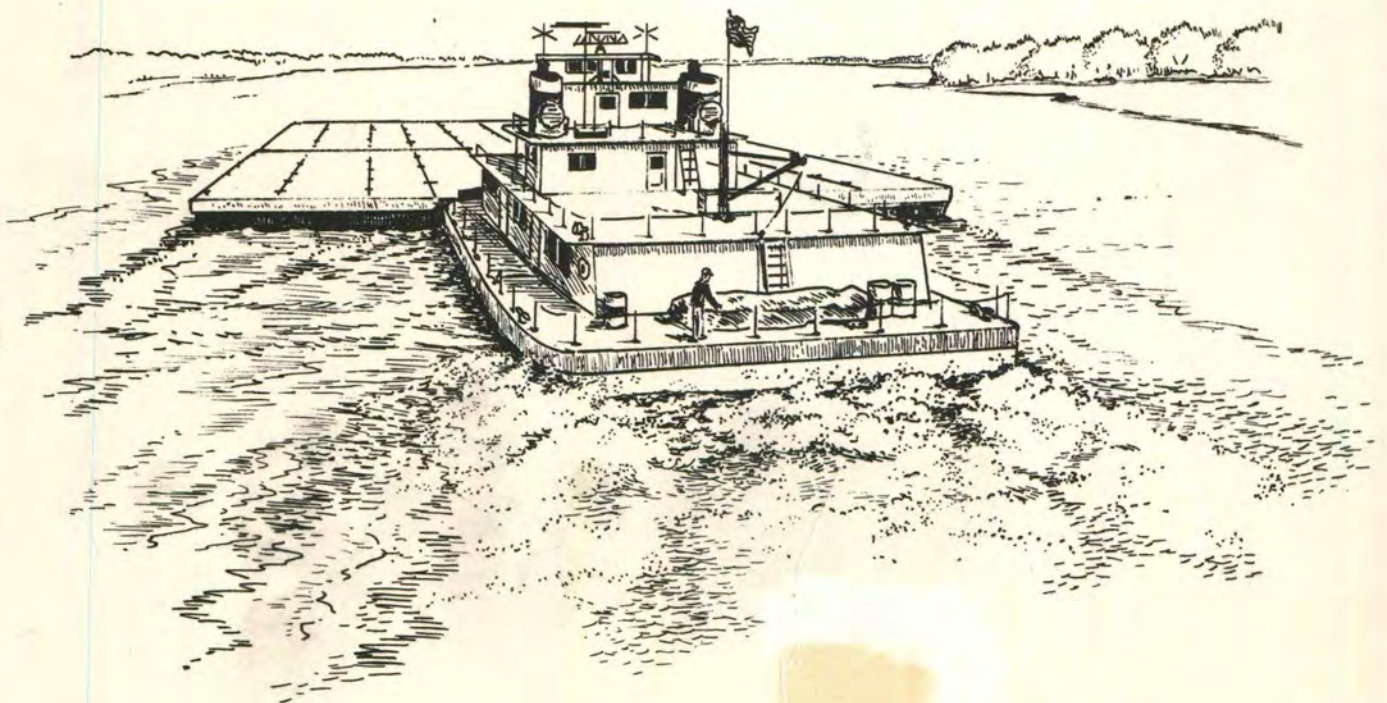


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1975 Iowa Barge Terminal Study



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IOWA BARGE TERMINAL STUDY

September 1975

For Department of Transportation Reference

and

Not for Publication

Prepared by

Office of Advance Planning

Division of Planning and Research
Iowa Department of Transportation

In Cooperation with the

United States Department of Transportation
Federal Highway Administration

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INTRODUCTION

Iowa is bordered on two sides by a navigable waterway, the Mississippi River on the east and the Missouri River on the west. Locks and dams, levees, and wing dams used to control the navigation channels on both rivers are maintained and operated by the U.S. Corps of Engineers. Commercial docks with facilities to store goods and load and unload barges are scattered along the shores of both rivers. There are approximately 65 of these terminals operating in Iowa. Approximately 9,000,000 tons of freight were handled at these Iowa terminals during 1974.

This freight must be transported to or from these barge terminals by motor truck, rail, or pipeline. Some terminals dispatch as many as 150 to 200 trucks per day. Only a very limited amount of data is available as to the origin and destination of the freight handled by these barge lines, or as to how the freight is transported to and from the waterfront.

In order to gain a better understanding of the movement of freight through these barge terminals, the Iowa Department of Transportation conducted a survey at each commercial dock location in Iowa. The purpose of this report is to document the efforts and findings of this survey.

THE SURVEY

The objective of the survey was to collect extensive data pertaining to the movement of freight through the barge terminals located in Iowa. Data considered most important related to volume shipped by commodity, origin and destination of freight through the terminal, and the mode used to transport freight to and from each terminal.

One of the first considerations was to obtain a complete and current list of the names and locations of the commercial docks operating in Iowa. An organization wishing to ship by barge must obtain a permit and be listed with the U.S. Corps of Engineers District Office in their district. Upon request, the Corps of Engineers in the Rock Island, St. Paul and Omaha districts forwarded their current list of all organizations with permits to the D.O.T.

Since no study of this nature had been conducted previously in Iowa, a preliminary investigation was necessary at a sample number of the barge terminals to determine the type of data available and the amount of time involved in the collection of the data. Once the preliminary field study was complete, instructions, interview forms, and schedules were developed for the field survey. Field work began during the latter part of May, 1975, and was completed in July. All data was obtained at the barge terminal locations through personal interviews with the owners or operators.

Some of the companies were reluctant to release portions of the desired data; others had to be reassured that the data would be

held in confidence by the D.O.T. and would not be released as

public information. Field personnel involved in the survey were

instructed to collect only that data which company representatives

showed a willingness to release. Consequently, the data will vary

somewhat in context from one location to another.

2 barges 1,200 h.p. tow 73/ton
3 barges 1,800 h.p. tow 87/ton
- Kansas City, Missouri to Sioux City, Iowa - \$5.50/ton

Average barge size is 2,000 tons

Sand - Alton, Illinois to Bettendorf, Iowa - \$1.50/ton

200 ton barge

Coal - New Orleans, Louisiana to Keokuk, Iowa - \$7.50/ton

Average barge size is 1,400 to 1,500 tons

Coal - New Orleans, Louisiana to Dubuque, Iowa - \$7.50/ton

Average barge size is 700 to 800 tons

Coal - Southwest Illinois to Muscatine, Iowa; St. Louis, Missouri to Muscatine, Iowa - \$2.50/ton

Southwest Illinois to Clinton, Iowa - \$2.30/ton

Coal - Minneapolis, Minnesota to Clinton, Iowa - \$2.20/ton

Average barge size is 1,400 to 1,500 tons

The following section of this report contains a list of individual dock locations. Each facility is listed with a location number which appears at the top of each section.

Appendix I contains a list of Army Corps of Engineers maps showing the location of each facility and identifying the location number.

SIGNIFICANT FACTS

Principal commodities handled at the commercial docks in Iowa are grain, petroleum, and coal.

In most cases, grain is trucked to the terminals from areas within a 100-mile radius of the terminal, loaded on barges, and transported down the river to the Gulf.

The petroleum terminals are located, for the most part, in the metropolitan areas of Bettendorf and Dubuque. Petroleum is transported up the river by barge from refineries located in Wood River, Illinois; Joliet, Illinois; Mt. Vernon, Illinois; and St. Louis, Missouri. The majority of the petroleum is distributed from the terminals to surrounding areas by truck. In addition to the barge shipments, a number of the terminals also receive petroleum by pipeline.

Power plants located near the river are the principal receivers of coal. The coal is shipped to the plant by barge and is used to produce electrical energy. The majority of the coal comes up the river from southern Illinois and Kentucky. Some Western coal from Wyoming and Montana is also received. The Western coal is transported by rail to Minneapolis and then down the river by barge to the power plants.

Other principal commodities handled at Iowa barge terminals include industrial salt, road salt, liquid fertilizer, bulk fertilizer, and phosphate rock.

The navigation season on the Mississippi River during most years ranges from 9½ months in northern Iowa to a full 12 months in Keokuk. The navigation season on the Missouri River, between Sioux City and Omaha, is between eight and ten months.

Very few of the companies operating in Iowa own barges or towboats. Most barges used here are leased from large companies located in the South. The majority of the barges used at the dock facilities located in Iowa have a capacity of about 1,450 tons. They are 195 feet long by 35 feet wide, have a draft of nine feet, and cost approximately \$140,000. Barge tows range from four or five on the Missouri River and up to 12 to 15 on the upper Mississippi River. The downstream trip from locations in Iowa to New Orleans requires from 12 to 14 days. The same barges used to transport grain downstream are used to carry coal, phosphate rock, and cement upstream.

During the survey, costs per ton by commodity were obtained from those operators willing to release this information. It must be realized that costs fluctuate, depending upon discounts or premiums added by the barge lines. Cost guidelines are determined by the Waterway Freight Bureau Tariff. Following is a list of some of the barge shipping costs per ton by commodity:

Grain - Iowa (Mississippi River) to Gulf of Mexico

Present	\$5.32/ton
Low	2.93/ton
High	7.98/ton

Average barge size is 1,400 to 1,500 tons

Cement - Hannibal, Missouri to Bettendorf, Iowa

1 barge	1,200 h.p. tow	\$1.00/ton
2 barges	1,200 h.p. tow	.73/ton
1 barge	1,800 h.p. tow	1.38/ton
2 barges	1,800 h.p. tow	.87/ton

Average barge size is 2,200 to 2,500 tons

Petroleum - St. Louis, Missouri to Burlington, Iowa - \$.0065/gallon

\$1.62/ton	20,000 barrel barge
1.30/ton	25,000 barrel barge

- Kansas City, Missouri to Sioux City, Iowa - \$5.50/ton

Average barge size is 1,000 tons

Sand - Albany, Illinois to Bettendorf, Iowa - \$1.50/ton

300 ton barge

Manganese Ore - New Orleans, Louisiana to Keokuk, Iowa - \$7.80/ton

Average barge size is 1,400 to 1,500 tons

Twine - New Orleans, Louisiana to Dubuque, Iowa - \$7.50/ton

Average barge size is 700 to 800 tons

Coal - Southwest Illinois to Muscatine, Iowa; St. Louis, Missouri to Muscatine, Iowa - \$2.50/ton

- Southwest Illinois to Clinton, Iowa - \$2.32/ton

- Minneapolis, Minnesota to Clinton, Iowa - \$2.20/ton

Average barge size is 1,400 to 1,500 tons

The following section of this report contains specific details on each individual dock location. Each facility has been assigned an identification number which appears at the top of each written summary. Appendix I contains U.S. Army Corps of Engineers maps illustrating the location of each facility and identified by number.

Foote Mineral Company (Ferro Alloys Division), Keokuk, Iowa - No. 1

The facility is located at the intersection of J Street and Commercial Street approximately four blocks south of U.S. 136.

Manganese ore is received at the terminal by barge from New Orleans at the rate of 4,000 to 6,000 tons annually. The facility has an open storage area with a capacity of 4,000 tons. Barges are offloaded by means of a 50 ton crane. Approximately 20 hours are required to offload a 1,100 ton barge.

Pig iron refined at the facility is shipped out by four railroads serving Keokuk. In past years pig iron has been shipped out by barge; however, due to a decrease in production, none was shipped during 1973 - 1974.

In August 1975, a barge was shipped and another is in process of being loaded for shipment.

There are no plans for expansion at this facility.

J. C. Hubinger Company, Keokuk, Iowa - No. 2

The facility is located on Commercial Street approximately four blocks from U.S. 136. Access to the terminal is good via U.S. 136 and paved city streets.

A corn processing plant is presently under construction at this location. The plant will be operable in June 1975. Corn will be shipped to the plant by rail and truck from locations in southeastern Iowa. Corn gluten feed pellets will be processed at the plant and shipped by barge to New Orleans. Storage facilities will include a one million bushel elevator at the plant and a one hundred thousand bushel bin at the dock. When handling facilities are completed, it is anticipated that barges will be loaded at the rate of 30,000 bushels per hour.

It is proposed that a railroad siding (Burlington Northern) and handling facilities to unload rail cars at the rate of 15,000 bushels per hour will be completed by 1976.

Iowa Gateway Terminal, Galland, Iowa - No. 3

The facility is located approximately six miles north of Keokuk near the unincorporated community of Galland. Access to the terminal is off Lee County Trunk A and down a steep, winding gravel road which is cut into a hill and bears a sign warning of falling rocks.

Coal, newsprint, industrial salt, and ice control salt are received at the terminal by barge. Coal from Kentucky is trucked from the terminal to Mt. Pleasant and Keokuk. Ice control salt and industrial salt are shipped from the Gulf of Mexico and trucked to a surrounding three state area within a 100 mile radius. Newsprint from Tennessee is trucked to surrounding areas (see page 12).

Storage facilities consist of a 9,600 square foot warehouse for paper, and eight acres of open storage for 25,000 tons of salt and 100,000 tons of coal. Handling facilities include a crane rated at 50 tons and a smaller backup crane. Approximately eight hours are required to unload a 1,600 ton barge.

Peak periods of operation tend to be in the early spring and late fall. Operations began in 1968 and have experienced a 400 percent growth since that time. Future proposed expansions include a 20,000 square foot warehouse, an increase in dock frontage (750 feet to 4,700 feet), and the addition of one or two cranes. Attempts are also being made to obtain a rail siding connecting the terminal with the Keokuk switching yards (Burlington Northern).

TERMINAL: Iowa Gateway Terminal

LOCATION: Galland, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Paper				2,200	100	
Road Salt				16,600	100	
Coal				34,200	100	
Industrial Salt				1,400	100	
TOTAL				54,400		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		10
APRIL		4
MAY		3
JUNE		7
JULY		1
AUGUST		5
SEPTEMBER		6
OCTOBER		5
NOVEMBER		7
DECEMBER		2
TOTAL		50

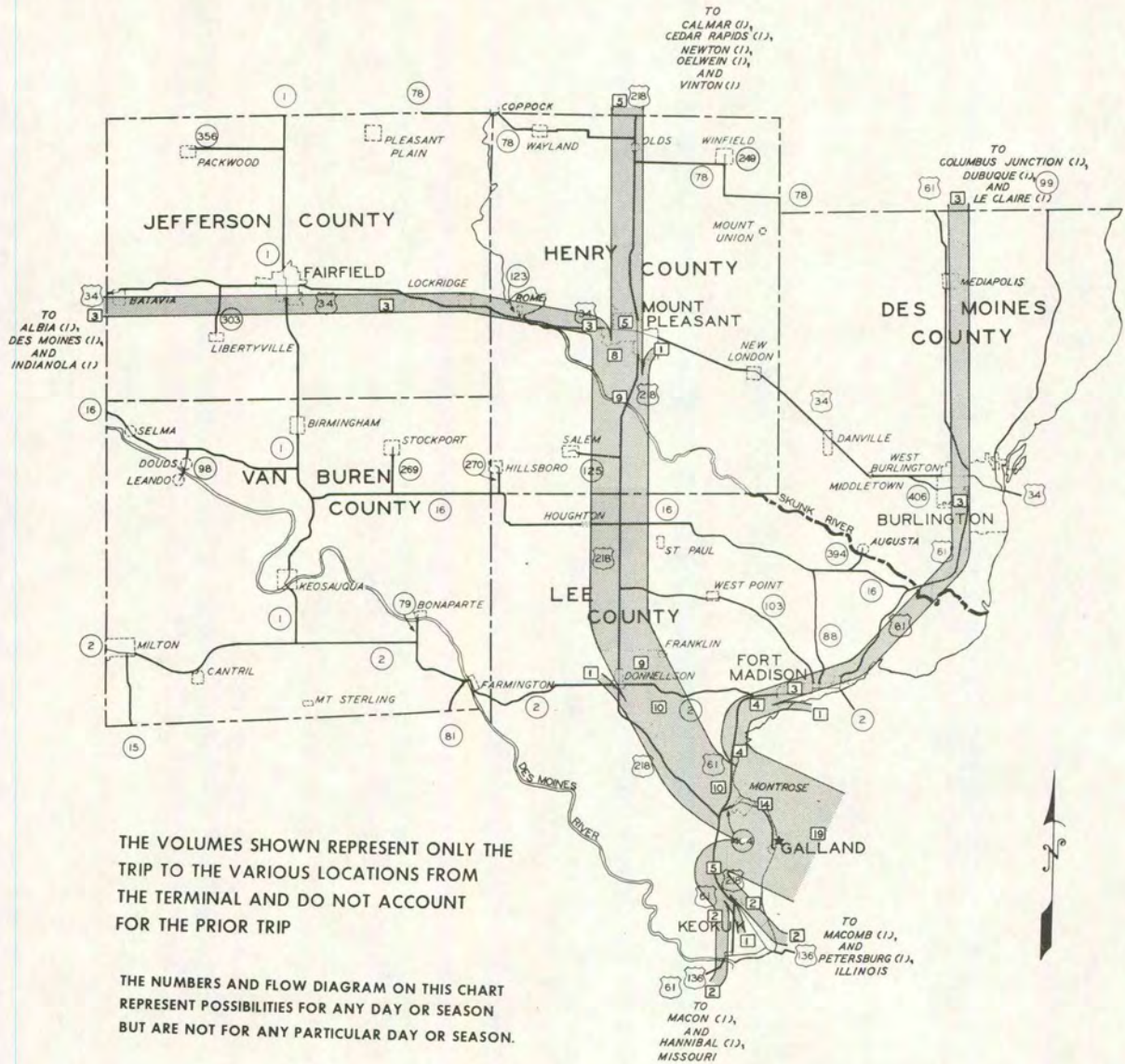
TERMINAL: Iowa Gateway Terminal
LOCATION: Galland, Iowa
COMMODITY: Paper
DATE: 1974

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
	Vinton			
	Des Moines			
	Cedar Rapids			
	Calmar			
	Oelwein			
	LeClaire			
	Indianola			
	Newton			
	Mount Pleasant			
	Fort Madison			
	Keokuk			
	Hannibal, Missouri			
	MacComb, Illinois			
	Albia			
	DAYS TOTAL			

This list represents only cities where commodity may be trucked
 Actual days' trips were not available.

