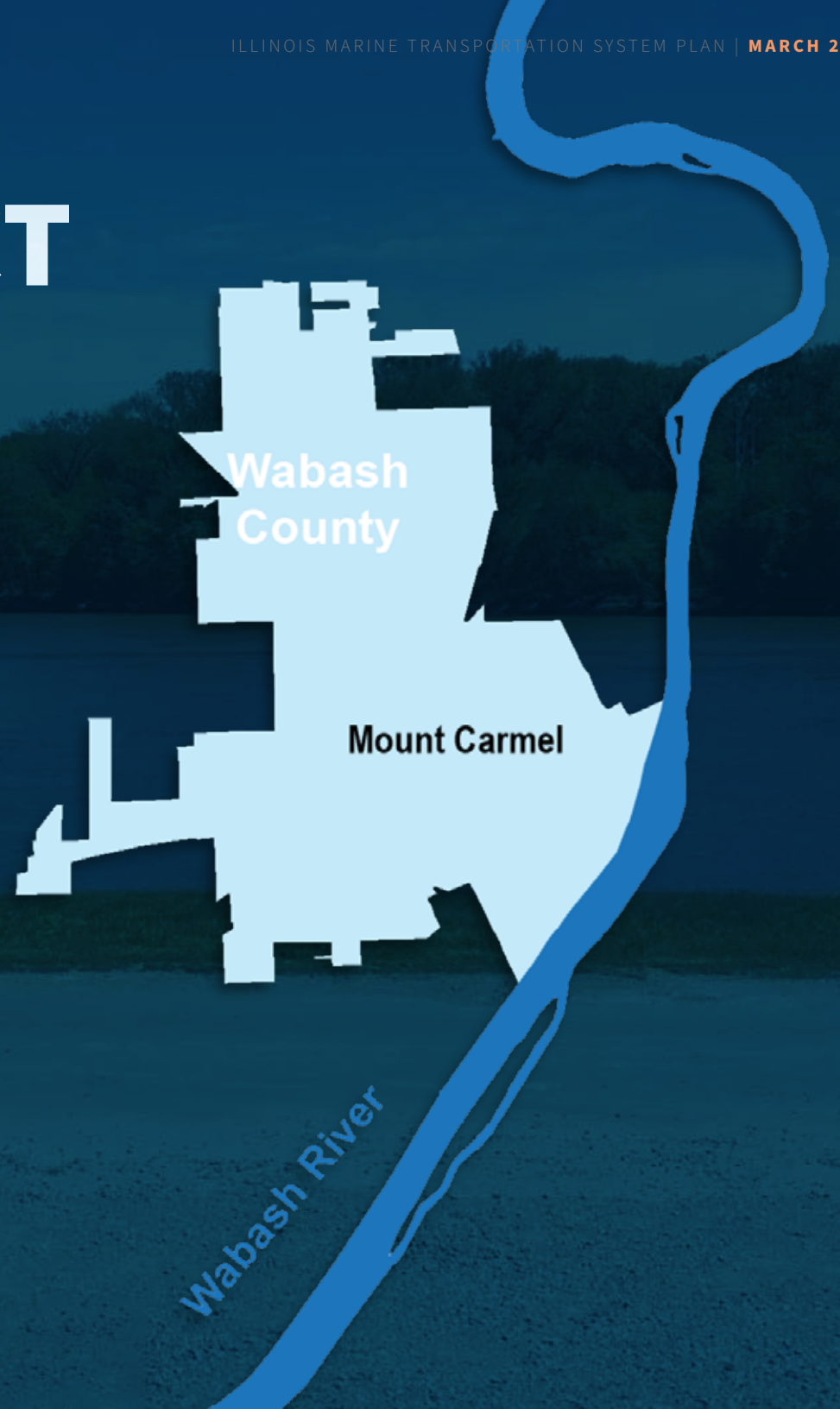
Top Commodities

The Mt. Carmel Regional Port District is situated on the Wabash River, which is not commercially navigable, due to this fact there are no waterborne commodities to report.

MT. CARMEL PORT DISTRICT

List of Terminals (Public and Private)

None



Economic Impact

The Port District is located on the Wabash River which is not commercially navigable. Due to that fact, the river does not handle cargo and there is no substantial economic impact associated.

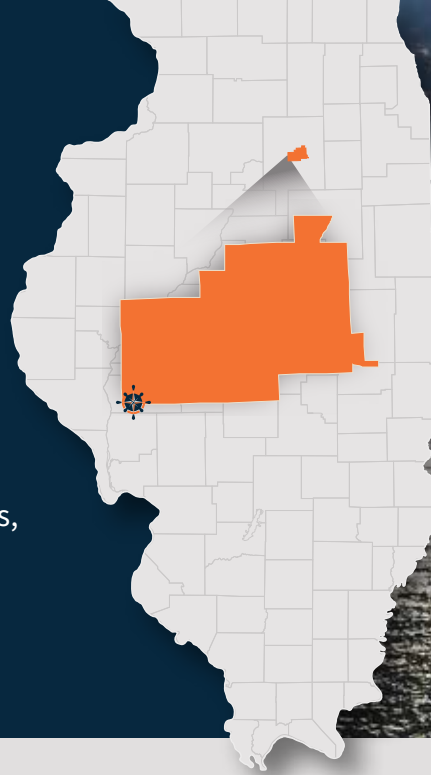


CAPITAL NEEDS

The Mt. Carmel Regional Port District is situated on the Wabash River which is not commercially navigable, due to this fact a marine terminal is not feasible.

OTTAWA PORT DISTRICT

The Ottawa Port District is located in North-Central Illinois, it encompasses the entire city limits of Ottawa and portions of Ottawa and South Ottawa townships, in LaSalle County.



Port District Biography

The Ottawa Port District is strategically placed within LaSalle County which is located in North-Central Illinois. One of the district's great advantages is the proximity of Illinois River, interstate 80, and the CSX rail line that all are closely accessible to each other. The general convergence of all these three modes provides a great transportation advantage to shippers and customers.

2011



Ottawa Port District was created.

Multimodal Connections

HIGHWAY



Several interstate, state routes, and US highways traverse the port district, these include I-80, IL 23, IL 71, and US 6.

RAIL



CSX Transportation (CSXT) a class one railroad provides service within the port district and connections nationwide, east of the Mississippi River. The Illinois Railway (IR) a short line railroad provides service as well and intersects with the BNSF Railroad, another Class 1 railroad with connections nationwide west of the Mississippi River.

WATER



The Illinois River flows 12 miles through the port district, the river is part of Marine Highway 55.

AIR

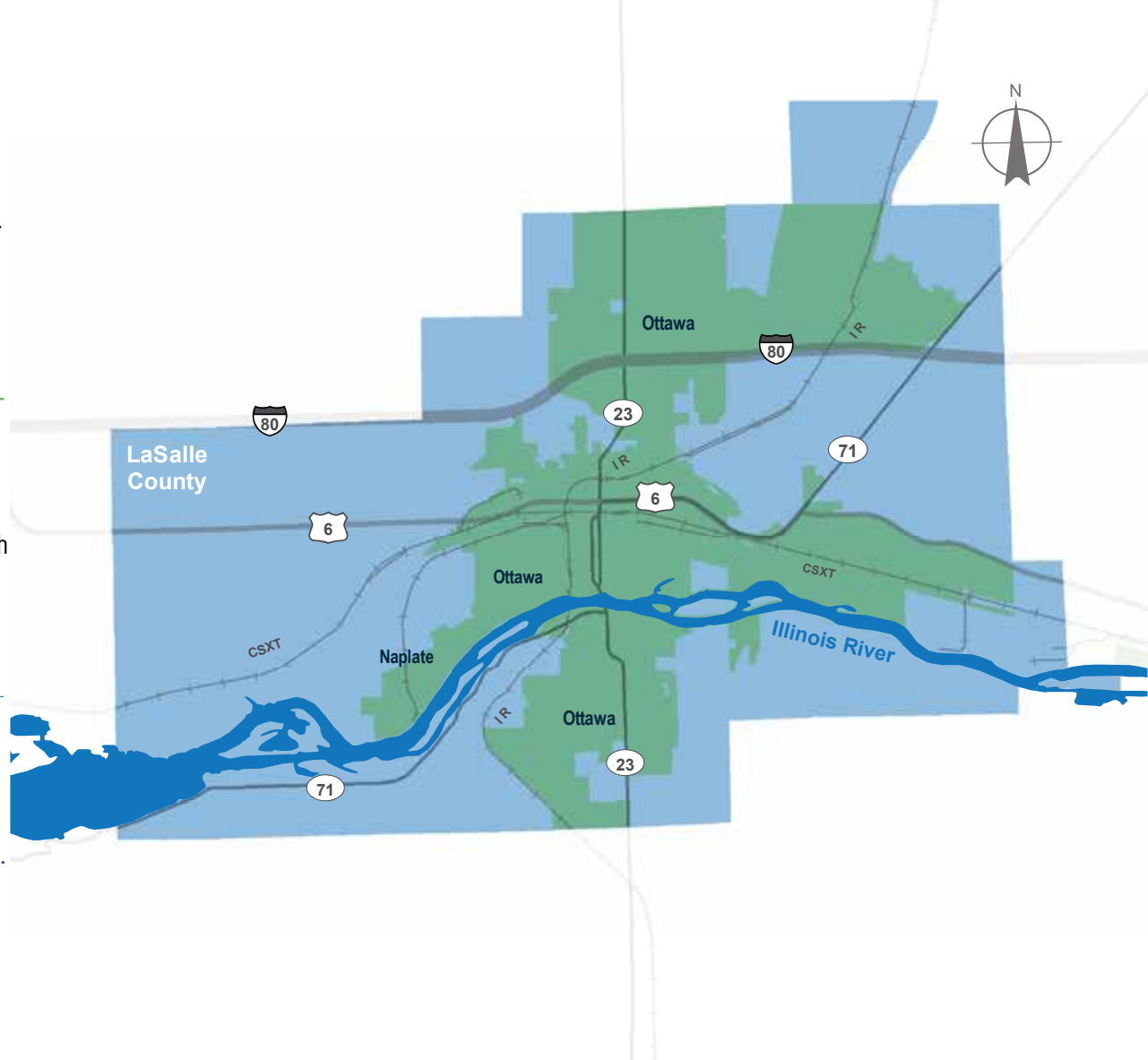


- Illinois Valley Regional Airport - VYS (Peru, IL)

LOCKS and DAMS



- Starved Rock Lock and Dam - Located near the district
- Marseilles Lock and Dam - Located near the district



Port District Top Commodities:

1

**PETROLEUM
PRODUCTS**



2

FOOD



3

FERTILIZER



2017 Commodities by County* (inbound, outbound, in-state):

LASALLE COUNTY
2.2 MILLION TONS

*Note Ottawa Port District does not encompass the entirety of LaSalle County

OTTAWA PORT DISTRICT

List of Terminals (Public and Private)

- 1 SABIC Innovative Plastics
- 2 Bruce Oakley Terminal
- 3 ADM Terminal Services - Upper Dock
- 4 ADM Terminal Services - Lower Dock
- 5 ADM Grain - Ottawa North
- 6 Artco - Ottawa Fleeting Operations
- 7 ADM Grain - Ottawa South
- 8 Ottawa Barge Terminal, Bulk Materials Dock
- 9 Ottawa Barge Terminal , Dock



Economic Impact

It is estimated that marine cargo activity being handled within the Ottawa Port District directly or indirectly supports 1,254 jobs within the state. These workers earn an estimated \$80.3 million in wages and contribute approximately \$132 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	995	103	156	1,254
Income	\$62.8M	\$6.9M	\$10.5M	\$80.3M
Value Added	\$105.1M	\$11.8M	\$15.2M	\$132.1M
Output	\$215.1M	\$26.6M	\$27.3M	\$269.0M

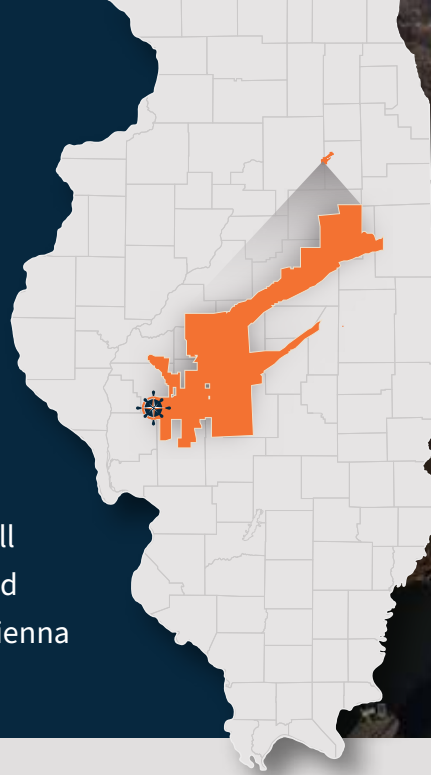


CAPITAL NEEDS

The Ottawa Port District does not own or operate any terminal facilities. If the Port District were to construct a terminal a major investment would be required. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars.

SENECA REGIONAL PORT DISTRICT

The Seneca Regional Port District is located in North-Central Illinois, its boundaries consist of all of the limits of the village of Seneca, as well as portions of Manlius and Brookfield Townships in LaSalle County and Erienna Township in Grundy County.



Port District Biography

The Port District is located in North-Central Illinois, just 65 miles southwest of Chicago providing it access to one of the nation's largest markets. The district owns and leases a chemical terminal that is located on 16 acres. One of the district's great advantages is the proximity of Illinois River, Interstate 80, and the CSX rail line, all of which are easily accessible to each other. The general convergence of these three modes provides a great transportation advantage to shippers and customers of goods.

1942-1945



The site of the Shipyard Industrial Park was home to the "Prairie Shipyard" which built 157 LSTs (landing ship, tank) for the U.S military during WWII, 23 of the 157 were directly involved in the D-Day assault in Normandy.

1960



General Service Administration decides to sell the former WWII Prairie Shipyard property. The soon to be Seneca Regional Port District would go onto purchase the property.

1961



Seneca Regional Port District was created.

Multimodal Connections

HIGHWAY



Two major roads provide service throughout the port district, these include IL-170 and US 6. Additionally, Interstate 80 is located just north of the port district.

RAIL



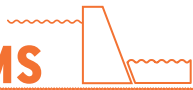
CSX Transportation (CSXT) a class I railroad provides service within the port district.

WATER



The Illinois River flows 5 miles through the port district, the river is part of Marine Highway 55.

LOCKS and DAMS



- Marseilles Lock and Dam - Located near the district



Port District Top Commodities:

1

PETROLEUM
PRODUCTS



2

FOOD



3

FERTILIZER



2017 Commodities by County* (inbound, outbound, in-state):

LASALLE COUNTY

2.2 MILLION TONS

GRUNDY COUNTY

711 THOUSAND TONS

*Note Seneca Regional Port District does not encompass the entirety of the listed counties

SENECA REGIONAL PORT DISTRICT

List of Terminals (Public and Private)

- 1** Renewable Energy Group, Inc.
- 2** Cf Industries, Seneca Terminal Dock
- 3** Growmark, Inc.
- 4** Cargill Aghorizons, Seneca Grain Elevator Wharf



Economic Impact

It is estimated that marine cargo activity being handled within the Seneca Regional Port District directly or indirectly supports 394 jobs within the state. These workers earn an estimated \$25.4 million in wages and contribute approximately \$43.6 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The table to the right breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	309	38	48	394
Income	\$19.9M	\$2.5M	\$3.0M	\$25.4M
Value Added	\$35.0M	\$4.3M	\$4.3M	\$43.6M
Output	\$76.4M	\$9.7M	\$8.0M	\$94.1M

Port-Owned Property Economic Impact

Independent of the port district economic analysis, the economic impacts of on-port tenants are presented below. These impacts are centered around the employment of businesses on port property: ranging from restaurants, golf courses, and youth organizations, to manufacturers and barge operators. These impacts represent the activities of marine, and non-marine businesses to show the diversity of port activity.

EMPLOYMENT	28
INCOME	\$2.3M
VALUE ADDED	\$4.0M
OUTPUT	\$10.7M



Seneca Terminal

The Seneca Regional Port District owns 15.7 acres of land along the Illinois River. The port district leases the terminal to C.F Industries who handle liquid anhydrous ammonia for fertilizer purposes. The anhydrous ammonia is held in a 1.13 million cubic foot tank. The terminal receives the product by barge and sends out the product via truck, the terminal does not have any rail access.

LAYOUT KEYNOTE

- ① Breasting Dolphins (3 Total)
- ② Unloading Platform with Manifolds
- ③ Pipeline (10-inch)
- ④ Storage Tank (1.13M CF)
- ⑤ Truck Loading/Unloading
- ⑥ Administration Building
- ⑦ Operations Buildings
- ⑧ Site Access Gate

TERMINAL CHARACTERISTICS

Terminal: Seneca
Berth Structure: 3 (Breasting)
Storage: 1.13M CF Tank Storage
Rail: None
Area: 15.7 acres
Commodities: Anhydrous Ammonia



SHAWNEETOWN REGIONAL PORT DISTRICT

The Shawneetown Regional Port District is located in Southeastern Illinois; its boundaries consist of large portions of Gallatin and Hardin Counties. A large portion of the Port District is located within the Shawnee National Forest.



Port District Biography

The Port District is located in Southeastern Illinois and is one of the few districts located on the Ohio River. The district is mainly rural with a heavy agricultural presence. Additionally, a large portion of the district is located within the Shawnee National Forest. Due to this fact, development of terminals along the river presents unique challenges that other port districts do not face.

1961



The Shawneetown Regional Port District was created.

Multimodal Connections

HIGHWAY



Several state routes traverse the port district, these include IL-1, IL-13, IL-141, IL-142, and IL-147.

RAIL



There is no rail access within the district.

WATER



The Ohio River flows 25.5 miles along the port district's eastern border, the river is part of Marine Highway 70. The Wabash River flows 15 miles along the port district's eastern border, the river does not have a navigation channel and does not support commercial navigation. The Wabash River flows into the Ohio River at Ohio River Mile Marker 848.

AIR



- Carmi Municipal Airport - CUL (Carmi, IL)

LOCKS and DAMS



- John T. Meyers Locks and Dam - Located near the district



Port District Top Commodities:

1

FOOD



2

PETROLEUM
PRODUCTS

3

COAL



2017 Commodities by County* (inbound, outbound, in-state):

HARDIN COUNTY

1.5 MILLION TONS

GALLATIN COUNTY

42 THOUSAND TONS

*Note Shawneetown Regional Port District does not encompass the entirety of the listed counties

SHAWNEETOWN REGIONAL PORT DISTRICT

List of Terminals (Public and Private)

- 1 Delta Materials, Shawneetown Upper Wharf
- 2 Bunge Corp Shawneetown III
- 3 Delta Materials, Shawneetown Lower Wharf
- 4 Delta Materials
- 5 Peabody Coal Co.



Economic Impact

It is estimated that marine cargo activity being handled within the Shawneetown Regional Port District directly or indirectly supports 115 jobs within the state. These workers earn an estimated \$7.2 million in wages and contribute approximately \$11.7 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	70	7	38	115
Income	\$4.4M	\$0.5M	\$2.4M	\$7.2M
Value Added	\$7.4M	\$0.9M	\$3.4M	\$11.7M
Output	\$15.3M	\$1.9M	\$5.6M	\$22.8M

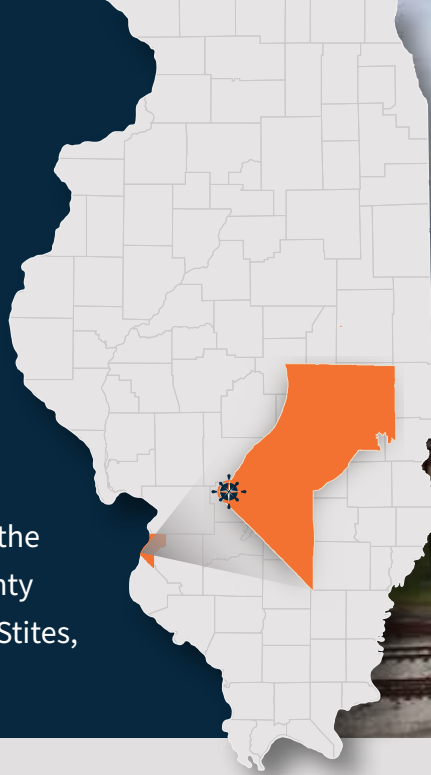


CAPITAL NEEDS

The Shawneetown Regional Port District does not own or operate any terminal facilities. If the port district were to construct a terminal a major investment would be required. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars.

SOUTHWEST REGIONAL PORT DISTRICT

The Southwest Regional Port District is located in Southwestern Illinois, across the river from St. Louis Missouri. The Port District's boundaries consist of the following townships in St. Clair County Canteen, Centreville, East St. Louis, Stites, and Sugar Loaf.



Port District Biography

The Southwest Regional Port District is located directly across the river from St. Louis, this provides the Port District with a great logistical advantage. The St. Louis metro area is one of the nation's largest markets, likewise the Port District has direct access to many interstates and class I railroads. Additionally, the Port District has the advantage of being located just south of the last lock and dam on the Mississippi River providing cost and time savings to shippers.



1994

Southwest Regional Port District was created.

Multimodal Connections

HIGHWAY



Several interstates and state routes traverse the port district, these include I-44, I-55, I-64, I-70, I-255, IL 3, IL 15, IL 111, IL 157, and IL 203. Included within these routes are a total of 5.21 Critical Urban Freight Corridor miles within the port district.

RAIL



Four class I railroads provide service within the port district these include Kansas City Southern (KCS), Norfolk Southern (NS), Union Pacific (UP) and CSX Transportation (CSXT). The Terminal Railroad Association of St. Louis (TRRA) a short line railroad provides terminal and switching service within the St. Louis Metro area.

WATER

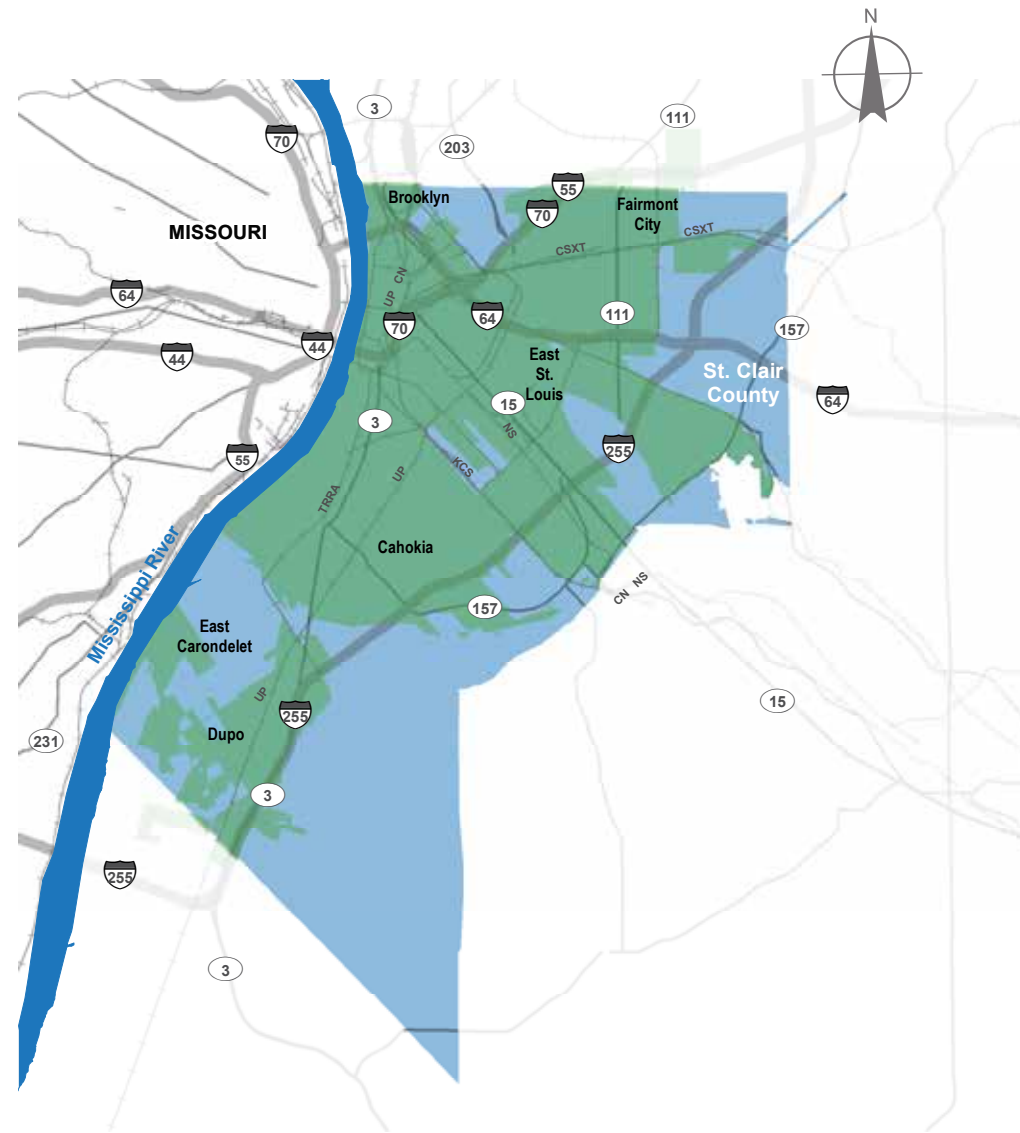


The Mississippi River flows 11 miles along the port district's western border, the river is part of Marine Highway 55.

AIR



- MidAmerica St. Louis Airport - BLV (Belleville, IL)
- St. Louis Downtown Airport - CPS (Cahokia, IL)
- St. Louis Regional Airport - ALN (East Alton, IL)



Port District Top Commodities:

1

FOOD



2

FERTILIZER



3

PETROLEUM
PRODUCTS

2017 Commodities by County* (inbound, outbound, in-state):

ST. CLAIR COUNTY
11 MILLION TONS

*Note Southwest Regional Port District does not encompass the entirety of St. Clair County

SOUTHWEST REGIONAL PORT DISTRICT

List of Terminals (Public and Private)

- 1 Bunge-Scf Grain Terminal, Fairmont City
- 2 Cargill Aghorizons, East St. Louis Elevator Wharf
- 3 Peavey/Conagra Foods, East St. Louis I.c. & B.n. Dock
- 4 Cahokia Marine Service Dock
- 5 Peavey/Conagra Foods, Sauget Grain And Bulk Terminal Dock
- 6 Gateway Terminal Llc
- 7 Consolidated Grain & Barge
- 8 Riverway Repair Dock



Economic Impact

It is estimated that marine cargo activity being handled within the Southwest Regional Port District directly or indirectly supports 8,713 jobs within the state. These workers earn an estimated \$581.9 million in wages and contribute approximately \$967.8 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	5,723	684	2,307	8,713
Income	\$340.5M	\$46.0M	\$77.3M	\$581.9M
Value Added	\$613.2M	\$77.3M	\$277.3M	\$967.8M
Output	\$1,346.9M	\$174.6M	\$464.3M	\$1,985.9M

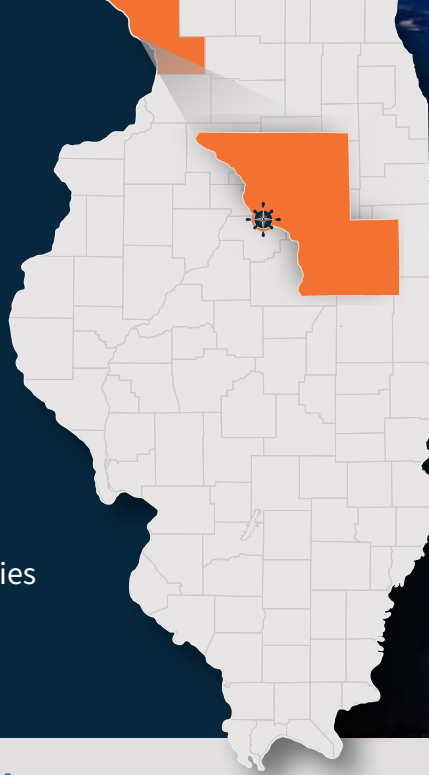


CAPITAL NEEDS

The Southwest Regional Port District does not own or operate any terminal facilities. If the Port District were to construct a terminal a major investment would be required. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars.

UPPER MISSISSIPPI RIVER INTERNATIONAL PORT DISTRICT

The Upper Mississippi River International Port District is located in Northwestern Illinois. Its boundaries consist all of Carroll and Jo Daviess Counties.



Port District Biography

The Upper Mississippi River International Port District is the northernmost Port District within Illinois located on the Mississippi River. The port district has been working in conjunction with the Jo-Carroll Depot Local Redevelopment Authority (LRA) which owns 37 percent of the 3,000 acres that the U.S. Army is in the process of transferring to the LRA. This area was previously the Savanna Army Depot and is now known as the Savanna Industrial Park. The Port District and LRA have been working together since 2009 to explore the development of a public port at the Savanna Industrial Park. Additionally, it is important to note that along the Mississippi River throughout the port district, the United States Fish and Wildlife Service owns vast areas of land.

1917



The Savanna Army Depot was officially opened. The depot covered 13,062 acres northwest of Savanna, Illinois. It was initially used as an ammunition test range. By 1942 the depot saw great expansion and at its height, employed 7,195 people in the manufacturing and storage of ammunition.

1938



Construction was completed on Lock and Dam #12.

1995



The Savanna Army Depot was selected for closure under the Base Realignment and Closure Act.

1997



Carroll and Jo Daviess Counties entered into an intergovernmental agreement to develop the Jo-Carroll Depot Local Redevelopment Authority (LRA). The organization is tasked with overseeing transfer of property and providing economic development at the Savanna Depot.

1999



The Local Redevelopment Authority was created.

2000



The Savanna Army Depot was officially closed and 3,000 acres of the depot was designated for economic development.

2009



The Upper Mississippi River International Port District was created.

Multimodal Connections

HIGHWAY



Several state routes and US highways traverse the port district, these include IL-78, IL-84, IL-40, US 20, and US 52. Included within these routes are a total of 45.9 Critical Rural Freight Corridor miles within the port district.

RAIL



Two class I railroads provide service within the port district which are Burlington Northern Santa Fe (BNSF) and Canadian National (CN). The Riverport Railroad, a short line railroad, provides terminal and switching service within the Savanna Army Depot (Savanna Industrial Park).

WATER

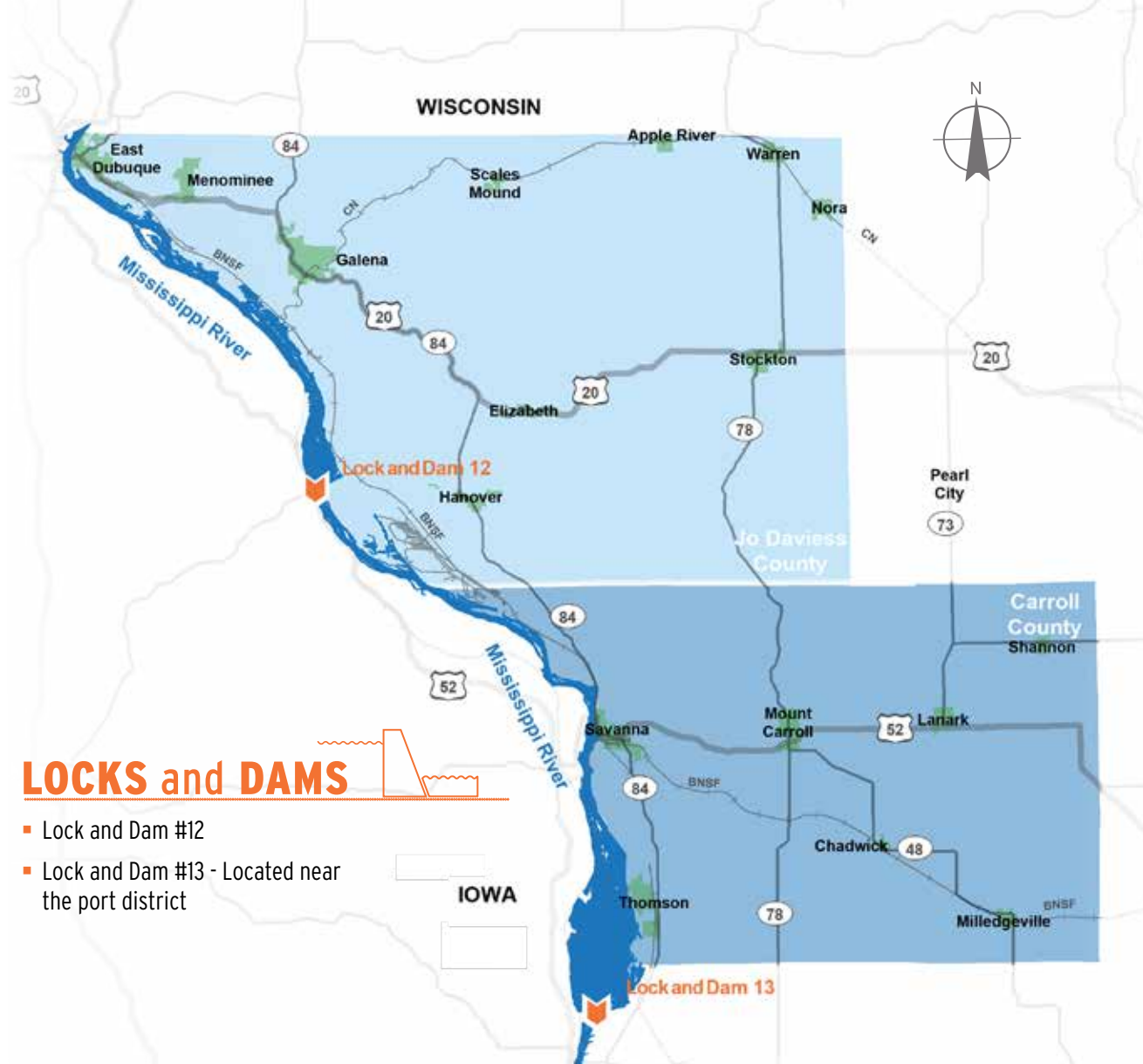


The Mississippi River flows 56 miles along the port district's western border, the river is part as Marine Highway 35.

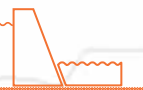
AIR



- Tri-Township Airport - SFY (Savanna, IL)



LOCKS and DAMS



- Lock and Dam #12
- Lock and Dam #13 - Located near the port district

Port District Top Commodities:

1

FOOD



2

FERTILIZER



3

SAND & GRAVEL



2017 Commodities by County (inbound, outbound, in-state):

CARROLL COUNTY

72 THOUSAND TONS

JOE DAVIESS COUNTY

439 THOUSAND TONS

UPPER MISSISSIPPI RIVER INTERNATIONAL PORT DISTRICT

List of Terminals (Public and Private)

- 1 NEWT Marine Services
- 2 I.E.I. Barge Services, Coal Wharf
- 3 Consolidated Grain And Barge Co., East Dubuque, Grain Elevator WH
- 4 I.E.I. Barge Services, Bulk Materials Wharf
- 5 Aggregate Materials Co. Inc., East Dubuque Wharf
- 6 I.E.I. Barge Services Inc., Fertilizer Wharf
- 7 Rentech Nitrogen LLC
- 8 Newt Marine Service, Savanna Dock
- 9 Consolidated Grain & Barge Co., Savanna Grain Elevator Dock



Economic Impact

It is estimated that marine cargo activity being handled within the Upper Mississippi River International Port District directly or indirectly supports 1,604 jobs within the state. These workers earn an estimated \$99.7 million in wages and contribute approximately \$163.9 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The following table breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	1,153	122	330	1,604
Income	\$72.1M	\$8.2M	\$19.3M	\$99.7M
Value Added	\$122.1M	\$14.0M	\$27.8M	\$163.9M
Output	\$252.1M	\$31.6M	\$47.7M	\$331.4M

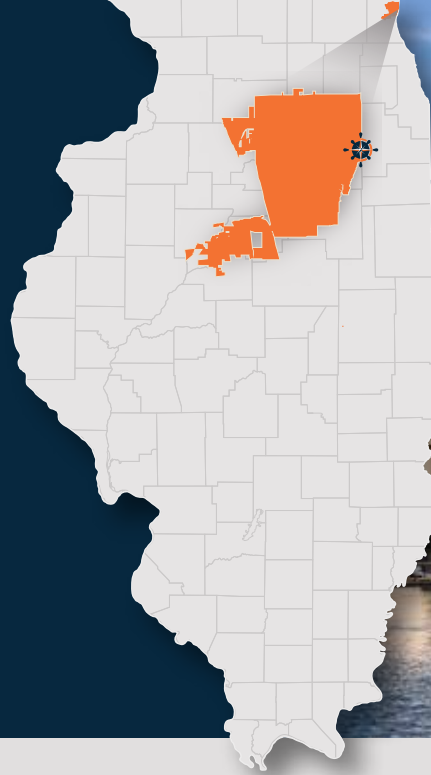


CAPITAL NEEDS

The Upper Mississippi River International Port District does not own or operate any terminal facilities. The construction of a terminal appears to be feasible and the LRA is presently overseeing re-use and planning efforts in order to establish final viability for such a project.