**DISPERSION OF TRUCK TRIPS FROM THE
IOWA GATEWAY TERMINAL
AT GALLAND, IOWA
TO POINTS WITHIN LEE AND ADJACENT COUNTIES**



Hunold Elevator, Montrose, Iowa - No. 4

This facility is located at the south edge of Montrose with access off a blacktop road and down a steep, winding gravel road. Approximately 4,000,000 bushels of grain per year is hauled to the terminal by truck and shipped by barge to New Orleans. Approximately 60 percent of the grain is corn, 40 percent beans, and a very small amount of wheat. A steel bin with a capacity of 205,000 bushels is used for storage. A 160' conveyor belt with a capacity of 8000 bushels per hour is used to load and unload grain. The peak period of operation is from September to December, with 60 percent of their total shipping completed during this time.

There has been no significant growth over the past ten years, but the operation has remained stable. The grain processors at Keokuk have affected the shipping business here somewhat, with their higher bids for grain. There are no proposed expansions other than the possible addition of one storage bin.

TERMINAL: Hunold Elevator

LOCATION: Montrose, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Corn	64,518	100				
Soybeans	25,145	100				
Wheat	1,418	100				
TOTAL	91,081					

MONTHLY BARGE MOVEMENTS

YEAR 1974 - Grain

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	1	
MARCH	8	
APRIL	4	
MAY	5	
JUNE	6	
JULY	7	
AUGUST	4	
SEPTEMBER	1	
OCTOBER	9	
NOVEMBER	12	
DECEMBER	6	
TOTAL	63	

TERMINAL: Hunold Elevator
 LOCATION: Montrose, Iowa
 COMMODITY: Grain
 DATE: November 26, 1974 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Cantril			3	3
Houghton			9	9
Centerville			1	1
Corydon			1	1
Donnellson			14	14
Leon			2	2
Corning			3	3
Montrose			52	52
Mt. Hamill			2	2
Hillsboro			1	1
Pulaski			3	3
Bonaparte		2		2
DAYS TOTAL		2	91	93

TERMINAL: Hunold Elevator
 LOCATION: Montrose, Iowa
 COMMODITY: Grain - Corn and Soybeans
 DATE: August 1, 1974 (Average)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Montrose			6	6
Agency			3	3
Houghton			10	10
Salem			5	5
Hillsboro			2	2
Cantril			1	1
Garden Grove			2	2
Centerville			3	3
DAYS TOTAL			32	32

First Mississippi, Inc., Fort Madison, Iowa - No. 6

The facility is located approximately four miles north of Fort Madison and five miles east of U.S. 61 on a good bituminous county road.

Phosphate rock is recieved from Florida for producing dry fertilizer. A ten ton clamshell bucket loads the rock into a hopper, then onto a 24 inch conveyer belt, for storage in an A-frame steel building. The capacity of the A-frame will be increased from 120,000 tons to 150,000 tons by October, 1975. The fertilizer is shipped by rail (90 percent) and truck (10 percent) to Iowa and 16 surrounding states.

Anhydrous ammonia is also produced at this facility and is shipped by several modes of transportation. Trucks transport 55 percent, rail 30 percent, pipeline 10 percent, and barge five percent.

Fifteen hundred ton barges are used for phosphate rock, and 2,500 ton pressurized barges for ammonia. Barges are loaded or unloaded in approximately 12 hours. Rail cars of phosphate rock are unloaded at the rate of 30 cars per day.

Due to decreased allocations of natural gas, a 55,000 barrel fuel oil tank and facilities for unloading barges will be completed by October, 1975.

TERMINAL: First Mississippi, Inc.

LOCATION: Fort Madison, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
AMMONIA	16,246					
PHOSPHATE ROCK				597,294	10	90
TOTAL	16,246			597,294		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		35
APRIL		43
MAY		44
JUNE		26
JULY		31
AUGUST	3	41
SEPTEMBER	4	56
OCTOBER		28
NOVEMBER		82
DECEMBER	7	15
TOTAL	14	401

The terminal is located between Wever and Fort Madison approximately six miles from U.S. 61 on a gravel county road. The gravel road is in fair condition and does not present any significant access problems.

Grain is shipped from the facility by barge to the Gulf of Mexico at the rate of approximately 2,750,000 bushels annually. All grain is transported to the facility by truck from local area farmers and elevators. There are no rail facilities at this location.

Storage facilities consist of five steel bins with a total capacity of 240,000 bushels. Barges are loaded by means of a conveyor and chute at the rate of 5,000 bushels per hour.

Operations began here in 1961, and there has been no significant growth since 1969, when dry facilities were added and storage capacity was increased from 60,000 bushels to the present 240,000 bushels.

The terminal operates 11 months of the year with peak operations usually in the early spring and late fall. There are no definite plans for future expansions.

TERMINAL: Green Bay Grain Company

LOCATION: Green Bay Landing (Fort Madison, Iowa)

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
GRAIN	67,832	100				
TOTAL	67,832					

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	1	
MARCH	7	
APRIL	6	
MAY	3	
JUNE	5	
JULY	5	
AUGUST	7	
SEPTEMBER	1	
OCTOBER	5	
NOVEMBER	7	
DECEMBER	2	
TOTAL	49	

TERMINAL: Green Bay Grain Company
 LOCATION: Green Bay Landing (Fort Madison, Iowa)
 COMMODITY: Grain - Corn and Soybeans
 DATE: 1974 - Peak

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
New London Grain&Feed			3	3
Packwood Elevator			2	2
Area Farmers		58		58
DAYS TOTAL		58	5	63

TERMINAL: Green Bay Grain Company
 LOCATION: Green Bay Landing (Fort Madison, Iowa)
 COMMODITY: Grain - Corn and Soybeans
 DATE: 1974 - Normal

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Packwood Elevator		1	1	2
New London Grain&Feed			1	1
Area Farmers		14		14
DAYS TOTAL		15	2	17

Standard Oil Company of Amoco Oil, Burlington, Iowa - No. 8

The terminal is located south of Burlington approximately one mile east of Old U.S. 61 on county gravel road. There is a short section of steep incline on the county road; however, no significant access problems were indicated.

Anhydrous ammonia is received at the terminal by barge from Texas City, Texas, at the rate of 25,000 to 30,000 tons annually. The product is distributed from the terminal to surrounding areas by truck-tractor semi-trailer. A 30,000 ton tank is used to store the anhydrous ammonia. Handling facilities consist of an eight inch pipe and a 20 foot hose. Approximately 40 hours are necessary to unload a 2,100 ton barge.

The facility normally operates ten months of the year, depending on the water level. Handling capabilities are such that barges cannot be unloaded during periods of high water. No significant growth has been experienced over the past few years and there are no definite plans for future expansion.

TERMINAL: Standard Oil Co. of Amoco Oil

LOCATION: Burlington, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
ANHYDROUS AMMONIA				26,123	100	
TOTAL				26,123		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		0
APRIL		2
MAY		0
JUNE		0
JULY		0
AUGUST		3
SEPTEMBER		0
OCTOBER		5
NOVEMBER		2
DECEMBER		0
TOTAL		12

TERMINAL: Standard Oil Co. of Amoco Oil
 LOCATION: Burlington, Iowa
 COMMODITY: Anhydrous Ammonia
 DATE: May 1, 1975 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
	Mediapolis		6	6
	Burnside, Illinois		6	6
	Wellman		3	3
	Thornburg		2	2
	Pleasantville		1	1
	Le Harpe, Illinois		5	5
	Downey		1	1
	Joy, Illinois		1	1
	Conesville		4	4
	Little York, Illinois		2	2
	Grinnell		1	1
	Wapello		4	4
	Nichols		2	2
	Alexis, Illinois		2	2
	Ollie		3	3
	Mt. Pleasant		3	3
	Houghton		3	3
	Viola, Illinois		2	2
	Bloomfield		2	2
	West Chester		2	2
	DAYS TOTAL	Cont. on next page		

TERMINAL: Standard Oil Co. of Amoco Oil
LOCATION: Burlington, Iowa
COMMODITY: Anhydrous Ammonia
DATE: May 1, 1975 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
	Riverside		1	1
	Troy		1	1
	Roseville, Illinois		1	1
	Pilot Grove		2	2
	Buffalo Prairie, Ill.		2	2
	Sewal		1	1
	Memphis, Missouri		1	1
DAYS TOTAL			64	64

During the month of May 15 to June 15, 1,000 of the 1,300 trucks a year will leave the terminal. Traffic for the rest of the year will run 1 to 2 trucks per day with an occasional surge of up to 7.

Archer-Daniels-Midland Export, Burlington, Iowa - No. 9

This facility is located several blocks off Main Street on a gravel road. The gravel road is on a very steep grade and has an extremely rough railroad crossing. The facility is operated by Archer-Daniels-Midland Export and is owned by the Burlington Northern Railroad Company. Grain is hauled to the facility by truck from local farmers and local elevators within a 75 mile radius of the terminal. Grain and grain products are shipped from the terminal by barge to Destrehand, Louisiana. A small amount of shipments are made by rail (Burlington Northern) during the winter months. Twelve million bushels passed through the facility in 1974; this, however, was somewhat higher than normal. In the past, from 2.5 to 9 million bushels have been shipped annually. Grain is stored in a steel building and three concrete elevators with a total terminal capacity of 1,326,000 bushels. Barges are loaded by conveyor and chute at the rate of 15,000 bushels per hour. Peak shipping periods are in the early spring and late fall.

Considerable growth (250 percent) has been experienced since operations began in 1969. There are no definite plans to expand facilities.

TERMINAL: Archer-Daniels-Midland Export

LOCATION: Burlington, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
GRAIN PRODUCTS	351,120	100				
TOTAL	351,120					

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	9	
MARCH	31	
APRIL	18	
MAY	18	
JUNE	20	
JULY	22	
AUGUST	16	
SEPTEMBER	6	
OCTOBER	17	
NOVEMBER	20	
DECEMBER	17	
TOTAL	194	

Yetter Oil Company, Burlington, Iowa - No. 12

Access to the facility is very good, as the truck loading terminal is located on Iowa 99. Over twenty million gallons of petroleum (60 percent fuel oil and 40 percent gasoline) are received by barge from St. Louis, Missouri annually. The petroleum is distributed by truck to areas within a 60 mile radius (80 percent Iowa, 20 percent Illinois) of the terminal at the rate of six to seven truck-tractor semi-trailers per day. Barge information was not released by the month, but it was indicated that approximately 25 barges are received annually.

Storage facilities consist of eight steel tanks with a total terminal capacity of five million gallons. Barges are unloaded by means of an eight inch pipeline at the rate of 110,000 gallons per hour.

A 20 percent annual growth was experienced from 1967 to 1972, but no significant growth has occurred since that time. There are no plans for future expansion.

Wayne Brothers Grain Company (Division of Garnac, Inc.), Burlington,
Iowa - No. 13

The facility is located in the northern part of Burlington, approximately one-half mile from Iowa 99, on a rough gravel road. The area is locally known as the O'Connell Slough.

In 1973, the facility became a division of Garnac, Inc. Three to four million bushels of grain (65 percent corn and 35 percent soybeans) is handled here each year. All grain is transported to the terminal by truck (95 percent from Iowa). All grain is shipped from the terminal by barge to New Orleans. Concrete elevators are used to store up to 425,000 bushels of grain. Barges are loaded by conveyor at the rate of 12,000 bushels per hour. Peak periods of operation tend to be in the early spring and late fall. Operations have remained stable with no significant growth since 1973, when the transfer to Garnac, Inc., was made.

There are no plans for future expansions of dock facilities; however, there are tentative plans to construct a railroad siding (Chicago, Rock Island & Pacific) and loading and unloading facilities so that grain can be shipped in and out by rail.

TERMINAL: Wayne Brothers Grain Company (Division of Garnac, Inc.)

LOCATION: Burlington, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Grain	107,826	100				
TOTAL	107,826					

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	3	
FEBRUARY	2	
MARCH	10	
APRIL	8	
MAY	3	
JUNE	5	
JULY	9	
AUGUST	6	
SEPTEMBER	2	
OCTOBER	8	
NOVEMBER	8	
DECEMBER	9	
TOTAL	73	

Burlington River Terminal, A. G. Stevenson, Burlington, Iowa - No. 14

The terminal is located just off Cash Street on a good gravel road. Liquid and bulk fertilizer are received by barge from Florida (via New Orleans) at the rate of approximately 65,000 tons annually. The fertilizer is distributed from the terminal to areas in Iowa, Missouri, and Illinois. The liquid fertilizer is distributed by truck and the bulk fertilizer is distributed by rail (Chicago, Rock Island & Pacific Railroad).

Storage facilities consist of a wooden frame shed with a capacity of 20,000 tons of bulk fertilizer and two steel tanks with a capacity of 12,000 tons of liquid fertilizer. Bulk fertilizer is unloaded by means of a clamshell bucket at the rate of 65 tons per hour. Liquid fertilizer is pumped from barges at the rate of 200 tons per hour.

Peak periods tend to be in the early spring and late fall, while summer is usually the slow season.

Operations began in 1972 and have since experienced a 20 to 25 percent growth. There are tentative plans to expand the liquid fertilizer storage facility from 12,000 to 15,000 tons capacity. While no commodities are shipped out of this facility by barge, it was indicated that 15 acres are available to expand facilities and load barges. There are no definite plans, however, at this time.

This facility was somewhat unique in one respect. During the month of May, seven Lash barges and four SeaBee barges were received. A Lash barge has a capacity of about 400 tons and a SeaBee barge has a capacity of about 800 tons. These barges can be loaded (barge and contents) aboard ocean-going ships for transport. It was indicated, however, that these smaller barges were seldom used.