WAUKEGAN PORT DISTRICT

The Waukegan Port District is located in Northeastern Illinois, it encompasses the entire city limits of Waukegan and portions of Benton Township, Lake County.



Port District Biography

The Waukegan Port District is located in Northeastern Illinois along Lake Michigan. The Port District owns portions of the Waukegan harbor and a full service public recreational marina, the marina is equipped with nearly 700 slips. Additionally, the Port District owns the Waukegan National Airport which is a reliever airport for Chicago's O'Hare International Airport.

1955



Waukegan Port District
was created

1956



Waukegan National
Airport opens

Multimodal Connections

HIGHWAY



Several interstates, state routes, and US highways traverse the port district, these include I-94, IL 43, IL 120, IL 131, IL 137, and US 41.

RAIL



Two class I railroads provide service within the port district these include, Union Pacific (UP) and Canadian Pacific (CP).

WATER



The port district has 6.8 miles of coastline along Lake Michigan, the lake is part of Marine Highway 90.

AIR

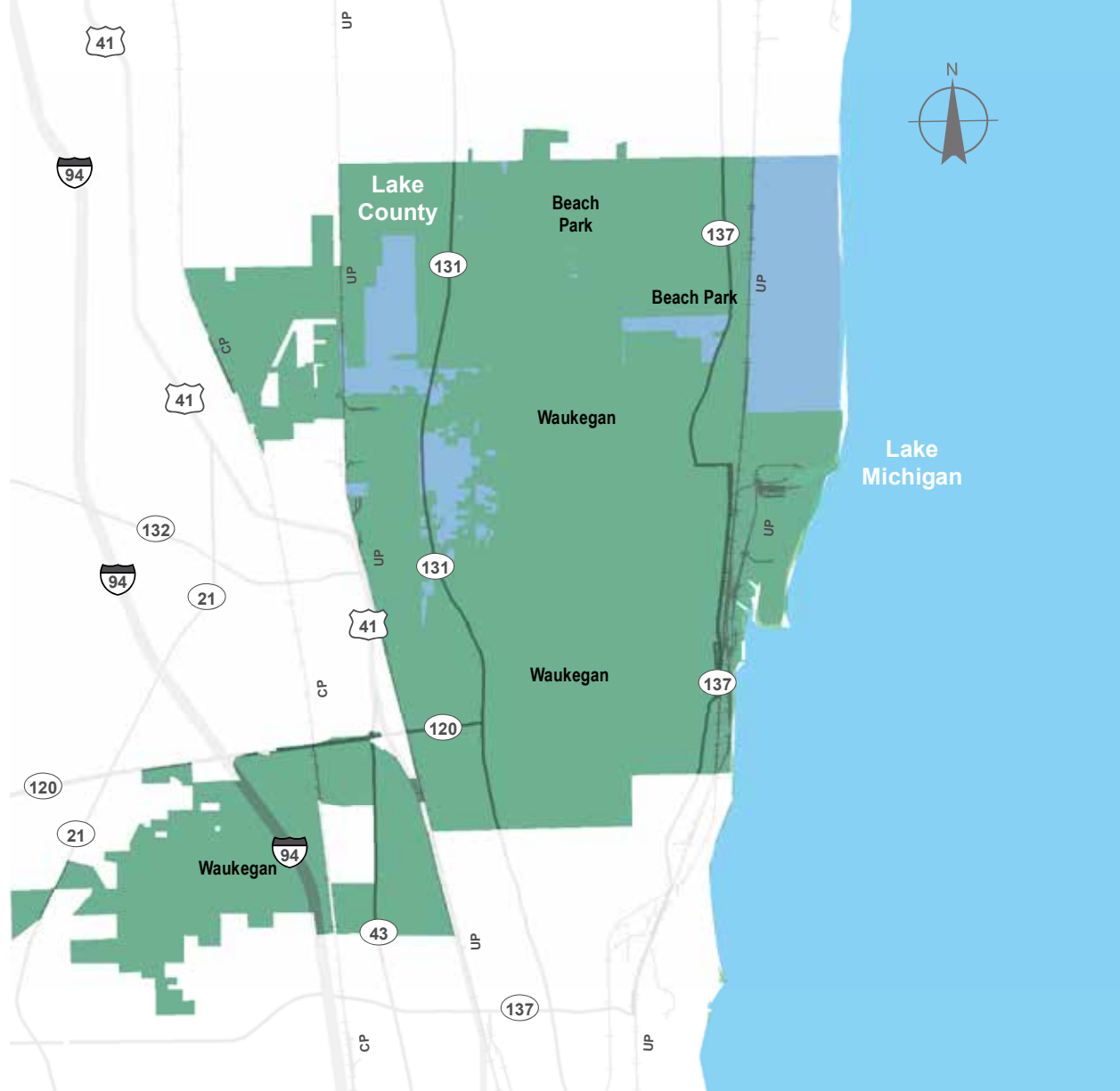


- Waukegan Regional Airport - UGN (Waukegan, IL)

LOCKS and DAMS



- No locks or dams



Port District Top Commodities:

1

**SAND
& GRAVEL**



2017 Commodities by County* (inbound, outbound, in-state):

LAKE COUNTY
117 THOUSAND TONS

*Note Waukegan Port District does not encompass the entirety of Lake County

WAUKEGAN PORT DISTRICT

List of Terminals (Public and Private)

- 1** National Gypsum
- 2** Waukegan Harbor Public Dock



Economic Impact

It is estimated that marine cargo activity being handled within the Waukegan Port District directly or indirectly supports 107 jobs within the state. These workers earn an estimated \$6.9 million in wages and contribute approximately \$11.6 million towards State GDP. The activity enabled comes from shippers across the state making use of facilities within the district, as well as the services supporting their goods movement. The table to the right breaks out the impact by the type of activity occurring.

	PORT USER	MARINE INDUSTRY	MARINE SUPPORTING	TOTAL
Employment	85	10	11	107
Income	\$5.6M	\$0.7M	\$0.7M	\$6.9M
Value Added	\$9.5M	\$1.1M	\$1.0M	\$11.6M
Output	\$19.1M	\$2.6M	\$1.9M	\$23.6M

Port-Owned Property Economic Impact

Independent of the port district economic analysis, the economic impacts of on-port tenants are presented below. These impacts are centered around the employment of businesses on port property: ranging from restaurants, golf courses, and youth organizations, to manufacturers and barge operators. These impacts represent the activities of marine, and non-marine businesses to show the diversity of port activity.

EMPLOYMENT	Waukegan Airport	586	815
	Waukegan Port	228	
INCOME	Waukegan Airport	\$41.5M	\$54.0M
	Waukegan Port	\$12.5M	
VALUE ADDED	Waukegan Airport	\$71.2M	\$91.0M
	Waukegan Port	\$19.8M	
OUTPUT	Waukegan Airport	\$109.2M	\$141.8M
	Waukegan Port	\$32.6M	

CAPITAL NEEDS

The Waukegan Port District does not own or operate any terminal facilities. If the Port District were to construct a terminal a major investment would be required. Depending on the type of terminal, the cost of construction could range from a couple million dollars to tens of millions of dollars. Capital needs at this time are reengineering of the commercial dock for future high water use and safer docking for large vessels.

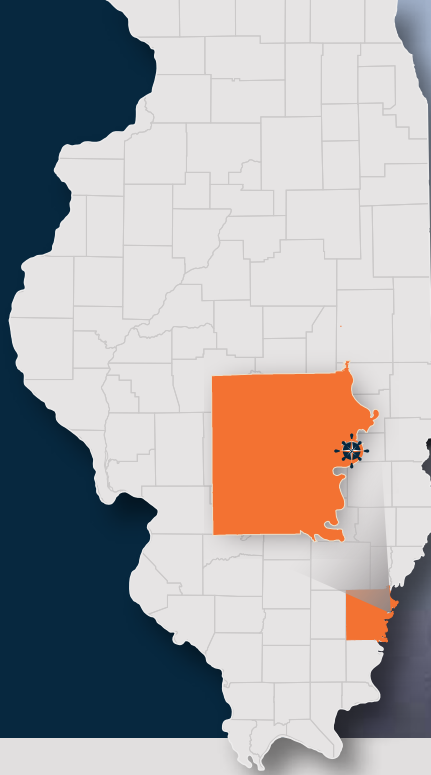
Waukegan Airport

The Waukegan National Airport is owned and operated by the Waukegan Port district and is a reliever airport for O'Hare International Airport, located 35 miles North of Chicago. The airport covers 520 acres and has 54 hangars which total nearly 600 thousand square feet of space, 16 office buildings which total 87,000 square feet, and a terminal building which is 15 thousand square feet. The airport has two paved runways one which is 6,000 square feet long and another which is 3,750 feet long. The airport has 188 based aircraft and annually supports 50,5000 aircraft operations.



WHITE COUNTY PORT DISTRICT

The White County Port District is located in Southeastern Illinois. The Port District's boundaries consist of all of White County and all the area within the incorporated limits of the City of Grayville .



Port District Biography

The White County Port District is located on the Wabash River, which is a non-commercially navigable waterway. Due to that fact, there is no commercial activity on the waterway.

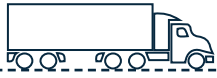
1989



White County Port District was created.

Multimodal Connections

HIGHWAY



Several interstates, state routes, and US highways traverse the port district, these include I-64, IL 1, IL 7, IL 8, IL 14, IL 141, and US 45.

RAIL



Evansville Western Railway, a class III railroad traverses within the middle of the district and connects to Norfolk Southern, BNSF, Union Pacific and CSX.

WATER



The Wabash River flows along the port district's eastern border, the river does not have a navigation channel and does not support commercial navigation.

AIR

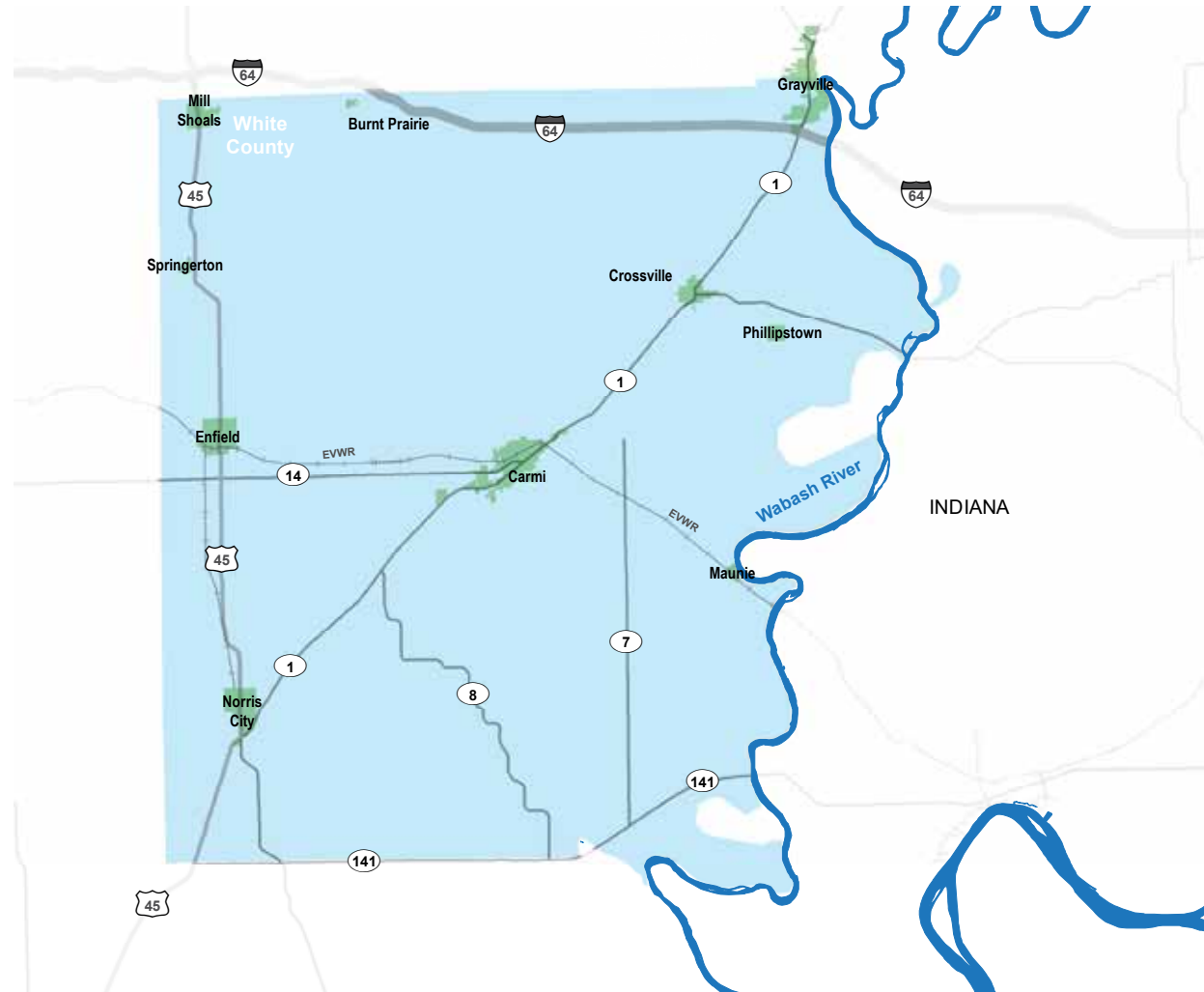


- Carmi Municipal Airport - CUL (Carmi, IL)

LOCKS and DAMS



- None



Top Commodities

The White County Port District is situated on the Wabash River which is not commercially navigable, due to this fact there are waterborne commodities to report.

WHITE COUNTY PORT DISTRICT

List of Terminals (Public and Private)

None



Economic Impact

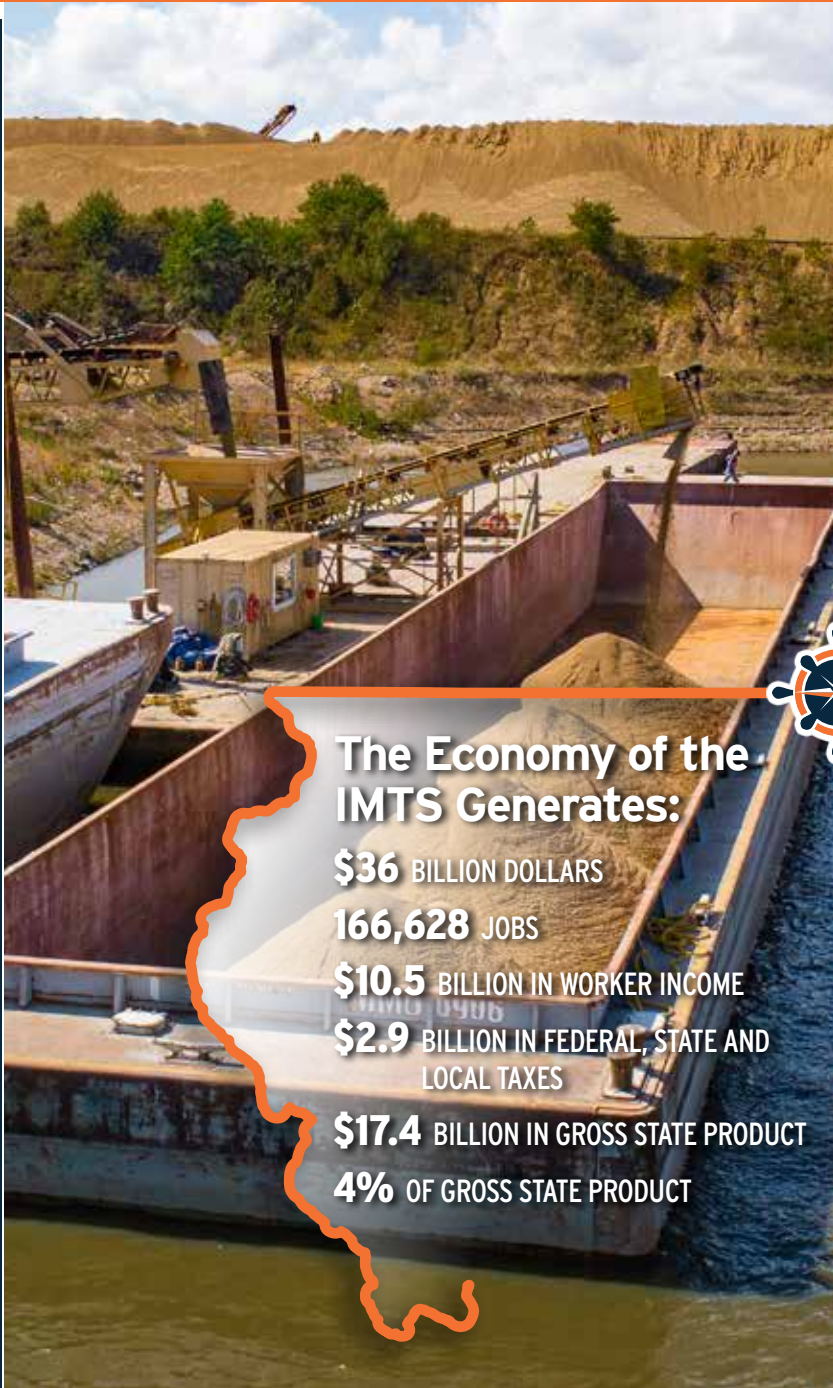
The Port District is located on the Wabash River which is not commercially navigable. Due to that fact, the river does not handle cargo and there is no substantial economic impact associated.



CAPITAL NEEDS

The White County Port District is situated on the Wabash River which is not commercially navigable, due to this fact a marine terminal is not feasible.

ECONOMIC VALUE



The Economy of the IMTS Generates:

\$36 BILLION DOLLARS

166,628 JOBS

\$10.5 BILLION IN WORKER INCOME

\$2.9 BILLION IN FEDERAL, STATE AND LOCAL TAXES

\$17.4 BILLION IN GROSS STATE PRODUCT

4% OF GROSS STATE PRODUCT

The State of Illinois holds a valuable position as the nation's freight hub. This position is substantially founded on the multimodal transportation network Illinois provides to industry, citizens and travelers. The Illinois Marine Transportation System (IMTS) is a crucial part of this network. This chapter explores the size and character of the economic value the IMTS brings to the state. It begins with a description of the flow of commodities moving across the system, the waterways relied upon and the counties involved, then presents a forecast of traffic growth between 2017 (the base year of this study) and the year 2045. Profiles of some of the major industries involved in producing or receiving commodities on the IMTS follow and are accompanied by introductions to the carriers and operators in the freight industry who transport the goods or supply facilities to stage them for movement. The chapter concludes with an assessment of the impact of the system on the economy of Illinois in terms of jobs, income, value added, and economic output.

The impact of the IMTS on the Illinois economy is substantial. The analysis presented in this chapter shows that 166,628 workers are directly or indirectly affected by the marine services across the state. The system generates \$36 billion in economic output in Illinois - representing 4 percent of gross state product - and each port district contributes to the total. The principal agricultural crops of Illinois depend on the IMTS for access to global markets, and the favorable cost of transportation by water keeps Illinois' crops competitive and farmers in business. In sectors like construction, chemicals or metals, goods that move on the IMTS either would bear a material economic penalty without the system, or they might not move at all.

4.1 COMMODITY FLOWS

The IMTS handled 90.6 million tons of freight in 2017 as compared to the 1.23 billion total Illinois freight tons reported in the state freight plan for 2014, the marine system is handling over 7 percent of the statewide traffic. More than 69 percent of the waterborne tonnage were commodities shipped outbound from Illinois to other parts of the country and world, with the majority of that shipping originating on the Mississippi and Illinois rivers. Shipments inbound to Illinois from the rest of the country and world accounted for 22 percent of the tonnage, with the Chicago Region and the Illinois River handling over two-thirds. The remaining 9 percent of tonnage moved within Illinois itself, notably from the Chicago Region. These proportions and the waterway components are illustrated in **Figure 4.1**.

The prominence of the Chicago region – which has connections both to the Great Lakes and the river system – can be seen again from the map in **Figure 4.2**, which depicts estimates of total 2017 waterborne tonnage by Illinois county. Counties near the juncture of other major rivers stand out in this map: St. Clair County on the Mississippi, which lies across from St. Louis, Missouri, and below the entrance of the Missouri River, and Massac County on the Ohio, across from Paducah, Kentucky, and the entrance of the Tennessee River. The large tonnages on the Mississippi and Illinois rivers otherwise are fairly dispersed among counties on their long pathways, although concentrations can be seen near such Illinois locations as Quincy (Adams County) and Peoria (Peoria and Tazewell Counties).



The IMTS Moves:

90.6 MILLION TONS
OF FREIGHT

7% OF ALL
STATEWIDE FREIGHT
TRAFFIC

FIGURE 4.1 2017 Freight Volume by Direction and Waterway in Thousands of Tons

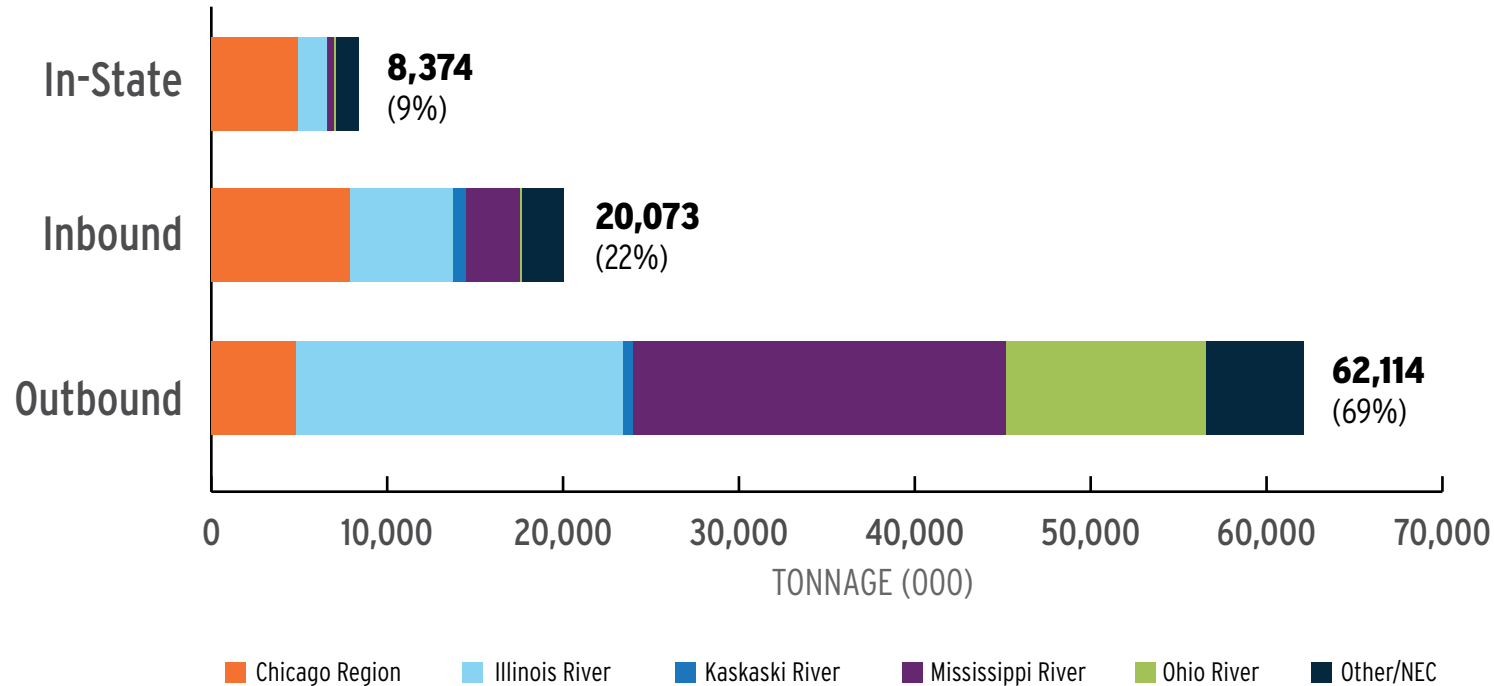
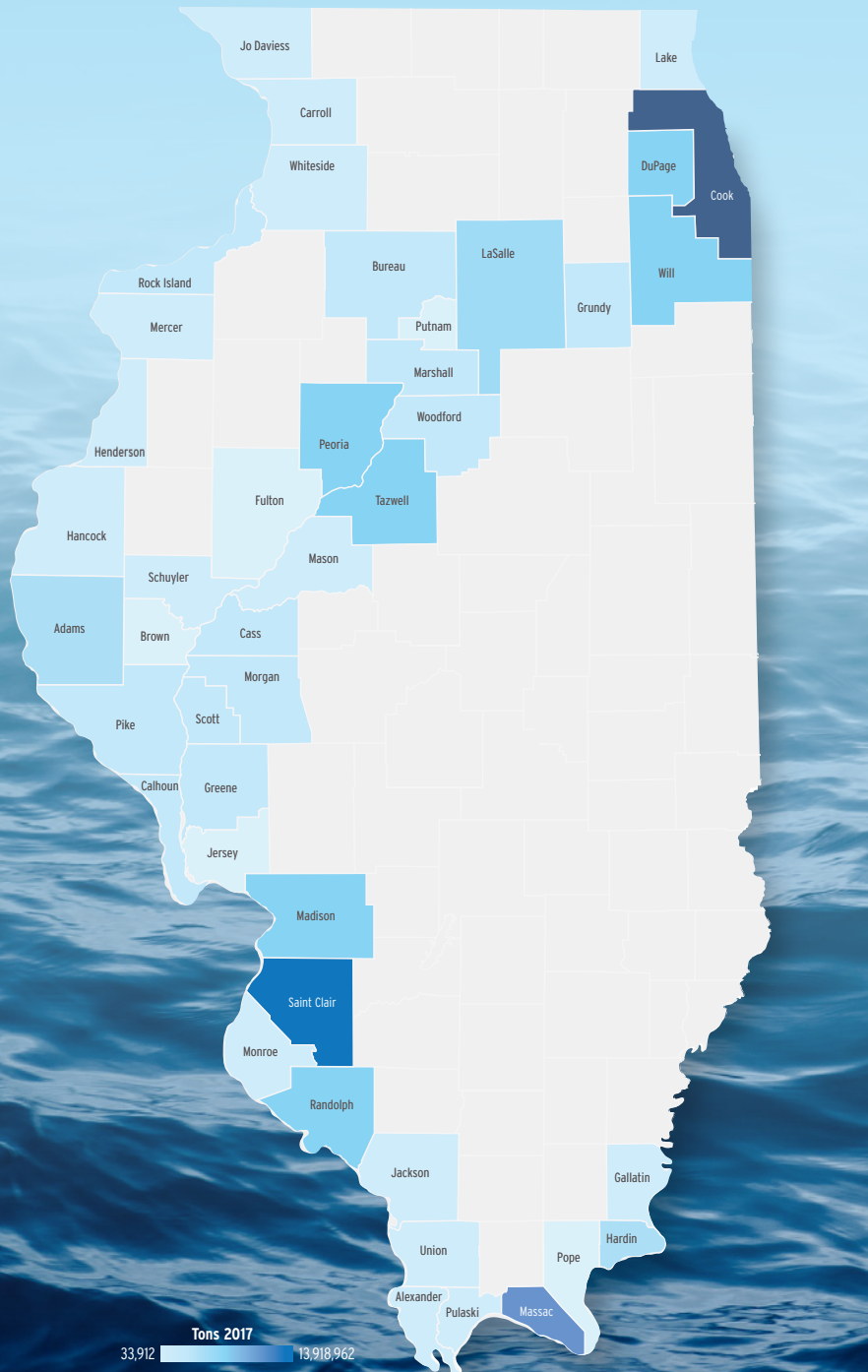


FIGURE 4.2 2017 Total Waterborne Tonnage by County



County Name	Tonnage Total	County Name	Tonnage Total
Cook	13,918,962	Marshall	866,573
St Clair	11,091,523	Grundy	711,987
Massac	8,753,071	Rock Island	708,506
Randolph	5,117,870	Alexander	476,182
Madison	4,386,729	Hancock	457,833
Tazewell	3,764,316	Jo Daviess	439,877
Du Page	3,693,209	Schuyler	398,878
Will	3,269,569	Jackson	327,464
Peoria	3,066,902	Whiteside	309,531
Adams	2,352,314	Henderson	242,785
La Salle	2,202,267	Putnam	230,864
Hardin	1,518,253	Monroe	173,195
Pike	1,426,332	Lake	117,674
Cass	1,368,653	Mercer	80,804
Woodford	1,366,574	Carroll	72,208
Morgan	1,343,225	Gallatin	42,616
Mason	1,310,482	Union	0
Greene	1,261,995	Brown	0
Calhoun	1,236,834	Fulton	0
Scott	1,135,416	Jersey	0
Bureau	1,113,225	Pope	0
Pulaski	869,223		

Freight tonnage on the IMTS declined 16 percent in just three years, from the 2014 volume reported in Illinois State Freight Plan and the 2017 volume reported here. Almost all of that decline was due to the loss of outbound coal traffic which primarily reflects the nationwide conversion of electric

utility plants from coal to natural gas. The “fracking” boom in oil fields in Texas, Pennsylvania, and elsewhere has created an abundance of domestic natural gas with a lower cost and environmentally cleaner profile than coal. This trend is expected to continue: the forecast for Illinois outbound waterborne tonnage through 2045 expects a 10 percent decrease, substantially caused by the continuing drop in coal volumes. Fortunately – and as shown in **Figure 4.3** – Illinois’ inbound tonnage is projected to grow by 42 percent and in-state volume by 19 percent, offsetting the outbound loss and yielding a 5 percent net gain in total tonnage by 2045, from 90.6 million to 94.7 million tons.

The breakdown of the 2045 forecast by waterway appears in **Table 4.1**. The net increase of 4.1 million tons combines waterways rising by 9.3 million tons, with waterways falling by 5.1 million tons. The tonnage growth is expected to come from the Chicago Region - a strong location for inbound materials - and the Illinois River, which is a continuing source of outbound agricultural products. Decreasing tonnage appears on the Ohio and Mississippi Rivers, which have greater exposure to the coal mines of southern Illinois. These waterway differences by direction are illustrated in **Figure 4.4**. The effect is that Chicago and Illinois River volumes climb from 47 percent of Illinois tonnage in 2017 to 55 percent in 2045.

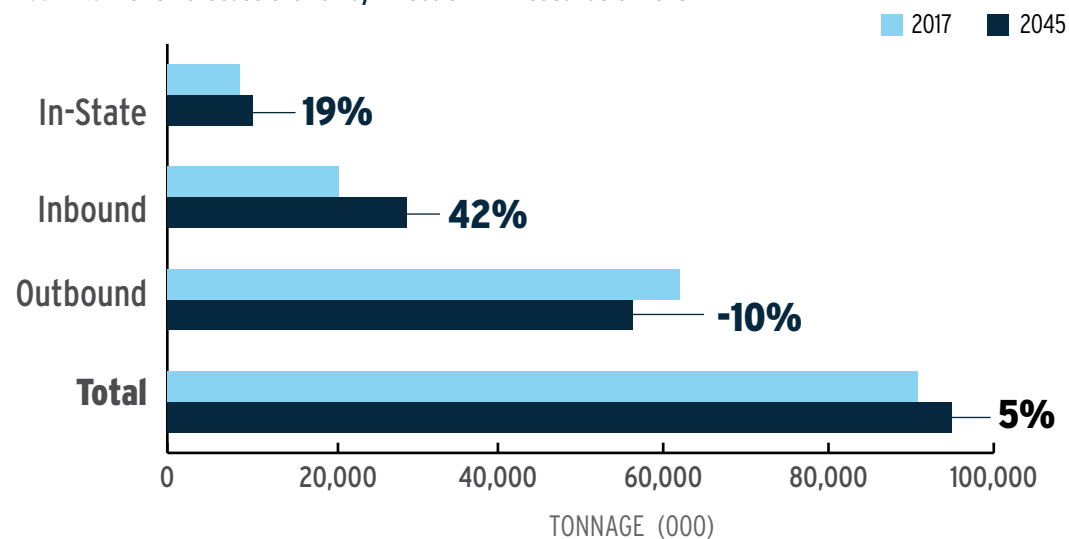
Freight Tonnage

DECLINED 16% IN 3 YEARS DUE TO LOSS OF OUTBOUND COAL TRAFFIC

Illinois Waterborne Tonnage

FORECASTED TO GROW 5% BY 2045

FIGURE 4.3 2045 Forecast Growth by Direction in Thousands of Tons

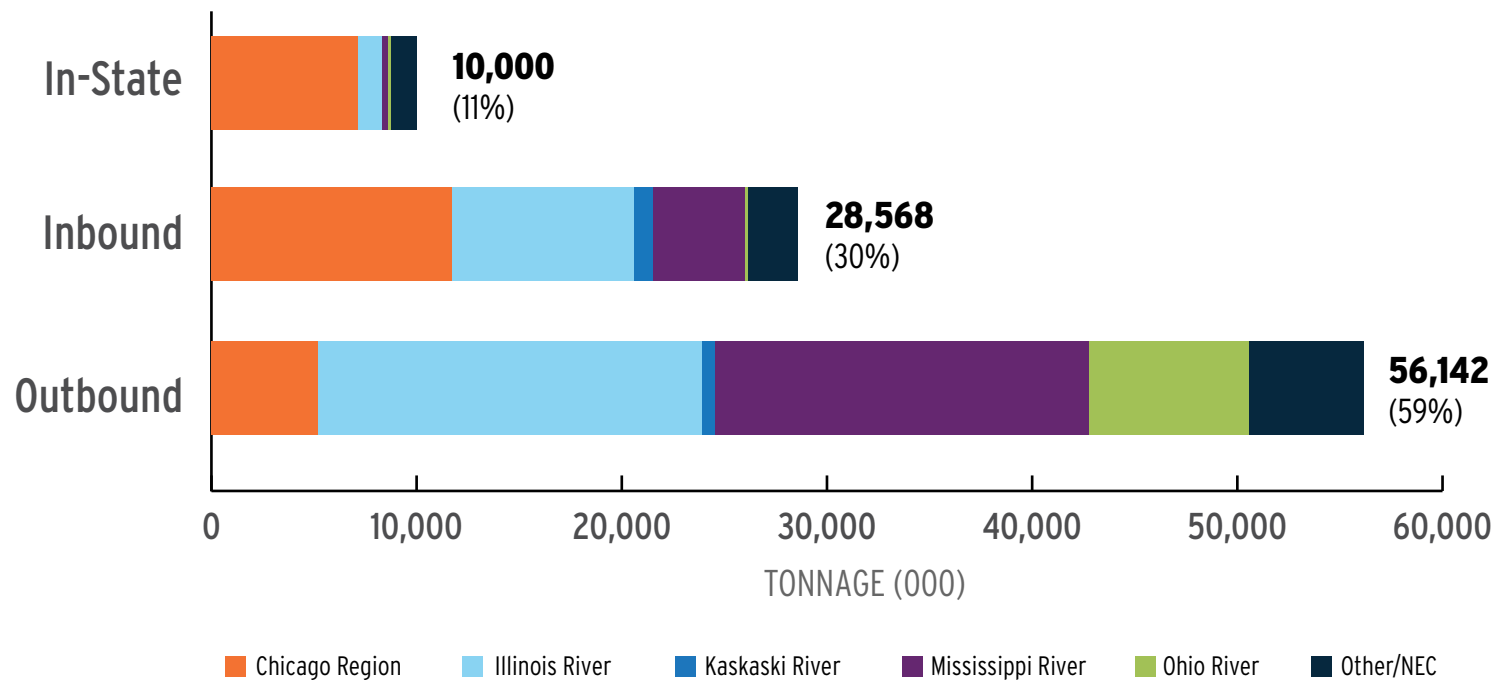


The traffic also includes an “Other and Not Elsewhere Classified (NEC)” category which is Illinois tonnage without identifying information as to type and location. Because it cannot be characterized, there is no basis for projecting whether it will grow or decline, and the forecast leaves the tonnage flat.

TABLE 4.1 2045 Forecast Growth by Waterway in Thousands of Tons

WATERWAY	TONS 2017	% OF STATE	TONS 2045	% OF STATE	GROWTH	CHANGE
Chicago Region	17,616	19%	24,083	25%	6,467	37%
Illinois River	26,074	29%	28,650	30%	2,576	10%
Kaskaskia River	1,385	2%	1,604	2%	219	16%
Mississippi River	24,590	27%	23,023	24%	-1,567	-6%
Ohio River	11,611	13%	8,065	9%	-3,546	-31%
Other/NEC	9,285	10%	9,285	10%	0	0%
Total	90,561	100%	94,710	100%	4,149	5%

FIGURE 4.4 2045 Volume by Direction and Waterway in Thousands of Tons



The source of tonnage is individual commodities and the driver of the forecast is the outlook for these commodities, whether produced and shipped in Illinois (outbound), or demanded and consumed in Illinois (inbound, with in-state also both out and in). The remainder of this chapter describes the array of commodities moving on Illinois waterways, first in 2017 and then as forecast for 2045, and presents examples of three prominent types:

- Food and Food Products, the principal outbound commodity and by far the largest overall, comprising nearly 40 percent of the total tonnage on Illinois waterways;
- Coal, the second largest outbound commodity and the source of over 80 percent of the forecast decline in outbound shipping, and
- Primary Metal Products, a top inbound and in-state commodity in 2017 and 2045, with a healthy forecast for growth.

The chapter concludes with a summary of sources for the traffic data and forecast.

4.1.1 COMMODITY FLOWS IN 2017

Illinois' outbound commodity flows on waterways totaled 62.1 million tons in 2017. The state is a top producer of agricultural products, notably corn, soybeans, and animal feed. Much of this production is sold for export, and the low-cost transportation provided by waterways running through the producing regions is a major factor determining the competitiveness of Illinois farm goods in the global market. The state also is a large manufacturer of food

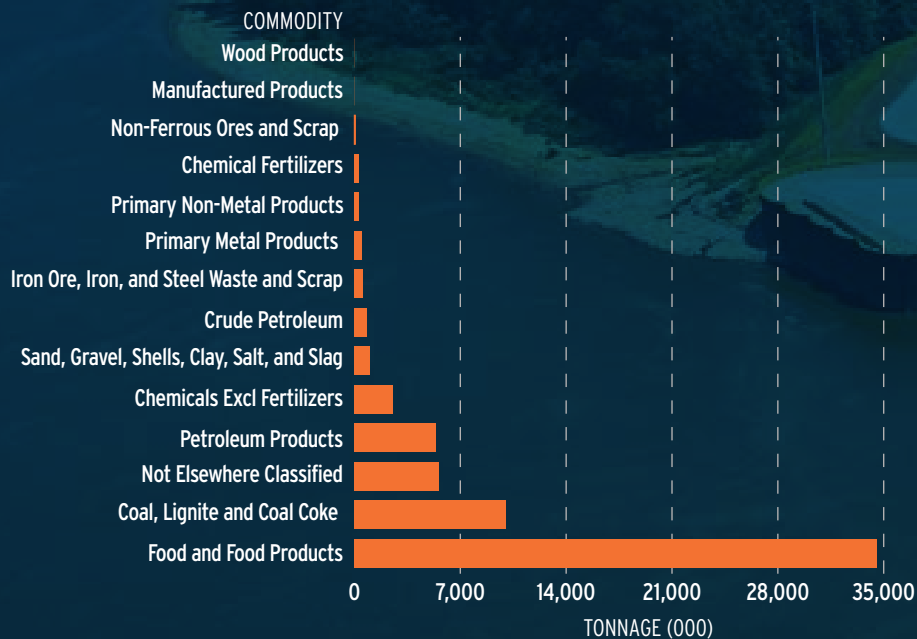
products, using farm goods as one of the inputs and shipping by water in bulk to markets around and outside the country.

Given the state's prominence in agriculture, food manufacture and exports of U.S. grains and soybeans, food and food products unsurprisingly account for the majority of the large outbound volume shipped by water. Other top commodities in 2017 include coal, petroleum products, chemicals, and sand and gravel, as shown in **Figure 4.5**.

Total inbound commodity flow volumes were 20.1 million tons in 2017, less than one-third the outbound total. Top inbound flows include primary metal products, chemical fertilizers, sand and gravel, and petroleum products as shown in **Figure 4.6**.

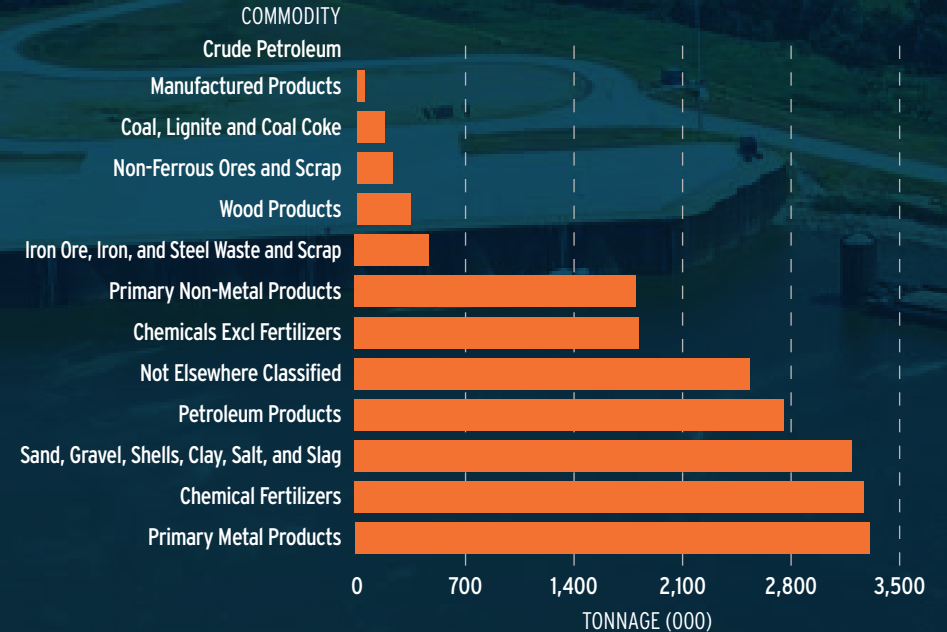
In-state commodity flows totaled 8.4 million tons in 2017, with sand and gravel the top commodity shown in **Figure 4.7** on the following page.

FIGURE 4.5 Outbound Commodity Shipments in 2017 in Thousands of Tons



Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

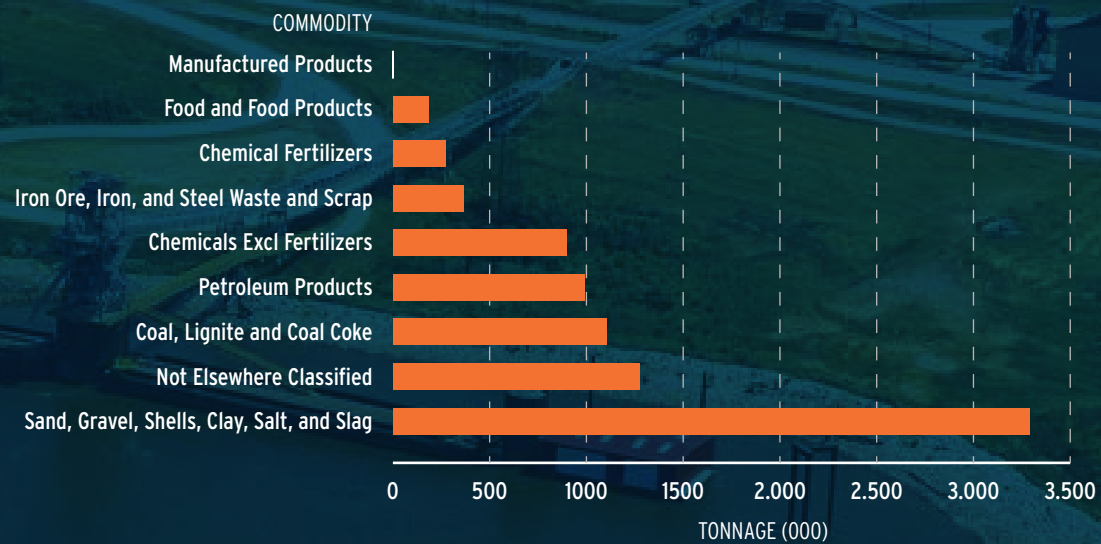
FIGURE 4.6 Inbound Commodity Shipments in 2017 in Thousands of Tons



Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis



FIGURE 4.7 In-State Commodity Shipments in 2017 in Thousands of Tons



Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

4.1.2 COMMODITY FLOW FORECAST

Illinois' outbound shipments are projected to decline by 10 percent from 2017 to 2045, as shown in **Table 4.2**. The state's substantial volumes of outbound food and food products are expected to grow 4 percent over this period. In contrast, 2017 volumes of the second largest volume commodity group, coal, lignite and coal coke, are projected to decline sharply from 2017 to 2045, dropping by 74 percent and turning the overall outbound forecast negative. Shipments of petroleum products are also expected to decline by 27 percent.

TABLE 4.2 Outbound Commodity Shipments 2045 Forecast in Thousands of Tons

COMMODITY GROUP	2017	2045	GROWTH	CHANGE
Wood Products	0	0	0	N/A
Manufactured Products	0	0	0	N/A
Coal, Lignite and Coal Coke	9,936	2,609	-7,327	-74%
Petroleum Products	5,417	3,938	-1,479	-27%
Chemicals excluding Fertilizers	2,624	2,357	-267	-10%
Crude Petroleum	953	932	-21	-2%
Not Elsewhere Classified	5,628	5,628	0	0%
Non-Ferrous Ores and Scrap	45	46	1	1%
Food and Food Products	34,567	36,009	1,442	4%
Sand, Gravel, Shells, Clay, Salt, and Slag	1,167	1,348	181	15%
Iron Ore, Iron, and Steel Waste and Scrap	706	1,055	349	49%
Chemical Fertilizers	297	502	205	69%
Primary Non-Metal Products	311	691	380	122%
Primary Metal Products	463	1,027	565	122%
Total	62,115	56,143	-5,973	-10%

Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

In contrast to outbound shipments, inbound volumes are expected to grow by 43 percent from 2017 to 2045, led by primary non-metal products, chemical fertilizers, primary metal products and chemicals. Coal volumes are expected to decline the most over this period in percentage terms, and petroleum products in terms of diminished tonnage, as shown in **Table 4.3**.

TABLE 4.3 Inbound Commodity Shipments 2045 Forecast in Thousands of Tons

COMMODITY GROUPS	2017	2045	GROWTH	CHANGE
Coal, Lignite and Coal Coke	46	12	-34	-75%
Petroleum Products	2,768	2,221	-546	-20%
Crude Petroleum	0	0	0	N/A
Manufactured Products	4	4	0	0%
Not Elsewhere Classified	2,433	2,433	0	0%
Sand, Gravel, Shells, Clay, Salt, and Slag	3,328	4,034	706	21%
Iron Ore, Iron, and Steel Waste and Scrap	349	474	126	36%
Non-Ferrous Ores and Scrap	178	286	107	60%
Primary Metal Products	3,322	5,318	1,996	60%
Chemicals excluding Fertilizers	1,837	3,038	1,201	65%
Chemical Fertilizers	3,285	5,432	2,147	65%
Food and Food Products	479	841	362	76%
Wood Products	230	432	201	87%
Primary Non-Metal Products	1,815	4,084	2,269	125%
Total	20,074	28,609	8,535	43%

Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

In-state shipment volumes are projected to grow 19 percent from 2017 to 2045, with primary metal products and sand and gravel accounting for most of this increase (as indicated in **Table 4.4**). As is the case for outbound and inbound shipments, volumes of petroleum products and coal, lignite, and coal coke are expected to decline the most.

TABLE 4.4 In-State Commodity Shipments 2045 Forecast in Thousands of Tons

COMMODITY GROUP	2017	2045	GROWTH	CHANGE
Coal, Lignite and Coal Coke	990	260	-730	-74%
Petroleum Products	897	631	-266	-30%
Chemicals excluding Fertilizers	363	326	-37	-10%
Not Elsewhere Classified	1,274	1,274	0	0%
Food and Food Products	1	2	0	4%
Sand, Gravel, Shells, Clay, Salt, and Slag	3,291	4,341	1,050	32%
Iron Ore, Iron, and Steel Waste and Scrap	270	403	133	49%
Chemical Fertilizers	183	310	127	69%
Primary Metal Products	1,105	2,453	1,348	122%
Total	8,375	10,000	1,625	19%

Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis



4.1.3 FOOD AND FOOD PRODUCTS

Outbound food and food products represent the largest volume commodity group transported on Illinois waterways. Volumes are mainly comprised of corn, soybeans, and animal feeds, almost all of which ultimately are transported down the Mississippi River. Illinois' outbound shipments of food products totaled 34.6 million tons in 2017 of which 33.7 million tons went to Louisiana and its ports, and 0.7 million tons to Alabama and Tennessee (i.e. via the Tennessee River). For the most part, these volumes are later shipped from Gulf of Mexico ports to international destinations.

Outbound shipments of 14.5 million tons originated from the Illinois River. A total of 13.5 million tons originated from Illinois portions of the Mississippi River and 5.6 million tons from the Ohio River. Volumes of outbound shipments of food are projected to grow 4 percent from 2017 to 2045, as illustrated in **Figure 4.8**. Specific projections for corn and soybeans appear in **Figure 4.9**, showing the growth in corn at 7.5 percent through 2045 and soybeans at 2.2 percent.

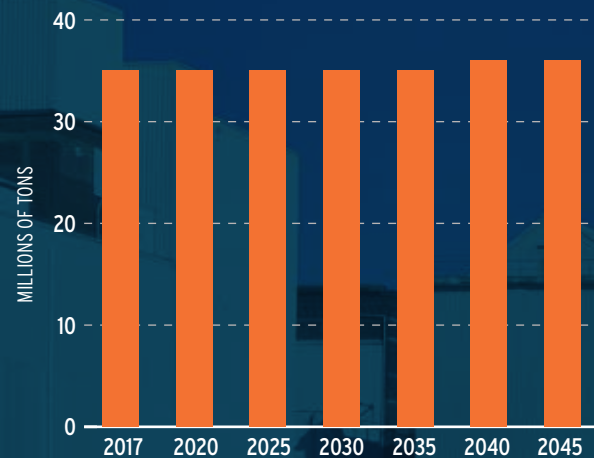
Inbound food product volumes totaled a relatively small 0.8 million tons in 2017 and included vegetable

oils and molasses. These volumes are projected to grow 76 percent from 2017 to 2045, as depicted in **Figure 4.10**.

Shipments of food products within Illinois were negligible in 2017 and are projected to remain so.

As shown in **Figure 4.11** 2017 origins of outbound food shipments are concentrated in St. Clair, Madison, and Adams Counties on the Mississippi River, Massac County on the Ohio River, and in central Illinois and to the South on the Illinois River. The 2045 forecast does not change these patterns.

FIGURE 4.8 Forecast of Outbound Shipments of Food in Millions of Tons



Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

FIGURE 4.9 Forecast of Outbound Corn and Soybean Shipments in Millions of Tons

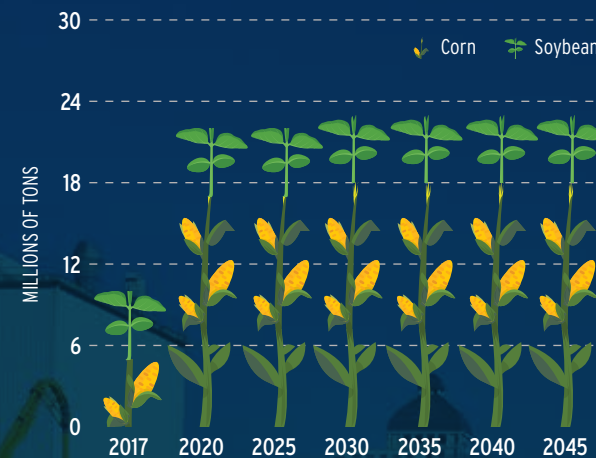


FIGURE 4.10 Forecast of Inbound Shipments of Food in Thousands of Tons

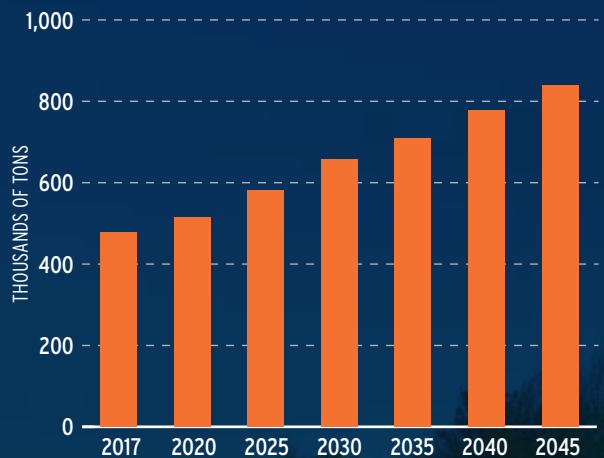
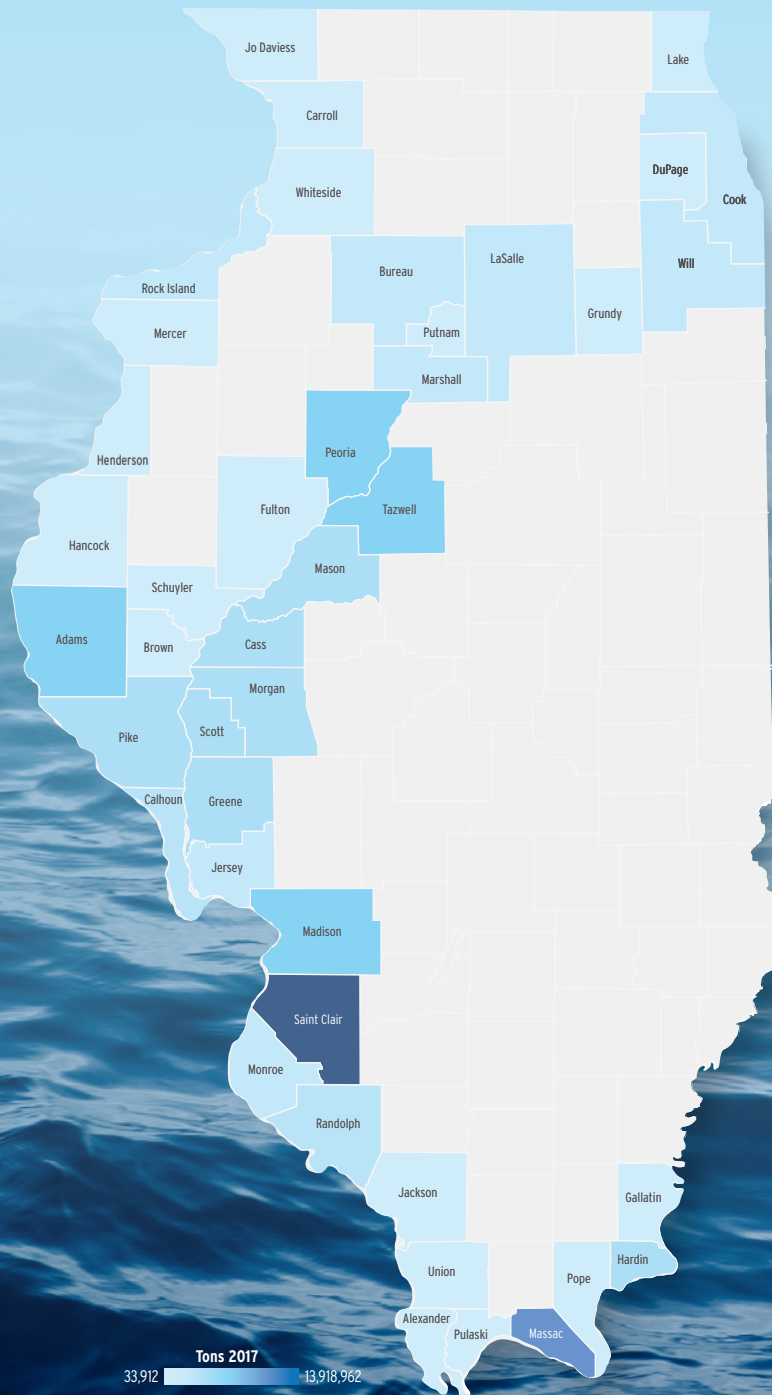


FIGURE 4.11 Distribution of 2017 Outbound Food Shipments by Origin County in Tons



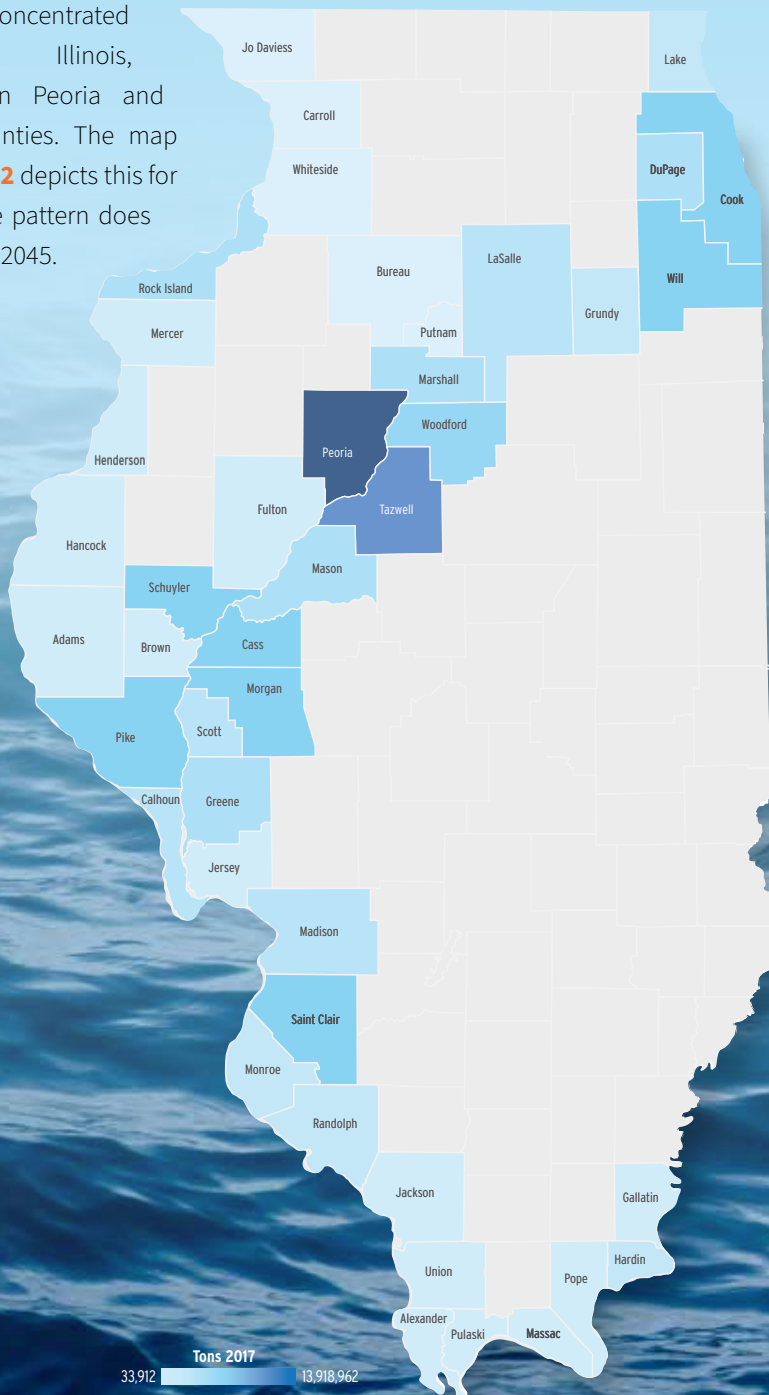
COUNTY NAME	TONNAGE
St Clair	7,141,257
Massac	3,845,524
Madison	2,318,587
Adams	2,188,346
Tazewell	2,185,583
Peoria	1,489,414
Pike	1,234,875
Cass	1,165,027
Morgan	1,138,731
Greene	1,103,807
Scott	999,959
Mason	936,841
Hardin	919,956
Woodford	828,986
La Salle	673,047
Will	637,535
Marshall	561,524
Pulaski	540,890
Calhoun	537,709
Rock Island	517,179
Randolph	512,188
Hancock	426,230

COUNTY NAME	TONNAGE
Bureau	407,732
Cook	360,290
Alexander	291,135
Schuyler	275,387
Whiteside	230,918
Henderson	229,781
Jackson	212,321
Grundy	204,856
Jo Daviess	146,583
Putnam	82,397
Du Page	70,919
Mercer	60,318
Monroe	45,000
Carroll	28,479
Gallatin	17,734
Union	0
Brown	0
Fulton	0
Jersey	0
Pope	0
Lake	0

Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

Destinations of inbound food are concentrated in central Illinois, specifically in Peoria and Tazewell Counties. The map in **Figure 4.12** depicts this for 2017, and the pattern does not change in 2045.

FIGURE 4.12 Distribution of 2017 Inbound Food Shipments by Destination County in Tons



COUNTY NAME	TONNAGE	COUNTY NAME	TONNAGE
Peoria	80,643	Grundy	3,410
Tazewell	66,051	Henderson	2,181
Cook	35,112	Monroe	1,529
Will	30,669	Bureau	1,003
St Clair	26,486	Mercer	957
Morgan	25,399	Randolph	683
Cass	25,057	Jackson	723
Pike	22,513	Carroll	331
Woodford	20,704	Putnam	315
Schuyler	18,432	Union	0
Greene	17,974	Jo Daviess	9
Scott	14,980	Brown	0
Adams	12,765	Fulton	0
Du Page	12,690	Jersey	0
Madison	10,975	Alexander	0
Marshall	9,827	Gallatin	0
Rock Island	8,895	Hardin	0
La Salle	8,597	Massac	0
Mason	6,784	Pope	0
Hancock	5,307	Pulaski	0
Calhoun	4,173	Lake	0
Whiteside	3,639		

Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

4.1.4 COAL

Almost all shipments of coal have been outbound. Coal was the second largest commodity group in terms of shipments from Illinois to other states, with 9.9 million tons shipped in 2017 including 6.3 million tons shipped north to Indiana and 3.1 million tons going south to Louisiana.

For outbound volumes from Illinois, the major origin in 2017 was the Kaskaskia region including the Kaskaskia River and Port of Kaskaskia (the Army Corps' definition which includes part of the East bank of the Mississippi River).

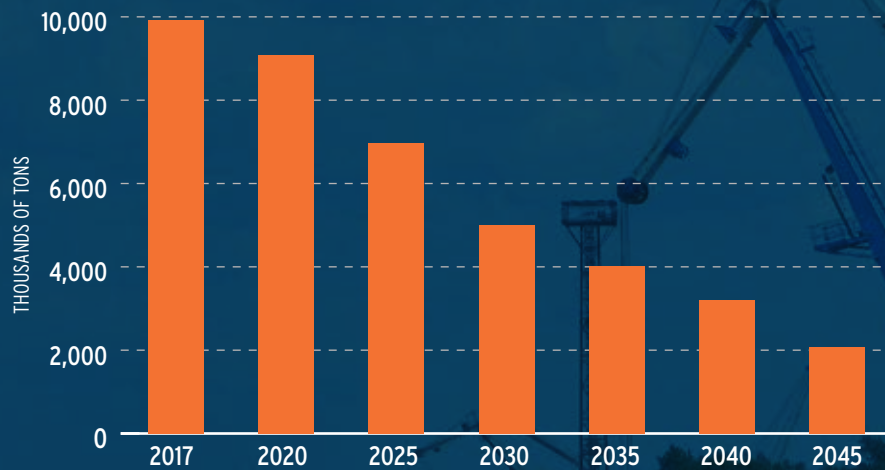
This region was the origin of 4.0 million tons of coal in 2017, exceeding the 3.1 million tons shipped to Louisiana, with the remainder going to other destination states such as Iowa or Wisconsin. It is estimated that the Ohio River was the origin of 4.0 million tons of coal, accounting for a majority of coal volumes shipped to Indiana. Another 0.4 million tons of coal originated out of the Port of Chicago.

Outbound coal has fallen dramatically from the 30 million tons in 2014, as reported in the Illinois

State Freight Plan. Competition from natural gas as an energy source for electric utilities is the chief cause, and falling volumes are projected to continue, with a decline of 74 percent from 2017 to 2045 (**Figure 4.13**).

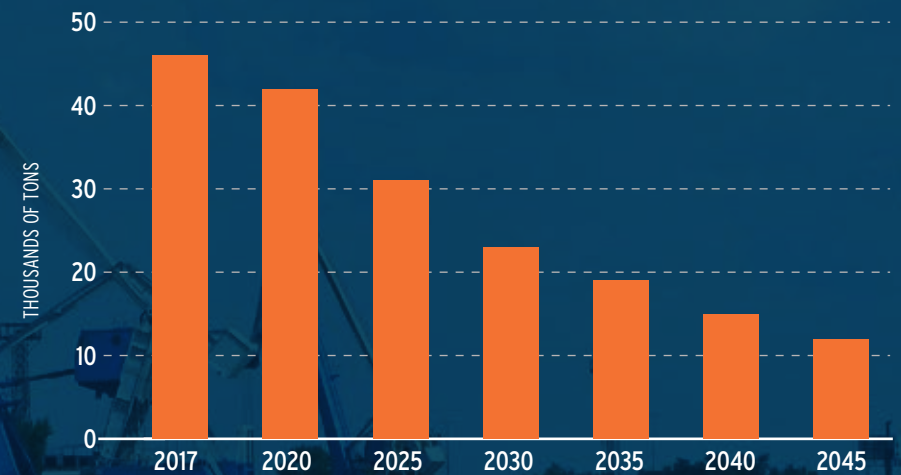
Inbound receipts of coal have been significantly smaller compared to outbound shipments, at under 90 thousand tons in 2017 (**Figure 4.14**). Volumes are projected to decline 75 percent from 2017 to 2045. No coal moved within Illinois in 2017.

FIGURE 4.13 Forecast of Outbound Shipments of Coal in Thousands of Tons



Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

FIGURE 4.14 Forecast of Inbound Shipments of Coal in Thousands of Tons



Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis



Origins of outbound coal shipments are concentrated in southern Illinois, Massac County on the Ohio River, and Randolph County on the Mississippi River, as depicted in

Figure 4.15.

FIGURE 4.15 Distribution of 2017 Outbound Coal Shipments by Origin County in Tons



COUNTY NAME	TONNAGE	COUNTY NAME	TONNAGE
Massac	4,702,606	Woodford	349
Randolph	4,033,671	Marshall	236
St Clair	419,438	Adams	53
Cook	362,782	Pike	10
Madison	126,842	Cass	10
Du Page	71,410	Morgan	9
Hardin	68,955	Greene	9
Pulaski	40,542	Scott	8
Jo Daviess	40,389	Schuyler	2
Alexander	21,822	Union	0
Jackson	12,471	Brown	0
Calhoun	10,773	Fulton	0
La Salle	6,508	Jersey	0
Will	6,165	Monroe	0
Bureau	3,942	Hancock	0
Grundy	1,981	Henderson	0
Gallatin	1,329	Mercer	0
Tazewell	920	Rock Island	0
Carroll	807	Whiteside	0
Putnam	797	Pope	0
Peoria	627	Lake	0
Mason	394		

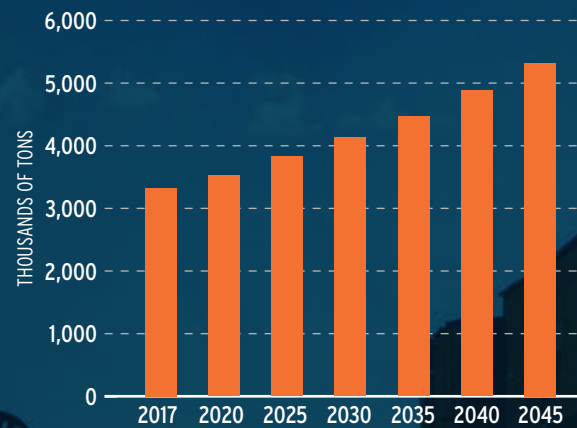
Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

4.1.5 PRIMARY METAL PRODUCTS

Primary metal products range from pig iron to bars and shapes. A majority of primary metal product volumes are inbound, with 3.3 million tons in 2017 coming from states including Louisiana and Arkansas, as well as from Canada and other countries. Growth in inbound volumes is projected to increase 60 percent from 2017 to 2045, as shown in **Figure 4.16**.

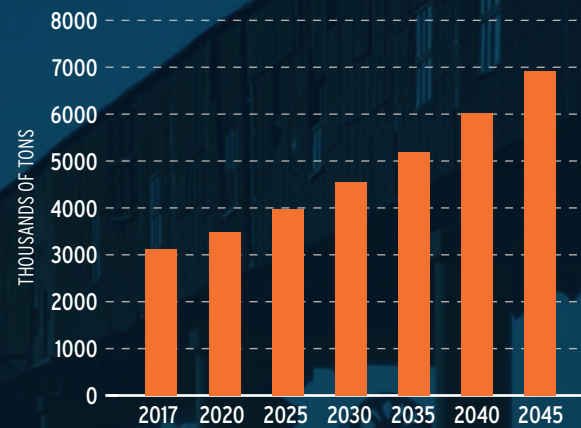
Outbound volumes are quite small, at 0.3 million tons in 2017 although projected to grow 122 percent from 2017 to 2045 (**Figure 4.17**). In-state volumes are larger at 1.1 million tons in 2017 and also are projected to grow 122 percent from 2017 to 2045 (**Figure 4.18**).