TERMINAL: Burlington River Terminal, A. G. Stevenson

LOCATION: Burlington, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
DRY FERTILIZER	This is the total of both types of fertilizer			63,000	15	85
LIQUID FERTILIZER					95	5
TOTAL				63,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		2
MARCH		1
APRIL		3
MAY		11*
JUNE		6
JULY		7
AUGUST		6
SEPTEMBER		6
OCTOBER		3
NOVEMBER		4
DECEMBER		1
TOTAL		50

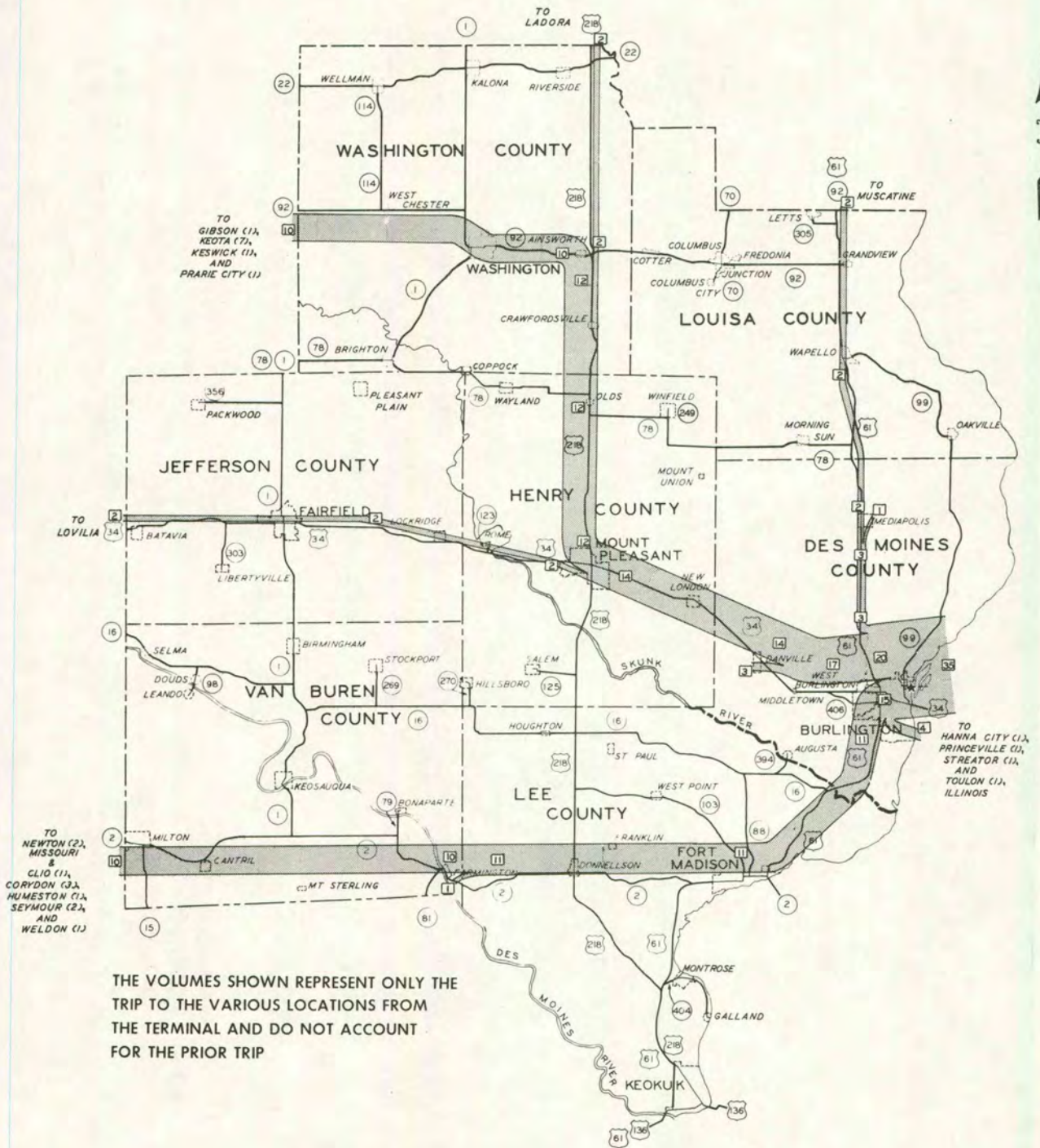
*Includes 7 Lash barges and 4 SeaBee barges.

TERMINAL: Burlington River Terminal (A. G. Stevenson)
LOCATION: Burlington, Iowa
COMMODITY: Liquid Fertilizer
DATE: May 7, 1975 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
	Towlin, Illinois		1	1
	Corydon		3	3
	Humeston		1	1
	Danville		3	3
	Princeville, Illinois		1	1
	Hanna City, Illinois		1	1
	Mediapolis		1	1
	Weldon		1	1
	Streator, Illinois		1	1
	Muscatine		2	2
	Prairie City		1	1
	Keota		7	7
	Clio		1	1
	Farmington		1	1
	Ladora		2	2
	Seymour		2	2
	Lovilia		2	2
	Gibson		1	1
	Newtown, Missouri		2	2
	Keswick		1	1
	DAYS TOTAL		35	35

**DISPERSION OF TRUCK TRIPS FROM THE
BURLINGTON RIVER TERMINAL
AT BURLINGTON, IOWA MAY 7, 1975
TO POINTS WITHIN DES MOINES AND ADJACENT COUNTIES**



THE VOLUMES SHOWN REPRESENT ONLY THE TRIP TO THE VARIOUS LOCATIONS FROM THE TERMINAL AND DO NOT ACCOUNT FOR THE PRIOR TRIP

Farmers Grain Dealers, Inc., Meekers Landing, Iowa - No. 15

The facility is located in a remote area seven miles from Iowa 99 down a very rough and winding gravel road. Approximately seven million bushels of grain are shipped by barge annually to Destrehand, Louisiana. Approximately 65 percent of the grain is corn, 33 percent is soybeans, and 2 percent wheat. The grain is trucked to the terminal from Farmers Co-op elevators within a 50 mile radius. The facility has no railroad connections.

Twenty concrete silos are used to store up to 861,000 bushels of grain. Barges are loaded by a conveyor and a 10" spout at the rate of 15,000 bushels per hour. Their peak period of operation is usually during March and April.

Operations have remained fairly stable over the past years with 150 to 175 barges shipped each year. There are no plans to expand this facility.

TERMINAL: Farmers Grain Dealers, Inc.

LOCATION: Meekers Landing, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
GRAIN	218,678	100				
TOTAL	218,678					

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	2	
MARCH	30	
APRIL	13	
MAY	19	
JUNE	10	
JULY	16	
AUGUST	12	
SEPTEMBER	7	
OCTOBER	14	
NOVEMBER	15	
DECEMBER	6	
TOTAL	144	

Farmland Industries, Inc., Muscatine, Iowa - No. 16

The terminal is located about one and one-half mile north of the Muscatine - Louisa county line on a very sandy gravel road approximately one-half mile from an asphalt county road.

Bulk fertilizer is received at the terminal by barge from Barstow, Florida (75 percent) and Luling, Louisiana (25 percent) at the rate of approximately 36,000 tons per year. The fertilizer is distributed to areas within a 150 mile radius of the terminal by truck and rail (C.R.I.P.). Approximately 40 percent is distributed by truck and 60 percent by rail. Storage facilities consist of an A frame building with a capacity of 25,000 tons. Barges are unloaded by means of a clamshell bucket and conveyor system at the rate of 225 tons per hour. Operations have decreased from 75,000 tons to 36,000 tons over the past five years. There are no plans for expansion.

TERMINAL: Farmland Industries

LOCATION: Muscatine, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
BULK FERTILIZER				35,000 to		
				36,000	40	60
TOTAL				35-36,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		0
APRIL		0
MAY		7
JUNE		10
JULY		4
AUGUST		0
SEPTEMBER		0
OCTOBER		1
NOVEMBER		4
DECEMBER		0
TOTAL		26

River Terminal Corporation, Muscatine, Iowa - No. 18

This terminal is operated by three separate entities. River Terminal Corporation and C and K Processing have the same ownership, management, and access to the terminal.

Inland Molasses has full use of the dock with separate ownership. The terminal has two docks, one main dock and a floating dock. Barges are normally received at the facility, but occasionally soybean oil for the Cargill Company and sand for the Acme Materials Company is shipped out. The terminal has had tremendous growth in the last few years, and plans are to add two new storage tanks.

Peak periods of operation are from March 20 to May 15 and from August 15 to November 20. During these periods as many as ninety truck tractor semi-trailers will transport products from the terminal to Iowa, Illinois, Nebraska, and Minnesota. Generally, normal operations exist for the rest of the year, with occasional slow periods in the summer. The terminal is located two miles south on Stewart Road and then 1/2 mile east on a flat gravel road.

The following is a brief synopsis of each company:

River Terminal Corporation is a branch of Allied Chemical Company of Houston, Texas, with a branch office in Omaha, Nebraska. Commodities handled by the company are condensed fish soluble liquid (used for feed) and liquid fertilizer. Two steel tanks with a capacity of 1,000,000 gallons of fish soluble and five steel tanks with a capacity of 2,895,000 gallons of liquid fertilizer are used for storage. During the year 1974, 20,000 tons of fertilizer and 6,000 tons of fish soluble passed through the facility.

The fish soluble and fertilizer are received from Texas and Florida. Barge size for fish soluble is 1,400 tons, taking 8-12 hours to unload. Fourteen hundred to 2,500-ton barges are used for fertilizer and require 4-10 hours to unload, depending on the size of the barge. One hundred percent of the fertilizer and fish soluble leave by truck.

C and K Processing handles and processes liquid molasses. Three steel tanks with a capacity of 1,740,000 gallons are used for storage. Twenty-one thousand tons of molasses flowed through the facility in 1974. Barges range from 1,200 - 1,400 tons and require 8-12 hours to unload. The barges are shipped from Louisiana, with the shipper furnishing the barges. The molasses is distributed from the terminal 80 percent by truck and 20 percent by rail.

Inland Molasses stores the industrial molasses in five steel tanks with a capacity of 2,500,000 gallons. During the year, 15,000 tons of industrial molasses is received, with 80 percent distributed from the terminal by truck and 20 percent by rail.

12 to 15 barges per year, ranging in size from 1,200 - 1,400 tons, are received. A monthly breakdown was not available.

TERMINAL: River Terminal Corporation

LOCATION: Muscatine

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
SOYBEAN OIL	3,000	100				
SAND	1,500	100				
MOLASSES				21,000	80	20
FERTILIZER				20,000	100	
FISH LIQUID				6,000	100	
TOTAL	4,500			47,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	0	2
APRIL	0	7
MAY	1	3
JUNE	0	0
JULY	0	2
AUGUST	2	1
SEPTEMBER	0	5
OCTOBER	0	2
NOVEMBER	0	6
DECEMBER	0	1
TOTAL	3	29

Muscatine Power and Water, Muscatine, Iowa - No. 19

The facility is located off U.S. 61 at the end of Maple Grove Road. Access to the facility is good.

Coal is received by barge and by rail and is used to produce electrical power during periods when the natural gas use is prohibited. They receive approximately 80,000 tons per year by barge and 140,000 tons by rail. Fifty-five percent of the coal comes from southern Illinois, 35 percent comes from Wyoming, and 10 percent comes from Montana. The Wyoming and Montana coal is shipped by rail to St. Louis and then by barge to Muscatine.

Five to six acres are used to store up to 200,000 tons of coal. The coal is offloaded into a hopper by a crane with a 2½ ton clamshell bucket, then is transferred to the storage pile or directly to the plant by conveyor.

The peak period of operation is during June and July and is fairly stable throughout the remainder of the navigational season.

Approximately a 7 percent annual increase in operations has been experienced over the past five years.

There are tentative plans to build a new and larger generating system in 1980.

TERMINAL: Muscatine Power and Water

LOCATION: Muscatine, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
COAL				87,000		
TOTAL				87,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		6
APRIL		5
MAY		5
JUNE		0
JULY		3
AUGUST		14
SEPTEMBER		6
OCTOBER		17
NOVEMBER		2
DECEMBER		0
TOTAL		58

Farmers' Grain Dealers Association, Muscatine, Iowa - No. 20

The terminal is located on a paved city street about one-half mile from U.S. 61. Access to the terminal is very good.

Grain (70 percent corn and 30 percent soybeans) is trucked to the terminal and shipped by barge to New Orleans. An elevator with a capacity of 460,000 bushels is used for storage. Barges are loaded by means of a conveyor belt and chute. A 1,450 ton barge can be loaded in four hours.

The barge terminal is in operation from March to mid-December, with trucking continuing all year. March and June are peak months and August tends to be slow. Operations began here in 1968 and have experienced a 10 to 15 percent growth since that time. Future plans for expansion include a rail hopper car unloading facility which has a projected completion date of October 1975. Company officials feel that this addition of rail facilities will nearly double shipping. Barge operations should be up 50 percent by 1976.

TERMINAL: Farmers' Grain Dealers Association

LOCATION: Muscatine, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
GRAIN	236,111	100				
TOTAL	236,111					

MONTHLY BARGE MOVEMENTS

YEAR 1974

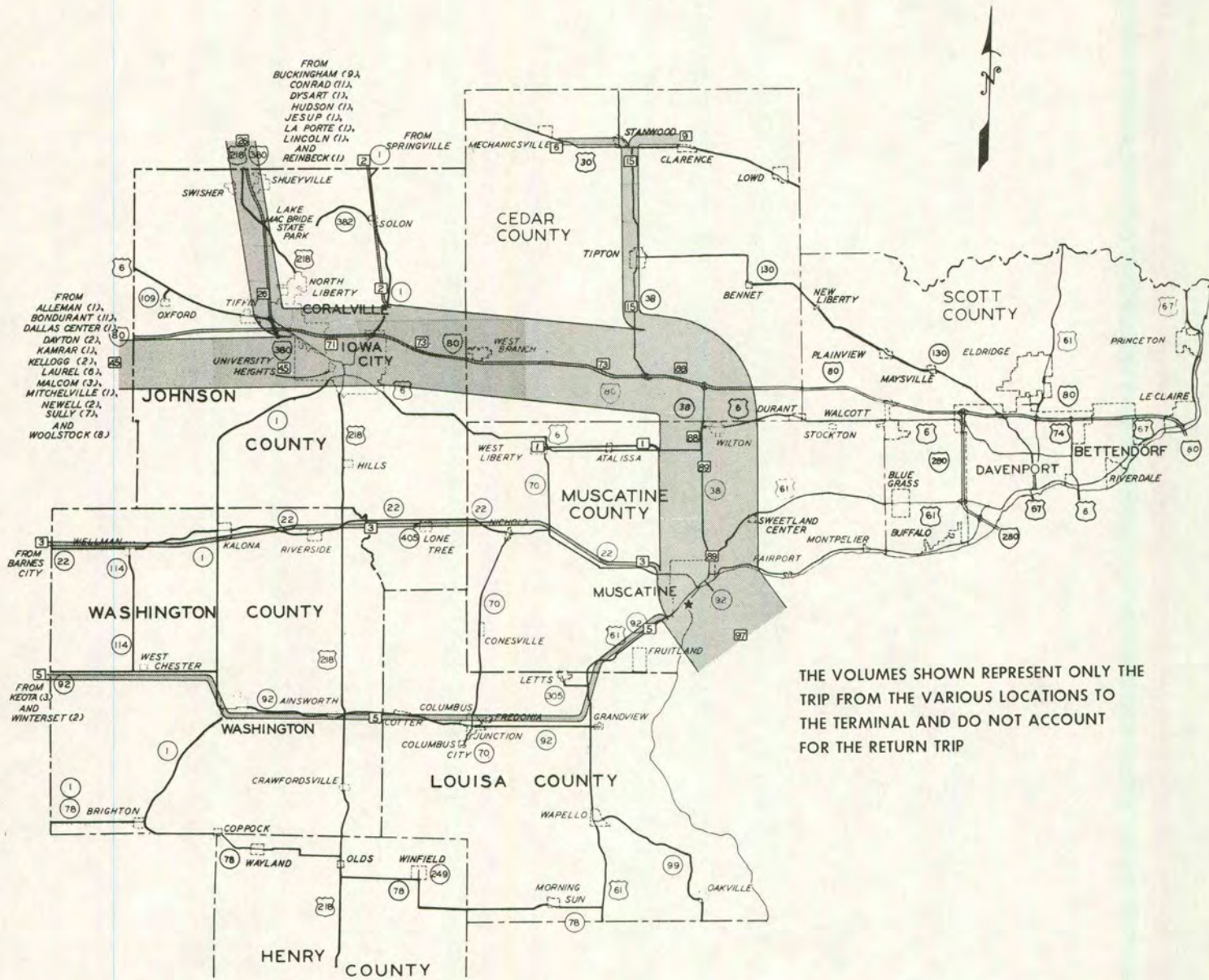
MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	0	
MARCH	1	
APRIL	20	
MAY	13	
JUNE	17	
JULY	24	
AUGUST	17	
SEPTEMBER	9	
OCTOBER	25	
NOVEMBER	17	
DECEMBER	14	
TOTAL	157	

TERMINAL: Farmers' Grain Dealers Association
LOCATION: Muscatine, Iowa
COMMODITY: Grain (Corn & Soybeans)
DATE: June 9, 1975 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Reinbeck			1	1
Barnes City			3	3
Keota			3	3
Dayton			2	2
Conrad			11	11
West Liberty			1	1
Springville			2	2
La Porte City			1	1
Malcolm			3	3
Woolstock			8	8
Dysart			1	1
Kellogg			2	2
Jesup			1	1
Lincoln			1	1
Kamrar			1	1
Mechanicsville		6		6
Hudson			1	1
Dallas Center			1	1
Newell		1	1	2
Bondurant			11	11
DAYS TOTAL		Cont. on next page		

**DISPERSION OF TRUCK TRIPS TO THE
FGDA
AT MUSCATINE, IOWA JUNE 9, 1975
FROM POINTS WITHIN MUSCATINE AND ADJACENT COUNTIES**



THE VOLUMES SHOWN REPRESENT ONLY THE TRIP FROM THE VARIOUS LOCATIONS TO THE TERMINAL AND DO NOT ACCOUNT FOR THE RETURN TRIP

Grain Processing Corporation, Muscatine, Iowa - No. 21

This facility receives and processes corn into 190 proof alcohol. A company owned barge, which has a capacity of 300,000 gallons, or 1,000 tons, is used exclusively. The barge was built to company specifications, and has six steel tanks. Only four or five barges (15 percent) are shipped per year, with the remaining 85 percent shipped by rail. Rail facilities include both the Chicago, Rock Island & Pacific and the Milwaukee roads. During a twelve-hour shift, approximately 300,000 gallons of alcohol can be loaded into barges or rail cars. The company is under close supervision by the Alcohol Tax Unit of the Internal Revenue Service. The entire waterfront property has been developed as a barge facility, and in 1968 the company had intended to ship 25 percent of their total product by barge.