FIGURE 4.16 Forecast of Inbound Primary Metal Products in Thousands of Tons



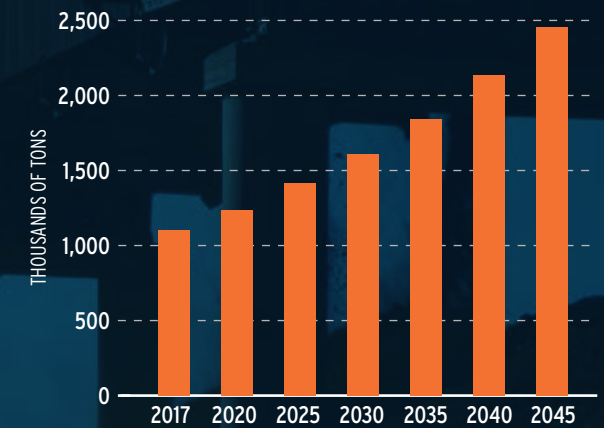
Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

FIGURE 4.17 Forecast of Outbound Primary Metal Products in Thousands of Tons



Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

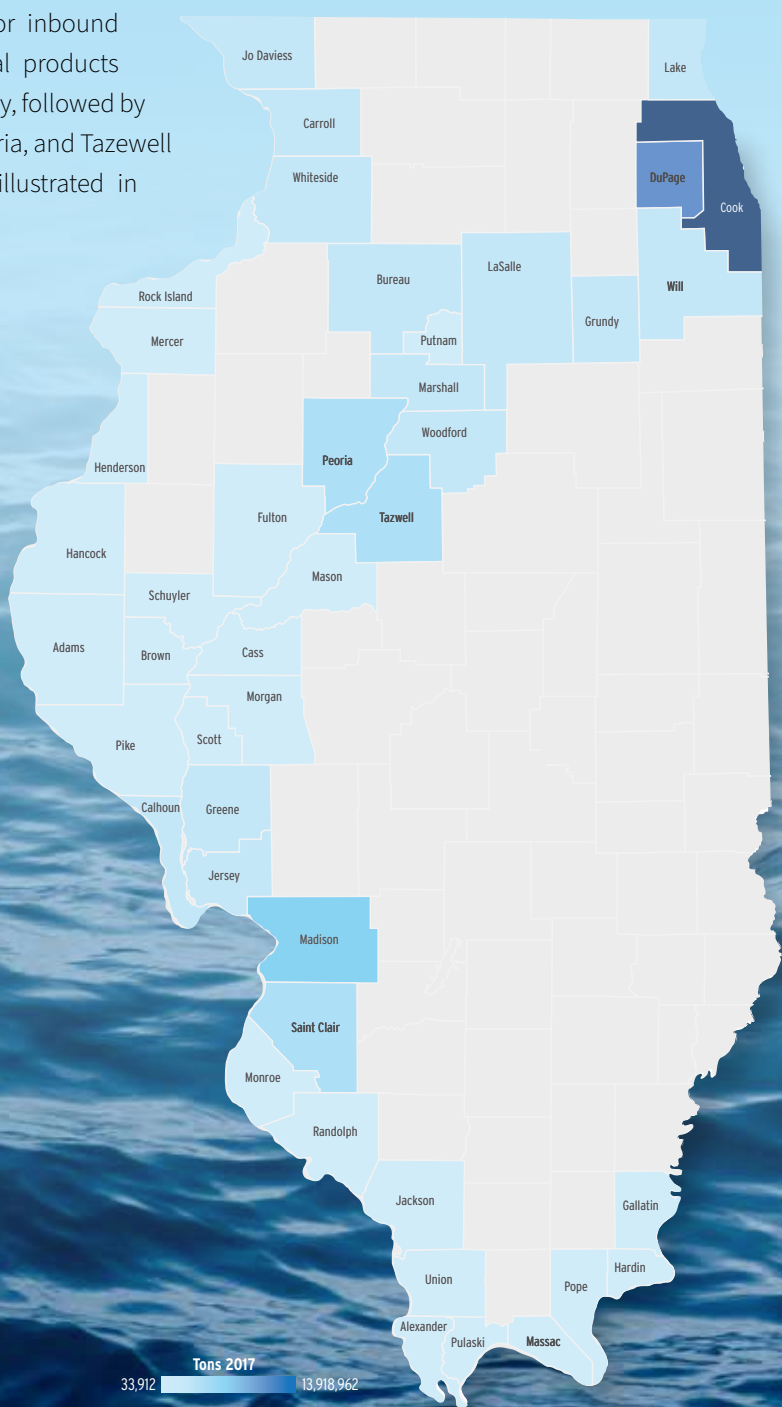
FIGURE 4.18 Forecast of In-State Primary Metal Products in Thousands of Tons



Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

The predominant destination for inbound primary metal products is Cook County, followed by Madison, Peoria, and Tazewell Counties as illustrated in **Figure 4.19**.

FIGURE 4.19 Distribution of 2017 Inbound Primary Metal Products by Destination County in Tons



COUNTY NAME	TONNAGE	COUNTY NAME	TONNAGE
Cook	1,566,819	Morgan	814
Du Page	566,253	Cass	803
Madison	334,546	Pike	721
Peoria	195,328	Mercer	605
Tazewell	159,984	Schuyler	590
St Clair	138,625	Greene	576
Will	130,235	Scott	480
Woodford	50,148	Union	0
La Salle	36,505	Brown	0
Monroe	28,741	Fulton	0
Marshall	23,802	Jersey	0
Mason	16,433	Hancock	0
Grundy	14,480	Henderson	0
Randolph	12,836	Jo Daviess	0
Calhoun	10,438	Alexander	0
Jackson	9,138	Gallatin	0
Carroll	7,092	Hardin	0
Rock Island	5,626	Massac	0
Bureau	4,260	Pope	0
Whiteside	2,302	Pulaski	0
Adams	2,065	Lake	0
Putnam	1,337		

Source: Army Corps of Engineers Waterborne Commerce Statistics and WSP Analysis

4.1.6 SOURCE OF DATA AND FORECAST

Four sets of data are used to develop the profiles presented in this chapter and to produce commodity flow forecasts for Illinois waterways. The first two are historical commodity flow data from the Army Corps of Engineers Waterborne Commerce of the United States (WCUS) for 2017, the third is derived from the Transearch Database, and the fourth from the U.S. DOT Freight Analysis Framework. These data sources are outlined below.

The WCUS data are reported in such a way as to protect the confidentiality of shippers and receivers of goods, and there is overlap between the volumes reported for various sections of waterway. Thus, while the state's total tonnage is a straightforward quantity, its waterway components are ambiguous and do not sum to the state total. Because volumes on specific waterways are important to Illinois port districts and to the estimation of activity by county, a considerable

effort was undertaken for the IMTS Plan to develop practical estimates of tonnage by waterway. This involved consultation with the Army Corps and multiple Illinois port districts, as well as cross-referencing and analysis across reported values and their definitions. The result is a reasonable depiction of waterway shipping; it is not exact, but it is sound and affords a solid basis for planning.

1 STATE TO STATE COMMODITY FLOWS transported on waterways in tons. Detail includes 14 commodity groups. This information does not contain waterway segment detail.

2 TONNAGE TRANSPORTED ON U.S. WATERWAY SEGMENTS. This data provides greater commodity detail, direction of movement, and shipments versus receipts, but does not contain origin-destination flows. Illinois waterway segments include the Illinois Waterway System (with Illinois River and Chicago area segments), the Kaskaskia River, and segments of the Mississippi River and Ohio River.

3 REGIONAL COMMODITY FLOWS derived from the commercial database Transearch for the Illinois State Freight Plan. It includes county-to-county flows and is used to estimate county origins for outbound shipments and county destinations for inbound receipts.

4 U.S. DOT FREIGHT ANALYSIS FRAMEWORK version 4 (FAF) forecasts of projected Illinois waterborne commodity volumes. Long term growth rates from FAF are applied to 2017 base year Army Corps' WCUS data to produce forecasts out to 2045.

In addition to the data and sources listed above, there is another classification which is important to note and could have federal funding implications. Port Statistical Areas (PSA) are used by the Army Corps of Engineers (USACE) to help rank ports based on the tonnage that is shipped or received within that geographic area. PSA's can vary in size from a municipality to multiple counties. The USACE does not use this statistic to prioritize projects, however PSA's assist in acquiring more accurate shipping data which can be helpful to the ports within the PSA in making a case for the receipt of state and federal funding.



4.2 INDUSTRY AND CARRIER PROFILES

The preceding subsection described the flow of commodities on the IMTS, first in summary and then in detail for three principal commodity types important to outbound and inbound traffic volumes and projections: food and food products, coal, and primary metal products. This subsection presents profiles of the industries responsible for this traffic, their importance in Illinois, their geography in respect to the marine system, and their business dynamics as they affect demand. The subsection following profiles the carriers who move goods on the marine system in service to these and other industries in the state.

4.2.1 FOOD AND FOOD PRODUCTS

The farm and food manufacturing industry accounted for 13.7 percent of the contribution of the private goods producing sector to 2017 GDP in the state of Illinois, according to the U.S. Department of Commerce.

Farms are a bit less than one-third of this contribution, but they are the underpinnings of much of the rest, supplying raw materials for processed foods. Corn and soybeans are the primary crops in Illinois agriculture.

Illinois is ranked as the nation's largest producer of soybeans in 2018 and was second only to Iowa in corn production.¹

Both commodities are heavily used for animal feed and as sources of oil. Among other products, soy is the basis of tofu and soy milk, a leading entry in the growing market for plant-based food. Corn is a source of sweeteners, starches, alcohol, and the ethanol used as a fuel additive with gasoline. These two Illinois crops are thus vital inputs for a variety of food and industrial uses, from livestock and manufactured goods to transportation.

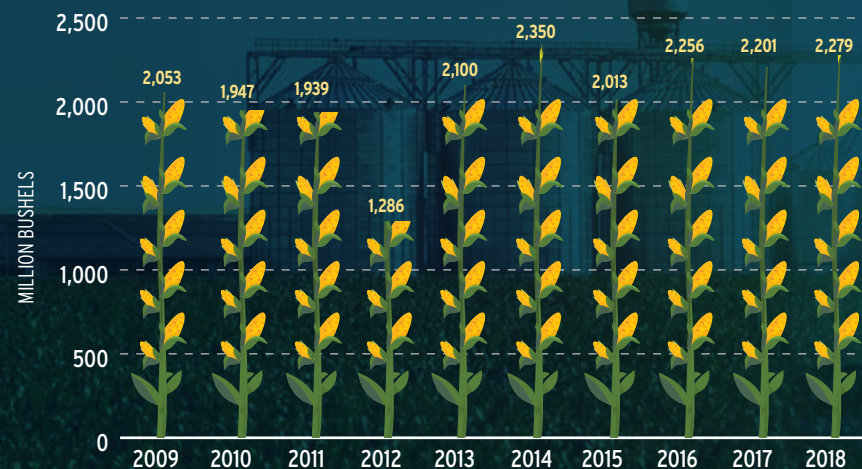
The waterway system is well suited to the movement of food in bulk, especially for high volume goods

in concentrated corridors. Corn and soybeans transported from Illinois farms have these characteristics. The largest single category of goods moved on the IMTS in 2017 was outbound food and food products, almost two-thirds of which consisted of corn and soybeans.

Production trends for these crops in Illinois are shown in **Figure 4.20** and **Figure 4.21**. Corn has been generally flat in recent years, whereas soybean output has risen fairly steadily. This is significant in that farmers generally alternate between them, partly for the benefit to soil of crop rotation and partly in response to variable market demand and commodity prices on a delivered basis. These commodities are traded globally. Illinois agriculture competes with growers around the world, and global demand affects every market and the income farmers can realize for their labor.

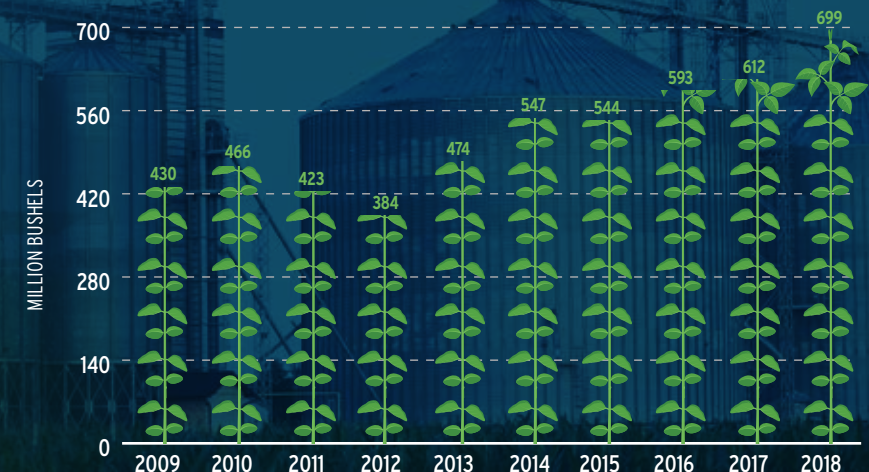
FARM AND FOOD MANUFACTURING CONTRIBUTE **13.7%** of Illinois' GDP

FIGURE 4.20 Trend in Illinois Corn Production



Source: USDA

FIGURE 4.21 Trend in Illinois Soybean Production



Source: USDA

This is especially and acutely true for traffic on the IMTS. Roughly one-quarter of the value of Illinois corn and two-fifths of soybean production went to export in 2018.² However, the previous section noted that nearly all (97 percent) of the Illinois outbound waterborne shipments of food products traveled downriver to Louisiana – home to the largest dry bulk ports in the country where half the volume goes to export.³

The implication is that the export market is a key driver of demand for the largest commodity group on the IMTS. As **Figure 4.22** illustrates, this is a volatile market, with corn exports rising 42 percent between 2017 and 2018 in a year when total production rose less than 4 percent, and soybean exports falling 15 percent between 2017 and 2018 in a year when total production grew 14 percent. The drop in soybeans can be attributed to the loss of the Chinese market due to higher tariffs imposed by that country during trade disputes with the United States.

The Chinese market (unimportant for U.S. corn but the largest in the world for soybeans) absorbed the majority of Illinois soybean exports in 2017, then with tariffs the following year, the Chinese market for Illinois exports declined more than 90 percent.⁴ A commodity market is one that turns on price because there is little difference among products between producers. Because a tariff is an effective price increase, the decline in 2018 volume is a demonstration of sensitivity to its effect. In turn, this is an indirect demonstration of the importance of the IMTS to Illinois agriculture, because waterways offer the least expensive means of bulk transportation for shippers with efficient access to them and thus help keep the state's farmers' price competitive.

The geography of Illinois corn and soybean production is mapped in **Figure 4.23** and **Figure 4.24** on the following page. The state produces three times as much corn as soybeans, making corn volumes by

county greater, yet soybean prices are approximately two-and-a-half times higher than corn, so the total dollar values of output by county would be closer to one another. Locations are comparable (to be expected for crops that are rotated); growers are present throughout the state but larger output broadly is north of St. Louis, and concentrations are south of Rock Island. Prominent counties are similar; top ones are somewhat different (perhaps again because of crop rotation), although such counties as Tazewell and Sangamon are leading producers of both crops. Clusters of crop volume are evident along and between the Mississippi and Illinois rivers, and extend further east toward the Indiana border. Grain terminal operators interviewed for this plan stated they do business with farms 60-90 miles away, which equates to the breadth of two to three counties; distances can be longer or shorter depending on the presence of competing facilities and transportation alternatives.

FIGURE 4.22 Illinois Corn and Soybean Export Trends (USDA)

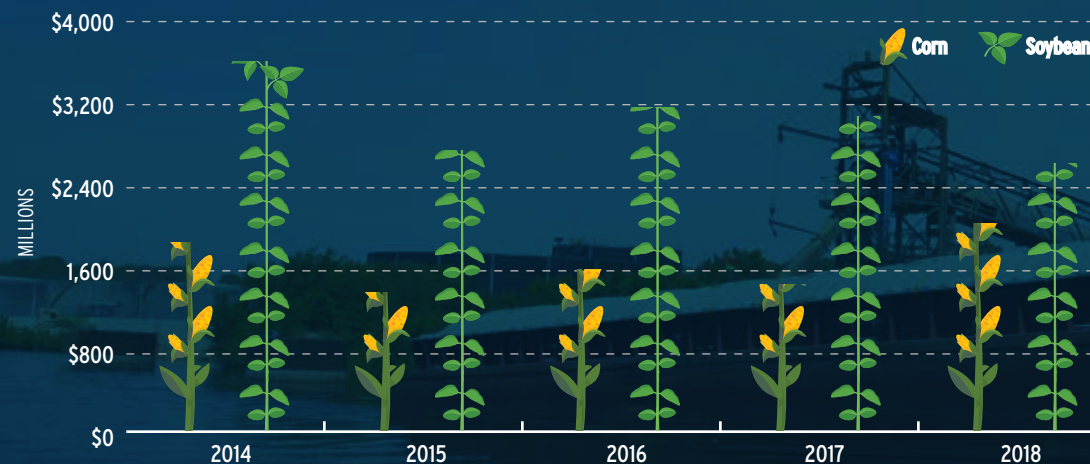


FIGURE 4.23 IL Corn Production by County: 2018 Bushels per Acre (USDA)

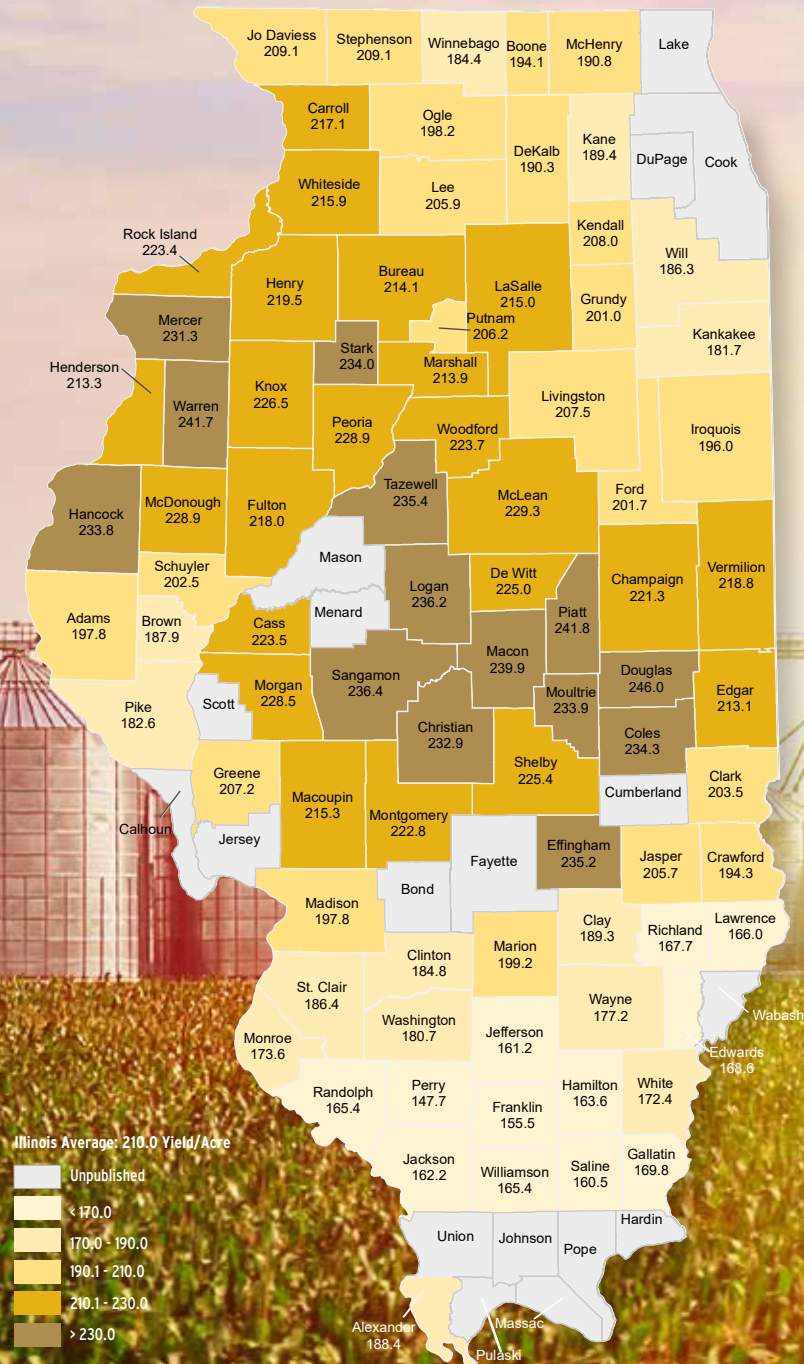
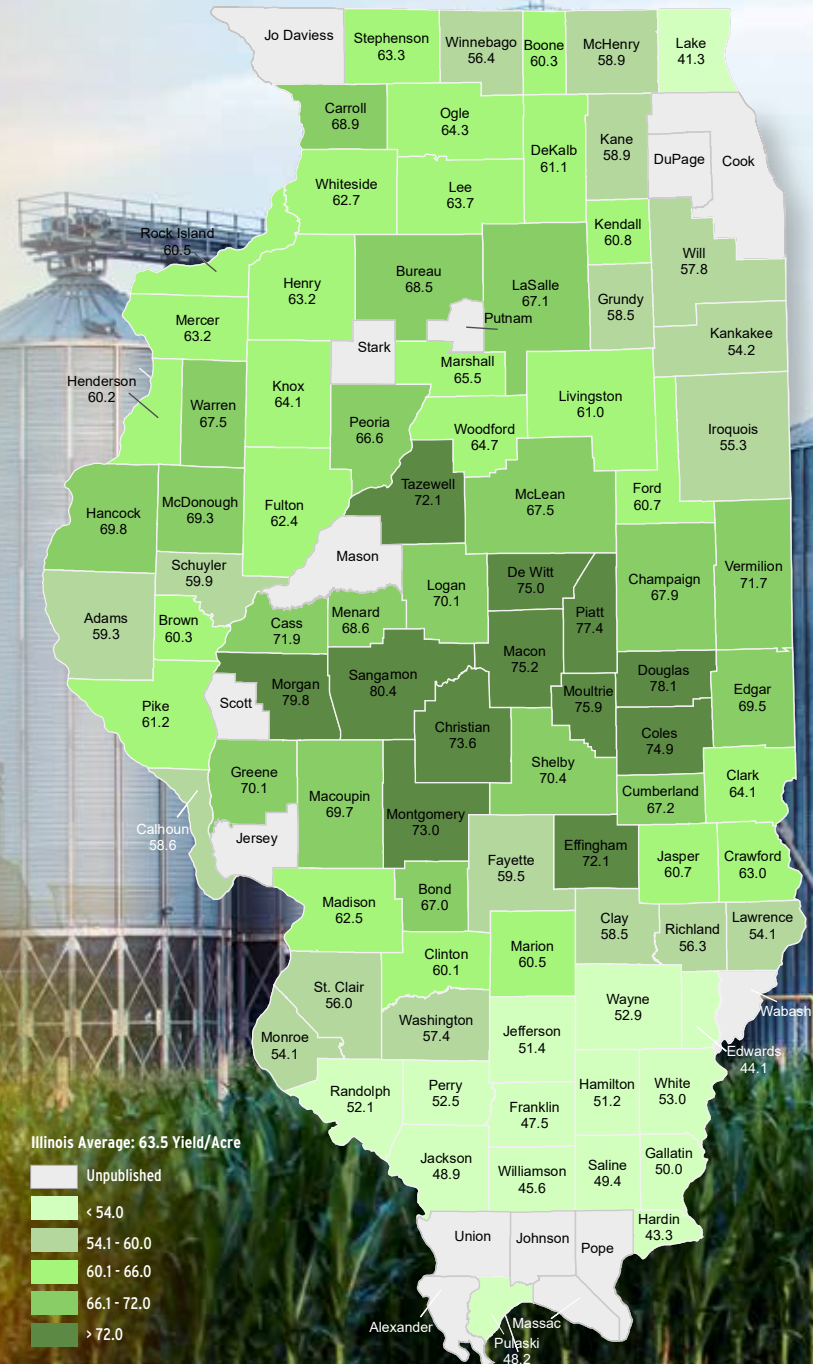


FIGURE 4.24 IL Soybean Production by County: 2018 Bushels per Acre (USDA)



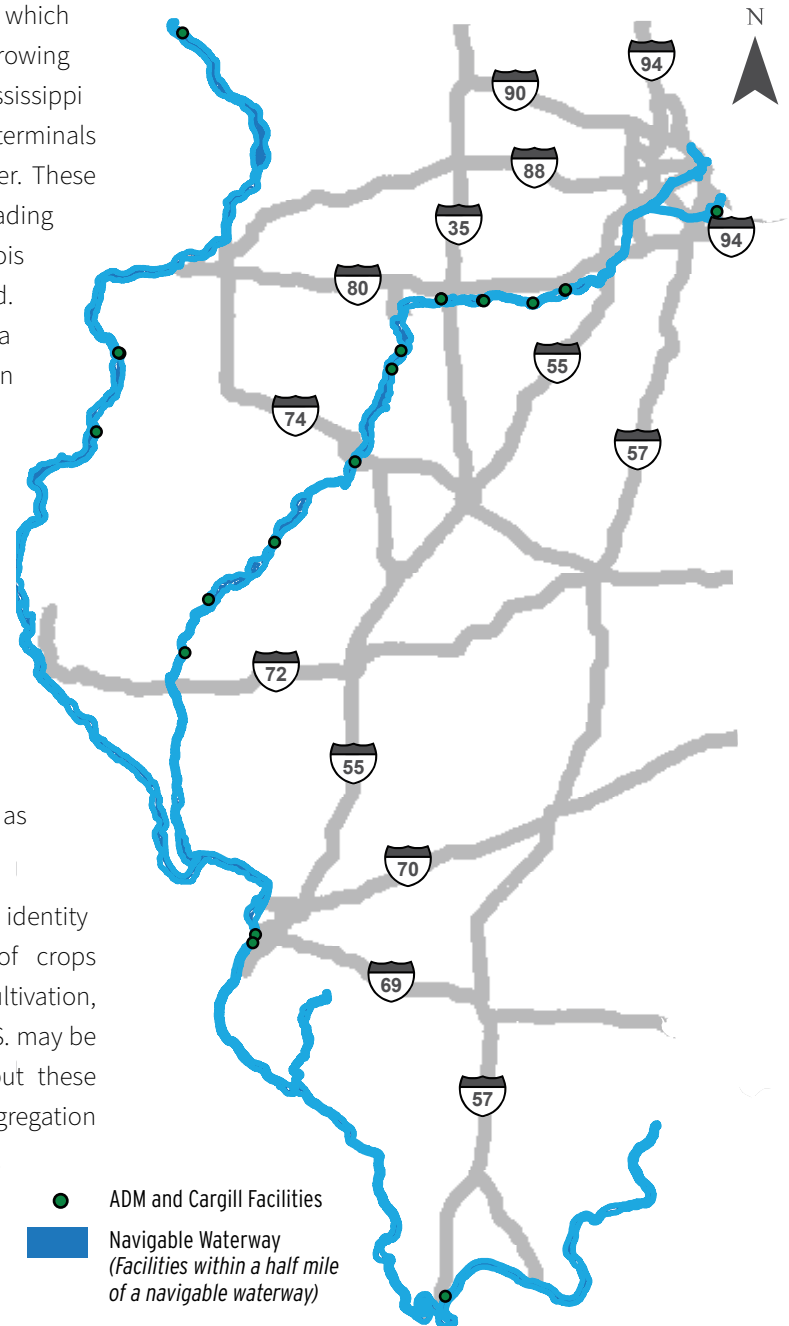
Farms access the rivers over roads by truck, with average payloads reportedly of 55,000 pounds. The top commodity moved by truck in the Illinois State Freight Plan was grain, although this encompassed direct shipments by truck and transloads to rail as well as to water. The cost of trucking was quoted in interviews at \$3.50 per loaded mile, which equates to ten to twelve cents per bushel for a 30-mile connection and twice that for 60 miles. In addition, the grain will be moved at least twice enroute to the waterfront - once to a grain elevator or "bin," then again to the waterside terminal - which easily could add 20-30 percent to the cost. This translates to two to seven percent of the market price per bushel depending on the connection distance and commodity (the higher priced soybeans are at the low end of the range, corn at the high). Farmers pay close attention to the "basis," which is the difference between the cash price at which they can sell grain locally and the market price for grain futures contract, which is established at exchanges such as the Chicago Board of Trade. Basis effectively sets the local cash price; it is more favorable close to the Mississippi River and less favorable further north in Illinois which reflects the cost of moving to domestic and global markets. The consequence is that the competitiveness of waterway transportation and access to the water affects farm incomes, land values, and tax bases.

The American multinational agribusiness companies Archer Daniels Midland (ADM) and Cargill are the leading intermediaries for Illinois corn and soybeans. Both have Illinois terminals along the IMTS (as depicted by the map in **Figure 4.25**) in addition to offices and facilities for other aspects of their

business. As the map indicates, the terminals are concentrated along the Illinois River which runs through the heart of the state's growing region. A smaller number appear on the Mississippi River although there are apt to be other terminals on the Iowa and Missouri sides of the water. These companies are involved in commodity trading contracts and are market makers for Illinois farms helping them sell into global demand. They work with farmers directly offering data and guidance for example on the direction of prices, what and how much to plant, when to store, and when to sell. Crops sold to the intermediary are trucked to the terminal where they may be dried (to remove moisture and weight) and are staged for loading. Both companies own barges themselves and also load onto equipment provided by carriers and others. There are smaller companies in this sector doing similar things on the IMTS, but these two firms are noteworthy as global players.

An important development in this market is identity preservation which is the segregation of crops according to their source, method of cultivation, and genetics. Grains and oil seeds in the U.S. may be genetically modified organisms (GMOs), but these are restricted in some foreign countries. Segregation of non-GMO crops is necessary for trading with such countries. However, the concept of identity preservation has evolved beyond GMO into the quest to define the conditions that lead to

FIGURE 4.25 IL Facilities of Major Agribusiness Companies on IMTS



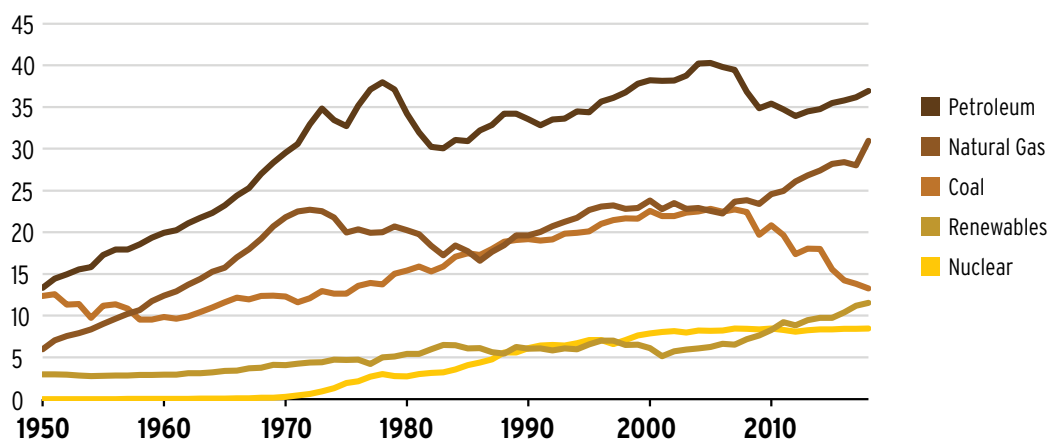
certain desirable crop characteristics such as protein content and disease resistance. This is enabled by information technology incorporated into farm equipment which can keep detailed digital records of seed, weather, cultivation techniques, and the like, from planting to harvest. Such distinctions change the character of the crop from a generic commodity to a differentiated product that may be able to command a better price. Thus far, the separation of non-GMO products still allows movement in bulk with such crops handled on different days at terminals and loaded onto specific barges. Bulk shipping keeps costs down and is desirable to retain. Nevertheless, the future of identity preservation points toward containerized goods as a coming segment in the market. The ability of container-on-barge or container-on-vessel operations to profitably and dependably serve this segment is an open question for the years ahead as is the supply of containers in the agricultural counties of Illinois where they would be needed.

4.2.2 COAL

Outbound coal was by far the largest commodity moving on the IMTS at the time the Illinois State Freight Plan was issued in 2017 (using data from 2014). Three years later, it is not. This is plainly illustrated by **Figure 4.26** from the U.S. Energy Information Administration (USEIA). Growth in coal and natural gas usage grew in tandem from the mid-1980's through around 2007, the approximate start of the fracking boom in the U.S. Thereafter, the usage trends sharply diverge, with natural gas climbing rapidly and coal falling about as fast.

FIGURE 4.26 Trends in U.S. Energy Sources (USEIA)

U.S. Total Energy Consumption (1950-2018) quadrillion British thermal units



The decline in coal is a national and global phenomenon PRECIPITATED BY ITS SULFUR AND GREENHOUSE GAS EMISSIONS AND ESPECIALLY BY THE RISE OF CHEAP, PLENTIFUL SOURCES OF DOMESTIC NATURAL GAS.



Illinois has around 15 percent of the nation's economically recoverable coal reserves, and is second only to Montana in this respect.⁵ Coal in the United States is employed almost entirely for the generation of electric power. This use and the declining demand for it can be seen in **Figure 4.27**. Even so, the trend in Illinois coal production has gone somewhat differently, as **Figure 4.28** shows and for several reasons. The first is that one-fifth of the output from Illinois mines is consumed by in-state utilities⁶ with the coal moving short distances by trucks or conveyors. This amounts to captive production with very low delivered cost. The second is that another quarter of Illinois' output goes to export, some of it metallurgical coal for industrial applications.

Third, coal from the Illinois Basin is like Appalachian coal in having high sulfur content, yet it has lower extraction costs than mines in the mountains of Appalachia. Coal from the giant Powder River Basin of Montana and Wyoming has low sulfur content. Electric utilities responding to air quality regulations began using scrubbers to remove sulfur but also mixing coal from high and low sulfur sources. This tended to favor the Illinois Basin over Appalachia because of its production cost advantage, and output in Illinois started to rise in 2011, reaching a peak in 2014 before falling back somewhat. Nevertheless, the future brings more challenges to demand, as **Figure 4.29** helps to explain.