There has been no significant growth over the past five years in barge or rail shipments. Traffic to the terminal averages 2,000 to 2,500 (corn and soybeans) trucks per month. No data, however, was obtained on the dispersion of the traffic by commodity in or out of the facility.

Access is good, as they are located approximately six blocks from U.S. 61.

TERMINAL: Grain Processing Company

LOCATION: Muscatine, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Alcohol	3,490 4					
TOTAL	3,490					

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	0	0
APRIL	1	0
MAY	0	0
JUNE	0	0
JULY	1	0
AUGUST	0	0
SEPTEMBER	0	0
OCTOBER	1	0
NOVEMBER	1	0
DECEMBER	0	0
TOTAL	4	0

Central Soya Company, Muscatine, Iowa - Nos. 22 & 24

Facilities are located off the junction of U.S. 61 and Oregon Avenue with good access via a city street. There are two dock terminals located approximately one mile apart that operate as one unit.

Soybeans (60 percent) and corn (40 percent) are trucked to the terminal from various locations in southeastern Iowa and shipped by barge to New Orleans. The terminal has storage facilities with a capacity of 1,500,000 bushels. Barge loading is accomplished by means of conveyor belts and spouts at the rate of 14,000 bushels per hour. Central Soya owns the barges and barge movements are controlled by their traffic office in Fort Wayne, Indiana.

Peak periods of operation are usually in the late fall. Shipments have been stable over the past few years with no significant growth pattern. There are no plans for future expansions at this facility.

TERMINAL: Central Soya Company

LOCATION: Muscatine, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
GRAIN	150,000	100				
TOTAL	150,000					

MONTHLY BARGE MOVEMENTS

YEAR 1974

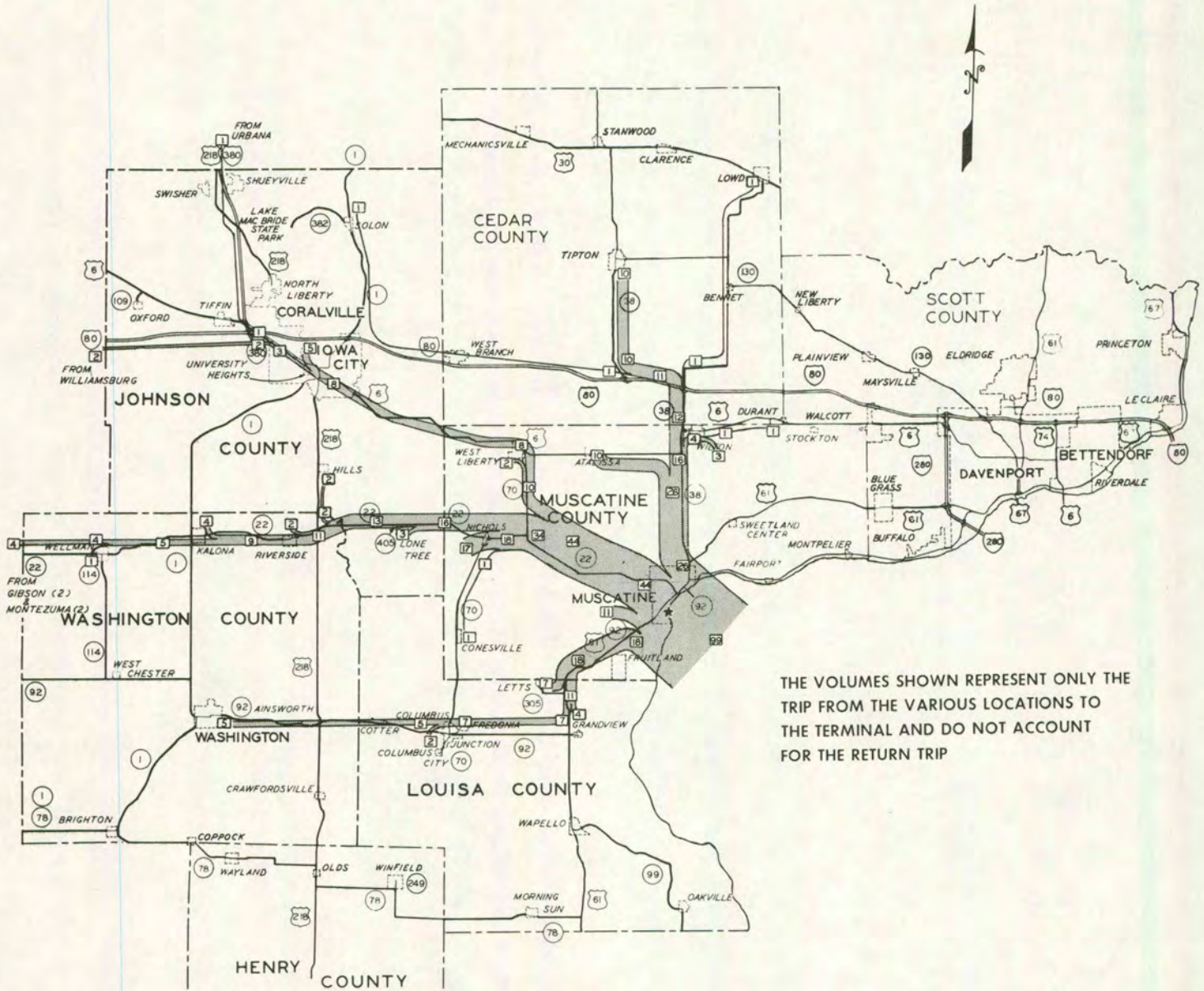
MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	0	
MARCH	22	
APRIL	16	
MAY	10	
JUNE	12	
JULY	13	
AUGUST	7	
SEPTEMBER	3	
OCTOBER	3	
NOVEMBER	3	
DECEMBER	14	
TOTAL	103	

TERMINAL: Central Soya Company
LOCATION: Muscatine, Iowa
COMMODITY: Grain
DATE: October 19, 1974 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Wilton		2	1	3
Washington			5	5
Muscatine		11		11
Montezuma		1	1	2
Gibson		1	1	2
Nichols		10	7	17
Grandview		4		4
Columbus Junction		1	1	2
Conesville		1		1
Durant		1		1
Solon		1		1
Iowa City		4	1	5
Kalona		3	1	4
Hills			2	2
Letts		6	1	7
Lone Tree			3	3
Tipton		8	2	10
Atalissa		8	2	10
Williamsburg		1	1	2
Riverside		1	1	2
DAYS TOTAL		Cont. on next page		

**DISPERSION OF TRUCK TRIPS TO THE
CENTRAL SOYA
AT MUSCATINE, IOWA OCTOBER 19, 1974
FROM POINTS WITHIN MUSCATINE AND ADJACENT COUNTIES**



THE VOLUMES SHOWN REPRESENT ONLY THE TRIP FROM THE VARIOUS LOCATIONS TO THE TERMINAL AND DO NOT ACCOUNT FOR THE RETURN TRIP

TERMINAL: Central Soya

LOCATION: Muscatine, Iowa

COMMODITY: Corn and Soybeans

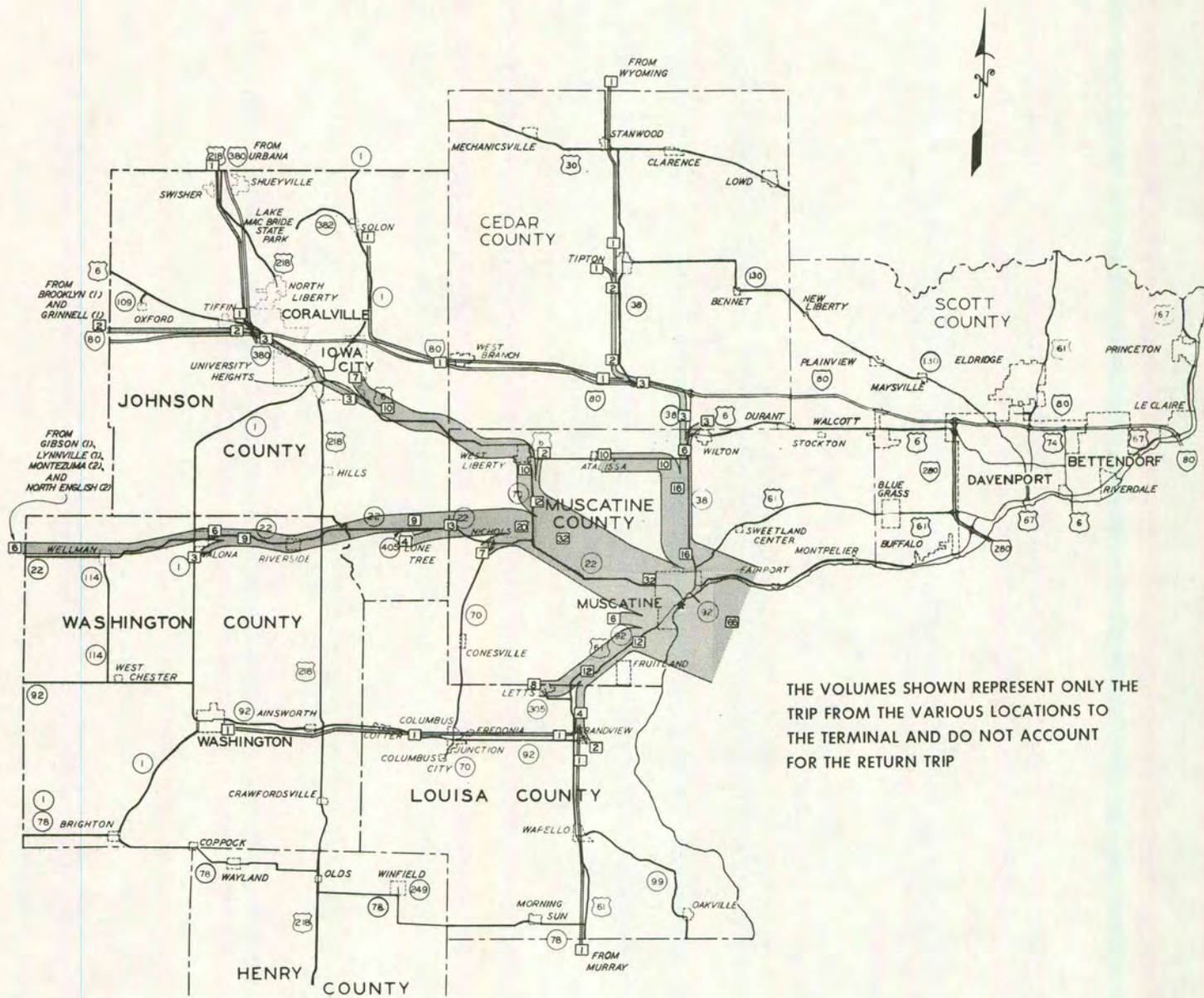
DATE: July 10, 1975 (Normal)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Letts		8	0	8
Atalissa		7	3	10
Nichols		2	5	7
Brooklyn		0	1	1
Wilton		1	2	3
West Liberty		1	1	2
North English		0	2	2
Lone Tree		3	1	4
Iowa City		7	0	7
Kalona		3	0	3
Muscatine		6	0	6
Montezuma		0	2	2
Murray		0	1	1
Washington		1	0	1
Solon		1	0	1
Wyoming		1	0	1
Grandview		2	0	0
Tipton		0	1	1
Grinnell		0	1	1
Urbana		0	1	1
	DAYS TOTAL			

--Continued on next page

**DISPERSION OF TRUCK TRIPS TO THE
CENTRAL SOYA
AT MUSCATINE, IOWA JULY 10, 1975
FROM POINTS WITHIN MUSCATINE AND ADJACENT COUNTIES**



THE VOLUMES SHOWN REPRESENT ONLY THE TRIP FROM THE VARIOUS LOCATIONS TO THE TERMINAL AND DO NOT ACCOUNT FOR THE RETURN TRIP

The facility is located on Ia. 22 with access across some railroad tracks.

Coal is received by barge and truck from southern Illinois and is used to produce electricity. No coal is received by rail. The coal received by barge comes from the Peabody Coal Company in St. Clair County in Illinois (approximately 50,000 tons annually). Coal is trucked to this facility from Victoria, Illinois (approximately 40,000 tons annually).

The coal is stored in an open storage area with a capacity of 110,000 tons. Barges are offloaded with a 3 cu. yd. clamshell bucket. The coal is then moved by conveyor to the storage area. A 1,400-ton barge is unloaded in approximately eight hours.

Barge and truck shipments are generally fairly steady throughout the year, and there is no definite peak or slow period of operation.

In 1967, operations here were more than doubled; and since that time, there has been a 6-7 per cent annual increase. There are no definite plans for expansion at this facility.

TERMINAL: Eastern Iowa Light and Power Corp.

LOCATION: Montpelier, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
COAL				47,862		
TOTAL				47,862		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		5
APRIL		9
MAY		7
JUNE		2
JULY		4
AUGUST		1
SEPTEMBER		1
OCTOBER		3
NOVEMBER		2
DECEMBER		0
TOTAL		34

Cargill, Inc., Buffalo, Iowa - No. 26

The facility is located on Iowa 22 between Montpelier and Buffalo about one-half mile north of the Muscatine - Scott County line. Access to the terminal is good.

Grain, molasses, industrial salt, and road salt, are handled at the terminal. Company officials were reluctant to release detailed information on grain shipments; however, 110 to 120 barges (1,500 tons) are shipped each year. Grain storage capacity is 50,000 bushels and grain is loaded on barges at the rate of 6,000 bushels per hour.

Molasses is shipped to the facility by barge from Louisiana at the rate of seven to eight million gallons annually. The molasses is distributed from the terminal by truck. Steel tanks with a total capacity of four and one-half million gallons are used for storage. Handling facilities are such that a 1,450 ton barge can be unloaded in 24 hours.

Approximately 100,000 tons of salt are shipped to the terminal by barge from Louisiana annually. The salt is distributed to surrounding areas by truck. Normal daily operation is from five to eight trucks, while during the peak fall and winter months as many as 30 trucks may be dispatched daily. Storage facilities for salt include an A-frame building with a capacity of 20,000 tons and an open storage area with a capacity of 60,000 tons.

Future plans for expansion include the addition of a three million gallon storage tank for molasses and the addition of rail facilities (Chicago, Rock Island & Pacific).

TERMINAL: Cargill, Inc.

LOCATION: Buffalo, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Grain	165,000	100				
Salt				100,000	100	
Molasses				30,000	100	
TOTAL	165,000			130,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	Grain: 110-120	barges annually
FEBRUARY		
MARCH	Salt: 44 road 26 industrial	salt salt
APRIL		
MAY		
JUNE	Molasses: 28	average annually
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
TOTAL		

Coal is shipped into the plant by barge from Alton, Illinois, and is used in the processing of cement. The barges are contracted through Alter Company of Davenport and arrive periodically when available.

Open storage is available for up to 100,000 tons of coal. A crane with a one and one-half yard clamshell bucket is used for unloading approximately 120,000 tons per year. Two, 1,000-ton silos by the river and 48 silos at the plant store a maximum of 175,000 tons of cement. The closing down of two obsolete kilns has resulted in approximately a 10 percent decline in production.

An average of 1,200 to 1,500 semi loads of cement a month are trucked out during May through October and 200 a month from January to March. The trucks operate in a radius of about 150 - 200 miles from the plant. An estimated 75 percent is done in Iowa, 24 percent in Illinois, and 1 percent in Wisconsin. Sixty-five percent of the cement is trucked from the facility and 35 percent by rail.

A long-range study is being conducted concerning future expansion, but no definite plans have been made. The plant is readily accessible off Iowa 22 in Buffalo.

TERMINAL: Martin Marietta Cement (Dewey Portland Cement)

LOCATION: Buffalo, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
COAL				120,345		
TOTAL				120,345		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		9
APRIL		5
MAY		8
JUNE		12
JULY		14
AUGUST		7
SEPTEMBER		12
OCTOBER		13
NOVEMBER		6
DECEMBER		0
TOTAL		86

American Oil Company, Buffalo, Iowa - No. 28

The terminal is located about two miles north of Buffalo on Iowa 22. Access to the terminal is good.

Asphalt, road oil, and fuel oil are shipped here from the refinery at Wood River, Illinois. The products are distributed from the terminal by truck. The majority of the asphalt is trucked to Galesburg and Sterling, Illinois. The fuel oil and road oil are distributed to Iowa locations within a 100-mile radius of the terminal. Asphalt and road oil trucks are dispatched at the rate of 90 per day during the peak season in late summer and drop to 10 per day in winter and early spring. Fuel oil trucks leave the terminal at the rate of 40 to 50 a day during the winter months; however, this rate drops considerably during the summer months.

Asphalt and road oil are stored in tanks with a combined capacity of 165,000 barrels. Tanks used to store fuel oil have a capacity of 215,000 barrels. Handling facilities consist of two, 8-inch manifolds for asphalt and two, 4-inch manifolds for fuel oil with barges being offloaded in approximately nine hours.