FIGURE 4.27 Trend in Coal Use (USEIA)

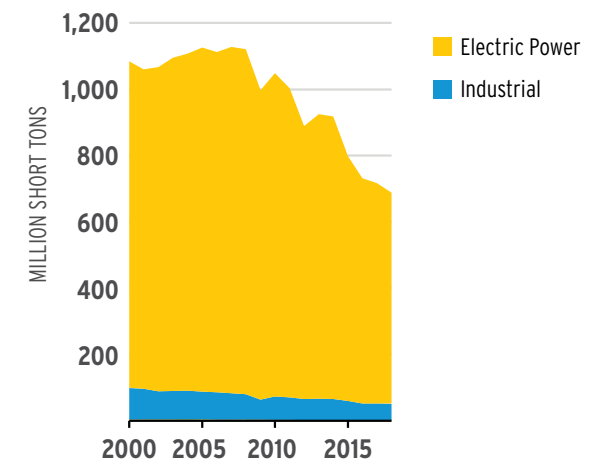


FIGURE 4.28 Illinois Coal Production Trend (USEIA)

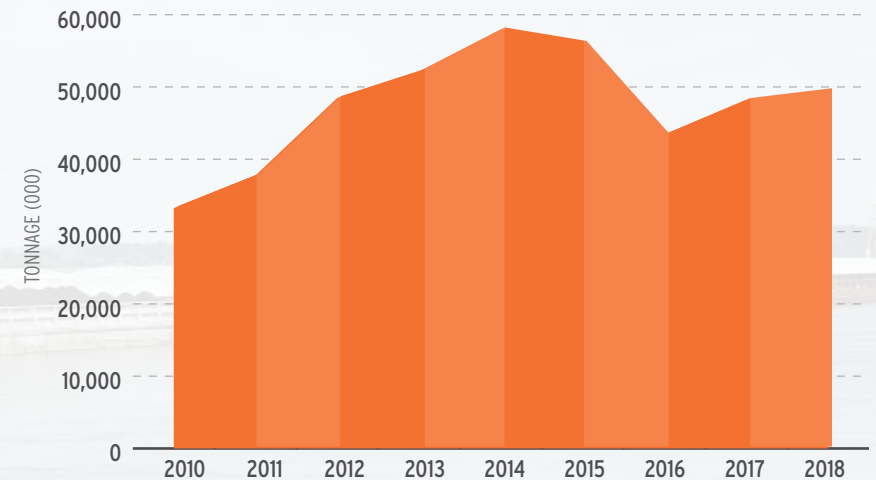
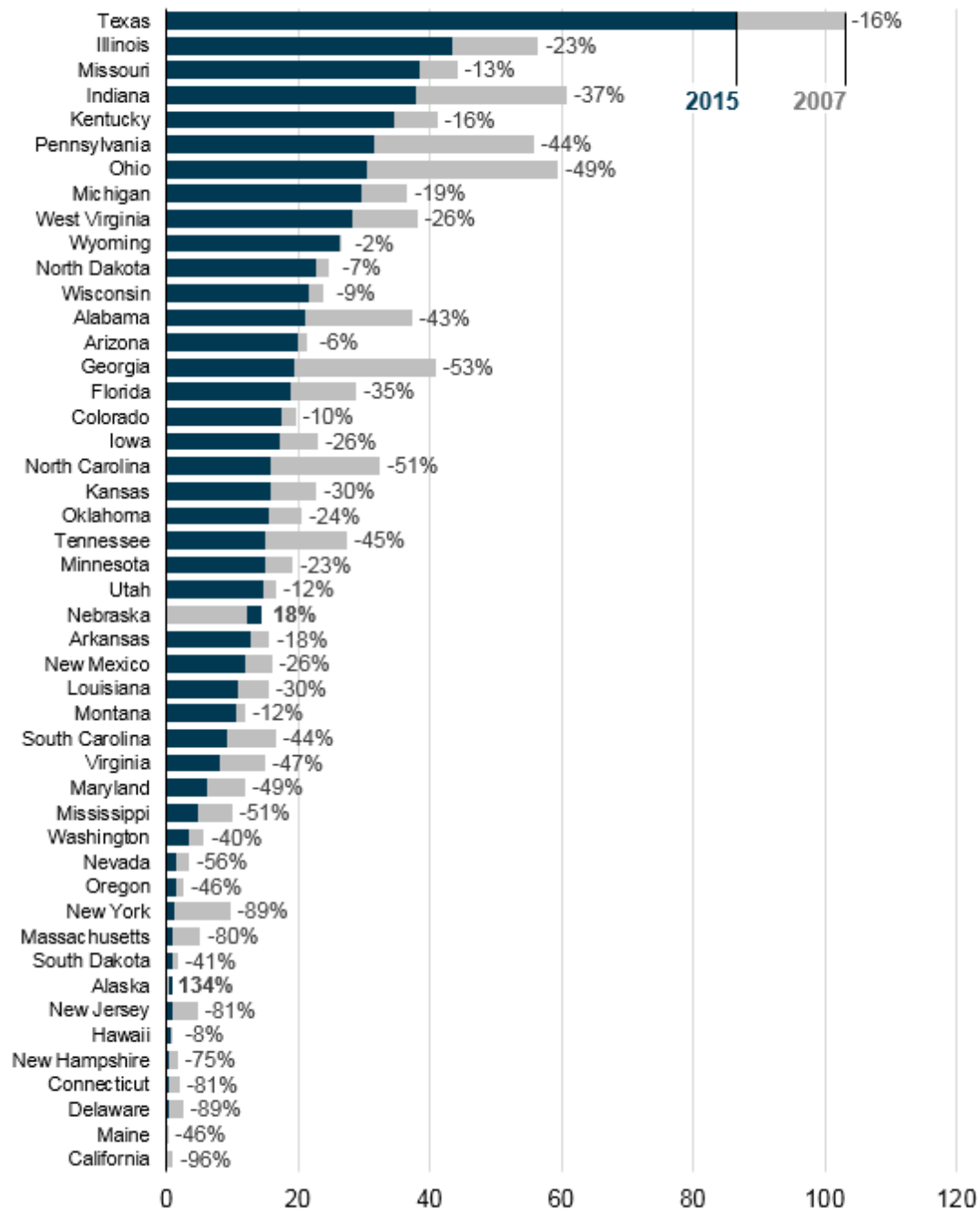




FIGURE 4.29 Declining Consumption Among IL Waterborne Coal Receivers

Electric power consumption of coal by state, 2007 and 2015
million short tons



Public utilities in eight states received Illinois coal by water in 2018 which accounted for 95 percent of Illinois waterborne coal shipments. Four of them – Florida, Kentucky, Ohio, and Tennessee – represented 91 percent of utility demand, and Ohio shipments largely were discontinued in the second half of the year. The eight states are highlighted in **Figure 4.33** which shows that between 2007 and 2015 – the latest year for which this chart has been produced – coal consumption in every one of the eight had declined, in most cases by at least 30 percent. Looking ahead, U.S. Energy Information Administration (USEIA) projects continuing and significant retirements of coal-fired utilities nationally through 2025 (depicted in **Figure 4.30**), with replacement by natural

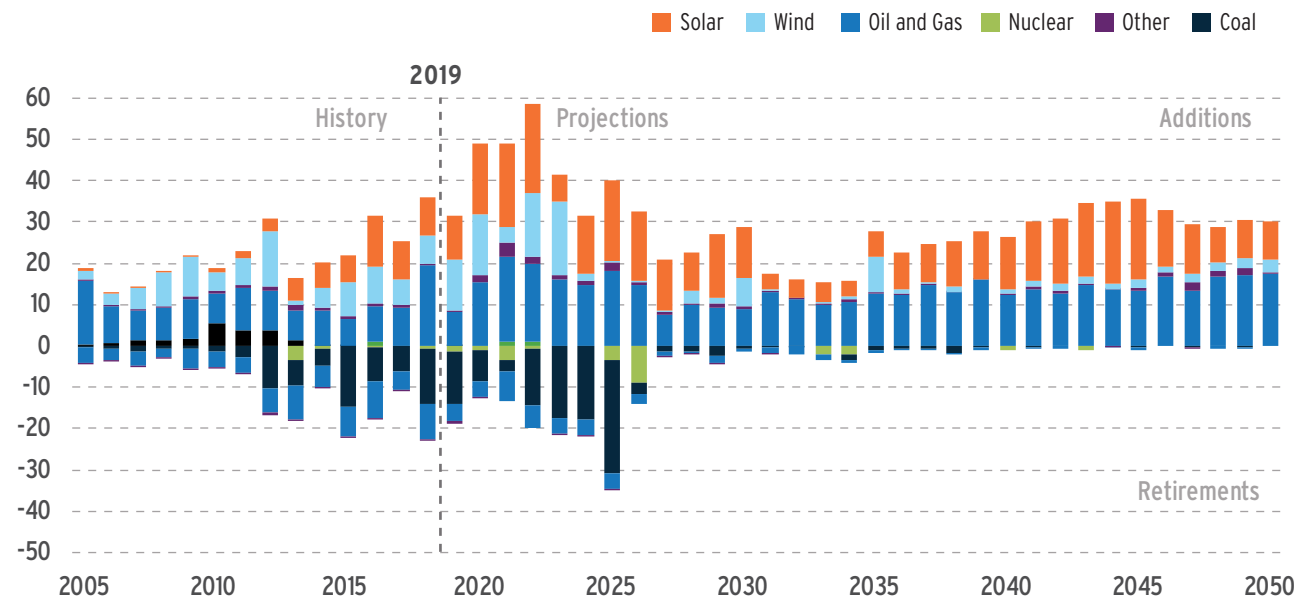
gas and renewables. While retirements of coal-fired utilities in states served by Illinois' waterborne coal are not specifically identified, the market outlook is not favorable.

The Illinois Basin coal fields are in southern Illinois, southwestern Indiana, and northern Kentucky. The majority of Illinois mines are south of the Kaskaskia River and stretch across the state as indicated by the map in **Figure 4.31**. This part of Illinois is enveloped by the Mississippi and Ohio rivers making access to water reasonably easy. Major companies in this sector are Peabody Energy, Foresight Energy, Williamson Energy, Alliance Resource Partners, and Turris Coal Company.

FIGURE 4.31 Illinois Coal Mines (USEIA)



FIGURE 4.30 Electric Utility Retirements and Additions by Fuel Type (USEIA)



Source: USEIA

4.2.3 PRIMARY METAL PRODUCTS

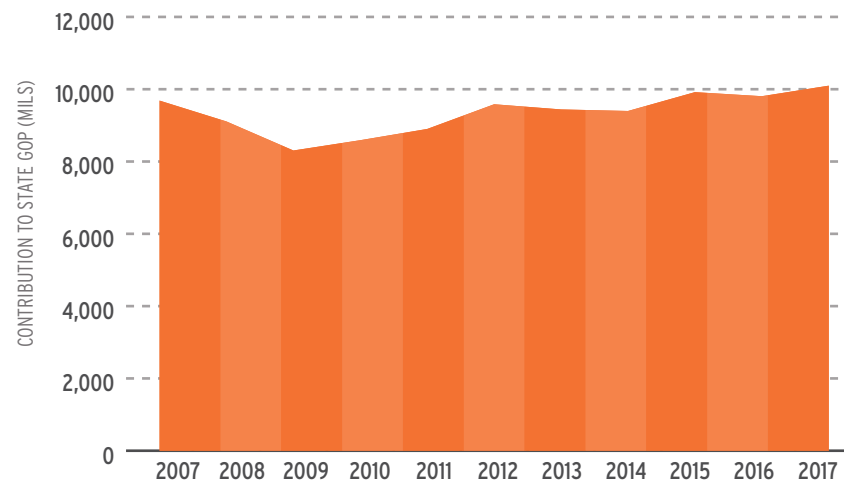
Primary Metal Products moving on the waterway system are chiefly iron and steel. On the IMTS, they are almost entirely an inbound commodity, implying that the key source of demand is among the users instead of the producers of these products. Usage is highly diverse involving such major Illinois industries as construction, machinery, electrical, and transportation equipment. However, supplies to these sectors tend to be processed components and not primary materials. Processing can be done by steel mills and mill services companies converting semi-finished goods into useful forms. However, the principal supply chain intermediary creating processed components is the fabricated metals industry.

Primary Metals MANUFACTURING CONTRIBUTE LESS THAN 2% OF ILLINOIS' GDP BUT HAS BEEN GROWING

According to the U.S. Department of Commerce, primary metal manufacturing (which includes steel mills) represented less than 2 percent of the private goods producing sector in 2017 Illinois GDP and had declined more than 20 percent over the previous decade. Fabricated metals manufacturing represented more than 7 percent and had grown by 4 percent in the preceding decade (the trend is illustrated in **Figure 4.32**). Fabricated metals manufacturing processes range from forging, cutting, and stamping of metals to bending, forming, galvanizing, machining, and welding. Among the components of the industry are toll processors, who act as intermediaries between steel mills or importers and various end users and are contracted by the end user to fabricate metal to their specifications. In essence, they are customizers of bulk steel into practicable shapes and quantities on behalf of the buyer. This business is suited to barge transport because the inbound quantities can be large and concentrated, and the processor can be selected for proximity to the buyer as well as for its types of service. These aspects hold down the transportation costs in what for the buyer is an extra step needed to obtain raw materials in a form they can use.

The outlook for fabricated metal products is a function of its end uses. Capital spending plans are important, and in 2020, they are being approached

FIGURE 4.32 IL Fabricated Metal Products Output Trend



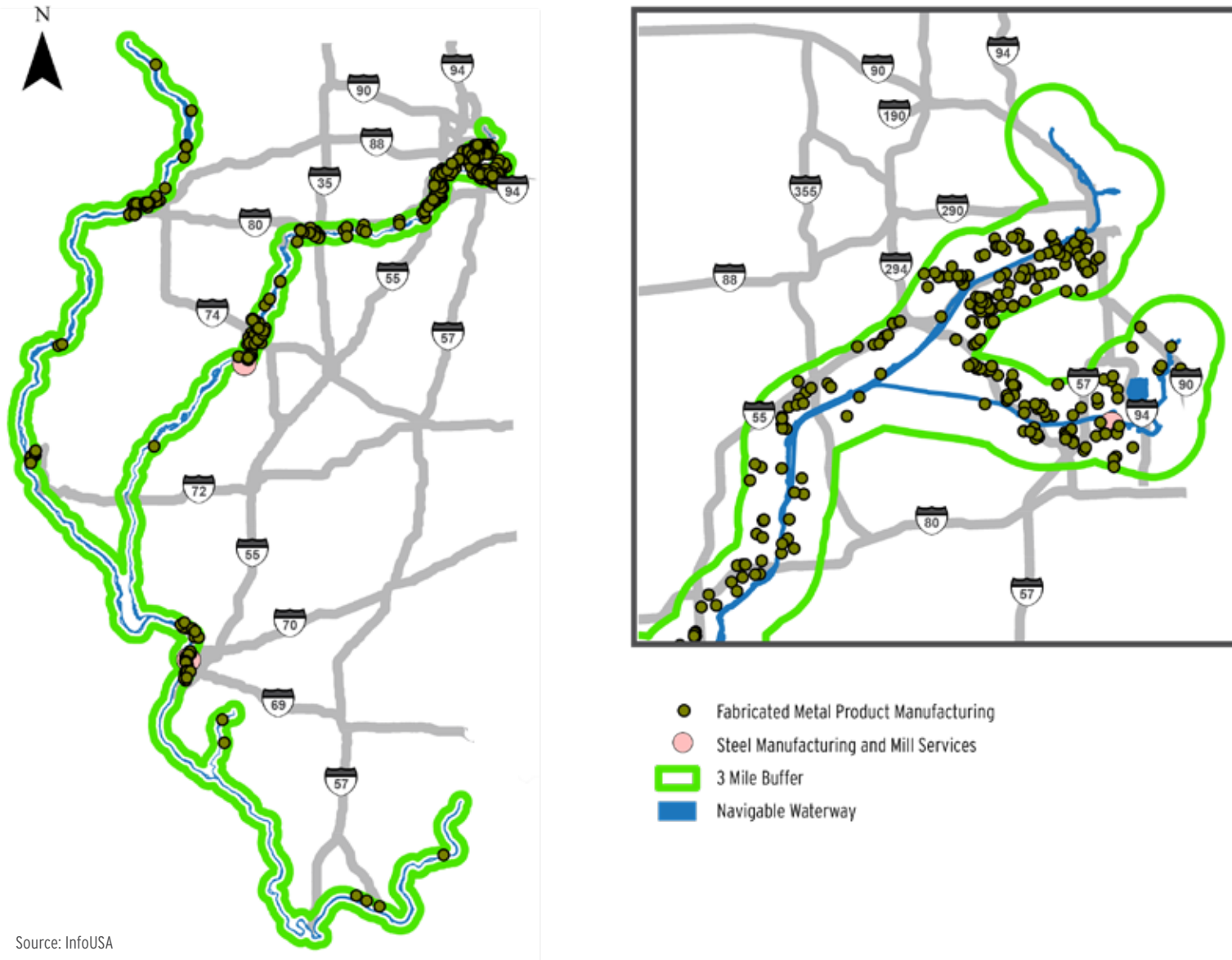
Source: U.S. Dept. of Commerce

cautiously. The diversity of the industry suggests it will move with the overall manufacturing economy, but that means it will have stronger as well as weaker segments. Infrastructure investment is likely to be a meaningful source of demand in the next few years, both from federal stimulus spending and from construction of e-commerce facilities which already was a growth market before the 2020 pandemic provided an extra boost. Infrastructure can require large volumes of goods creating dense transportation lanes which is efficient for fabricators and conducive to inbound supplies shipped by water when companies are adjacent to the IMTS.

There are several thousand facilities engaged in metal fabrication within three miles of the IMTS, employing over 12,000 people. The map in **Figure 4.33** on the following page, illustrates several steel mills and mill service firms but is comprised mostly of fabricated metal manufacturers. The figure also has a close-up of the concentration of establishments near the IMTS in the Chicago region. Chicago in fact is a primary center for fabricated metals. According to World Business Chicago, this sector is the largest component of the manufacturing industry in the metropolitan area, and Chicago production of fabricated metal is greater than any other urban area in the country.

Many of the firms depicted in this figure are not receiving shipments from the waterway, for reasons ranging from their type of fabrication and their need for barge-load volumes, to the location of their suppliers for inbound product and the delivered cost of supplies. Nevertheless, the map is a good indication of producers in proximity to the IMTS for this major industry in the state and leading commodity on the waterways – and may be an indication of opportunities for attracting new users to the system.

FIGURE 4.33 **Metals Manufacturing Facilities Along IMTS**



Source: InfoUSA

4.3 CARRIER/OPERATOR PROFILES

There are numerous in-state and out-of-state carriers and operators that serve the IMTS every day, including barges on Illinois' rivers and ships on the Great Lakes. While marine transportation remains a large industry in the State of Illinois, many users believe there is room for improvement. This section provides brief company-specific profiles of carriers and operators that serve the IMTS, as well as commentary from consultations on strengths, weaknesses, and opportunities on the system. The types of marine stakeholders are profiled to the right.

Throughout the consultation process, many carriers and operators expressed similar interests resulting in a few key themes. In particular, there were two primary takeaways that users repeatedly brought up:

- **Educating the public about freight transportation and improving general awareness of the marine system.** Many stakeholders expressed frustration with a lack of public understanding or appreciation of the importance of freight transportation in general and especially marine transportation. This lack of awareness is important because public support is needed to secure funding for continued investment. Additionally, several stakeholders expressed a desire for IDOT to assume a role as an educator for the public.
- **The need to provide adequate and regular infrastructure funding.** Many vessel operators stated that the infrastructure at ports and harbors in Illinois is outdated. Consequences of this outdated status include broken docks falling into the water, narrowing channels leading up to ports and harbors, and fluctuating water levels – all resulting in delayed and reduced operations. Therefore, many stakeholders have stressed that continued investment in infrastructure is critical to maintaining the marine system's reliability, safety, and availability. Not only is funding needed to maintain infrastructure to its current specifications or condition, but many users also stressed the value of investing in improvements such as increasing draft of water bodies, improving connections between land and water, and investing in port terminals.



4.3.1 BARGE CARRIERS

Illinois' river system is served by a wide range of barge carriers. These operators have different specializations and roles within the system. Specialization by equipment type is frequent, reflecting different commodity types, handling characteristics and requirements, and industry clientele. Dry bulk versus liquid bulk equipment is the most common distinction, and there are segments within each, such as petroleum carriers within the liquid bulk group. While barges for dry and liquid goods obviously differ in construction, there are operational limitations as well: for instance, equipment used for certain commodities cannot be used for others because of contamination concerns. A list of barge carriers that are represented by the Illinois River Carriers Association (IRCA) can be viewed in Appendix D. **Note: This list does not include IRCA members who are not carriers, such as terminal operators.*

Some barge companies are multi-line carriers with large, diverse fleets and operations throughout the inland waterway system; from the IRCA list, American Commercial Barge Lines and Ingram Barge are examples of this type. Others are subsidiaries of businesses that are not mainly in transportation: American River Transportation Company is part of the

agribusiness giant ADM, and Middle River Marine is part of the Chicago construction aggregates and ready-mix provider Ozinga. Still others have circumscribed geographic ranges: Kindra Lake Towing with regional operations around Chicago is an example. Profiles of most of the IRCA carriers are presented in Appendix D, with brief descriptions of their services, facilities, routes, commodities, and other characteristics.

STRENGTHS, WEAKNESSES, ISSUES AND OPPORTUNITIES

Select barge carriers were consulted to collect feedback on the needs and issues of Illinois' waterways. In order to protect carriers' confidentiality, feedback on the system's needs and issues are summarized here.

- A strength of the system is the **large number of operators** which introduces competition and ensures that barge transportation remains an affordable option for shippers.
- There is an opportunity for increased barge shipping through the Port of Chicago; however, some operators noted a weakness: current infrastructure at the port is believed insufficient for increased operations.

- A threat or weakness is the ongoing **discussion of closure of lock and dams at Brandon Road in Joliet, IL** to prevent the spread of aquatic invasive species. Carriers were concerned that the public does not understand the importance of the IMTS has in commerce.
- A strength is **facilities and operations located across the entire river system**, not just in certain areas. This makes it easier for potential customers to utilize the marine system, regardless of location on the river.
- A weakness is a **potentially-limited service or space for oversize-overweight loads** in some areas. One operator noted that they had to transport mobile cranes to some river terminals making the handling of oversize-overweight loads more complex and expensive. A similar concern is the **BNSF railroad bridge in Lemont** which restricts the movement of "megaloads" by barge on the Sanitary and Ship Canal.

It is important to note that the above are key points made by stakeholders, though they do not constitute a full strengths and weaknesses discussion.

4.3.2 LAKE AND OCEAN CARRIERS

Like the river system, Illinois' Lake Michigan ports are served by a variety of carriers with different cargo and geographic specialties. U.S. and Canadian vessels conduct trade within the Great Lakes, while foreign-registered vessels carry goods for import and export to overseas markets. Domestic operators focus on movement of dry bulk commodities, while foreign-flag carriers are handling dry bulk as well as break-bulk and project cargo like grain, steel, and machinery.

Illinois' Great Lakes marine system is relatively small in geographic scope compared to the inland river system, with activity focused on ports in Chicago and Waukegan. Despite a small Great Lakes shoreline, Illinois and the Chicago area in particular play an important role in Great Lakes trade, especially since Chicago's waterways provide the only navigable link between the Mississippi River and Great Lakes. By comparison, Waukegan's commercial navigation role is currently more limited, as the majority of the port's commercial traffic is incoming gypsum from Michigan.

There are two main groups of users at Illinois' Great Lake Ports: (1) domestic-registered and Canadian-registered carriers and (2) foreign carriers. These distinctions between users relate to a ship's registration (or "flag," as flags indicate the country of registration) and related laws. In the U.S., the Jones Act prohibits foreign-flag vessels from moving cargo between two points in the U.S.. Canada has a similar regulation prohibiting foreign-flag vessels from moving cargo

between two Canadian ports. These regulations mean that U.S.- and Canadian-flag vessels handle trade between ports on the Great Lakes system while foreign-flag vessels handle imports and exports from overseas trading partners like Europe.

||||||

Types of Great Lakes Vessels Using Illinois Ports

Different types of vessels are used for Great Lakes shipping depending on the flag of the carrier, service area for the vessel, type and volume of cargo being carried, and loading or unloading capabilities of customers. Ultimately, there are three major types of vessels operating on the Great Lakes: lakers, tug-barge combinations, and "salties."

- **Lakers** make up the bulk of U.S.- and Canadian-flag shipping capacity on the Great Lakes and were often built specifically for operation on the Great Lakes - and for specific customers such as steel or cement manufacturers. The U.S.-flag fleet has some of the largest lakers by size, including the 1000+ foot "thousand footers" which were designed to maximize the amount of cargo carried through the Soo Locks in Michigan. By comparison, Canadian-flag lakers are often smaller, as they are often constructed to fit within the smaller dimensions of the St. Lawrence Seaway locks. Lakers most often handle dry bulk materials, and therefore, most are equipped with self-unloading equipment that allows them to unload materials at unimproved dock areas.

- **Tug/Barge** units are also used by U.S.- and Canadian-flag carriers, particularly for customers that require smaller shipments. Most of these tug/barge units are larger than single inland barges and designed to handle the rougher waters of the open lakes.

- **Salties** are vessels used for trade with overseas ports and are almost exclusively operated by carriers flagged in other countries. The size of these vessels is limited by the dimensions of locks on the St. Lawrence Seaway, and they handle a wide range of goods for international trade.

||||||

Select Domestic (US-Flag) Carriers

Domestic (or U.S.-flag) carriers are carriers with vessels registered in the US. On the Great Lakes, domestic operators primarily handle dry bulk commodities such as iron ore, coal, limestone, cement, and salt. Together, domestic operators carried about 83.7 million tons of commodities like these in 2018.⁷ The operations of Great Lakes domestic carriers are usually limited in scope to the Great Lakes, and the largest domestic-flag vessels are too large to navigate the Welland Canal into Lake Ontario. Most of the U.S.-Flag Great Lakes Carriers are members of the Lake Carriers Association, whose membership roster is listed in Appendix D.

IIII

Select Canadian Carriers

Like U.S. Carriers, Canadian-flag carriers on the Great Lakes often specialize in dry bulk commodities, such as grain, ore, coal, and limestone. However, there are some differences in U.S. and Canadian Great Lakes fleets:

- Canadian fleets service Canadian customers on Lake Ontario, which lies downstream of the Welland Canada. Therefore, the average vessel size of Canadian fleets must be smaller in order for vessels to pass through the Welland's locks.
- Canadian fleets have a greater capacity for the movement of liquid bulk such as petroleum and asphalt.
- Canadian fleets often have newer vessels as Canadian firms can purchase vessels built at lower cost shipyards overseas. By comparison, the Jones Act requires that U.S.-flag fleets only use vessels constructed in the U.S. where construction costs are higher. U.S. carriers have chosen to invest capital in modernization and overhaul work that can keep existing vessels operating longer.

As a result, Canadian carriers have a large fleet of medium- and small-sized vessels. Appendix D lists some of the major Canadian Great Lakes carriers.

IIII

Select Foreign-Flag Carriers

For the purposes of Great Lakes discussions, foreign flag carriers are synonymous with carriers registered in nations other than the U.S. and Canada. Considering that both the U.S. and Canada prohibit foreign-flag carriers from carrying cargo between

domestic ports; and since U.S. and Canadian lakers are often purpose-built for Great Lakes operations, foreign flag vessels handle the majority of Great Lakes' ports trade with overseas ports. In particular, Europe is a key trading partner for Great Lakes ports due to the direct sailing routes from the St. Lawrence River over to Europe. Trade with other regions including South America, Africa, and Asia does occur, but not as frequently. The Great Lakes' trade with foreign ports is often described as "steel in, grain out" as Salties delivering specialty loads of steel often carry grain outbound for export. Other major imports include higher-value machinery, such as mining equipment, construction equipment, generators, boilers, refinery parts, and wind turbines.

Given the wide variety of goods moving in and out of the Great Lakes in foreign trade, Salties must be able to carry a wide variety of cargos. Subsequently, the size of St. Lawrence Seaway locks limits the size of Salties entering the Great Lakes, and vessels entering the Seaway must be equipped with select elements of mooring equipment for passage through Seaway locks. Given the size restraints and gear requirements associated with passage, not all foreign-flag vessels can enter the system, and some carriers have specialized in serving the Great Lakes. An illustrative list of common foreign-flag operators is provided in Appendix D.

IIII

Select Shipping Agents

Shipping agents can be thought of as marine concierges; they provide logistical and administrative support to carriers visiting a port, handling tasks like booking of pilots, filing of Customs and Border

Patrol paperwork, interfacing with port authorities in advance of a port call, and arranging for resupply of vessels. Two examples of agents serving Great Lakes carriers are profiled in Appendix D.

STRENGTHS, WEAKNESSES, ISSUES, OPPORTUNITIES

Based on consultations with carriers and industry publications, the Great Lakes commercial navigation needs and issues that are directly relevant to Illinois include:

- **The need for continued infrastructure investment.** This includes the need to continue investments in dredging the Calumet River and Waukegan Harbor, as well as repairs to aging breakwaters and other protective structures. Additionally, system-wide there is a need for continued investment in bottlenecks like the Soo Locks in Michigan which are critical to the movement of commodities like iron ore. Infrastructure investment is becoming particularly important as historically high lake levels have the potential to damage aging breakwaters and other waterside infrastructure.
- **The desire for improved cruise facilities in Chicago.** Stakeholders noted that Chicago's lack of dedicated cruise tourism docks or infrastructure has meant that the city is left off itineraries for most cruises.
- **Opportunities for short-sea shipping.** Some marine groups have expressed interest in creating cross-lake truck ferry services to bypass road congestion around Chicago.



4.3.3 FACILITY OPERATORS

Facility operators help move cargo between land and water and can provide additional services such as fleeting of barges, maintenance, and shipbuilding, to name a few. The list of facility operators provided in this section each offers a wide variety of services to manufacturers, shippers, and other users of the IMTS. Below is a selection of offerings facility operators may provide:

- **Port and Infrastructure.** Especially on the inland waterway system, operators provide inbound and outbound opportunities for barge, rail, and trucking carriers.
- **Logistics Services.** Many operators offer customers on-time shipping coordination, advanced loading and unloading capabilities, dock crews, and a full suite of logistics offerings.

- **Storage and Warehousing.** Often, operators will provide outdoor (ground) and indoor storage for their own commodities or products of other companies who utilize the terminal.

Profiles of a number of prominent terminal operators in Illinois Are presented in Appendix D, and provide additional detail about their services.

STRENGTHS, WEAKNESSES, ISSUES, AND OPPORTUNITIES

Consultations with terminal operators and review of existing materials suggest that some common best practices, needs, and issues include:

- Having a combination of modes onsite is a strength as it can attract customers with varying volumes of freight and can help lower transportation costs through the introduction of competitive modes.

- Adequate maintenance of local roads can be a weakness for truck operations as poorly maintained roads around barge facilities can damage trucks and cargo or require trucks to take longer routes. A related concern is adequate clearances on routes hauling oversize-overweight cargo.
- For some operators of smaller terminals, receiving adequate and timely rail service can be a problem as more Class I railroads implement Precision Scheduled Railroading and focus on higher-volume, longer-distance trade lanes.
- In the case of Great Lakes terminal operators, high water levels are a threat because they increase damage inflicted by storms.



4.3.4 RAIL AND TRUCK CARRIERS

Rail and trucking are critical elements of the marine transportation system because they provide firms and farms without water access the opportunity to ship and receive goods by water. Depending on the geographic location and economic conditions, rail and truck operators can be competitors of barge carriers, vying for bulk traffic on similar trade lanes. In other areas, the land transport and river relationship can be complementary, with a combination of barge, rail, and convenient truck access service attracting new customers. Brief profiles for a number of rail and trucking carriers operating in Illinois are presented in Appendix D, selected because the carriers interface with the marine system or have routes in parallel to the Illinois or Mississippi rivers. Additional information on Illinois' rail network and its operators can be found in the *2017 Illinois State Rail Plan Update*.⁸

STRENGTHS, WEAKNESSES, ISSUES, AND OPPORTUNITIES

The railroads and trucking firms consulted for this project had some common feedback:

- Class I railroads invest a large portion of their capital for infrastructure improvements, particularly in Illinois. While the ability to **sustain large capital investments** each year is a strength, it also translates into high fixed costs. Railroads are financed internally or from public markets, and occasionally receive financial help from the public sector.
- Over the past year, **freight shipping has significantly declined** which has caused Class I's and other shippers to become wary of a possible recession.⁹ This is a significant issue for Illinois' major rail

operators as it is becoming increasingly difficult to plan for operations and determine the long-term viability for capital investments.

- A Class I strength is an **expansive network** which allows railroads to compete against barges for long-distance shipment of bulk commodities.
- **Quick and easy entry into rail-to-river access points** is a competitive advantage for smaller railroads as it can help them appeal to additional customers.

As with previous barge and terminal operators, rail and trucking operators suggested that continued investment in transportation infrastructure was a key role for the state. In particular, rail carriers saw continued investment as an important tool to counteract declining freight volumes.

4.4 ECONOMIC IMPACT ANALYSIS

The IMTS supported 166,628 jobs that generated almost \$17.4 billion in gross state product in 2017. These jobs represent the total range of economic effects: from direct users of the waterways and providers of marine transportation services to indirectly affected supply chains and businesses which benefit from the re-spending of their income in the local economy. These 166,628 workers earned a total of approximately \$10.5 billion in income, which in turn generated \$2.9 billion in federal, state and local taxes. Of the 166,628 jobs in total, 45 percent (~74,600 jobs) can be said to be directly tied to the waterways. The majority of these direct jobs 78 percent (~59,400 jobs), represent the economic activity of businesses who source and ship goods via the waterway with the other 12 percent (~15,400 jobs) representing marine transportation and supporting businesses who render service to all marine traffic and not just Illinois businesses.

The following subsection provides an overview of the systematic accounting of the process that produced this estimation of statewide marine transportation system impacts.



The Economy of the IMTS generates:

\$17.4 billion IN GROSS STATE PRODUCT

\$10.5 billion IN WORKER INCOME

\$2.9 billion IN FEDERAL, STATE AND LOCAL TAXES

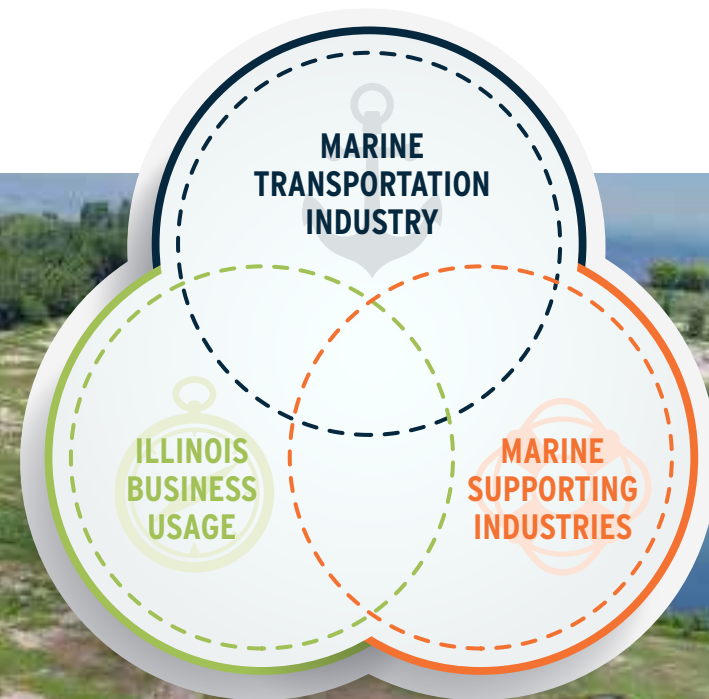


4.4.1 MARINE FREIGHT AND ILLINOIS

The Illinois marine system covers both inland navigable waterways and Great Lakes ports. This system transports a vast amount of cargo, totaling 90.6 million tons in 2017, serving major Illinois industry and supported by an array of freight carriers, as earlier sections of this chapter described. One of the challenges in assessing the importance of a system this large is differentiating between the local (state) economic activity it facilitates and the rest of commerce moving on the waterways. The facilities in Illinois provide benefits to a broader user base that encompasses more than just Illinois businesses, and while non-Illinois businesses are considered out of scope, the local transportation service sectors assisting in the movement of their goods must still be accounted for. The analysis presented in the subsequent pages focuses on freight-only related impacts, emphasizing three classes of waterways-associated activities. **Figure 4.34** shows these three classes.

Central to the work done in quantifying the economic effects is putting forth a transparent methodology that can be repeated as a way of benchmarking the contribution of the IMTS as the Illinois economy continues to evolve. While the impacts estimated in this marine transportation system plan are limited to a current year snapshot of activity, this method of assessing the role the IMTS plays in the economy should be continued to better understand future needs and evolving trends.

FIGURE 4.34 Components Used to Understand Waterway Activity



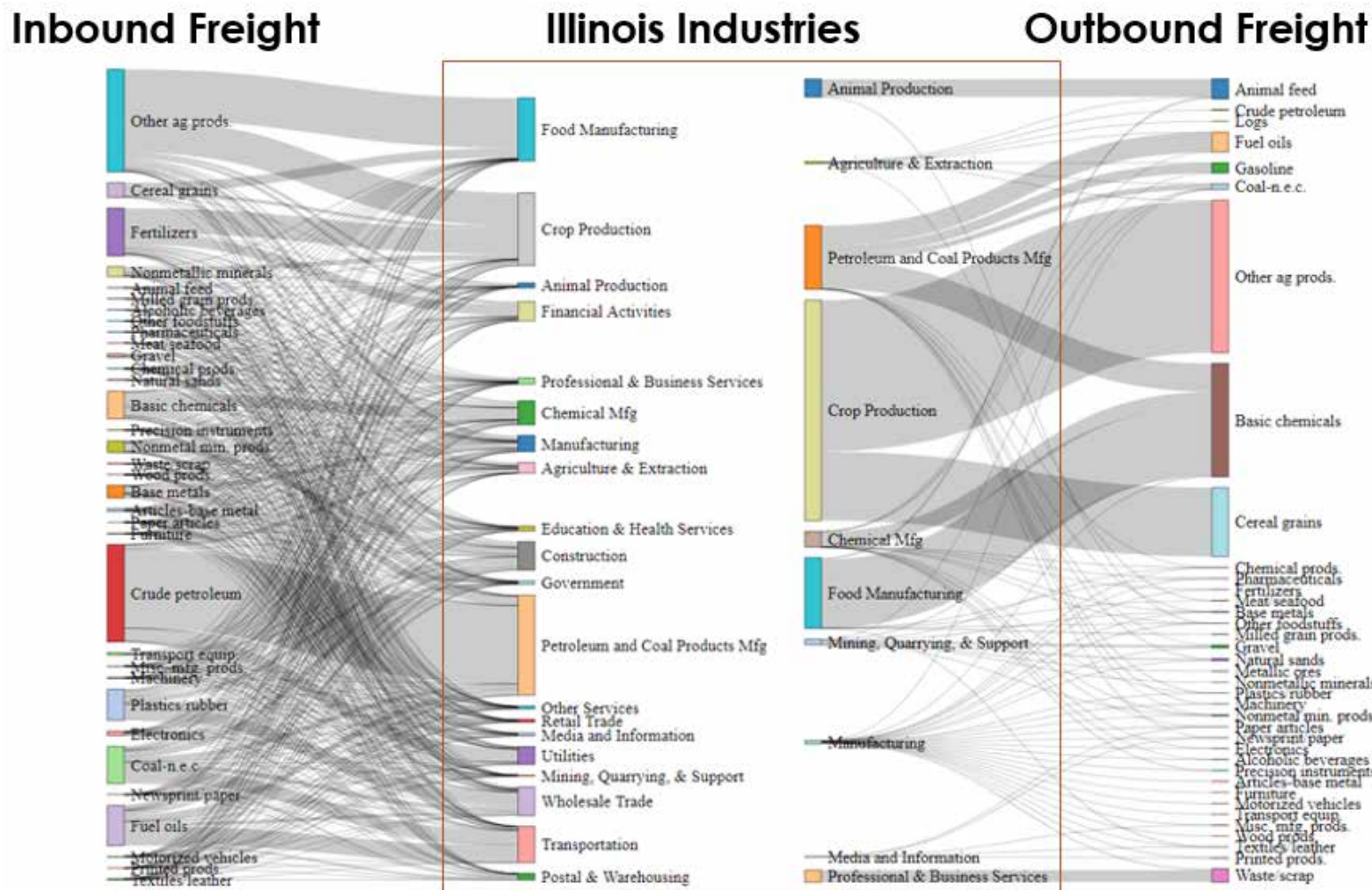
4.4.2 GOODS MOVEMENT AND THE ECONOMY

In describing the importance of freight in the economy, the analysis is referencing the role of the marine economy in moving goods to and from markets as a means of satisfying Illinois industrial needs. Industries are both producers and consumers of goods, and trade between industries for components is what necessitates the use of marine and other modes of transporting goods. The economic

flow diagram of the Illinois economy in **Figure 4.35** serves to explicitly map the movement of marine goods in relation to Illinois businesses.

This diagram conceptually demonstrates the role of marine cargo traffic and helps demystify how freight movement lines up with discussions of the economy.

FIGURE 4.35 **Flow of Marine Goods in the Illinois Economy**



4.4.3 METHODOLOGY

To capture the diverse set of behaviors enabled by the IMTS, system-associated activities were classified according to three different ways in which they interact with the economy as the marine industry, as marine-supporting industry, and as marine system users (**Figure 4.36**). This section covers the methods of quantifying the waterways role in the economy as a way of cost-effectively transporting goods for each of these three forms of impact.

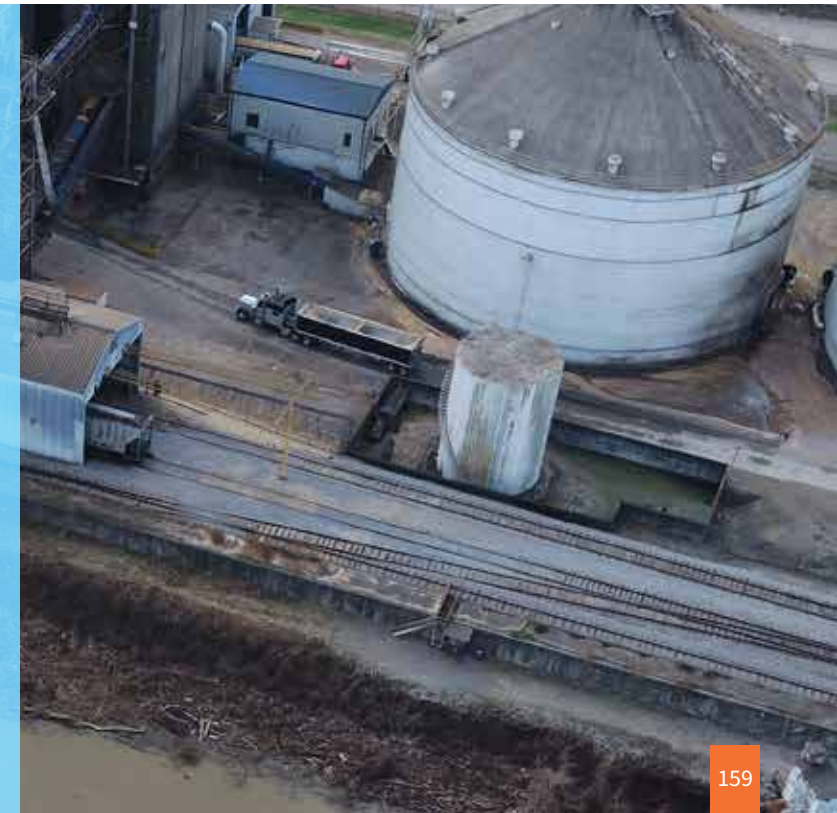
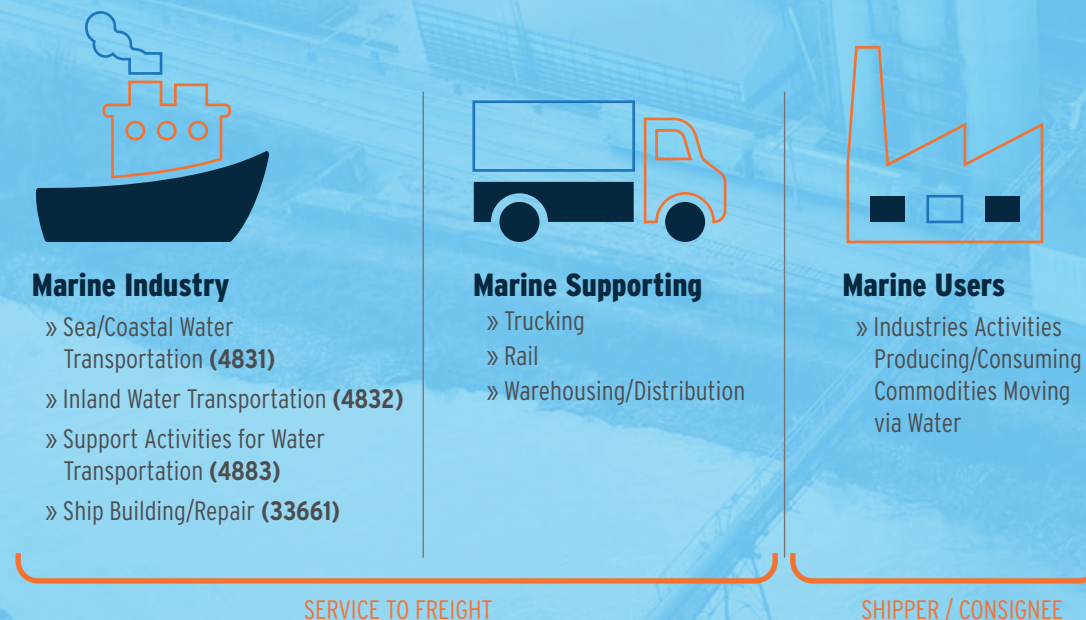
Marine Industry

The following categories comprise aspects of water transportation that is classified as marine industry impacts. These industries comprise the service providers conducting the waterborne services taking place on the waterways:

- **Water Transportation.** Captures both coastal water transportation workers as well as inland water transportation. Includes tug operators, port operators, as well as the cargo handling and harbor operation services. Data sourced from the Quarterly Census of Employment and Wages
- **Support Activities for Water Transportation.** Includes cargo handling and harbor operation services. The data was sourced from the *Quarterly Census of Employment and Wages* to allow for the emphasis to be placed on cargo
- **Ship Building and Repair.** This benefit captures cargo vessel manufacturing and repair. Note that the distinction between ship and boat is that boat emphasizes recreational watercraft which

is outside of the scope of this analysis. Analysis utilized InfoUSA point located businesses involved in ship building and repair, scaled to match IMPLAN state level data. This level of geographic specificity plays a role in successive sections concerned with regionalizing impacts down to a district level. Whereas services can be typically contracted for, and therefore can take place outside of the physical business location contracted from, ship-building and repair activities predominantly take place on site, and so the usage of point locations of businesses was desirable for regionalizing the state impacts.

FIGURE 4.36 Impacts of Marine Transportation System



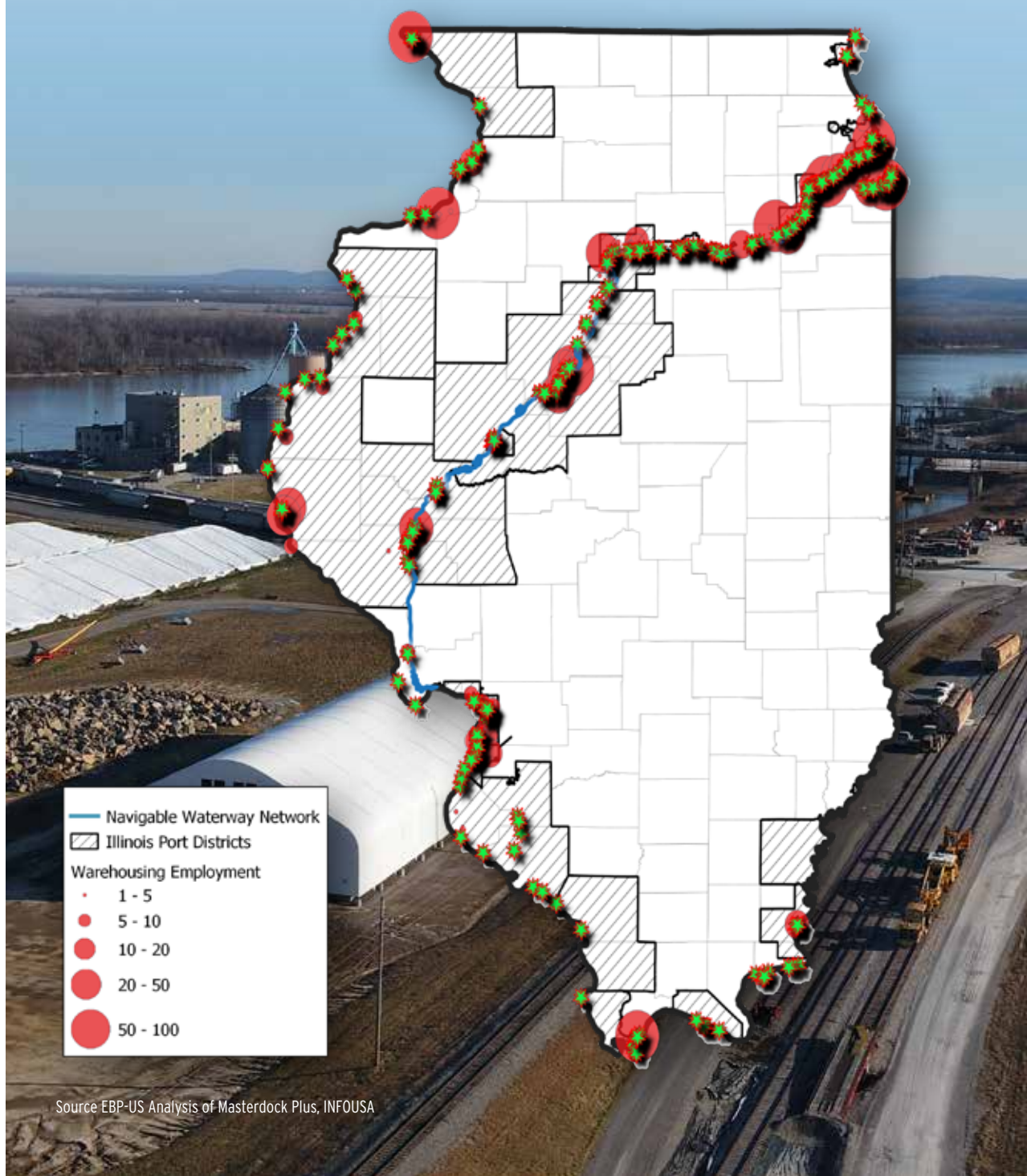
4.4.4 MARINE-SUPPORTIVE AND RELATED IMPACTS

Separate from the physical operators responsible for the provision of transportation services are the supporting industries which provide services to waterways users. This activity encompasses not just warehousing and distribution activities taking place around port premises, but also the truck and rail transportation acting as a feeder service getting goods on and off the water.

- **Warehousing Activity.** Captured by looking at InfoUSA businesses buffering the waterways. This is defined as a 1-to-5-mile zone around the river.¹⁰
- **Supporting Truck/Rail Transportation.** Estimates the magnitude of non-marine traffic responsible for getting goods on and off the waterways.

Note that especially during the off season, port districts may act as traditional truck-rail intermodal yards. This goes beyond the scope of this marine cargo analysis, and as such, should be noted as not part of the IMTS figures. On top of the raw value of a good representing its production cost are value added premiums representing additional costs going into the purchase price due to other supply chain costs such as transportation. Assessment of feeder traffic takes the total volume of traffic getting on and off at county locations (based on the IMTS Commodity Flow tonnage data). From there, the IMPLAN data is used to estimate the associated trucking and rail transportation margins, representing the net economic value to feeder traffic. For quantifying the magnitude of warehousing/distribution activity, the InfoUSA database is used to quantify the magnitude of businesses within a 1 to 5-mile buffer around the waterway (with a 1-mile buffer in the denser areas surrounding Chicago facilities). **Figure 4.37** shows the relation of the identified businesses to the docks identified by the US Army Corp's Masterdock Plus database.

FIGURE 4.37 Relationship of Warehousing to Master Dock Ports



Source EBP-US Analysis of Masterdock Plus, INFOUSA



Marine Users

Finally, to give a full accounting of the value of marine traffic to the state, the magnitude of industry activity taking place on the waterways is quantified. Note that the value of cargo on the waterways from FAF cannot be used directly, as there is an implicit double count between the value of inbound cargo and the value of outbound cargo. This is primarily because the purchase price of the goods includes both the intermediate inputs (as represented by inbound goods) as well as the value-added activity taking place at facility location by manufacturing businesses. This requires adjusting the value of outbound cargo to only include the value-added portion of activity captured in the valuation of the cargo. Implicit in doing this, all manufacturing components not carried by marine transportation are being discounted.



Modal Terminology and Understanding the Results

Because the IMTS Plan examines the ways in which the IMTS affects the economy, it is helpful to detail the terminology used to describe the components of IMTS economic impacts.

- **Direct Effects** are the result of expenditures associated with the port-user, port industry, construction, and tourism aspects of a port. All these effects are from the values of initial costs, labor, and materials associated with the port's operation and usage.
- **Indirect Effects** represent the purchasing of goods and services by suppliers, in order to meet the demand of the direct port activity.

- **Induced Effects** – represent the income earned by workers being re-spent in the economy on household goods and services.



Functional Definitions of Economic Measures

The following are useful definitions to help the reader gain a clearer understanding of what the measures being presented in the following section capture within the various regional economies.

- **Employment** represents the fulltime, or part-time jobs within a region for a given industry. To this extent, one single person working multiple jobs may be represented twice if they work two part time jobs.
- **(Labor) Income** represents not just an employee's level of compensation, but also fringe/benefits and proprietor income. Put simply, a measure of all forms of income gained from employment.
- **Value Added (GDP)** is measured as the difference between an industry's economic output and the value of intermediate inputs to its production process. Value added is the combination of labor costs, taxes, and any other proprietor or property income. It focuses on net new production occurring, and does not include the value of purchased inputs.
- **Output** represents the total measure of economic activity for an industry in a region. This measure is computed as the cost of intermediate inputs of production for the industry, plus any value-added activity.

4.4.5 STATE LEVEL IMPACTS

Altogether the marine waterways are responsible for supporting over 166,000 jobs across the state. These workers earn a combined income of almost \$10.5 billion and contribute approximately \$17.4 billion in GDP to the state's economy, which accounts for 4 percent of Illinois' overall GDP. Of the 166,000+ jobs supported,

some 74,682 of them are directly due to activity enabled by the waterways. **Table 4.5** highlights the impacts by type of activity. Note that some 78 percent of impacts are driven by waterways users, and another 10 percent comprise the water transportation sector itself.

TABLE 4.5 Marine Waterways Impacts by Type

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	--	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	166,629	10,483.1	17,361.1	36,024.4

Source EBP-US

From **Table 4.6**, one can see the breakdown of these impacts in terms of the direct economic effects of the marine transportation system, as well as the indirect purchasing and induced household income re-spending effects within the state. Note that the induced

effects represent household consumption on goods and services. This tends to emphasize more labor-intensive industries, which is why one sees more of a job effect than when looking at the indirect impacts.

TABLE 4.6 Breakdown of Impact by Type

TYPE	EMPLOYMENT	INCOME (\$M)	VALUE ADDED (\$M)	OUTPUT (\$M)
Direct	74,682	\$ 4,916.4	\$ 7,880.9	\$ 19,853.6
Indirect	42,107	\$ 2,993.3	\$ 4,909.1	\$ 8,635.1
Induced	49,840	\$ 2,573.4	\$ 4,571.1	\$ 7,535.7
Total	166,629	\$ 10,483.1	\$ 17,361.1	\$ 36,024.4

Source EBP-US

Table 4.7 displays the impacts on the top 15 industries affected. Based on the mix of commodities, much of the industry reliant on the waterways is associated with agriculture, chemical products manufacturing (including fertilizers), plastics, and rubber products. When one looks at the total impacts by industry, there is more of an emphasis on household services such as healthcare and media.

There is a critical distinction to be made about these impacts concerning their representation as a temporal snapshot, as

opposed to a depiction of continuing industry dependence. Intuitively, it is expected that some businesses would be unable to adapt to the added transportation cost burden to move goods in the absence of the marine waterways system and would either relocate or close-up shop in the state. This study presents a snapshot in time, so it does not attempt to estimate that distinction, although interviews conducted for this study suggest that continuing dependence is real.

TABLE 4.7 **Impacts to Industry**

Industry	DIRECT IMPACT				TOTAL IMPACT			
	Employment	Income (\$M)	Value Added (\$M)	Output (\$M)	Employment	Income (\$M)	Value Added (\$M)	Output (\$M)
Crop Production	5,635	266	548	1,645	6,337	291	603	1,856
Food Manufacturing	2,124	147	289	1,578	2,439	167	327	1,787
Water Transportation	2,079	192	402	1,510	2,103	194	407	1,527
Truck Transportation	8,560	548	660	1,403	10,593	679	816	1,736
Transportation Equipment Mfg	1,898	144	232	1,368	2,020	153	246	1,438
Construction & Bldgs	6,406	435	617	1,231	7,793	532	748	1,477
Chemical Mfg	1,233	163	377	1,230	1,469	197	473	1,480
Machinery Mfg	2,119	220	388	998	2,221	230	406	1,043
Media & Information	683	62	279	742	2,447	231	657	1,621
Health Care and Social Assistance	5,794	337	401	656	15,884	937	1,082	1,744
Computer and Electronic Mfg	1,582	153	282	655	1,663	159	294	684
Rail Transportation	1,758	312	380	582	2,011	357	434	665
Plastics & Rubber Products Mfg	1,451	110	199	535	1,671	127	229	616
Petroleum and Coal Products Mfg	131	26	144	488	233	47	280	989
Fabricated Metal Mfg	1,801	130	210	488	2,376	172	273	635
Rest of Industries	31,429	1,671	2,473	4,745	105,369	6,010	10,085	16,724
Total	74,682	4,916	7,881	19,854	166,629	10,483	17,361	36,024

Source EBP-US Analysis

Tax Impacts

The \$36 billion in economic impacts represent the magnitude of industry activity in the state that is either directly or indirectly tied to the marine transportation system. This industry activity and household consumption is subject to income and consumption taxes which serve to generate revenue at a federal, as well as state and local level. Using IMPLAN data, one can look at the tax implications and estimate the revenue derived from

the activity supported by the waterways. In total, this amounts to approximately \$2.9 billion in revenue generated each year. Of this \$2.9 billion in revenue, as depicted in **Figure 4.42**, approximately 60 percent of it is in the form of federal tax revenue on businesses and households. The remaining \$1.2 billion represents revenue generated to support Illinois state and local budgets. **Table 4.8** shows the breakout of tax revenue by collector as well as tax type.

FIGURE 4.38 Split of Tax Revenue Generated

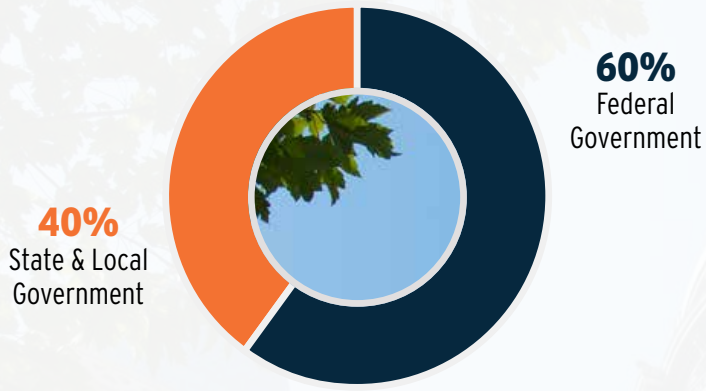


TABLE 4.8 Tax Revenue by Type

COLLECTOR	TAX TYPE	TOTAL TAX IMPACT (\$M)
Federal Government	Income/Profits	567.2
	Social Insurance Tax (FICA)	1,057.2
	Miscellaneous Fees & Taxes	106.9
	Total Federal Government	1,731.3
State and Local Government	Motor Vehicle License	17.8
	Income/Profits	123.5
	Miscellaneous Fees & Taxes	61.8
	Sales tax	446.8
	Property Tax	518.7
	Social Insurance Tax (FICA)	0.1
	Total State and Local Government	1,168.8
Total Tax Revenue		2,900.1

4.4.6 PUBLIC PORT DISTRICT IMPACTS

While the impacts of the waterways set forth above are at a state level, it is important to piece out the relative contributions of port districts serving the marine transportation system both as a communications piece to highlight the necessary services that districts provide and as a way of spatially understanding where goods movement takes place. The public port district impacts are presented below in **Table 4.9** (the methodology for regionalizing

port district impacts from the state estimated figures is described in Appendix D). The table shows beneficial impacts occurring across the state, including some outside the individual districts. The Peoria (Heart of Illinois), Chicago (Illinois International), Quincy (Mid-America), St. Louis (America's Central) and Joliet districts emerge with the largest total impacts, representing benefits from marine activity on the Illinois and Mississippi rivers and the Great Lakes.

TABLE 4.9 Economic Impacts by Public Port District

Port District	DIRECT		TOTAL	
	Employment	Output (\$Millions)	Employment	Output (\$Millions)
Outside District	23,371.1	6,318.2	52,690.1	11,437.7
Heart of Illinois Regional Port District	12,922.9	3,196.1	27,623.6	5,797.6
Illinois International Port District	9,915.4	2,797.2	22,851.2	5,068.8
Mid-America Intermodal Authority Port District	6,631.7	1,585.3	13,913.4	2,896.5
America's Central Port District	5,317.0	1,426.8	11,980.4	2,591.5
Joliet Regional Port District	5,205.0	1,313.0	11,320.5	2,377.7
Southwest Regional Port District	3,628.4	1,080.6	8,713.3	1,985.9
Kaskaskia Regional Port District	3,182.3	873.5	7,219.3	1,578.8
Massac-Metropolis Port District	1,070.6	331.2	2,557.3	599.2
Illinois Valley Regional Port District	884.9	241.6	1,992.4	435.7
Upper Mississippi River International Port District	741.5	182.1	1,604.5	331.4
Havana Regional Port District	598.5	171.8	1,384.5	313.3
Ottawa Port District	558.3	147.2	1,253.6	269.0
Jackson-Union Counties Regional Port District	198.6	55.5	453.4	100.5
Alexander-Cairo Port District	193.6	54.8	456.1	100.3
Seneca Regional Port District	162.4	52.8	394.0	94.1
Waukegan Port District	46.4	13.2	106.8	23.6
Shawneetown Regional Port District	53.5	12.5	114.6	22.8
White County Regional Port District	N/A	N/A	N/A	N/A
Mt. Carmel Regional Port District	N/A	N/A	N/A	N/A
Total	74,682.2	19,853.6	166,628.9	36,024.4

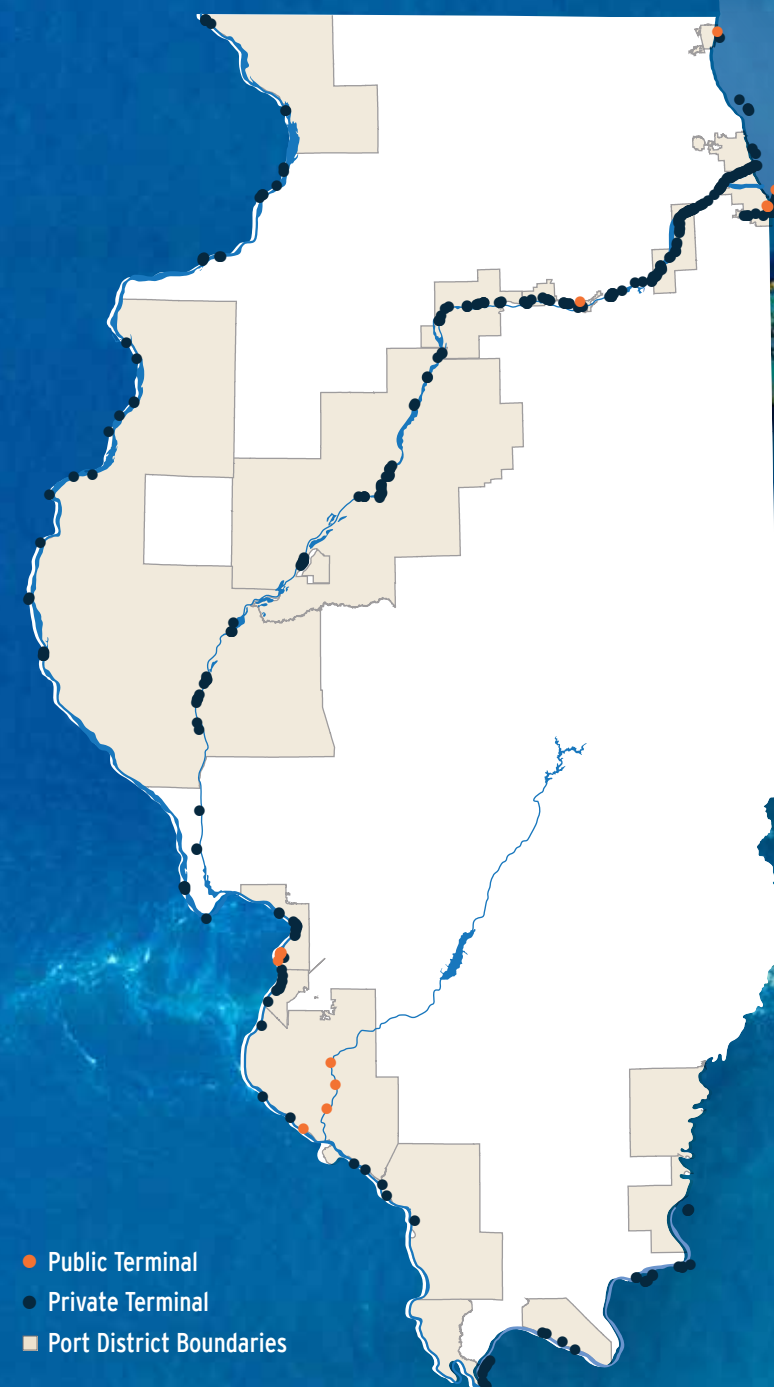
An important aspect of public port district impacts is the role of private terminals in generating benefits. The “Outside District” impacts reported in the table derive entirely from private facilities, and by themselves are responsible for nearly one-third of the total impacts. Inside the port districts, the data sources are unable to separate the activity and benefits attributable to public versus private facilities. That said, an analysis of the Army Corps of Engineers data found that of the 400+ terminals located within Illinois, approximately 96 percent are privately owned. This proportion makes it likely that private terminals – many of them sited within public districts and all using the public waterway – are responsible for the bulk of the state benefits. **Figure 4.39** shows the location of the private and public terminals within the state.

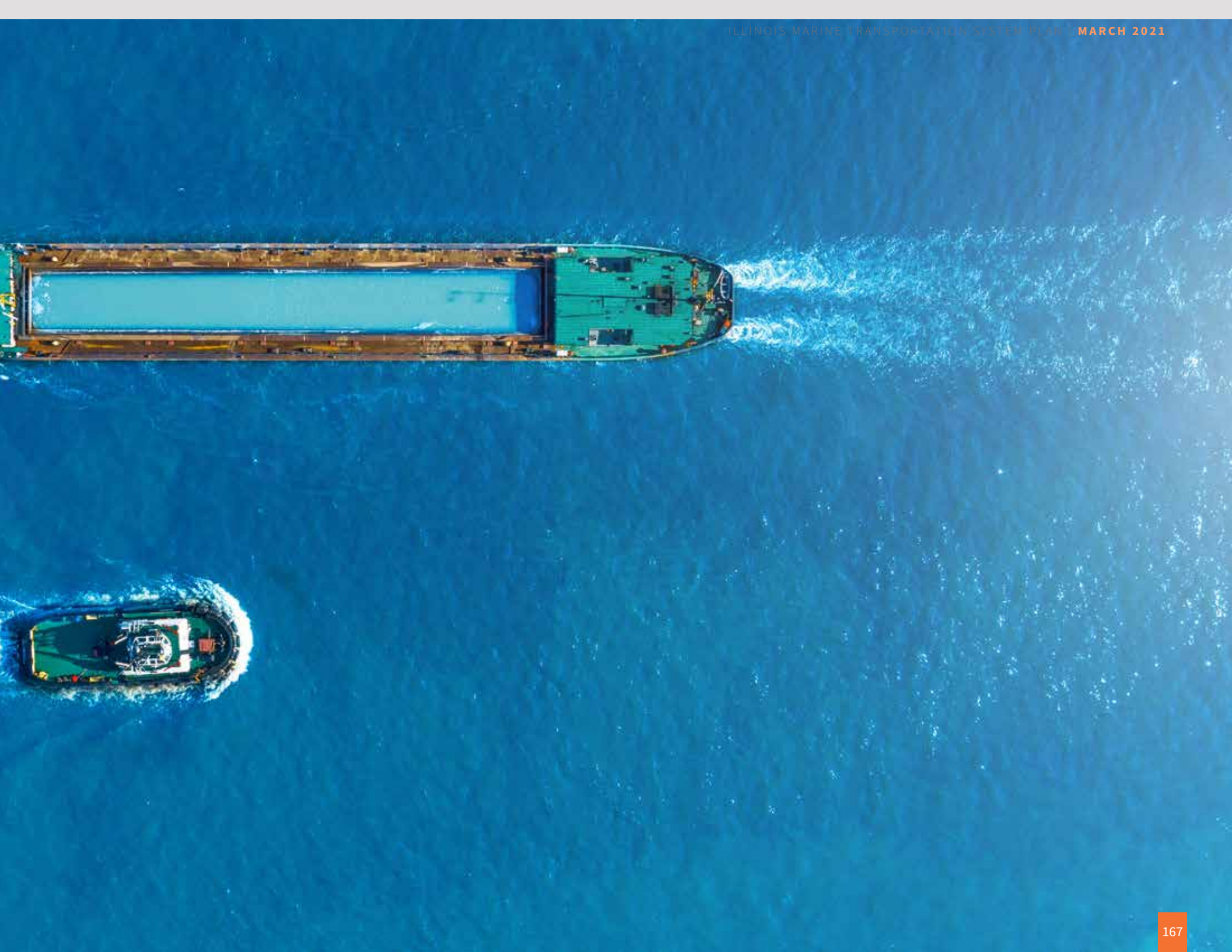
A nuance to note is that while district impacts signify the provision of services at a localized level, the impacts attributed to each district are not

necessarily taking place within district boundaries. Rather, the impacts are being enabled by services rendered at the district locations. The businesses which produce and consume goods moving via water are diffuse across the state and make use of truck and rail to get goods on and off the waterways. For activity taking place outside of district boundaries, based on Masterdock Plus terminal locations, we have aggregated the estimated activity as ‘Outside District’ impacts in the following diagram.

In addition to these impacts, interviews with port districts revealed that the services they provide are numerous and benefits go beyond those described here. The emphasis of this section of the IMTS Plan was on capturing Illinois-related contributions to the economy, but the scope of services rendered in the public port districts goes beyond state boundaries. These services should be recognized, even though they are not quantified in this impact summary¹¹.

FIGURE 4.39 Pubic and Private Terminals within Illinois





Endnotes

- 1.....2018 Agricultural Statistics Annual Bulletin - Illinois, U.S. Department of Agriculture
- 2.....Estimated based on USDA factors
- 3.....Port Performance Freight Statistics in 2018, US DOT, Bureau of Transportation Statistics
- 4.....State Exports by Harmonized System Commodities, US Dept. of Commerce
- 5.....Illinois State Energy Profile, USEIA, May 2020
- 6.....Ibid., here and elsewhere in the paragraph
- 7.....Lake Carriers Association. "2019 State of the Lakes," 2019. <http://www.lcaships.com/wp-content/uploads/2019/04/LCA-2019-SOTL-Online.pdf>
- 8.....Illinois Department of Transportation. "2017 Illinois State Rail Plan Updated," 2017. http://www.idot.illinois.gov/Assets/uploads/files/Transportation-System/Fact-Sheets/Rail%20Plan%20Report_12_28_2017_FULL_Final_FRA.pdf
- 9.....USA Today. "A 'Troubling Signal' for the Economy is Fewer Goods Being Shipped Around the Country," July 2019. <https://www.usa-today.com/story/money/2019/07/25/recession-drop-in-shipping-raises-downturn-concerns/1809574001/>
- 10.....To Prevent over-attribution, we used a 5 mile buffer around the river except in the more dense areas are Chicago, where it was tightened to a 1 mile radius.
- 11.....The impact to port users goes well beyond state boundaries, with cargo originating and destined to states across the country

NEEDS ASSESSMENT AND STRATEGY DEVELOPMENT



The IMTS and its 1,118 miles of commercially navigable waterways are a vital part of the state's transportation network. The freight aspect of the marine mode has not been included as extensively as other modes in Illinois due to many reasons, one being that there is no sustainable dedicated funding. Additionally, there are few active port districts in Illinois, as well as that similar to railroads - that private freight providers dominate the market. Through the IMTS Plan process, IDOT has initiated mainstreaming the IMTS within the other modes of transportation fully considered at IDOT.

While completion of the IMTS Plan integrates the marine mode further into IDOT's multimodal program, there is more work that needs to be continued beyond this plan. This chapter highlights the needs and strategies on how to continue to support the IMTS and those who utilize this valuable system. Specifically, this chapter addresses the following: 1) activities and programs in peer states and neighbor states; 2) critical needs for the IMTS and its stakeholders; 3) programmatic recommendations to address identified needs; and 4) the benefits of acting to implement these programmatic recommendations. Key findings are as follows:

- Compared with a representative set of peer states and neighboring states, Illinois performs comparably well in many metrics. However, in certain areas – primarily related to organizational structure, funding, and dredging activities – there are opportunities for improvements to make Illinois more competitive.
- Critical IMTS needs exist with respect to: Port Development; Waterway Maintenance and Operations; and Statewide Planning and Funding. Eight programmatic recommendations are identified to address these critical needs.
- The quantifiable value of the marine transportation system (MTS) to Illinois – leaving aside its substantial additional benefit to other states and the nation as a whole – is extremely large. The Programmatic Recommendations defined in this Plan are intended to safeguard and preserve this value and to support continued and beneficial MTS growth.