There has been no significant growth in operations over the past few years. In the future, they plan to handle a much greater volume of fuel oil as they have just begun handling the high-sulfur type used for diesel truck fuel. It is predicted that fuel oil volumes may reach 255,000 barrels per year.

TERMINAL: American Oil Company

LOCATION: Buffalo, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
ASPHALT				94,444	100	
FUEL OIL				35,833	100	
TOTAL				130,277		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		3
APRIL		0
MAY		1
JUNE		2
JULY		6
AUGUST		5
SEPTEMBER		9
OCTOBER		5
NOVEMBER		2
DECEMBER		1
TOTAL		34

Pillsbury Company, Buffalo, Iowa - No. 29

The facility is located just north of Buffalo on Iowa 22. Access to the facility is fair; however, there is a rather rough railroad crossing on the access drive.

Grain is transported to the terminal by truck and rail (Milwaukee) and shipped by barge to New Orleans. Approximately 60 trucks haul grain to the terminal daily from Iowa locations as far west as Des Moines between U.S. 30 and I-80. Grain is transported to the terminal by rail at the rate of 60 cars per week from various locations along the Milwaukee line as far west as Dedham. Twenty car mini-trains, three per week, are utilized. Empty hopper cars leave the terminal and return loaded the following day.

Oak logs are shipped from the terminal by barge at the rate of eight to nine barges per year. The logs are trucked to the terminal from Iowa and Illinois locations within a 30 mile radius and are shipped by barge to New Orleans for export to Scotland (12,325 tons in 1974).

Salt is received at the terminal by barge from New Orleans at the rate of approximately five barges per year (7,250 tons). The salt is distributed from the terminal by truck to state and county maintenance facilities as far west as Grinnell.

Grain storage capacity is approximately 1,300,000 bushels. There is an open area available for the storage of salt. Grain barges are loaded at the rate of 20,000 bushels per hour. A crane with a clamshell bucket is used to unload salt from the barges.

Barge operations began here in 1967 and have increased from 180 barges handled in 1968 to 335 in 1974. The facility shipped approximately 465,000 tons of grain by barge in 1974.

Mississippi River Grain Elevator, Inc., Buffalo, Iowa - No. 30

The terminal is located on Utah Street just off Iowa No. 22. Access is fair, however, a very rough railroad crossing exists on the access drive.

Corn, corn products, and soybeans are shipped from the terminal by barge to New Orleans for export. The grain is transported to the terminal by truck from Iowa locations within a 150-mile radius of the terminal. During peak periods as many as 150 truck-tractor semitrailers may be dispatched in a day, however, during a normal day 85 to 90 are dispatched. Storage facilities consist of an elevator with a capacity of 750,000 bushels. Barges are loaded by means of a conveyor system at the rate of 30,000 bushels per hour.

Operations began here in 1973 and 13.5 million bushels of grain were shipped in 1974. Company projections indicate 16 million bushels will be shipped in 1975 and 20 million in 1976. Future plans include the addition of rail facilities by 1977.

TERMINAL: Mississippi River Grain Elevator

LOCATION: Davenport, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
GRAIN	378,000	85	15			
TOTAL	378,000					

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	0	
MARCH	33	
APRIL	18	
MAY	24	
JUNE	23	
JULY	37	
AUGUST	22	
SEPTEMBER	6	
OCTOBER	29	
NOVEMBER	35	
DECEMBER	31	
TOTAL	258	

Builders Sand and Gravel, Davenport, Iowa - No. 32

The facility is located off U.S. 61 and U.S. 67 with good access.

Sand and gravel are received at the terminal by barge and distributed to builders throughout the Quad-Cities area by truck. Approximately 250,000 tons of sand and gravel are handled here annually. Detailed information on monthly barge movements, origins and destinations, etc. was not available.

There are 70,000 square feet of open storage available at the terminal. Barges are unloaded by means of a clamshell bucket at the rate of about 200 tons per hour.

Alter Company, Davenport, Iowa - No. 33

Alter began operations in 1960 with four barges and one tow, and have expanded to the present 25 barges and six tows.

Grain, scrap iron, miscellaneous steel, and ingots are handled at this facility. Barges owned by Alter Company also handle phosphate rock, which is delivered from Florida to Fort Madison; Wyoming coal, which is transported from Minneapolis, Minnesota to Peoria, Illinois; and Illinois coal bound for Muscatine, Keokuk, and Davenport. Some other commodities contracted for Alter to handle are slag, urea, and salt.

The company uses its own equipment for 90 percent of its business, with occasional interchange of equipment with other tow or barge companies. Two tanks are used to store 25,000 bushels of grain, which arrives by truck. The scrap iron is transported from Alter's scrap iron facility in Davenport to the terminal by rail (95 percent), and loaded directly onto barges bound for Pittsburgh. Grain is loaded in barges at 15,000 bushels per hour and shipped to New Orleans. Miscellaneous steel and ingot barges that come in from Pittsburgh are unloaded in approximately two days. The steel and ingots are then loaded on rail cars and transported to Alcoa in Davenport.

Shipping costs average \$5.32 a ton on grain and \$2 to \$3 a ton on coal. The facility has good access off U.S. 67 and 61 in Davenport.

TERMINAL: Alter Company

LOCATION: Davenport, Iowa

COMMODITY FLOW

YEAR 1974

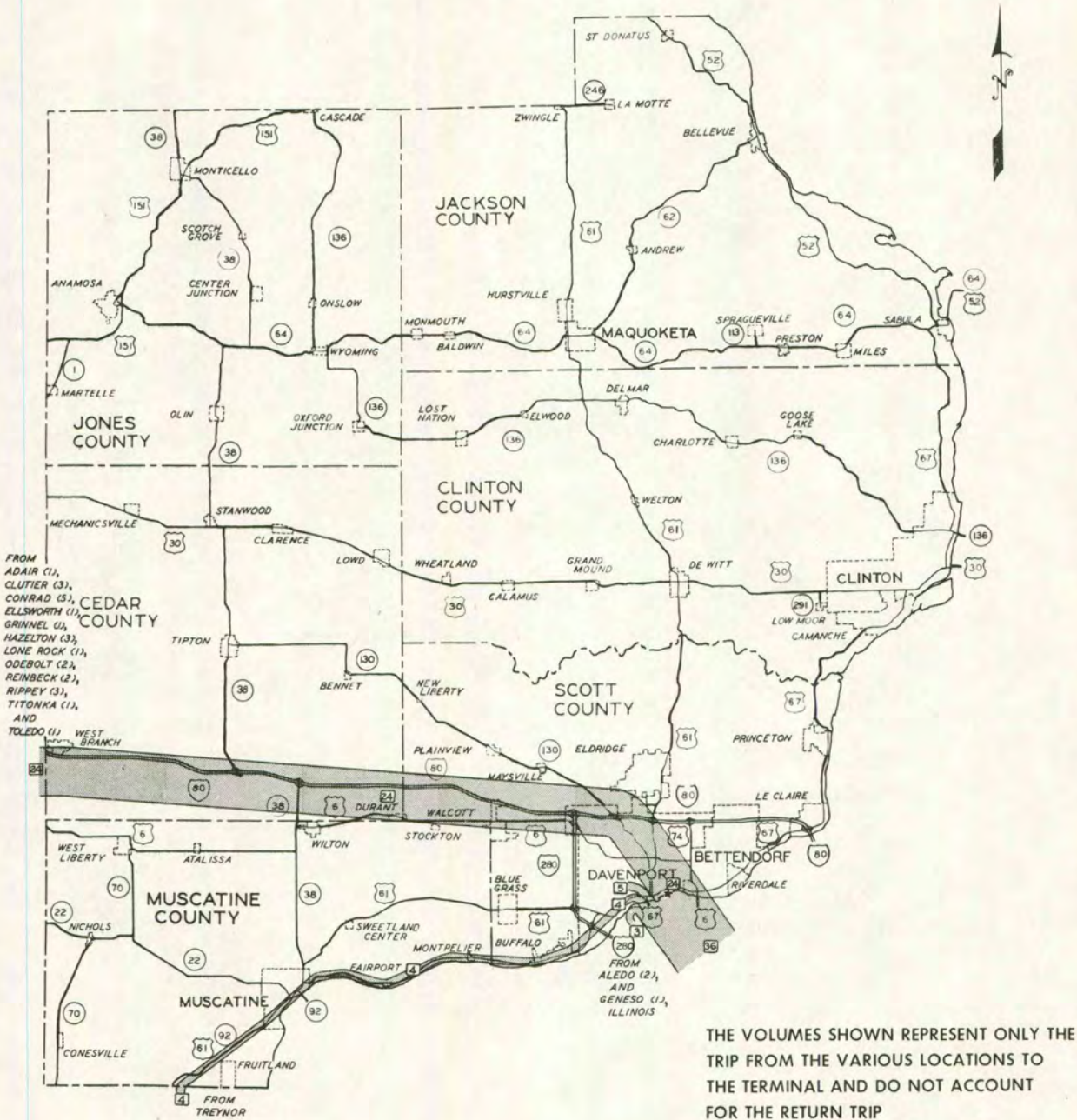
COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Grain	155,000	100				
Ingots				3,000		100
Steel				1,500		100
Scrap Iron	20,000	5	95			
TOTAL	175,000			4,500		

MONTHLY BARGE MOVEMENTS

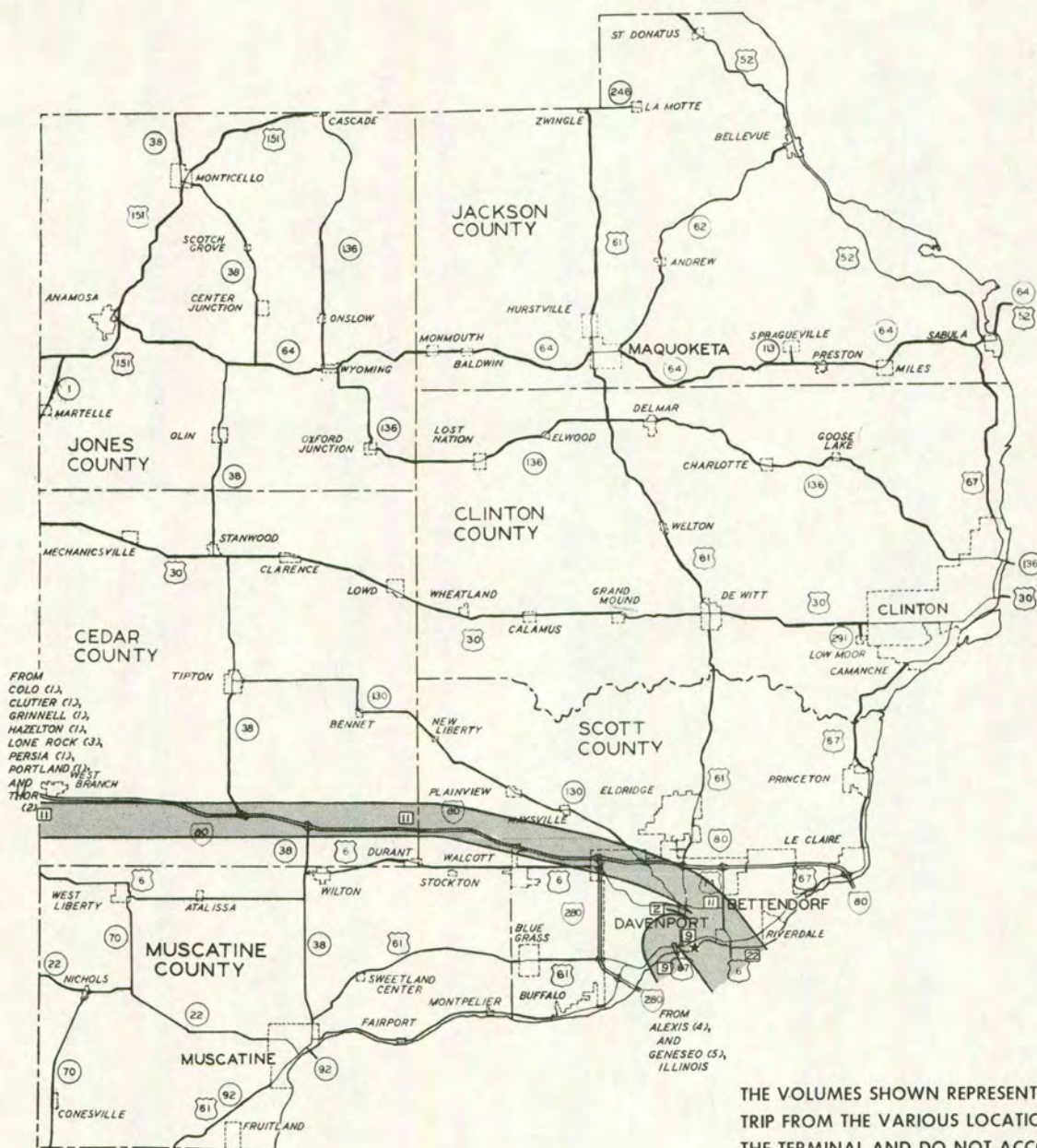
YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	4	0
APRIL	11	0
MAY	14	0
JUNE	15	0
JULY	22	2
AUGUST	18	0
SEPTEMBER	13	0
OCTOBER	7	1
NOVEMBER	13	0
DECEMBER	3	0
TOTAL	120	3

**DISPERSION OF TRUCK TRIPS TO THE
ALTAR COMPANY
AT DAVENPORT, IOWA JULY 8, 1974
FROM POINTS WITHIN SCOTT AND ADJACENT COUNTIES**



**DISPERSION OF TRUCK TRIPS TO THE
ALTAR COMPANY
AT DAVENPORT, IOWA MAY 3, 1974
FROM POINTS WITHIN SCOTT AND ADJACENT COUNTIES**



International Multi-Foods Company, Davenport, Iowa - No. 34

This facility's 800,000 to 900,000 bushel concrete elevator was destroyed by an explosion in late May, 1975.

In excess of 5,000,000 bushels of grain a year is shipped from this terminal, 75 percent corn, and 25 percent soybeans. At the present time, a 50,000 bushel barge can be loaded in three hours. Barges are contracted through a barge company. During July through December, 18 to 20 barges per month are shipped. During the rest of the year, three to five per month are shipped. Wheat, 1,000,000 bushels, is received by rail for making Robin Hood Flour. Flour is shipped from the plant by both rail and truck. On an average, 15 to 20 trucks per day will utilize the terminal. During peak seasons, 40 to 60 per day will arrive.

It is a company policy not to release detailed information concerning grain movements.

The dock terminal is located behind the flour plant on U.S. 61 and 67.

Universal Atlas Cement (Div. of U.S. Steel), Bettendorf, Iowa - No. 35

The facility is located about four blocks east of U.S. 67 on 31st Street.

Cement is shipped to the terminal at the rate of approximately 50, 2,500-ton barges per year from Hannibal, Missouri.

Ninety-five percent of the cement leaves the terminal by truck and is distributed for the most part to Redi-Mix plants in eastern Iowa. On a peak day, 45 to 50 truck-tractor semitrailers are loaded; on an average day 18 - 20 are loaded at the terminal. This year some rail shipments from Independence, Missouri were received, as the Hannibal plant was shut down for a period of time. The company would prefer, however, to receive all shipments by barge, as it was indicated that the shipping cost by barge runs 1/4 of that by rail.

Concrete silos are used to store up to 10,300 tons of cement. Handling facilities are such that a 2,500-ton barge can be offloaded in approximately 18 hours.

The company owns four barges; and when necessary, leases additional barges from the Martin-Marietta Company.

Shipping costs run from \$2,300 per barge to \$3,180 per barge, and the time involved from Hannibal to Bettendorf is approximately 30 hours.

Peak periods of operation are during the summer months when road construction projects are underway.

In 1972, 99,000 tons were shipped while 129,000 tons were shipped during 1974.

TERMINAL: Universal Atlas Cement (Div. of U.S. Steel)

LOCATION: Bettendorf, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
CEMENT				128,700	95	5
TOTAL				128,700		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		2
MARCH		4
APRIL		7
MAY		4
JUNE		7
JULY		9
AUGUST		3
SEPTEMBER		7
OCTOBER		6
NOVEMBER		5
DECEMBER		4
TOTAL		58

Mobil Oil Company, Bettendorf, Iowa - No. 36

The terminal is located at the foot of 31st Street approximately three blocks from U.S. 67. Access to the facility is good.

Approximately 113 million gallons of petroleum products are handled here annually. (60 percent gasoline and 40 percent fuel oil) Forty million gallons are received by barge from Joliet, Illinois and the remaining 63 million gallons are received by pipeline. The petroleum is distributed by truck to areas in Iowa and Illinois within a 50-mile radius of the terminal. Peak months for gasoline are April and May, while for fuel oil, November to February are peak months. During 1974, 5,350 truck-tractor semitrailers hauled petroleum from the terminal. (Peak months 25 to 30 per day - normal months 10 to 15 per day)

Nine steel tanks with a total capacity of 15,500,000 gallons are used to store petroleum. Two eight-inch pipelines and one six-inch pipeline are used to unload barges. Seven to nine hours are required to unload a 25,000 barrel barge.