This chapter also highlights the synergies between the IMTS Plan programmatic recommendations and the goals and strategies identified in the IDOT Statewide Long-Range Transportation Plan and the Illinois State Freight Plan.

5.1 PEER STATE AND NEIGHBOR STATE REVIEW

The IMTS Plan provided the opportunity to not only examine the IMTS assets and economic performance, but also to consider long-term programmatic opportunities and strategies for the state, particularly with respect to relevant best practices in peer states and neighbor states. The analysis considered:

- Identification of peer state and analysis of their MTS planning and funding
- Analysis of neighbor state dredging programs

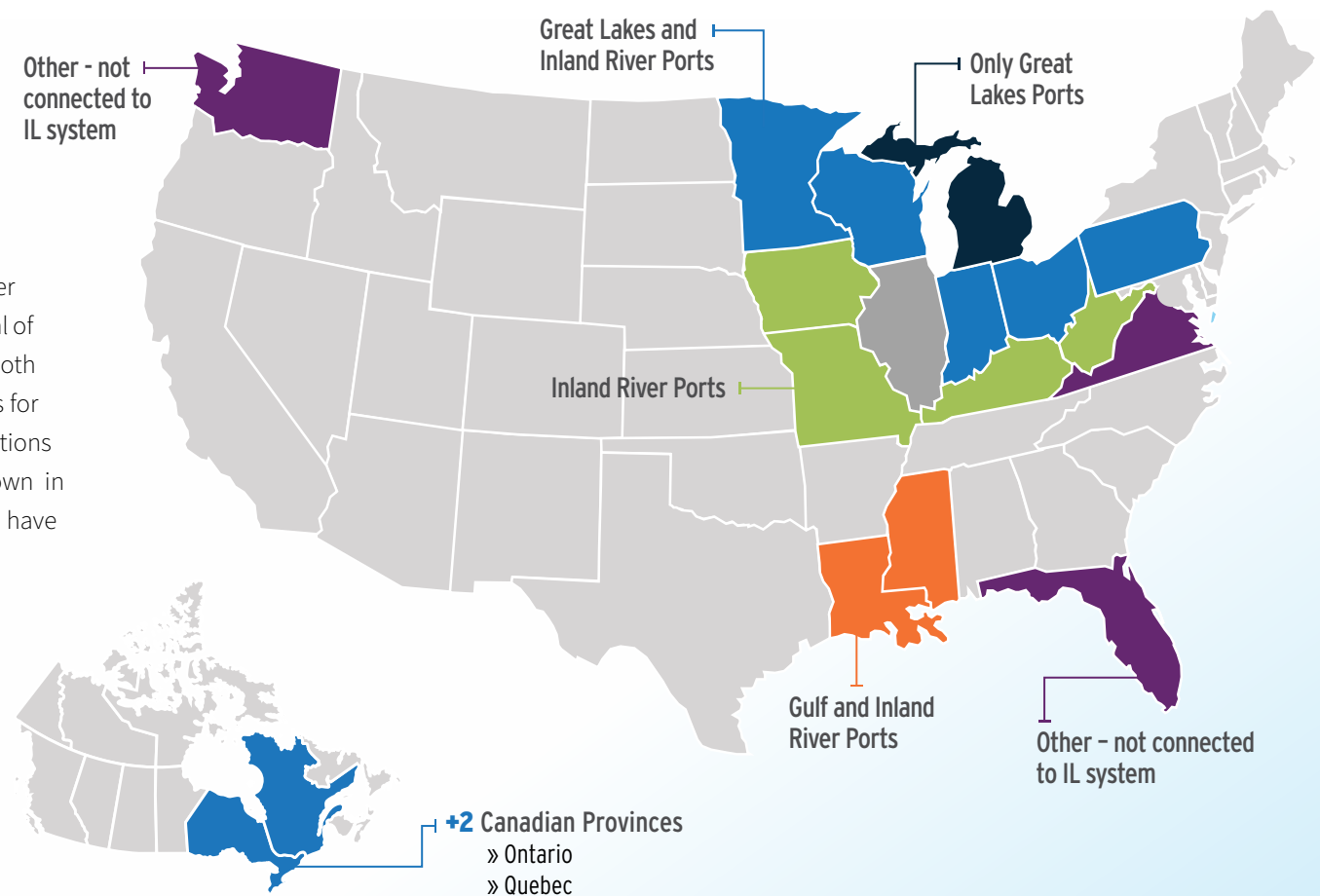
5.1.1 PEER STATE ANALYSIS—FINDINGS RELATED TO MTS PLANNING AND FUNDING PROGRAMS

Peer State Identification

In consultation with study stakeholders, a set of peer states were identified for examination, with the goal of capturing a mix of neighboring states (which are both partners for interstate trade as well as competitors for MTS business) and other states with MTS conditions and programs offering valuable lessons. As shown in **Figure 5.1**, each of the Peer States reviewed have ports on the Great Lakes, an Inland/Intracoastal Waterway, or both. Additionally, some states have deep-water ports on the Atlantic, Pacific, or Gulf coasts. Except for Florida, Virginia, and Washington, each of the peer

states is reachable from Illinois by water via the Great Lakes and/or Mississippi River-Ohio River system. For additional perspective, three international examples were included in the analysis – two provinces in Canada that are adjacent to the Great Lakes and the St. Lawrence Seaway.

FIGURE 5.1 Map of Peer States Reviewed



Issues and Questions for Investigation

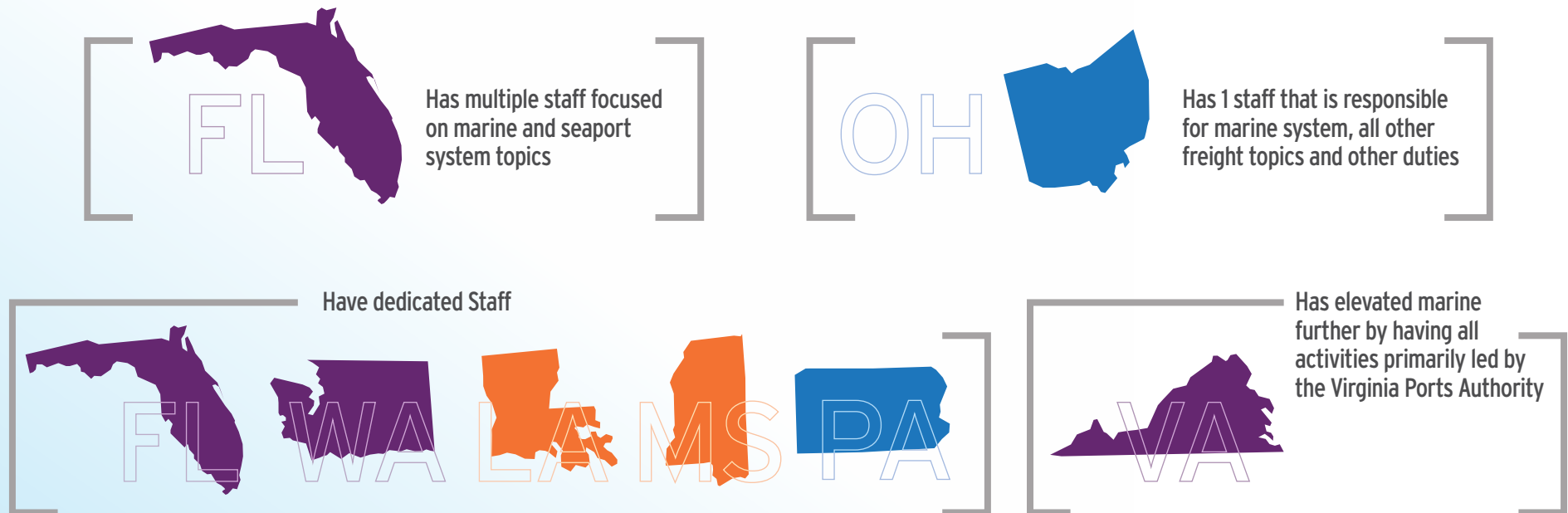
Some of the key questions driving the investigation included:

- How could IDOT organize itself to provide an appropriate level of attention to the marine system (i.e., to understand system needs and position itself to address those needs)?
- How could IDOT integrate marine system activities with other synergistic statewide planning activities (e.g., long-range planning, safety planning, multimodal freight planning, etc.)?
- What type of funding could IDOT provide for marine projects in the state, and who should be eligible for the funding?
- What support and advocacy activities could IDOT provide to marine stakeholders in the state?

Findings: DOT Structure

While all states acknowledge a role in the marine system, Illinois is in the minority in that it does not have dedicated transportation staff to address marine issues. Most states that have active marine programs (e.g., funding support to address marine needs) have dedicated marine transportation staff, may have multiple dedicated staff, and in some cases, have a dedicated marine section/department. See **Figure 5.2**.

FIGURE 5.2 Case Study Highlights – Marine Staff and/or Dedicated Section



Findings: Marine Planning Integration

In the last half century, IDOT has had varying roles in marine planning. When the agency was established in the early 70s it took over the Division of Water Resources from the dissolved Department of Public Works and Buildings. The Division was responsible for marine planning activities among others. In 1995, the Illinois Department of Natural Resources (IDNR) was established and the Division of Water Resources was transferred to IDNR. Between 1995 and 2016, IDOT's role in marine planning was minimal. In 2016, IDOT and IDNR came to an understanding that IDOT is responsible for promoting, supporting, and encouraging transportation along the states' waterways, while IDNR would continue to regulate food plains, recreational uses, etc. This shift aligned with IDOT's holistic approach to viewing the transportation system as a multimodal system and not by individual mode.

While IDOT currently does not have a designated marine section or solely dedicated staff, the agency has acknowledged the role and high-level needs of the marine system in other state planning

documents, including the Illinois Long Range Transportation Plan and the Illinois State Freight Plan. This range of engagement is typical of other DOTs and states. With the completion of this Illinois Marine Transportation System Plan, Illinois joins the ranks of states that have dedicated marine modal system plans.

Compared to peer states, Illinois has less established formal cross-agency and executive level structures to address the MTS. When the IDNR was created, it took much of the marine expertise that was previously housed in IDOT to address recreation, flooding, and transportation issues. Today, the Illinois Environmental Protection Agency (IEPA), Illinois Department of Commerce and Economic Opportunity (DCEO) have large roles in Illinois' waterways and ports; these agencies and IDOT approach the MTS based on their respective responsibilities, but without formal cross-agency guidance. Several states have created state-level advisory boards to provide some level cross-agency guidance (see **Figure 5.3**).

FIGURE 5.3 Case Study Highlights – Integration of Marine Planning

PEER STATES WITH SOME
TYPE OF STATE-LEVEL
MARINE FOCUSED
ADVISORY BOARD



Michigan focused on recreation to the exclusion of broader marine interests.

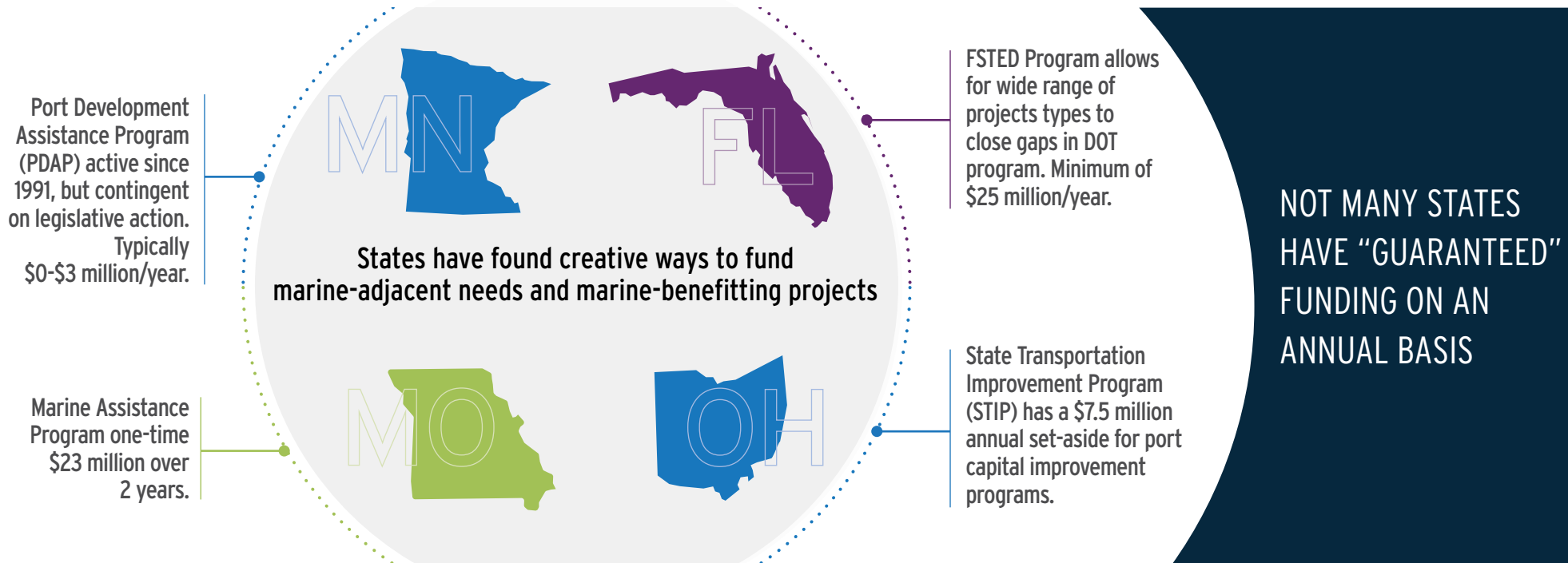
Florida Seaport Transportation and Economic Development (FSTED) Council - one of the best examples of an effective board that facilitates collaboration or a purpose.

Findings: Marine Funding

All states provide support to their ports and waterways through funding of connecting modes – principally in the form of highway access and truck corridors, but also including freight rail – as well as to industrial land development through state and regional economic development agencies. Some peer states also have funding programs dedicated to addressing marine system needs as shown in **Figure 5.4**. Several of these states have funding programs that are secured through regular annual grants (Florida) or guaranteed shares of state transportation funding (Virginia), meaning that funding is both substantial and reliable, but the majority of these states have funding programs supported by one-time allocations or annual legislative appropriations, meaning funding may be available but is less reliable on a year-to-year basis.

Historically, Illinois does not offer a dedicated port funding mechanism. However, in 2019, Illinois established the Port Capital Improvement Grant Program, providing a one-time funding pool of up to \$150 million for port assistance, to be allocated under the direction of IDOT and DCEO with the involvement of other relevant agencies. IDOT is currently developing guidance for a phased five-year distribution of these funds, which would provide funding levels equivalent to Florida. However, the extent and timing of distribution may be impacted by responses to the COVID-19 pandemic. Additionally, within Illinois there are programs administered by DCEO that place emphasis on economic development at/around ports, such as the River Edge Redevelopment Zone Program, but these are not led by IDOT or marine transportation focused.

FIGURE 5.4 Case Study Highlights – Sustainable, Dedicated Funding



Like many other states, Illinois provides the ability to “flex” a portion of transportation funds for marine uses. In 2018, IDOT initiated the Illinois Competitive Freight Program, a grant program to select projects for Illinois’ share of National Highway Freight Program (NHFP) funds provided to the state through USDOT. This program allows for up to 10 percent of state funds to be “flexed” for use on non-traditional highway/transportation projects and can include rail or marine projects. IDOT also provides some support to plan for the marine system through its Statewide Planning & Research (SPR) funds.

Findings: Engagement and Advocacy

Peer states generally engage in some level of support and advocacy for marine system stakeholders. With the development of this IMTS Plan and the establishment of a guiding committee comprised of a wide array of port and waterway system stakeholders, IDOT is providing comparable service and support.

Currently, IDOT is in the process of developing a port capital grant program in consultation with the DCEO, IDNR, and IEPA.

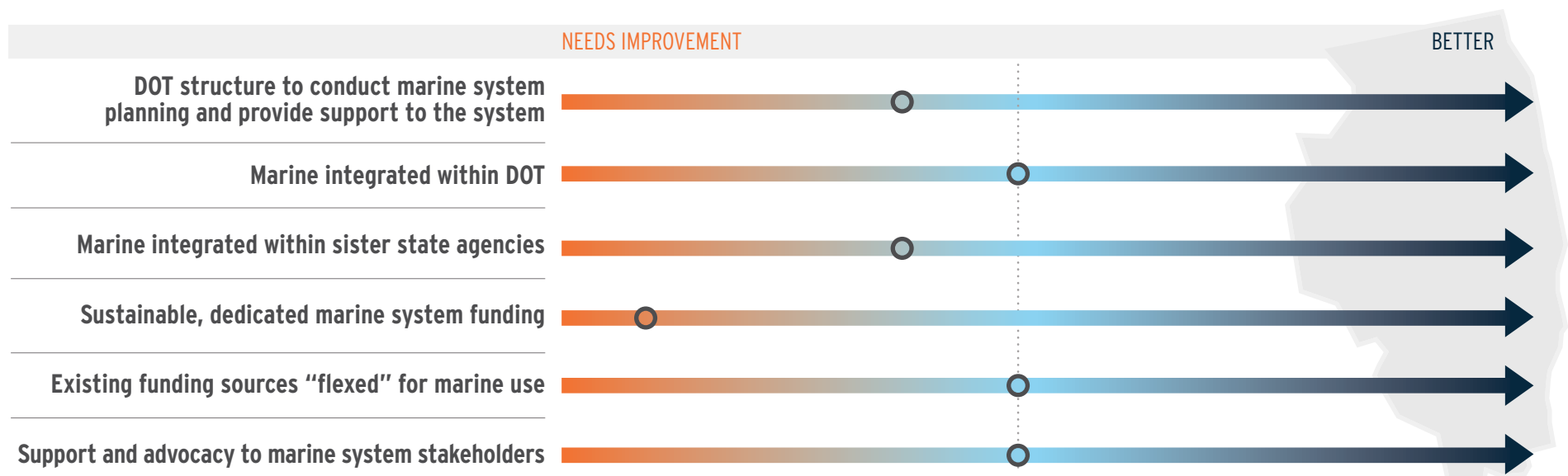
Key Takeaways From Analysis of Peer States MTS Planning and Funding Programs

With respect to peer states, Illinois is performing at a typical level with respect to: integration of MTS planning within the larger framework of IDOT activities; allowance for flexible use of FAST Act freight funds; and stakeholder advocacy and support. Areas where Illinois could potentially benefit from best practice examples (Figure 5.5) in other states include:

- Providing dedicated IDOT staff for MTS planning;
- Streamlining cross-agency coordination and partnerships; and
- Developing a reliable long-term mechanism for MTS and ports funding, following up on the one-time Port Capital Grant Improvement Program allocation.

IN 1995, IDOT'S DIVISION OF WATER RESOURCES WAS TRANSFERRED TO IDNR. SINCE THEN IDOT HAS NOT BEEN ENGAGED IN THE IMTS. IN 2016, IDOT AND IDNR CAME TO AN AGREEMENT WHERE IDOT WOULD OVERSEE THE TRANSPORTATION ASPECT OF THE IMTS.

FIGURE 5.5 Case Study Highlights – Illinois “Base Case” Benchmarking





5.1.2 NEIGHBOR STATE ANALYSIS—FINDINGS RELATED TO DREDGING PROGRAMS

Importance of Dredging

Adequately and timely dredging of navigation channels to maintain sufficient depths for vessel operation is critical for the IMTS. Without adequate and timely dredging, shippers/carriers and the marine industry overall can face significant economic losses (and the sheer inability to deliver goods) due to impassable channels. Several key dredging-related issues include:

- Federal and state requirements are burdensome to comply with in terms of cost and time.
- There is a lack of consistency in regulations as applied at the state-level.
- There is no reliable source of funding for dredging at the federal level, and the funding that is available is oversubscribed.
- Most states do not have dedicated funds to perform dredging in their own borders, nor has authority to dredge federally managed navigation channels.
- “Lessons learned” are being collected for the disposal and reuse of dredged materials, and true best practices to comply with regulations are not formally established.
- Illinois is at a competitive disadvantage as compared to other states due to regulatory requirements that lead to higher per-unit costs and longer implementation timelines for dredging.



■■■■■■■■■■

Neighbor States Analysis

A review of neighbor state dredging regulations was conducted to aid IDOT in understanding how other states regulate, permit, fund, and dispose of dredged material. While IDOT may not be in a position to implement changes to state dredging regulations or processes, they may provide advice and recommendations on next step actions to IDNR, IEPA, and other state stakeholders on how to better position the state to ensure its businesses are on a level playing field with potential neighbor-state competitors. Neighbor states reviewed included: Minnesota, Iowa, Missouri, Wisconsin, Indiana, and Kentucky. Federal, state, port, association, and dredging contractor stakeholders were also consulted as part of this review. Key findings from the analysis are summarized below.

■■■■■■■■■■

Findings: Permitting and Regulatory Authority

While all states are governed by the same regulations at the federal level, it is truly the regulations of each state that govern the playing field. In Illinois, both the IDNR and IEPA are involved in permitting and regulating dredging activity in the state. Both Indiana and Minnesota have similar structures, but neighbor states of Iowa, Kentucky, Missouri, and Wisconsin all only have one state agency overseeing these activities – and in most cases, it is the Department of Natural Resources. This structure influences state dredging considerations.

■■■■■■■■■■

Findings: Placement of Dredged Material

Federal regulations for all states are the same; “Contained Disposal” is required if the dredged material is deemed contaminated or silty, or “Open Water Disposal” is allowed if the dredged material is clean and smooth sand (per a “Section 401” water quality certification). However, each state also has its own clean water standards, and the state water quality standard may be more strict than

the Federal § 401 water quality certification. This state standard may also only apply if the project sponsor is an entity other than a federal agency, namely the USACE. This is the case in Illinois, where a federal dredging project may be governed by federal water quality standards and allow for open water disposal, but the same project advanced by a local sponsor would be required to follow State of Illinois standards, which are more strict and may deem the dredged material contaminated and not allowable for open water disposal. While stricter water quality standards are positive for the surrounding population that depends on the water supply, this disconnect between federal and state regulations places an undue burden on non-federal dredging projects.

■■■■■■■■■■

Findings: Beneficial Use of Dredged Material

Neither “contained disposal” nor “open water disposal” provide benefits beyond simply removing materials to ensure proper channel depth. There are, however, many other potential uses for dredged materials that can build and support natural infrastructure, such as building beaches and revitalizing shoreline. The USACE encourages and aims to ensure as much excavated sediment from dredging is used for natural infrastructure, but there are challenges to making use of this dredged material. In Illinois, it is undetermined how much of the dredged material is suitable for reuse at this time. However, IDOT and the University of Illinois at Urbana – Champaign Illinois Center for Transportation (ICT) is currently undertaking a Beneficial Use of Dredge Material (BUDM) from the Illinois Marine Transportation System Study to better determine what this material may be used for by IDOT and others. In Indiana, while BUDM is encouraged, the high cost of reuse has led stakeholders to lean toward contained disposal facilities as a preference. In Kentucky, there is active BUDM, but the state has absolved itself of responsibility

and indicated that the sponsor will assume liability for any contamination issues that arise from the use.

Few best practices exist regarding the use/reuse of dredged material. The USACE is conducting 10 pilot studies across the US (including in IL and its neighbor states), representing a variety of dredging conditions, to help establish best practices in BUDM. In Missouri, Greater St. Louis was also part of an early USACE study on reuse, but there has not been much activity in the state since the study. One of the most active states in BUDM and one leading in terms of best practices is Minnesota. In the state, BUDM is considered for each dredging project and an innovative numeric system is used to assess water quality levels for each project and then the action for dredged materials based on the “score.” In some cases, this could result in beneficial use, but it could also mean contained disposal or open water disposal. Additionally, the recently enacted Water Resources Development Act of 2020 (WRDA) requires the USACE to establish a national policy to maximize the beneficial use of material obtained from Corps projects.

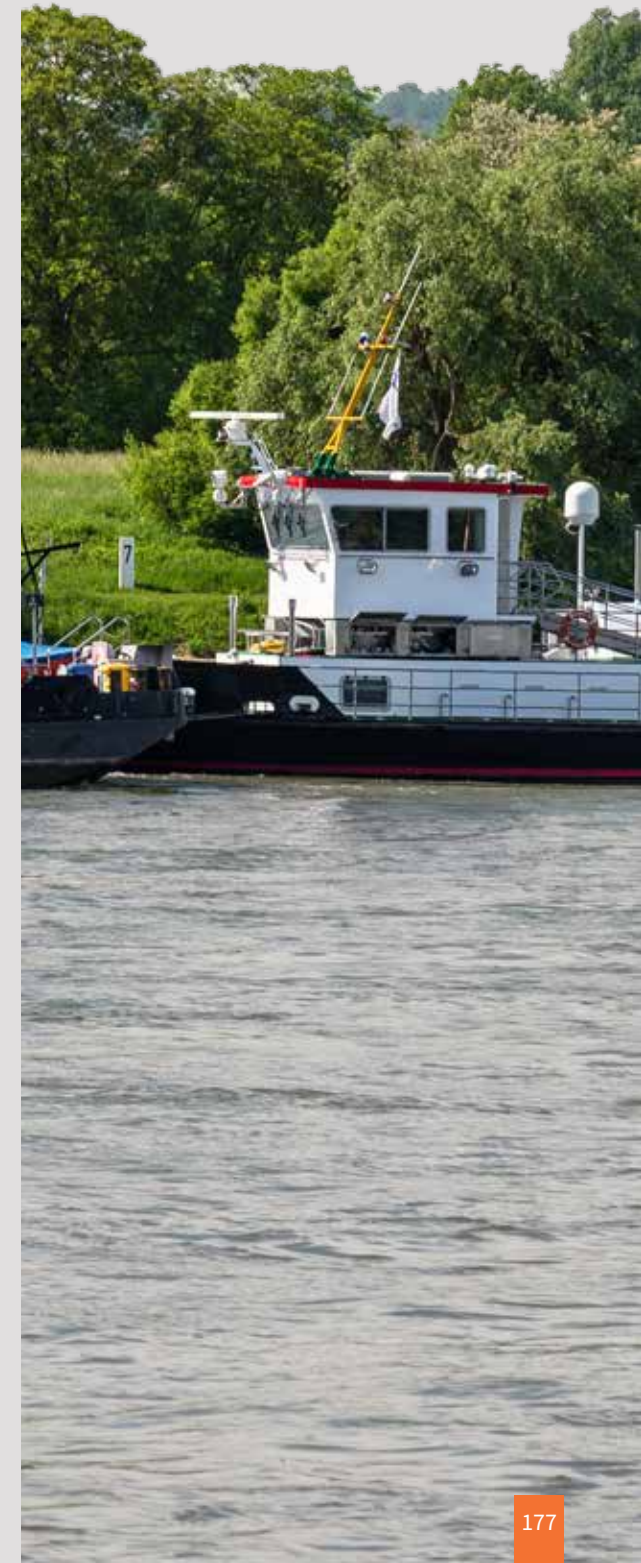
Finding: Funding for Dredging

While there is funding for dredging at the federal level, it is insufficient to address the dredging backlog. Several neighbor states do provide annual or bi-annual funding for dredging projects within their borders as part of broader marine investment programs, including Kentucky, Minnesota, and Wisconsin. Other states only provide funding during emergency situations. In Illinois, there is no dedicated funding for dredging.

Key Takeaways From Analysis of Neighbor States Dredging Programs

The analysis of neighbor states suggests the following opportunities for the State of Illinois.

- **Definition of “Contaminated” Dredged Material.** Illinois appears to have more stringent water quality standards and a definition for “contaminated” dredged material that goes beyond the federal definition. An exception could be explored by Illinois and federal stakeholders related to the water quality standard and the meaning of contamination, so that if open water disposal is allowed by one stakeholder, then it is allowed by the other.
- **Dredged Materials Management.** Illinois could continue to explore how dredged materials in Illinois are managed and maintained over time. Missouri has an aggressive dredged materials management program that enables the state to do more open water disposal than may be possible absent the oversight. Review of Illinois’ procedures and revisions to these, may allow for increased opportunities for open water disposal on non-federal projects.
- **Beneficial Use of Dredged Materials (BUDM) Best Practices.** Illinois has over 1,000 miles of navigable waters and has the geographic and community diversity to serve as a testing ground for BUDM. While an Illinois challenge is that some dredged soil is of unsuitable quality for reuse, as technology changes, Illinois could be a leader in how to make use of undesirable material – potentially as part of the BUDM study being led by IDOT. In the interim, the state could get involved in and monitor the activities of the pilot study that is being conducted by USACE in Illinois.
- **Use of Dedicated Marine Transportation System Funding for Dredging Activities.** As IDOT explores establishment of an annual, dedicated program, consideration could be given in the project criteria to allow for state-supported dredging.



5.2 PROGRAMMATIC RECOMMENDATIONS

To directly address the identified critical needs, IDOT and its IMTS partners and stakeholders developed a set of programmatic recommendations, focusing on actions that IDOT can lead or assist in implementing. There are eight recommendations in total, addressing the areas of: port development; waterway maintenance and operations; and statewide planning and funding. These recommendations were also made with guidance from existing IDOT plans including the Long-Range Transportation Plan and the Statewide Freight Plan.

5.2.1 IDOT LONG-RANGE TRANSPORTATION PLAN

The primary purpose of the Illinois Long-Range Transportation Plan (LRTP) is to provide strategic direction for the development of the Illinois transportation system. The LRTP vision for transportation in Illinois is to provide innovative, sustainable and multimodal transportation solutions that support local goals and grow Illinois' economy. This vision was established in conjunction with

thousands of stakeholders who participated in outreach activities throughout the planning process. The development of the IMTS Plan and its programmatic recommendations was done in consultation of the objectives of the 5 goal areas of the LRTP. Below you will find the 5 goal areas, as well as their objectives. Each recommendation that follows which goal area and objective from the LRTP it supports.

Economy

Goal: Improve Illinois' economy by providing transportation infrastructure that supports the efficient movement of people and goods.



Objective 1: Encourage regional coordination in the identification of solutions to transportation problems to provide for efficient movement of freight, people and services supporting economic growth.

Objective 2: Support projects that improve connectivity and coordination of services to enhance continuity and accommodate the efficient movement of people, goods and services across all modes to address intermodal efficiency.

Objective 3: Support land use and transportation connectivity.

Objective 4: Identify and address issues affecting freight commerce and passenger services.

Objective 5: Support economic development in Illinois communities.

Livability

Goal: Enhance the quality of life across the state by ensuring that transportation investments advance local goals, provide multimodal options, and preserve the environment.



Objective 1: Enhance collaboration and coordination between IDOT and regional and local transportation agencies and adjoining states in transportation decision-making.

Objective 2: Support projects that enhance the livability of Illinois - making connections between people, and the places they need to go.

Objective 3: Enhance the effectiveness of the multimodal transportation system through better traveler information, utilizing technology where possible, to maximize efficiency of existing facilities and services.

Objective 4: Enhance existing policies and practices related to under-served populations so outreach and inclusion are effective and go beyond meeting the minimum federal requirements.

Objective 5: Utilize a sustainable approach to transportation planning, design, construction and operation which promotes environmental stewardship and energy conservation.

Mobility

Goal: Support all modes of transportation to improve accessibility and safety by improving connections between all modes of transportation



Objective 1: Enhance intermodal freight connectivity and mobility to improve continuity and accommodate the efficient movement of goods and services.

Objective 2: Invest in and support multimodal transportation infrastructure improvements and strategic performance-based expansion of services that support the effective movement of passengers.

Objective 3: Increase route efficiency and safety for all users by improving infrastructure condition and addressing capacity issues.

Resiliency

Goal: Proactively assess, plan and invest in the state's transportation system to ensure that our infrastructure is prepared to sustain and recover from extreme events and other disruptions.



Objective 1: Improve safety on the Illinois transportation system by reducing the number of injuries/fatalities attributable to extreme events.

Objective 2: Minimize the frequency and duration of facility closures due to extreme events and other disruptions.

Objective 3: Enhance transportation system redundancy.

Objective 4: Identify current and future transportation system vulnerabilities to extreme events and climate change.

Objective 5: Address transportation system vulnerabilities to extreme events and climate change within the transportation planning, design, and asset management processes.

Stewardship

Goal: Safeguard existing funding and increase revenues to support system maintenance, modernization, and strategic growth of Illinois' transportation system.



Objective 1: Invest in improvements for airports, highways/streets, freight, ports, waterways and new traffic and transit technologies.

Objective 2: Ensure selection and prioritization decisions on projects is transparent and guided by sound data and performance-based decisions.

Objective 3: Support innovative project opportunities.

Objective 4: Identify funding sources and leverage resources wisely to maximize the value of investments.

5.2.2 ILLINOIS STATE FREIGHT PLAN

In 2014, Illinois had over one billion tons of freight, valued at nearly \$3 trillion moved to, from, or within the state. This vast amount of freight is moved on Illinois' multimodal network that includes highways, railroads, waterways, and airports. The state freight plan provides data and analysis on the movement of goods within the state. The freight plan provides a framework to ensure the freight system, regardless of mode, work in a manner that is beneficial to Illinois' economy. The development of the IMTS Plan and its programmatic recommendations was done in consultation of the freight plan and its goals.



IMPROVE SAFETY

- Minimize roadway incidents involving freight vehicles
- Ensure IDOT's Intelligent Transportation System (ITS) has adequate safety notification protocols

IMPROVE EFFICIENCY

- Establish performance measure to evaluate efficiency of freight movement
- Update IDOT's Illinois Transportation Automated Permits (ITAP) truck permitting process

GROW THE ECONOMY

- Secure stable dedicated state funding source for freight projects
- Improve international competitiveness of Illinois

PRESERVE EXISTING INFRASTRUCTURE

- Reduce stress on roadway system by supporting multimodal alternatives for freight shipments
- Perform routine maintenance in order to control deterioration of roadways and lessen number of critical repairs

EXPAND INFRASTRUCTURE STRATEGICALLY

- Optimize the limited funds that are available for new construction projects
- Ensure design policies encourage innovation and design flexibility to support multi-modal transportation goals

SUPPORT MULTIMODAL DISTRIBUTION

- Enhance coordination of multimodal planning with Illinois Metropolitan Planning Organizations (MPOs), local jurisdictions, and adjoining states
- Encourage mode shifting to lessen environmental impacts

- Leverage and coordinate expertise that already exists within IDOT, including IDOT District staff
- Liaison with port districts, associations, private terminals, federal agencies, and other key system stakeholders
- Lead a new state-level Marine Transportation System Advisory Board (see Recommendation 3)
- Educate the state legislature and their staff on the benefits the marine system has on the state's transportation network and economy; educate the public on the importance of the marine transportation system
- Provide technical assistance/support to stakeholders (grant applications, policy changes, understanding regulations, etc.)
- Provide multimodal communication & coordination with external entities when an IDOT-sponsored project will impact marine facilities
- Collect and monitor data; perform or manage system-wide or sub-regional studies; coordinate research activities
- Participate in state and national marine organizations
- Coordinate and administer applicable IDOT IMTS funding programs (see Recommendation 8)

STATEWIDE LONG-RANGE TRANSPORTATION PLAN:

	ECONOMY CHAPTER	1	2	3	4	5
		✓	✓		✓	

	LIVABILITY CHAPTER	1	2	3	4	5
		✓				

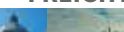
	MOBILITY CHAPTER	1	2	3
		✓		

	RESILIENCY CHAPTER	1	2	3	4	5
				✓		

	STEWARDSHIP CHAPTER	1	2	3	4	5
			✓			

ILLINOIS STATE FREIGHT PLAN

FREIGHT GOALS

PRIORITY GOALS					
					
IMPROVE SAFETY	IMPROVE EFFICIENCY	GROW THE ECONOMY	PRESERVE EXISTING INFRASTRUCTURE	EXPAND INFRASTRUCTURE STRATEGICALLY	SUPPORT MULTIMODAL DISTRIBUTION
✓	✓	✓	✓	✓	✓

5.2.4 RECOMMENDATION #2: FULLY INTEGRATE IMTS MODAL SYSTEM PLANNING WITHIN IDOT

IDOT should – as one stakeholder put it – “embrace waterways as part of the transportation system” by fully integrating it as a transportation mode within the framework of statewide modal system planning. Additionally, IDOT should coordinate internally and with external partners to make sure other modal investments which impact the IMTS are done so in a manner that minimizes potential negative impacts on the IMTS, or in a manner that complements the IMTS. This IMTS Plan is an important first step in that process. Follow-on steps should include:

- Establish a regular update cycle for the IMTS Plan
- Establish processes to effectively coordinate the IMTS modal system plan with other modal system plans, state freight plan, statewide long-range transportation plan, rail plan, pipeline plan, and regional/MPO plans, and Port District plans
- Provide effective linkage between statewide IMTS planning and public/private investments and activities at the state, port districts, IDOT districts, metropolitan/regional, and local levels, through involvement and engagement of the new Marine Section (see Recommendation 1)
- Establish performance measures and targets for the IMTS to guide data collection and performance tracking towards statewide goals, consistent with or similar to those in other modes
- Review project and program funding criteria to better address marine (freight and passenger) system needs and establish a “level playing field” to the extent permitted by revenue sources

Synergies with other IDOT modal plans and policies:

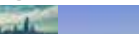
STATEWIDE LONG-RANGE TRANSPORTATION PLAN:

	ECONOMY CHAPTER	1	2	3	4	5
			✓	✓		

 STEWARDSHIP CHAPTER	1	2	3	4	5
	✓				

ILLINOIS STATE FREIGHT PLAN

FREIGHT GOALS

ACTION PLAN					
					
IMPROVE SAFETY	IMPROVE EFFICIENCY	GROW THE ECONOMY	PRESERVE EXISTING INFRASTRUCTURE	EXPAND INFRASTRUCTURE STRATEGICALLY	SUPPORT MULTIMODAL DISTRIBUTION
	✓		✓	✓	✓

5.2.5 RECOMMENDATION #3: FULLY INTEGRATE STATEWIDE IMTS PLANNING ACROSS PUBLIC AND PRIVATE STAKEHOLDERS

IDOT should take a lead role in developing structures and processes that effectively integrate IMTS planning across the full spectrum of responsible state agencies, regional agencies, and private sector stakeholders. IDOT should use these venues to advocate for the IMTS. Follow-on steps should include:

- Establish a state-level Marine Transportation System Advisory Board, to include IDOT, IEPA, IDNR DCEO, Department of Agriculture and/or other public agencies, as well as private sector partners
- Collaborate to establish and administer marine system funding programs & existing state programs that can benefit the marine system
- Address key issues and shared interests: beneficial use of dredged materials; permitting/regulatory changes; resiliency/flooding; multimodal system connections; etc.
- Establish coordination between the Advisory Board (see Recommendation 1) and the Illinois State Freight Advisory Committee and other private sector stakeholder groups and associations to facilitate private sector input
- Collaborate with state regulatory agencies and public and private ports to review permitting regulations for efficiencies and economic competitiveness related to activities undertaken by ports to improve the movement of goods and increase economic competitiveness.

|||||

Synergies with other IDOT modal plans and policies:

STATEWIDE LONG-RANGE TRANSPORTATION PLAN:

	1	2	3	4	5
 ECONOMY CHAPTER	✓	✓			

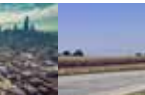
	1	2	3	4	5
 LIVABILITY CHAPTER	✓				

	1	2	3
 MOBILITY CHAPTER	✓		

	1	2	3	4	5
 RESILIENCY CHAPTER	✓				

ILLINOIS STATE FREIGHT PLAN

FREIGHT GOALS

 IMPROVE SAFETY	 IMPROVE EFFICIENCY	 GROW THE ECONOMY	 PRESERVE EXISTING INFRASTRUCTURE	 EXPAND INFRASTRUCTURE STRATEGICALLY	 SUPPORT MULTIMODAL DISTRIBUTION
	✓				

5.2.6 RECOMMENDATION #4: IMPROVE PORT DISTRICT STRUCTURE AND APPOINTMENT PROCESS

IDOT should work to improve the structure and function of port districts, helping to match the boundary definitions of port districts to appropriate market regions and facilitating the timely appointment of port district board members.

- Develop relationships with port district boards/staff through the new Marine Section (see Recommendation 1)
- Collaboratively review whether consolidation, dissolution, or boundary adjustments for port districts would provide greater efficiency and achievement of statewide MTS goals, considering market needs and infrastructure conditions
- Establish a port district board appointment process within IDOT, and work as a liaison with the Governor's Office to promote timely port district board appointments

|||||

Synergies with other IDOT modal plans and policies:

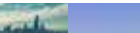
STATEWIDE LONG-RANGE TRANSPORTATION PLAN:

	ECONOMY CHAPTER	1	2	3	4	5
		✓				

	STEWARDSHIP CHAPTER	1	2	3	4	5
					✓	

ILLINOIS STATE FREIGHT PLAN

FREIGHT GOALS

					
IMPROVE SAFETY	IMPROVE EFFICIENCY	GROW THE ECONOMY	PRESERVE EXISTING INFRASTRUCTURE	EXPAND INFRASTRUCTURE STRATEGICALLY	SUPPORT MULTIMODAL DISTRIBUTION
	✓				

5.2.7 RECOMMENDATION #5: STREAMLINE DREDGING PROCESS

IDOT should take a lead role in addressing known deficiencies in the state's process for port activity permitting, dredging, and beneficial use of dredged materials, to improve the efficiency and performance of the IMTS and remedy Illinois' competitiveness with neighboring states.

- Collaborate with new Marine Transportation System Advisory Board (see Recommendation 3) to define and establish common, accepted definitions of "contaminated" dredged material, dredged materials management practices, and beneficial use of dredged material best practices
- Work with Federal regulatory agencies as necessary to establish consistency between improved state practices and federal practices and to generally streamline the federal permitting process for dredging projects to the extent practical

|||||

Synergies with other IDOT modal plans and policies:

STATEWIDE LONG-RANGE TRANSPORTATION PLAN:

	1	2	3	4	5
 ECONOMY CHAPTER	✓	✓			

	1	2	3
 MOBILITY CHAPTER	✓		✓

	1	2	3	4	5
 RESILIENCY CHAPTER		✓			

ILLINOIS STATE FREIGHT PLAN

FREIGHT GOALS

 IMPROVE SAFETY	 IMPROVE EFFICIENCY	 GROW THE ECONOMY	 PRESERVE EXISTING INFRASTRUCTURE	 EXPAND INFRASTRUCTURE STRATEGICALLY	 SUPPORT MULTIMODAL DISTRIBUTION
	✓		✓		

5.2.8 RECOMMENDATION #6: STRENGTHEN FEDERAL AGENCY AND MULTI-STATE PARTNERSHIPS

IDOT should take a lead role in managing and strengthening relationships with Federal agency partners and in facilitating multistate partnerships to achieve IMTS objectives that extend beyond the boundaries or direct control of the state itself.

- Leverage previous recommendations (new IDOT Marine section, statewide IMTS Advisory Board, dredging process improvements) to strengthen relationships with responsible Federal regulatory and implementing agencies (USACE, Fish & Wildlife, EPA, MARAD, et al.)
- Encourage the USACE to develop and regularly publish a 5-year program of planned activities and timelines potentially impacting IMTS stakeholders, allowing stakeholders to plan ahead for waterway closures, improvements, and other USACE activities
- Seek opportunities to accelerate or facilitate Federal program delivery through state participation in administration, contracting, or other means
- Work with USDOT partners to make IMTS projects as competitive as possible for discretionary grant awards
- Collaborate with federal regulatory agencies and public and private ports to review permitting regulations for efficiencies and economic competitiveness related to activities undertaken by ports to improve the movement of goods and increase economic competitiveness

|||||

Synergies with other IDOT modal plans and policies:

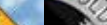
STATEWIDE LONG-RANGE TRANSPORTATION PLAN:

	ECONOMY CHAPTER	1	2	3	4	5
		✓				

	LIVABILITY CHAPTER	1	2	3	4	5
						

ILLINOIS STATE FREIGHT PLAN

FREIGHT GOALS

					
IMPROVE SAFETY	IMPROVE EFFICIENCY	GROW THE ECONOMY	PRESERVE EXISTING INFRASTRUCTURE	EXPAND INFRASTRUCTURE STRATEGICALLY	SUPPORT MULTIMODAL DISTRIBUTION
		✓		✓	

- Continue to leverage National Highway Freight Program Funds (or similar future programs) allowing for flexible allocation across modes; re-establish the Port Revolving Loan Fund (see Recommendation 8) as a mechanism for project applicants to meet grant match requirements
- Continue to pursue and support discretionary grant applications under BUILD, INFRA, PIDP (Port Infrastructure Development Program), and other applicable programs for IMTS investments
- Review other IDOT transportation system funding programs for leveraging potential in cases where the integration of IMTS projects would be demonstrably more beneficial than single-mode investments
- Review federal and state economic development grant programs (TARP, USCG, IDNR, DCEO, etc.) for potential use in meeting IMTS needs
- Explore the potential for establishing public-private partnerships for IMTS maintenance and capital needs when deemed appropriate, especially when funding is not sufficient to provide safe, efficient, and/or reliable marine transportation

STATEWIDE LONG-RANGE TRANSPORTATION PLAN:

	STEWARDSHIP CHAPTER	1	2	3	4	5
				✓	✓	

FREIGHT GOALS

FREIGHT GOALS					
					
IMPROVE SAFETY	IMPROVE EFFICIENCY	GROW THE ECONOMY	PRESERVE EXISTING INFRASTRUCTURE	EXPAND INFRASTRUCTURE STRATEGICALLY	SUPPORT MULTIMODAL DISTRIBUTION
		✓	✓	✓	

5.2.10 RECOMMENDATION #8: ESTABLISH LONG-TERM, SUSTAINABLE IMTS FUNDING PROGRAM

Building on the Port Capital Grant Improvement Program, IDOT should work to design and establish a long-term, predictable, and secure funding program for the improvement of existing IMTS infrastructure and expansion of the system.

- Finalize the design of the Port Capital Grant Improvement Program, covering an estimated five years of port funding, subject to potential modifications due to the COVID-19 pandemic and necessary state financial responses
- Identify long-term, sustainable revenue streams allowing indefinite continuation of the Port Capital Grant Improvement Program at reliable and predictable annual expenditure levels
- Re-establish the Port Revolving Loan Fund to support short-term port and IMTS investment needs, such as local matches to discretionary grants or quick-response expenditures; loans could be funded out of an expanded Port Capital Grant Improvement Program or a parallel program, based on further exploration

|||||

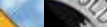
Synergies with other IDOT modal plans and policies:

STATEWIDE LONG-RANGE TRANSPORTATION PLAN:

 STEWARDSHIP CHAPTER	1	2	3	4	5
			✓	✓	

ILLINOIS STATE FREIGHT PLAN

FREIGHT GOALS

					
IMPROVE SAFETY	IMPROVE EFFICIENCY	GROW THE ECONOMY	PRESERVE EXISTING INFRASTRUCTURE	EXPAND INFRASTRUCTURE STRATEGICALLY	SUPPORT MULTIMODAL DISTRIBUTION
		✓	✓	✓	

5.3 CRITICAL NEEDS FOR THE IMTS AND ITS STAKEHOLDERS

Through detailed discussions with stakeholders, analysis of IMTS infrastructure and operations, and review of peer and neighbor state best practices, the critical needs for the IMTS and its stakeholders were identified. The list of critical needs (see **Table 5.1**) is intended to focus on issues of statewide significance that impact the state's entire IMTS infrastructure and operability of

all its port districts together; it includes only eight items, but each is important and challenging. Individual ports improvement plans and programs were investigated in the study but are not included in the list of critical needs, as they are and will continue to be addressed at a port districts level, with engagement with and by IDOT as appropriate.

TABLE 5.1 IMTS Critical Needs

TYPE	DESCRIPTION
Port Development	- Funding and implementation support for port districts to develop, expand, and/or improve their terminal facilities, truck and rail access, berths and channels, supporting logistics facilities, and water-dependent non-freight activities - Technical support for port districts to document and communicate their capabilities, assets, and economic importance to a broad range of public and private stakeholders - Improved definition of port districts to capture IMTS opportunities and deliver IMTS improvements and services
Waterway Maintenance and Operations	- Improved regulatory, management, and funding practices for channel and berth maintenance dredging - Improved delivery of critical lock and dam maintenance, resiliency, and other projects through close collaboration with Federal Agency partners and through multi-state partnerships
Statewide Planning and Funding	- Improved IMTS planning capacity within IDOT - Improved IMTS planning coordination across Illinois agencies - Establishment of sustainable IMTS funding program



5.4 BENEFITS OF ACTION

The benefits—considering only benefits to the State of Illinois—of implementing these programmatic recommendations can be evaluated and quantified on three dimensions: avoided loss of economic value; avoided impacts of freight transportation on other modes; and accommodation of future statewide business expansion and growth.

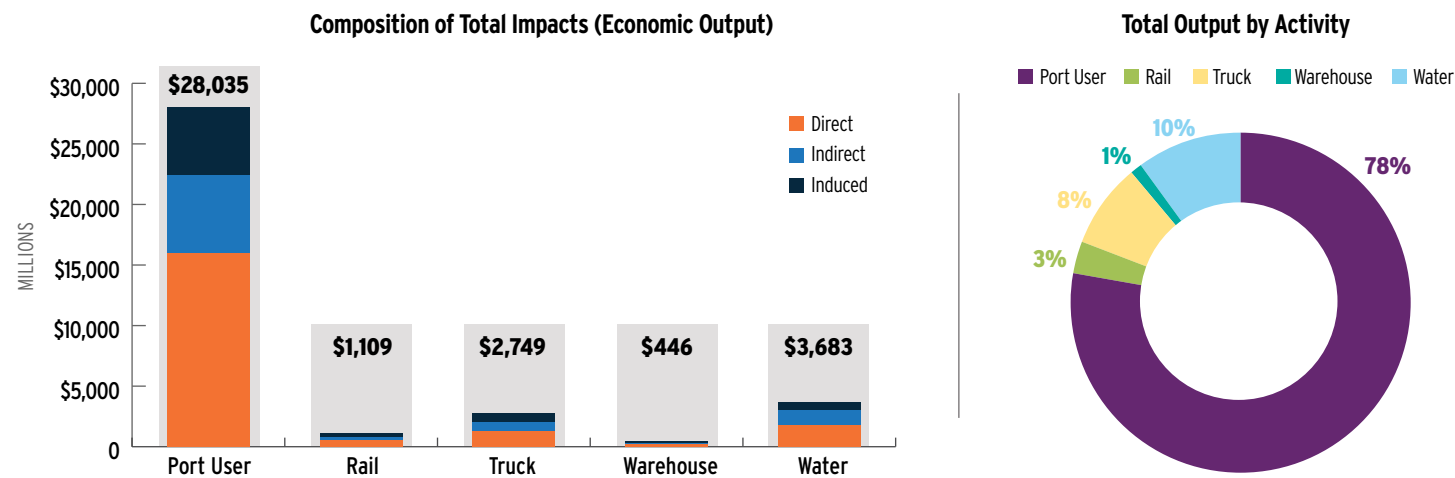
Avoided Loss of Economic Value

This plan performed an extensive analysis of the economic value of the IMTS to the State of Illinois. The main findings were that direct economic benefits are extremely large (74,682 employees, \$7.9 billion in value-added), total economic benefits are even larger (166,629 employees, \$17.4 billion in value-added), and that port users (the businesses that benefit from marine transportation services) account for most of the calculated benefit (see **Figure 5.6**).

What could happen to these benefits if the IMTS is unable to maintain the capacity, performance, and services it currently offers due to lack of maintenance or insufficient investment?

- Direct water-related benefits (3,800 jobs and \$539 million in value added) would be most immediately at risk, were IMTS activity to decline.
- Close behind, direct port user benefits (59,000 jobs and \$6.2 billion in value-added) would be impacted. For port users, their jobs and value-added contributions could be significantly impacted if marine transportation services had to be replaced by truck and rail services, which can be substantially more expensive. In the best case, their costs for transportation spending would increase, impacting their bottom-line and reducing their ability to spend on labor, capital expansion, maintenance, and/or shareholder returns, but they would continue to operate. In the worst case, the cost impacts would be so severe that the businesses could not operate profitably in Illinois and would have to seek locations in other states or close entirely.

FIGURE 5.6 Summary of Statewide IMTS Economic Impact



Avoided Impacts of Freight Transportation on Other Modes

In 2017, the IMTS moved 62.1 million tons of freight from Illinois origins to out-of-state destinations, 20.1 million tons from out-of-state origins to Illinois destinations, and 8.4 million tons between origins and destinations in Illinois. What could happen to these benefits if the IMTS is unable to maintain the capacity, performance, and services it currently offers due to lack of maintenance or insufficient investment?

- Most of the tonnage currently moved by water would likely be shifted to truck or rail. However, some portion of this tonnage would be likely lost, as the business generating the freight could no longer afford to remain in business or in Illinois.
- For traffic that could shift to rail, the transportation impacts (increased rail ton-mileage) might be manageable, but there might be significant impacts in terms of the need for improved rail transfer facilities at impacted businesses or for new or expanded multi-user rail terminals. Rail drayage to off-site terminals could generate significant increases in truck vehicle miles of travel (VMT) and congestion in certain areas. There would also be an increase in rail ton-mileage, although these effects might be manageable within the state's extensive rail network.

- The state's surface transportation system would see a significant increase in truck VMT, likely resulting in greater highway pavement damage, congestion, and emissions. If just 10% of annual IMTS tonnage moved instead by truck, it would mean 9.6 million tons of truck freight added to Illinois highways – equivalent to around 450,000 loaded truck trips per year. If each of those trucks moved an average of 150 miles in Illinois (the distance from Peoria to Chicago), they would generate around 67.5 million additional truck VMT each year – which, for perspective, is roughly 2,700 trips around the equator.

||||

Accommodation of Illinois Economic Growth

Between 2017 and 2045, IMTS freight volume is expected to increase from 90.1 million tons to 94.8 million tons. Historically important commodities like coal and petroleum are projected to decline, but continued growth in agricultural products, fertilizers, food products, and other manufactured products – along with emerging commodities like plastics and agricultural by-products – will more than offset these losses. This represents a 5 percent growth in tonnage; the economic value capturing this 5 percent growth can be estimated at roughly \$870 million (current total value-added of \$17.4 billion times 5 percent).

SUMMARY

This Plan is intended to document the diverse functions, roles, and benefits of the IMTS, its public Port Districts, and its private partners and stakeholders. The value of the IMTS to the state of Illinois – leaving aside its substantial additional benefit to other states and the nation as a whole – is extremely large. The Programmatic Recommendations identified in this Plan are designed to safeguard and preserve this value and to support continued and beneficial IMTS growth well into the future.

IMPLEMENTATION OF PROGRAMMATIC RECOMMENDATIONS

The programmatic recommendations outlined in the IMTS Plan will help IDOT and other state agencies support the long-term resiliency of the IMTS by more fully integrating the marine mode into IDOT's mission. The IMTS is a complex system with many different state and federal agencies overseeing various types of activities that occur on the system. Likewise, there is robust private industry use, as well as personal and commercial recreational use, of the system every day. In order for the full potential of the IMTS as a mode of transport to be realized, IDOT will need to continue to strengthen its relationships with other agencies and the private industry. The programmatic recommendations detailed in Chapter 5 have been developed through an in-depth process including input from the IMTS Plan steering committee, federal, state, and local units of government, and private industry. While IDOT is the agency that will lead the implementation process, many of the recommendations will require the cooperation of other governmental agencies or implementation partners. This chapter highlights some of the roles that implementation partners can play in making these recommendations become a reality.

6.1 IMPLEMENTATION PARTNERS

6.1.1 ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT)

IDOT is responsible for the maintenance, expansion, and advocacy of the state's multimodal transportation network and therefore will be the lead agency as it relates to implementing the recommendations brought forward in the IMTS Plan. IDOT will be responsible for working internally, with other implementation partners, the public and elected officials to ensure that the recommendations are implemented. The working relationship with other partners will be critical, especially when a recommendation requires changes to another partner's policies or regulations, or when advocating for increased investment in IMTS infrastructure.

6.1.2 ILLINOIS DEPARTMENT OF COMMERCE AND ECONOMIC OPPORTUNITY (DCEO)

The IMTS contributes \$36 billion to the Illinois State economy. As Illinois' economic development agency, DCEO will be a key partner in helping implement programmatic recommendations related to re-examining existing statewide economic programs and funding sources to consider how these programs can help support the IMTS and its users. Additionally, DCEO will be instrumental in the development of the port capital investment program as outlined in the "Rebuild Illinois" capital program, and a key partner in advocating for increased investment in the IMTS.

6.1.3 PORT DISTRICTS & ILLINOIS PORTS ASSOCIATION (IPA)

Most if not all the programmatic recommendations made could impact the state's port districts in some manner. The port districts are the local unit of government responsible for advancing the use of the IMTS in their jurisdiction. Each port district was part of the steering committee that guided the development of the IMTS Plan and its accompanying programmatic recommendations. IDOT will need to continue to work with the port districts to ensure that the recommendations are implemented in a manner that will be beneficial to the port districts. That said, while the Illinois Ports Association (IPA) speaks on behalf of its member public port districts on broad-scale topics, each port district has its own unique challenges, needs, and relationships with private partners. It will be critical that dialogue continues to occur with individual port districts while implementing the programmatic recommendations.

6.1.4 ILLINOIS DEPARTMENT OF NATURAL RESOURCES (IDNR)

The IMTS is a great natural resource that provides benefit to the state environmentally, economically, and recreationally. IDNR is responsible for the conservation and preservation of the waterways within the IMTS. Additionally, IDNR works alongside the USACE to implement mitigation strategies surrounding invasive species. Due to this, IDOT will need to work in conjunction with IDNR to ensure that recommendations are implemented in a manner that protects the health and wellness of this invaluable natural resource.

6.1.5 ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA)

IEPA's mission is to "safeguard environmental quality, consistent with the social and economic needs of the State, so as to protect health, welfare, property and the quality of life."¹ The IMTS is a natural resource that needs to be handled with respect and care as it provides great economic, social and environmental benefits to the State. Additionally, the IMTS is a natural resource which is vulnerable to the effects of climate change and rising lake and river levels, which can negatively impact infrastructure and navigation. IDOT will need to work closely with IEPA to implement the recommendations in an environmentally-friendly manner.

6.1.6 ILLINOIS DEPARTMENT OF AGRICULTURE (IDOA)

The IDOA's mission is to "advocate for Illinois' agricultural industry and provide the necessary regulatory functions to benefit consumers, agricultural industry, and our natural resources. The agency will strive to promote agri-business in Illinois and throughout the world."² The State of Illinois is a national leader in the growing of corn and soybeans. A majority of the commodities grown in Illinois are moved short distances by truck and long distances by rail or water. Illinois' waterway infrastructure plays a pivotal role in the success of agribusiness in the state. IDOT and the IDOA will need to work together to ensure that the programmatic recommendations and strategies are implemented in a manner that allows the IMTS to meet the current and future demands of Illinois's agribusiness industry. Additionally, these policies should be implemented in a manner that places Illinois' agribusiness at a competitive advantage over neighboring states.



Illinois
PORTS ASSOCIATION



6.1.7 UNITED STATES ARMY CORPS OF ENGINEERS (USACE)

The USACE has jurisdiction over the nation's inland river system. In this role they are responsible for maintaining and operating the lock and dam systems on the nation's inland river system which includes the Mississippi, Ohio, Illinois, and Kaskaskia River, as well as the Chicago Area Waterway System. Additionally, they are responsible for maintaining the navigation channels of the nation's inland river system and mitigation strategies surrounding invasive species. The inland waterways and locks and dams that support them are extremely important to the state's transportation network and the ability of the IMTS to maintain and grow commercial and economic activity. IDOT will need to work alongside the USACE to ensure the programmatic recommendations are implemented in a manner that is supported by this important federal partner.

6.1.8 METROPOLITAN PLANNING ORGANIZATIONS AND REGIONAL PLANNING AGENCIES

Metropolitan Planning Organizations (MPOs) are federally mandated and federally funded transportation policy-making organizations made up of representatives from local governments and governmental transportation authorities. They ensure regional cooperation in multi-modal transportation planning. Federal funding for multi-modal transportation projects and programs are channeled through this planning process. Congress created MPOs in order to ensure that existing and future expenditures of governmental funds for

transportation projects and programs are based on a continuing, cooperative, and comprehensive planning process. Regional Planning Agencies (RPAs) develop plans that coordinate planning by groups of local governments. This planning process includes land use planning, transportation planning, and environmental planning. Thirteen Illinois MPOs or RPAs are directly involved with transportation planning associated with, and along Illinois Waterways. They are responsible for integrating waterway segments into the regional multi-modal transportation network.

6.1.9 UNITED STATES MARITIME ADMINISTRATION (MARAD)

MARAD is a federal agency under the U.S. Department of Transportation whose mission is to "foster, promote and develop the maritime industry of the United States to meet the nation's economic and security needs."³ Additionally, they play a key role in technical aspects of the nation's marine transportation infrastructure. The IMTS is unique in that it links the Gulf of Mexico with the Atlantic Ocean via the Great Lakes and St. Lawrence Seaway; this makes the IMTS of vital importance to the nation's economic and security needs. IDOT will need to work alongside MARAD to ensure the programmatic recommendations are implemented in a manner that work to achieve MARAD's mission. By doing so, IDOT can ensure that the IMTS supports Illinois and the nation alike.

6.1.10 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (U.S. EPA)

As the federal agency responsible for protecting human health and the environment, the US EPA develops national standards that states are responsible for enforcing through their own regulations. Being a natural resource, the IMTS has different regulations and requirements as compared to other modes of transportation and is vulnerable to the effects of climate change with the rise of lake and river levels. IDOT should work with the US EPA in conjunction with the IEPA to ensure that the programmatic recommendations are implemented in a manner that follows US EPA regulations and standards.

6.1.11 STATE AND FEDERAL LEGISLATIVE BRANCHES (LEG)

While there are many actions IDOT can take independently and in partnership with state and federal partners, there are some that will require legislative support and action. IDOT will need to work with the state and federal legislative branches of government to ensure that laws are passed that will support the efficient movement of goods and the IMTS as a mode of transportation. This will require expanding conversations with elected officials on the importance the IMTS has to Illinois and the nation.

6.2 IMPLEMENTATION STAKEHOLDERS

In addition to the implementation partners previously mentioned there are many associations which represent many private and public sector interests of the IMTS. The following are other stakeholders who may also assist IDOT in implementing the IMTS Plan and its programmatic recommendations and strategies.

- Inland Rivers Ports and Terminals, INC.
- Great Lakes St. Lawrence Governors & Premiers
- Lake Carriers Association
- Upper Mississippi River Basin Association
- Illinois River Carriers' Association

6.3 IMPLEMENTATION PARTNERS COLLABORATION

As previously mentioned in this chapter, IDOT alone will not be able to implement all the recommendations mentioned in chapter 5. There are many programmatic recommendations and their action items that will require collaboration with one or multiple implementation partners. Chapter 6.1 highlighted the roles each partner plays within the IMTS and general responsibilities. The table below shows the programmatic recommendation action items and which implementation partner will need to collaborate with IDOT to ensure they are implemented.

RECOMMENDATIONS	IDOT	DCEO	IDNR	IEPA	IDOA	PORT DISTRICTS	IPA	USACE	MARAD	US EPA	LEG	MPO/RPA
New Organizational Structure												
Leverage and coordinate expertise that already exists within IDOT, including IDOT District staff	X											
Liaison with port districts, associations, private terminals, federal agencies, and other key system stakeholders	X	X	X			X	X	X	X	X		X
Lead a new state-level Marine Transportation System Advisory Board	X											
Educate the state legislature and their staff on the benefits the marine system brings to the state's transportation network and economy; educate the public on the importance of the marine transportation system	X	X	X			X	X	X	X		X	X
Provide technical assistance/support to stakeholders (grant applications, policy changes, understanding regulations, etc.)	X	X	X	X	X		X	X	X			X
Provide multimodal communication & coordination with external entities when an IDOT-sponsored project will impact marine-related facilities	X	X	X				X		X			X
Collect and monitor data; perform or manage system-wide or sub-regional studies; coordinate research activities	X	X	X	X	X			X	X	X		X
Participate in state and national marine organizations	X		X			X	X	X	X	X		X
Coordinate and administer applicable IDOT IMTS funding programs	X	X									X	

RECOMMENDATIONS	IDOT	DCEO	IDNR	IEPA	IDOA	PORT DISTRICTS	IPA	USACE	MARAD	US EPA	LEG	MPO/RPA
Modal Integration												
Establish a regular update cycle for the IMTS modal system plan	X											
Establish processes to effectively coordinate the IMTS modal system plan with other modal system plans, state freight plan, statewide long-range transportation plan, rail plan, pipeline plan, and regional/MPO plans, and Port District plans	X											
Provide effective linkage between statewide IMTS planning and public/private investments and activities at the state, port districts, IDOT districts, metropolitan/regional, and local levels, through involvement and engagement of the new Marine Section	X	X				X	X					X
Establish performance measures and targets for the IMTS to guide data collection and performance tracking towards statewide goals, consistent with or similar to those in other modes	X					X	X					X
Review project and program funding criteria to better address marine (freight and passenger) system needs and establish a "level playing field" to the extent permitted by revenue sources	X	X				X	X					
Increased Collaboration												
Establish a state-level Marine Transportation System Advisory Board, to include IDOT, IEPA, IDNR, DCEO, Department of Agriculture, and/or other public agencies	X	X	X	X		X	X		X		X	
Collaborate to establish and administer marine system funding programs & existing state programs that can benefit the marine system	X	X	X			X	X		X		X	X
Address key issues and shared interests: beneficial use of dredged materials; permitting/regulatory changes; resiliency/flooding; multimodal system connections; etc.	X	X	X	X	X	X	X	X	X			X
Establish coordination between the Advisory Board and the Illinois State Freight Advisory Committee and other private sector stakeholder groups and associations to facilitate private sector input	X											

RECOMMENDATIONS	IDOT	DCEO	IDNR	IEPA	IDOA	PORT DISTRICTS	IPA	USACE	MARAD	US EPA	LEG	MPO/RPA
Port District System												
Develop relationships with port district boards/staff through the new Marine Section	X					X	X					X
Collaboratively review whether consolidation, dissolution, or boundary adjustments for Ports Districts would provide greater efficiency and achievement of statewide MTS goals, considering market needs and infrastructure conditions	X					X	X				X	
Establish a Port District board appointment process within IDOT, and work as a liaison with the Governor's Office to promote timely port district board appointments	X					X	X				X	
Dredging Needs												
Collaborate with new Marine Transportation System Advisory Board to define and establish common, accepted definitions of "contaminated" dredged material, dredged materials management practices, and beneficial use of dredged material best practices	X		X	X		X	X				X	X
Work with Federal regulatory agencies as necessary to establish consistency between improved state practices and federal practices and to generally streamline the federal permitting process for dredging projects to the extent practical	X	X	X	X				X		X	X	
Federal and State Partnerships												
Leverage previous recommendations (new IDOT Marine section, statewide MTS Advisory Board, dredging process improvements) to strengthen relationships with responsible Federal regulatory and implementing agencies (USACE, Fish & Wildlife, EPA, MARAD, et al.)	X											X
Encourage the USACE to develop and regularly publish a 5-year program of planned activities and timelines potentially impacting IMTS stakeholders, allowing stakeholders to plan ahead for changes in the waterway transportation system	X							X				
Seek opportunities to accelerate or facilitate Federal program delivery through state participation in administration, contracting, or other means	X	X						X			X	
Work with USDOT partners to make IMTS projects as competitive as possible for discretionary grant awards	X						X		X			X
Support multi-state partnership efforts, including work by IDNR which is teaming with the 5 Upper Mississippi River states to develop a plan on the issues of flooding, drought, and sedimentation; explore other opportunities where such partnerships may be of value to IMTS objectives	X		X	X		X	X					X

RECOMMENDATIONS	IDOT	DCEO	IDNR	IEPA	IDOA	PORT DISTRICTS	IPA	USACE	MARAD	US EPA	LEG	MPO/RPA
Existing Funding												
Continue to leverage National Highway Freight Program Funds (or similar future programs) allowing for flexible allocation across modes; re-establish the Port Revolving Loan Fund (see Recommendation 8) as a mechanism for project applicants to meet grant match requirements	X	X				X	X				X	X
Continue to pursue and support discretionary grant applications under BUILD, INFRA, PIDP (Port Infrastructure Development Program), and other applicable programs for IMTS investments	X	X	X			X					X	X
Review other IDOT transportation system funding programs for leveraging potential in cases where the integration of IMTS projects would be demonstrably more beneficial than single-mode investments	X											X
Review federal and state economic development grant programs (TARP, USCG, IDNR, DCEO, etc.) for potential use in meeting IMTS needs	X	X	X	X	X	X	X	X	X	X	X	
New Funding												
Finalize the design of the Port Capital Grant Improvement Program, covering an estimated 5 years of port funding, subject to potential modifications due to the COVID-19 pandemic and necessary state financial responses	X	X	X	X	X						X	
Identify long-term, sustainable revenue streams allowing indefinite continuation of the Port Capital Grant Improvement Program at reliable and predictable annual expenditure levels	X	X									X	
Re-establish the Port Revolving Loan Fund to support short-term port and IMTS investment needs, such as local matches to discretionary grants or quick-response expenditures; loans could be funded out of an expanded Port Capital Grant Improvement Program or a parallel program, based on further exploration	X										X	

Endotes

1.....<https://www2.illinois.gov/epa/Pages/default.aspx>

2.....<https://www2.illinois.gov/sites/agr/About/Pages/default.aspx>

3.....<https://www.maritime.dot.gov/about-us>

PHOTO CREDIT REFERENCES

Source information for photo imagery included in this document.

Getty Stock Imagery
Source: Getty Images
www.gettyimages.com



Illinois Port District Imagery
Source: Illinois Port Association
<http://illinoisports.org/>







Illinois Department of Transportation (IDOT)
Source: IDOT Ferry Services
<http://www.idot.illinois.gov/travel-information/passenger-services/Ferry-Services/index>



Ozinga Bros., Inc.
Source: Ozinga Bros., Inc.
<https://www.ozinga.com/>



Jackson County Port District
Source: Jackson County, IL
<https://www.jacksoncounty-il.gov/>



Historic Imagery
Source: Chicago Past
<https://chicagopast.com/tagged/chicago-river>



Historic Imagery
Source: Illinois Marine Transportation Initiative
http://www.idot.illinois.gov/Assets/uploads/files/Transportation-System/Pamphlets-&-Brochures/Freight-Council/102918/ISFAC_Illinois_Marine_Transportation_October.pdf



Hokia Mounds State Historic Site
Source: painting by William R. Iseminger
<https://cahokiamounds.org/>



Eastland Disaster Historical Society

Source: Eastland Disaster Historical Society
<http://www.eastlanddisaster.org/>

**University of Illinois at Chicago**

Source: UIC Library Archives
<https://uicarchives.library.uic.edu/history-of-uic/navy-pier-1914-1946/>

**NavyTimes**

Source: National Archives
<https://www.navytimes.com/news/your-navy/2019/06/06/the-unloved-unlovely-yet-indispensable-1st/>

**Google Maps**

Source: Google Maps
<https://www.google.com/maps/>

**WSP Imagery**

Source: Adam Miliszewski, Photographer