There are no plans for future expansions.

TERMINAL: Mobil Oil Company

LOCATION: Bettendorf, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED		% SHIPPED IN BY		TONS RECEIVED		% SHIPPED OUT BY	
	OUT BY BARGE		TRUCK	RAIL	BY BARGE		TRUCK	RAIL
PETROLEUM PRODUCTS					144,000		100	
TOTAL					144,000			

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		2
APRIL		4
MAY		6
JUNE		4
JULY		9
AUGUST		0
SEPTEMBER		3
OCTOBER		9
NOVEMBER		4
DECEMBER		7
TOTAL		48

Shell Oil Company, Bettendorf, Iowa - No. 37

The terminal is located off U.S. 67 about three blocks down a good paved street.

Petroleum products are received at the terminal by barge from Wood River, Illinois, at the rate of approximately 1,000,000 barrels per year. Gasoline, furnace fuel, and jet fuel are the principal products received. Barges are leased from the Missouri Towing Company in Cape Girardeau, Missouri.

All petroleum products are distributed from the terminal by truck. About thirty trucks are loaded at the terminal during a normal day's operation, while on a peak day as many as forty trucks may be loaded. The petroleum is distributed by truck to various locations in Iowa, Illinois, and Wisconsin within a 100-mile radius of the terminal. The facility has rail connections with the Des Moines Rock Island and Northwestern.

Petroleum is stored at the terminal in seven tanks with a combined capacity of 339,000 barrels. There is an 8-inch pipeline from the dock to the storage tanks. Petroleum is pumped from barges to the storage tanks at the rate of 2,500 barrels per hour.

Peak periods of operation tend to be in the late fall and are relatively steady throughout the remainder of the year. There has been no significant growth over the past years, and there are no plans to expand the facility.

TERMINAL: Shell Oil Company

LOCATION: Bettendorf, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
PETROLEUM PRODUCTS				180,000	100	
TOTAL				180,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		8
APRIL		2
MAY		6
JUNE		4
JULY		9
AUGUST		9
SEPTEMBER		12
OCTOBER		4
NOVEMBER		9
DECEMBER		9
TOTAL		72

The terminal is located three blocks east of U.S. 67 on a paved city street.

Petroleum products, mainly gasoline, fuel oils, and jet fuel, are received at this terminal by barge from Wood River, Illinois. Approximately 2,000,000 barrels are shipped to the terminal each year.

All petroleum is distributed from the terminal by truck at the rate of approximately forty truckloads per day. The jet fuel all goes to the airport at Moline, Illinois. The gasoline and fuel oil are distributed to Illinois and to Iowa locations within a 60-mile radius of the terminal.

Nine steel tanks with a combined capacity of 248,300 barrels are used to store incoming petroleum. One 6" pipeline and one 8" pipeline are used to transfer the petroleum from barge to storage tanks.

Operations at this terminal have remained steady over the past few years with no significant growth. There are no definite plans to expand the facility in the future.

TERMINAL: The American Oil Company

LOCATION: Bettendorf, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
PETROLEUM PRODUCTS				357,500	100	
TOTAL				357,500		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		5
MARCH		11
APRIL		7
MAY		11
JUNE		12
JULY		15
AUGUST		14
SEPTEMBER		10
OCTOBER		19
NOVEMBER		12
DECEMBER		14
TOTAL		130

TERMINAL: Phillips Petroleum Company

LOCATION: Bettendorf, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
PETROLEUM PRODUCTS				31,125	100	
TOTAL				31,125		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		0
APRIL		2
MAY		2
JUNE		0
JULY		3
AUGUST		2
SEPTEMBER		0
OCTOBER		0
NOVEMBER		0
DECEMBER		0
TOTAL		9

Bettendorf Terminal Company, Bettendorf, Iowa - No. 40

The terminal is located at 3623 Elm Street four blocks from U.S. 67 with good access. Le Claire Quarries own and operate the terminal.

Sand is the only commodity handled at the terminal. Approximately 150,000 tons per year are shipped here by barge from Albany, Illinois. Forty to fifty 300-ton barges are received each month during the navigational season of March to December. The sand is distributed throughout the Quad Cities area by truck at the rate of about 35, 15-ton loads per day.

Sand is stored at the terminal in an open space with a capacity of approximately 60,000 tons. Barges are offloaded in approximately 2 1/2 hours by crane with a 1 3/4 cu. yd. bucket.

The operation is relatively steady all year with no definite peak or slow periods. There has been no significant growth over the past few years, and there are no plans for expansion.

The Texaco Company, Bettendorf, Iowa - No. 41

The terminal is located off U.S. 67 at the end of Elm Street with good access.

Gasoline and fuel oil are received at the terminal by barge from Mt. Vernon, Illinois, at the rate of about 14 million gallons per year.

The petroleum products are distributed by truck to Iowa and to Illinois locations within a 40 to 50-mile radius of the terminal at the rate of 10 - 15 truckloads per day.

Six steel tanks are used to store up to 6,260,000 gallons at the terminal. Handling facilities consist of two 6-inch pipes and one 8-inch pipe from dock to storage tanks. A 25,000-barrel barge can be unloaded in approximately eight hours.

Operations are fairly stable the year around; however, the summer months tend to be slightly slower. Volumes dropped last year from approximately 18 million gallon a year to 14 million gallon per year.

In the past, petroleum was trucked from the terminal to Coralville and to Cedar Rapids; but due to new pipeline connections, this is no longer done. There are no plans for future expansion at this facility.

TERMINAL: The Texaco Company

LOCATION: Bettendorf, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
PETROLEUM PRODUCTS				57,843	100	
TOTAL				57,843		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		4
APRIL		1
MAY		2
JUNE		0
JULY		0
AUGUST		2
SEPTEMBER		3
OCTOBER		4
NOVEMBER		0
DECEMBER		4
TOTAL		20

Union Oil Company, Bettendorf, Iowa - No. 42

The terminal is located off U.S. 67 on South Bellingham Street, with good access.

Approximately 500,000 barrels of petroleum products, primarily gasoline and diesel fuel, go through the terminal each year. Sixty-five per cent of the petroleum is received by pipeline, and 35 per cent is shipped to the terminal by barge from Lamont, Illinois.

All petroleum is distributed from the terminal by truck to Iowa and Illinois locations within a 50-mile radius of the terminal. They do have access to the Milwaukee railroad, but it is a dryline and has not been used for the last ten years.

Trucks are dispatched from the terminal at a normal rate of twenty per day; peak periods may run from twenty-five to thirty trucks per day.

Storage facilities can accommodate up to 90,000 barrels of gasoline and 70,000 barrels of fuel oil. A 6" and an 8" pipeline run from the dock to the storage tanks, and a 25,000-barrel barge can be offloaded in approximately nine hours.

Barge operations run from March to December, and trucks are dispatched the year around with no definite peak or slow periods.

There has been no significant growth over the past five years, and there are no future plans for expansion at this facility.

TERMINAL: Union Oil Company

LOCATION: Bettendorf, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED		% SHIPPED IN BY		TONS RECEIVED		% SHIPPED OUT BY	
	OUT BY BARGE		TRUCK	RAIL	BY BARGE		TRUCK	RAIL
PETROLEUM PRODUCTS					35,333		100	
TOTAL					35,333			

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		0
APRIL		0
MAY		4
JUNE		0
JULY		2
AUGUST		2
SEPTEMBER		0
OCTOBER		2
NOVEMBER		0
DECEMBER		3
TOTAL		13

Le Claire Quarries, Le Claire, Iowa - No. 43

The facility is located on U.S. 67, with very good access.

Rock is extracted from the quarry at this location and is shipped by barge at the rate of approximately 100,000 tons during 1974. Ninety percent of the rock is utilized at locations along the Mississippi River for river bank protection. The rock is shipped in barges owned by the U.S. Army Corps of Engineers.

Sand is shipped to the terminal by barge from Albany, Illinois, at the rate of 101,000 tons in 1974. The sand is distributed by truck, on a call basis only, to locations within a 30 mile radius of the terminal. Daily truck volumes tend to vary a great deal. The daily average for an entire year would be approximately 30 to 35 loads.

There is available open storage for approximately 100,000 tons of rock and sand. Handling facilities consist of a crane with a one and three-fourths cubic yard bucket which can operate at the rate of 250 tons per hour.

Although operations have increased significantly over the past ten years, there are no definite plans to expand the facility.

TERMINAL: Le Claire Quarries

LOCATION: Le Claire, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
ROCK	100,000	mined at the site				
SAND				101,000	100	
TOTAL	100,000			101,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED	
JANUARY			
FEBRUARY			
MARCH	No monthly figures available.		
APRIL			
MAY			
JUNE			
JULY			
AUGUST			
SEPTEMBER			
OCTOBER			
NOVEMBER			
DECEMBER			
TOTAL		50	336*

*Estimated: An average of 2 barges (300 ton) per day - 24 days per month - 7 months per year.

Determann Industries, Inc., Camanche, Iowa - No. 44

Construction began on this facility in 1969 and it was completed late in 1973. The terminal is located just off U.S. 67 and access to the terminal is very good. Determann Industries do not ship any of their own products by barge, but they act as a shipping and receiving agent for other industries in the area. Commodities handled at the facility include structural steel, pipe, urea, magnesium dioxide, coal, and aluminum. The structural steel and pipe shipped to the terminal originates in Pittsburgh. Incoming urea is trucked to Hawkeye Company in Camanche. All coal comes from Kentucky and is trucked to Beloit, Wisconsin. The aluminum comes from Bettendorf by rail and is shipped by barge to New Orleans.

One hundred acres of open storage space is used to store incoming pipe and steel. No storage space is available for the remaining commodities so a direct transfer is necessary between truck or rail and barge. Handling facilities consist of three cranes, 100, 70, and 65 tons, with a 3.5 yd. clamshell attachment. A 1500 ton barge can be offloaded in approximately 16 hours. The facility has access to Burlington Northern, Milwaukee, and Chicago & North Western Railroads, and can store up to 15 rail cars on the plant site.

Dock operations begin each year in March and end in December, and are relatively steady throughout this nine month period. Operations began in late 1973 and have remained stable since this time. There are no definite plans for future expansions.

TERMINAL: Determann Industries, Inc.

LOCATION: Camanche, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
UREA				1,500	100	
ALUMINUM	13,500		100			
COAL				3,000	100	
MAGNESIUM DIOXIDE	1,500					
PIPE & STEEL				33,750	100	
TOTAL	15,000			38,250		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	0	0
APRIL	2	0
MAY	1	0
JUNE	0	1
JULY	2	2
AUGUST	1	0
SEPTEMBER	0	0
OCTOBER	1	6
NOVEMBER	2	8
DECEMBER	1	6
TOTAL	10	23

This facility is located directly off the junction of U.S. 67 and U.S. 30. Cellophane and other film material are manufactured at this location. The barge terminal handles only one commodity, caustic soda, which is used in the manufacturing process. Caustic soda is shipped to the terminal from Louisiana by barge at the rate of 25,000 tons per year. The facility has two, one million gallon storage tanks. The solution is pumped through pipes from barges to the storage tanks. A 20,000-barrel barge can be unloaded in about eight hours. Barges are received from March to December with the peak periods being in the early spring and late fall. The plant has rail connections with the Davenport, Rock Island and Northwestern Railways and receives shipments by rail tank car during winter months and periods when they are unable to obtain barges. The company would prefer, however, to rely strictly on barge shipments if possible. The company has been in operation for 12 years and has operated at its present capacity for most of this period. There are no definite plans for expansion.

No data was obtained on the shipment of the manufactured product from the plant. This information was considered of a confidential nature by the company.

TERMINAL: E. I. DuPont DeNemours, Inc.

LOCATION: Clinton, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
CAUSTIC SODA				25,000		
TOTAL				25,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		2
APRIL		4
MAY		4
JUNE		0
JULY		3
AUGUST		0
SEPTEMBER		2
OCTOBER		2
NOVEMBER		1
DECEMBER		4
TOTAL		22

Interstate Power Company, Clinton, Iowa - No. 47

The facility is located on a gravel road (Beaver Channel Parkway) approximately one mile from U.S. 30. Approximately 550,000 tons of coal are shipped here annually by barge. The coal comes from Kentucky, Southern Illinois, and Wyoming. The Kentucky and Illinois coal is shipped upriver; the Wyoming coal is shipped downriver from Minneapolis. Fly ash is trucked from the facility at the rate of approximately six to fifteen truck-loads weekly. All coal is used in producing electricity when natural gas supplies are low. The facility has open storage space for 300,000 tons of coal.

A 300,000 ton silo is used to store the fly ash. A clamshell crane, hopper, and 36-inch conveyor system is used to unload coal from the barges. A 1,500-ton barge can be unloaded in approximately three and three-fourths hours. Coal is received by barge from March to December, with peak operations in early spring and late fall.

The facility has rail connections with the Chicago & Northwestern, Burlington Northern, and the Chicago, Rock Island & Pacific Railroads. Coal is received by rail only occasionally in the winter months or when barges cannot be obtained. Barge shipments have remained fairly stable over the past years: 400 barges were received in 1967, 335 in 1974, and 425 are expected in 1975.

There are no plans for expansion of the Clinton plant; however, a new facility is under construction at Lansing.

TERMINAL: Interstate Power Company

LOCATION: Clinton, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
COAL				550,000		
TOTAL				550,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		17
APRIL		36
MAY		37
JUNE		8
JULY		36
AUGUST		53
SEPTEMBER		41
OCTOBER		72
NOVEMBER		35
DECEMBER		0
TOTAL		335

Fronings, Inc., Clinton, Iowa - No. 48

The facility is located on a local blacktop street just off U.S. 30. Approximately 10,000,000 bushels of grain, 60 percent corn and 40 percent soybeans, are handled here annually. From 150 to 200 barges are moved through this facility annually. All outgoing grain is destined for New Orleans.

This company owns 17 barges and one tugboat. The barges are 195'x35' (1,400-1,500 ton capacity) and cost approximately \$140,000 each. The remainder of the barges used are contracted from barge companies. One steel tank and a wooden elevator are used to store up to 220,000 bushels of grain at this facility. The loading operation, which is monitored on a closed circuit TV system, can load barges at the rate of 13,000 bushels per hour. Barges are loaded and shipped nine months a year, with the peak operations in the early spring and late fall. The operations at this facility have expanded very rapidly over the past years - 50 percent over the last five years and 200 percent over the last ten years.

Fronings, Inc. have recently sold this facility to the Peavey Company of Minneapolis, Minnesota. Fronings do have tentative plans to build a similar new facility at Winona, Minnesota.

TERMINAL: Fronings, Inc.

LOCATION: Clinton, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
GRAIN	272,985	100				
TOTAL	272,985					

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	0	
MARCH	29	
APRIL	11	
MAY	11	
JUNE	12	
JULY	19	
AUGUST	15	
SEPTEMBER	7	
OCTOBER	30	
NOVEMBER	36	
DECEMBER	18	
TOTAL	188	

TERMINAL: Fronings, Inc.
 LOCATION: Clinton, Iowa
 COMMODITY: Corn
 DATE: October 21, 1974 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Manchester, Iowa		0	1	1
Maquoketa, Iowa		2	0	2
Cascade, Iowa		0	1	1
Low Moor, Iowa		2	0	2
Mechanicsville, Ia.		0	3	3
Center Junction, Ia		4	0	4
Clarence, Iowa		0	9	9
Conrad, Iowa		0	2	2
DeWitt, Iowa		2	0	2
Calamus, Iowa		1	0	1
Conroy, Iowa		0	1	1
Frederika, Iowa		0	2	2
Chelsea, Iowa		0	1	1
Ferguson, Iowa		0	3	3
Luzerne, Iowa		0	5	5
Gilbertville, Ia.		0	2	2
Warren, Ill.		1	10	11
Clinton, Iowa		3	0	3
Hopkinton, Iowa		5	1	6
	SUB TOTAL	20	41	61

TERMINAL: Fronings, Inc.

LOCATION: Clinton, Iowa

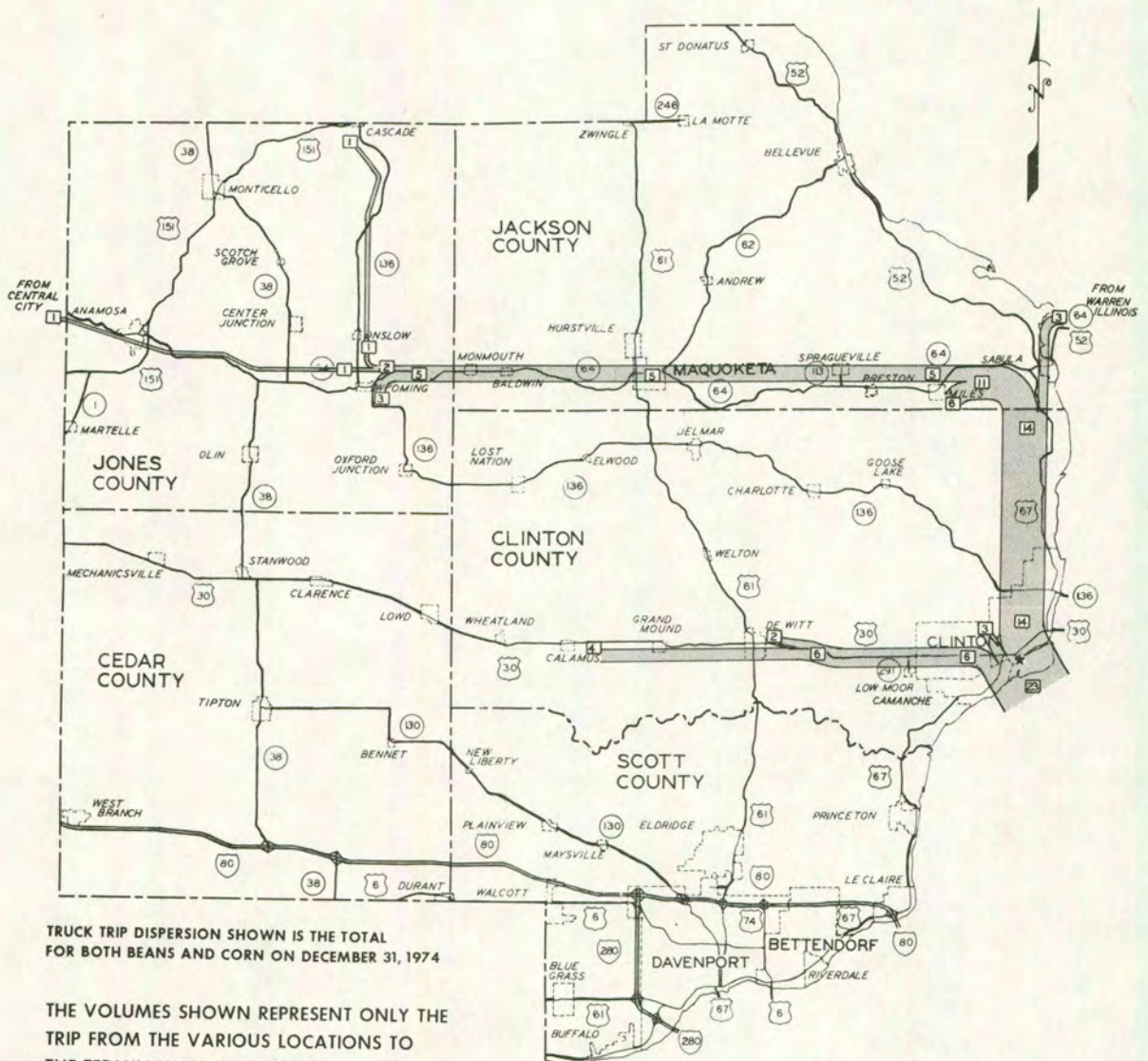
COMMODITY: Soybeans

DATE: October 21, 1974 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Wyoming, Iowa		3	0	3
Low Moor, Iowa		6	0	6
Mechanicsville, Ia.		1	0	1
Center Junction, Ia		7	0	7
Clarence, Iowa		0	2	2
Clinton, Iowa		4	0	4
DeWitt, Iowa		2	0	2
Morrison, Iowa		2	0	2
Frederika, Iowa		0	2	2
Luzerne, Iowa		0	3	3
Gilbertville		0	1	1
Warren, Illinois		2	2	4
Sterling, Illinois		1	0	1
Lena, Illinois		0	1	1
Worthington, Ia.		1	0	1
McCausland, Iowa		2	3	5
Hopkinton, Ia.		3	0	3
Prairieburg, Ia.		0	1	1
Pearl City, Ill.		1	0	1
Preston, Iowa		6	2	8
	DAYS TOTAL	41	17	58

**DISPERSION OF TRUCK TRIPS TO THE
FRONINGS INCORPORATED
AT CLINTON, IOWA DECEMBER 31, 1974
FROM POINTS WITHIN CLINTON AND ADJACENT COUNTIES**



Clinton Corn Processing, Clinton, Iowa - No. 49

The plant is located on a paved city street one-half mile from U.S. 30. The dock at this location is used strictly for transporting fuel oil to operate the corn processing plant. Pelletized gluten feed is manufactured at this location, but is trucked to C&F Sales, Inc., dock in Clinton for shipment by barge. Thirty-five million bushels of corn are processed at this plant each year. Approximately 85 percent of the corn processed here comes in by rail from areas outside a radius of 60 miles. The remaining 15 percent is trucked to the plant from local elevators.

This facility receives approximately seven million gallons of fuel oil annually by barge from Wood River, Illinois. They have two steel tanks capable of storing four million gallons each; another four million gallon tank is under construction at the present time. Pumping facilities transfer the fuel oil from the barges to the storage tanks at the rate of 2,167 gallons per minute; a 600,000 gallon barge can be unloaded in five hours. From four to twelve barges are received at the terminal each year from March to December with no definite seasonal variation. Barge operations began in 1971 and there has been a significant growth to date. Future expansions are contemplated.

TERMINAL: Clinton Corn Processing

LOCATION: Clinton, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
PETROLEUM PRODUCTS				17,229		
TOTAL				17,229		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		2
APRIL		0
MAY		0
JUNE		0
JULY		2
AUGUST		0
SEPTEMBER		0
OCTOBER		1
NOVEMBER		2
DECEMBER		0
TOTAL		7

Lewis and Lawson Harbor Service, Clinton, Iowa - No. 50

The facility is located on 17th Avenue just south of U.S. 30. Access to the terminal is good via paved city streets.

The purpose served at this facility is the grouping and moving of barges for commercial docks in Clinton and surrounding areas. Barge cleaning and repair work is also accomplished here. No commodities are shipped or received at this terminal.

The company owns two tugboats, one of which is 450 hp. and is 48 ft. by 14 ft., with a capacity of 50 gross tons. The other tugboat is 950 hp. and is 60 ft. by 20 ft., with a capacity of 58 gross tons. An 80-ton crane, which is used for lifting barge lids, operates on a 200 ft. by 50 ft. dock. A 100-ton crane, which can lift one end of a barge from the water, operates on the dry dock.

The facility is in operation from February to December. Future plans include the obtaining of a second 100-ton crane to operate on the dry dock so barges can be lifted completely from the water for repair.

City of Clinton (C&F Sales, Inc.), Clinton, Iowa - No. 51

The facility is located on a local city street off U.S. 30. The City of Clinton owns the facility but it is leased by C&F Sales, Inc., a subsidiary of C&F Industries of Chicago. C&F Sales acts only as a shipping and receiving agent at this facility and all products shipped in and out of the terminal are owned by the customers.

Pelletized feed and grain meal are trucked and railed to this facility by the Clinton Corn Processing Company and Cargill plants located in Cedar Rapids and Des Moines, for shipment by barge to New Orleans for export. Dibutynized Aeromatic Concentrate (DAC) is transported by truck from the Chemplex Company for shipment by barge to Taft and Good Hope, Louisiana. Fertilizer and salt (industrial and road) are shipped to the terminal by barge from New Orleans. The industrial salt is trucked to the Clinton Corn Processing Plant and other factories and water conditioning companies; the road salt is trucked to state, county, and city road departments within a 100 mile radius. The facility has rail connections with Chicago & North Western, Burlington Northern, and Chicago, Milwaukee, St. Paul & Pacific Railways; for the most part only the soybean meal and feed pellets are transported to the terminal by rail. Storage facilities include one 15,000 ton fertilizer and feed warehouse, one 5,000 industrial salt warehouse, 20,000 ton open storage space for road salt, and one 15,000 barrel tank for liquid storage. Handling facilities at the terminal are such that a 1,500 ton barge can be loaded or unloaded in approximately 10 hours. Operations are relatively stable throughout the season from March to December.

Terminal operations have greatly expanded over the past year with more expected in the future. Future plans include a 20,000 ton urea warehouse and a 45,000 ton phosphate warehouse. Improvements to present dock facilities are also proposed.

TERMINAL: C&F Sales, Inc.

LOCATION: Clinton, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
SOYBEAN MEAL AND FEED PELLETS	190,000	10	90			
DAG	39,000	100				
FERTILIZER				5,900	100	
SALT				29,000	100	
TOTAL	229,000			34,900		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	16	3
APRIL	20	1
MAY	21	0
JUNE	20	0
JULY	19	9
AUGUST	17	3
SEPTEMBER	16	0
OCTOBER	14	1
NOVEMBER	20	6
DECEMBER	10	2
TOTAL	173	25

The facility is located about seven blocks east of U.S. 67 with good access via paved city streets.

Approximately twelve to fifteen thousand tons of nitrogen solution are received by barge annually. The nitrogen solution is distributed from the terminal by truck to various locations in Iowa, Wisconsin, and Minnesota. Storage facilities consist of three 5,000 ton steel tanks. Barges are unloaded at the rate of 300 tons per hour. Normal operations are on a call basis only and peak periods of operation tend to be in the early spring. There are no definite plans for expansion.

Agri-Chemicals Company, Inc., Bellevue, Iowa - No. 54

The terminal is located about two miles north of Bellevue and one-fourth mile east of U.S. 52 on a county asphalt road. Access to the facility is good.

Operations began at the facility in 1967. From 1967 to 1973, approximately 30,000 tons of anhydrous ammonia was received by barge annually. In 1974, only 5,000 tons were received. This decrease was due to a severe shortage of the product. It is anticipated that operations will be back to normal by 1976. The product is distributed 50 percent by rail (Chicago, Milwaukee, St. Paul & Pacific), and 50 percent by truck to various locations in Iowa, Nebraska, South Dakota, Minnesota, Wisconsin, and Illinois. The trucks operate within a 200 mile radius of the terminal; the more distant locations are served by rail. Truck volumes vary from five per day during slow periods, up to 50 per day during peak periods.

A 30,000 ton tank is used for storage. Barges are unloaded by pumps through an eight inch pipeline at the rate of 400 tons per hour.

Very little growth has been experienced since 1967; there are no future plans for expansion.

TERMINAL: Agri-Chemical Company

LOCATION: Bellevue, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
ANHYDROUS AMMONIA				5,000	50	50
TOTAL				5,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		0
APRIL		0
MAY		0
JUNE		0
JULY		0
AUGUST		0
SEPTEMBER		2
OCTOBER		0
NOVEMBER		0
DECEMBER		0
TOTAL		2

The facility is located on Terminal Street approximately six blocks east of U.S. 52 with good access via local city streets.

Asphalt, gasoline, and fuel oil are received here by barge at the rate of approximately 100,000 tons annually. The petroleum products are distributed from the terminal to various locations in Wisconsin, Iowa, and Illinois by truck. The terminal has no rail facilities. Truck volumes vary from 15 per day to 45 per day, with an average of about 30 per day.

Storage facilities consist of tanks with a capacity of 109,000 barrels of asphalt and 255,000 barrels of gasoline and fuel oil. Barges are unloaded in two days by means of one six inch and three eight inch pipelines.

The facility is in operation from March to December, with June through December being the peak months for asphalt, and August through December the peak months for fuel oil. Gasoline volumes remain fairly steady throughout the year.

Asphalt volumes have increased from 14 million gallons in 1970 to 21 million gallons in 1974. Gasoline volumes have decreased from 17 million gallons in 1970 to four million gallons in 1974. There are no definite plans for future expansion.

TERMINAL: PASCO Marketing, Inc.

LOCATION: Dubuque, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
PETROLEUM PRODUCTS				103,750	100	
TOTAL				103,750		

MONTHLY BARGE MOVEMENTS

YEAR 1974

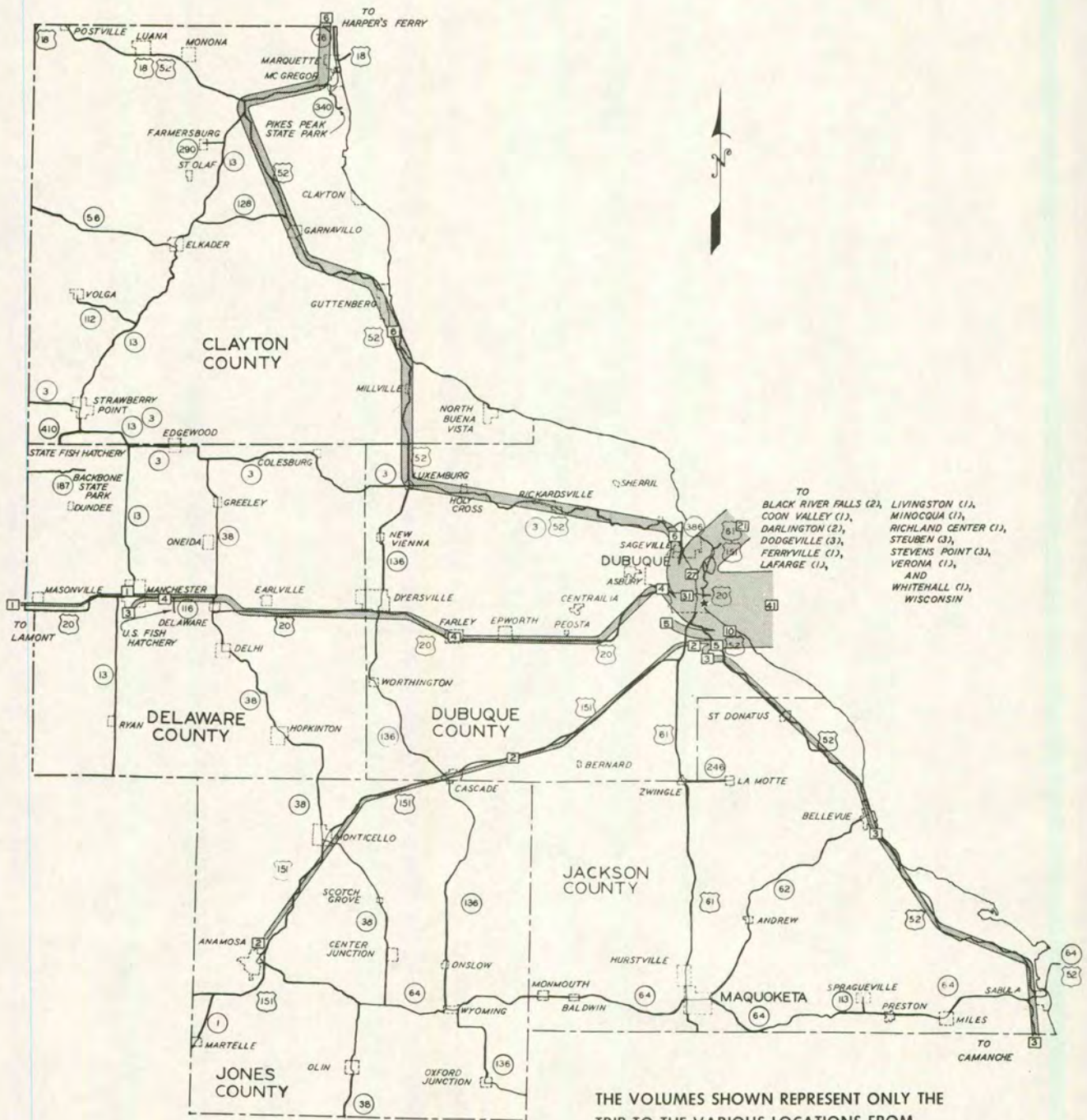
MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		0
APRIL		5
MAY		2
JUNE		4
JULY		9
AUGUST		9
SEPTEMBER		12
OCTOBER		4
NOVEMBER		3
DECEMBER		0
TOTAL		48

TERMINAL: PASCO Marketing, Inc.
 LOCATION: Dubuque, Iowa
 COMMODITY: Petroleum Products
 DATE: July 2, 1974 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
	Manchester		3	3
	Camanche		3	3
	Anamosa		2	2
	Dubuque		5	5
	Harper's Ferry		6	6
	Stevens Point, Wis.		3	3
	Verona, Wis.		1	1
	Ferryville, Wis.		1	1
	Black River Falls, Wis.		2	2
	Minocqua, Wis.		1	1
	Darlington, Wis.		2	2
	Whitehall, Wis.		1	1
	Dodgeville, Wis.		3	3
	Steuben, Wis.		3	3
	Livingston, Wis.		1	1
	Coon Valley, Wis.		1	1
	Richland Center, Wis.		1	1
	Lafarge, Wis.		1	1
	Lamont		1	1
		DAYS TOTAL	41	41

**DISPERSION OF TRUCK TRIPS FROM THE
PASCO MARKETING
AT DUBUQUE, IOWA JULY 2, 1974
TO POINTS WITHIN DUBUQUE AND ADJACENT COUNTIES**



THE VOLUMES SHOWN REPRESENT ONLY THE TRIP TO THE VARIOUS LOCATIONS FROM THE TERMINAL AND DO NOT ACCOUNT FOR THE PRIOR TRIP

Dubuque Twine Company, Dubuque, Iowa - No. 56

The terminal is located four blocks from the main truck route on a brick street. The dock is owned by the City of Dubuque, but is operated by Dubuque Twine Company.

Baler twine is shipped by barge from New Orleans to the terminal. Five or six 700 to 800 ton barges are received here annually. The twine is distributed from the terminal to various locations in Iowa and Minnesota by truck at the rate of approximately two truckloads per day.

There are indoor storage facilities for the twine, and barges are offloaded with a one ton crane.

Operations have increased approximately 30 to 40 percent over the past few years. There are no future plans for expansion.

The facility does have rail connections (Burlington Northern and Illinois Central Gulf) but very rarely ships out by rail.

TERMINAL: Dubuque Twine Company

LOCATION: Dubuque, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
TWINE				3,750	100	
TOTAL				3,750		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		1
APRIL		1
MAY		1
JUNE		0
JULY		0
AUGUST		0
SEPTEMBER		1
OCTOBER		0
NOVEMBER		1
DECEMBER		0
TOTAL		5

Inland Molasses Corporation, Dubuque, Iowa - No. 57

The terminal is located about four blocks from the city truck route on an asphalt city street, with good access.

Molasses, dry fertilizer, liquid fertilizer, ice control salt, and industrial salt are received by barge. Lard, grease, and tallow are shipped from the terminal by barge. The molasses is trucked from the terminal to various locations within a 200 mile radius at an average rate of five trucks per day. Dry and liquid fertilizer are trucked to various locations in a three state area within 150 miles of the terminal at rates varying from two trucks per day during slow months, up to 50 per day during peak months. Salt is trucked to locations within a 100 mile radius at an average rate of 20 trucks per day. The lard, grease, and tallow are trucked to the terminal from a local packing plant at the rate of three to four trucks per day.

Storage capacities are as follows:

Molasses	25,000 Tons
Liquid Fertilizer	5,000,000 Gallons
Dry Fertilizer	8,000 Tons
Salt	20,000 Tons
Tallow	5,000 Tons
Lard	9,000 Tons

The facility has access to the Illinois Central Gulf and Burlington Northern rail lines; however, only about two percent of

their total shipping is done by rail.

Ice control salt and dry fertilizer volumes have experienced a slight decrease in the past few years; volumes for the remaining commodities have remained relatively stable. There are no future plans for expansion.

The dock listed as "Olin Mathieson Company" (see page 164), approximately one mile upriver is also utilized by the Inland Molasses Corp. Commodity volumes shown in this summary reflect the total operations at the two locations.

TERMINAL: Inland Molasses Corporation

LOCATION: Dubuque, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Liquid Fertilizer				32,200	100	
Molasses				21,000	100	
Lard	16,800	95	5			
Tallow	7,000	95	5			
TOTAL	Continued on next sheet					

MONTHLY BARGE MOVEMENTS

YEAR _____

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
TOTAL	See Next Page	

TERMINAL: Inland Molasses Corporation

LOCATION: Dubuque, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Salt				30,800	100	
Dry Fertilizer				25,200	100	
Grease	1,400	95	5			
TOTAL	25,200			109,200		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	1	4
APRIL	3	8
MAY	2	12
JUNE	3	6
JULY	1	10
AUGUST	1	4
SEPTEMBER	2	7
OCTOBER	2	6
NOVEMBER	2	10
DECEMBER	1	2
TOTAL	17	69

Molo Sand and Gravel Company, Dubuque, Iowa - No. 58

The terminal is located at the foot of Third Street about three blocks from the main truck route.

Sand and gravel are dredged out of the river near Dubuque and hauled to the terminal by small barges with an average capacity of 160 tons. Approximately 900 barges are received annually.

The sand is distributed by truck (98 percent) and rail (two percent) to locations in Dubuque and surrounding local areas within a 30 mile radius. On an average, 40 to 50 trucks per day are loaded at the terminal.

The facility has two and one-half acres of open storage space. Barges are unloaded by crane with a one and one-half cubic yard bucket in one and one-half to two hours.

The facility has experienced a six to eight percent annual growth in the past few years, and is in the process of a slow expansion.

Interstate Power Company, Dubuque, Iowa - No. 59

The plant is located at the foot of East Eighth Street about four to five blocks off the through truck route.

Coal is received at the facility by barge at the rate of approximately 120,000 tons per year. The coal is used at the plant to produce electrical energy. About 70 percent of the coal is shipped up the river from St. Louis and 30 percent comes down the river from the Twin Cities.

Barges are unloaded in about four hours by means of a crane with a clamshell bucket and a conveyor. An open storage area with a capacity of about 200,000 tons is utilized to store coal.

Coal arrives fairly steadily all year long from March through December, with no definite peak or slow periods.

The operation has been stable over the past few years with no significant growth (1972, 95 barges received; 1974, 98 barges received). There are no plans for future expansion at this facility.

TERMINAL: Interstate Power Company

LOCATION: Dubuque, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
COAL				121,463		
TOTAL				121,463		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		5
APRIL		16
MAY		19
JUNE		15
JULY		10
AUGUST		3
SEPTEMBER		0
OCTOBER		21
NOVEMBER		9
DECEMBER		0
TOTAL		98

Pillsbury Company (Swift Chemical Company), Dubuque, Iowa - No. 60

This terminal is located at Seventh and Commercial Streets via city truck route. The last six blocks to the terminal consist of a very rough gravel and brick road.

The terminal was opened in 1973 to handle grain for shipping and to receive fertilizer. In 1974, 9,300,000 bushels of corn and 300,000 bushels of soybeans were shipped to New Orleans. Six thousand tons of fertilizer from Florida and 1,500 tons of soybean meal from New Orleans were received.

It takes approximately three hours to load a 50,000 bushel grain barge, and three days to unload a 1,500 ton fertilizer barge.

Once unloaded, grain is stored in an 830,000 bushel flat storage building and a 310,000 bushel elevator. Fertilizer is stored in a covered building with a capacity of 110,000 tons.

Most of the fertilizer is shipped out by truck or rail in May or late fall. Grain is received by rail, 50 percent; and by truck, 50 percent.

The facility has a siding with the Illinois Central Gulf Railroad Company.

TERMINAL: Pillsbury Company (Swift Chemical Company)

LOCATION: Dubuque, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Grain	269,400	50	50	1,500	50	50
Fertilizer				6,000	50	50
TOTAL	269,400			7,500		

MONTHLY BARGE MOVEMENTS

YEAR 1974

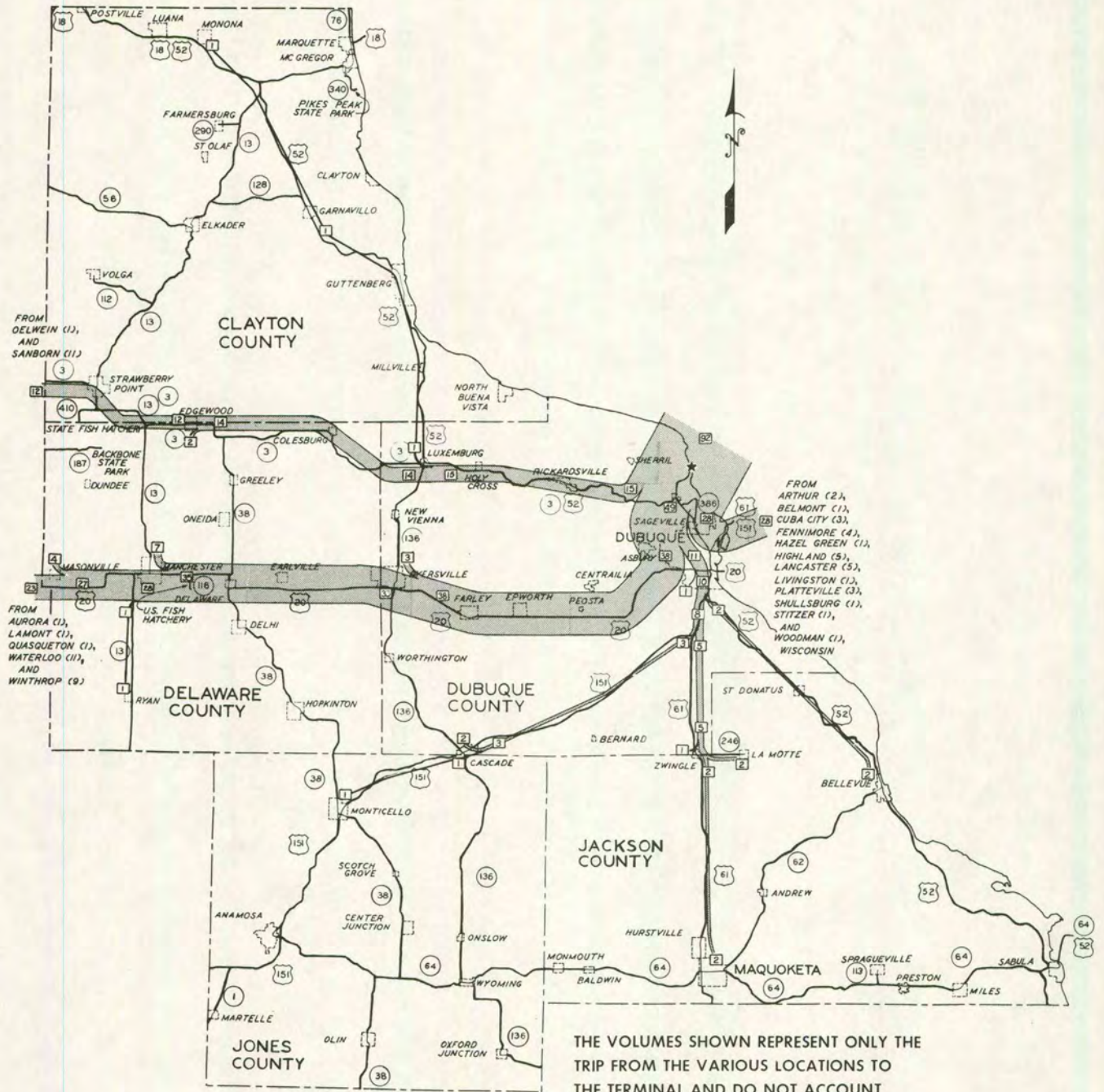
MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	13	0
APRIL	26	0
MAY	27	0
JUNE	23	0
JULY	32	1
AUGUST	9	1
SEPTEMBER	3	1
OCTOBER	16	1
NOVEMBER	30	1
DECEMBER	13	0
TOTAL	192	5

TERMINAL: Pillsbury Company (Swift Chemical Company)
LOCATION: Dubuque, Iowa
COMMODITY: Grain
DATE: November 21, 1974 (Peak)

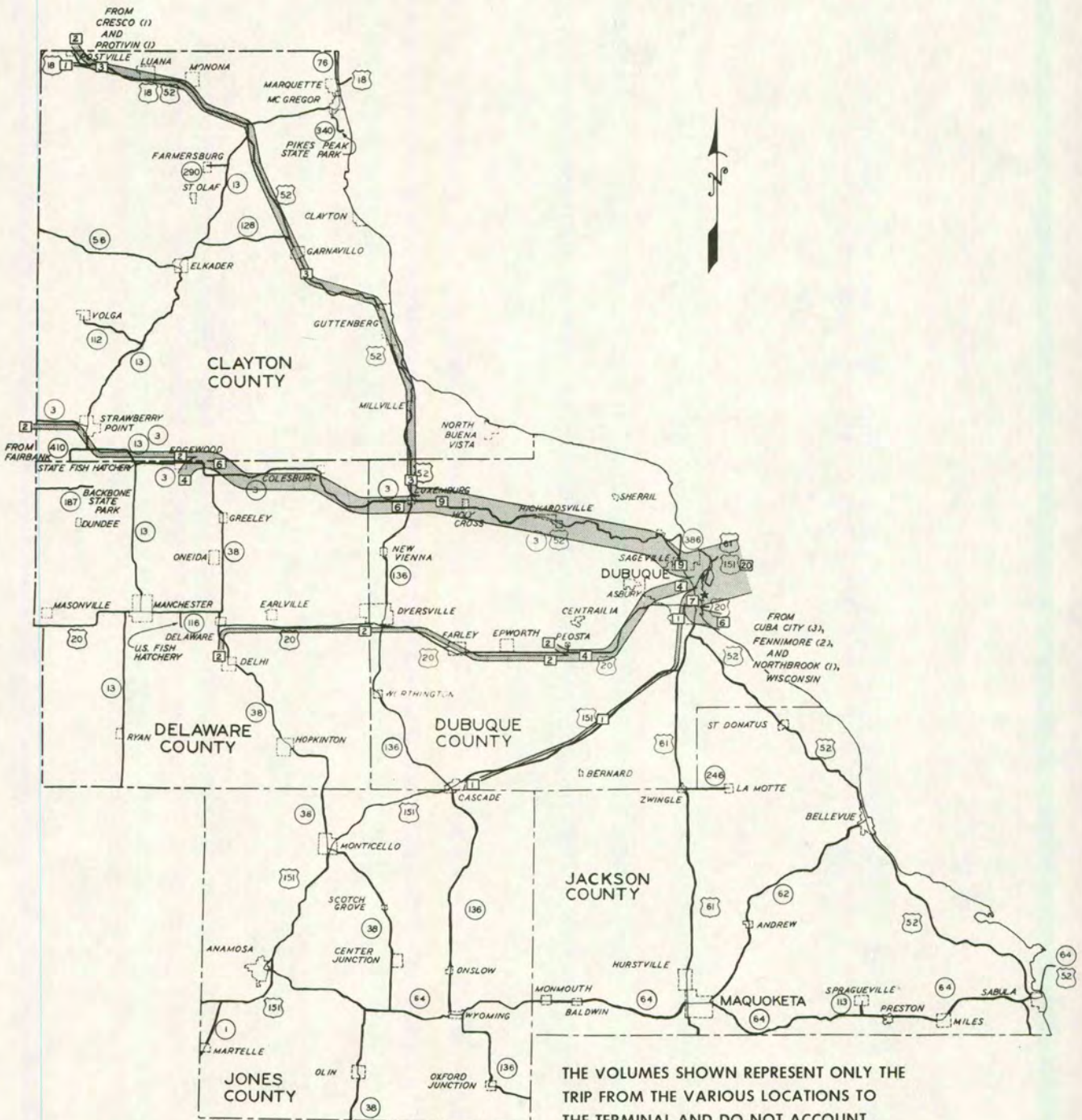
DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Waterloo			11	11
Woodman, Wis.			1	1
Fennimore, Wis.		4		4
Highland, Wis.		3	3	5
Manchester		1	6	7
Aurora			1	1
Winthrop			9	9
Arthur, Wis.			2	2
Masonville			4	4
Stitzer, Wis.		1		1
Bellevue		2		2
Oelwein		1		1
Lancaster, Wis.			5	5
Quasqueton			1	1
Monona		1		1
Lamont		1		1
LaMotte		2		2
Edgewood		1	1	2
Maquoketa		2		2
Belmont, Wis.		1		1
DAYS TOTAL		Continued on next page		

**DISPERSION OF TRUCK TRIPS TO THE
PILLSBURY
AT DUBUQUE, IOWA NOVEMBER 21, 1974
FROM POINTS WITHIN DUBUQUE AND ADJACENT COUNTIES**



**DISPERSION OF TRUCK TRIPS TO THE
PILLSBURY
AT DUBUQUE, IOWA FEBRUARY 6, 1975
FROM POINTS WITHIN DUBUQUE AND ADJACENT COUNTIES**



Dubuque Oil Company, Dubuque, Iowa - No. 61

Dubuque Oil Company is owned by Koch Industries of Wichita, Kansas.

Five steel tanks with a capacity of 13,000,000 gallons are used for storage of gasoline (67 percent) and fuel oil (33 percent).

Approximately fifty 20,000 to 25,000 barrel barges are received each year. The barges are unloaded with a 25 inch pipeline at 3,000 barrels an hour.

The petroleum is shipped from St. Paul, Minnesota, by Ingram Barges of New Orleans. The company now is in the process of obtaining their own barges for residual petroleum products.

During normal operations, 25 trucks per day, six days a week will leave the facility.

Peak periods of operation occur during summer and fall, with as many as 60 trucks per day.

Distribution is generally within a 50 mile radius of the facility, including locations in Iowa, Illinois, and Wisconsin.

Due to a 100 percent growth in the last five years, plans are to construct additional storage facilities.

The terminal is located on an extension of 12th Street in a relatively new industrial park area of Dubuque.

Olin-Mathieson, Dubuque, Iowa - No. 62

Olin-Mathieson handles only the shipping and receiving at this facility. Inland Molasses owns the dock and buildings. All commodities and facilities are included in the Inland Molasses summary, pages 146 and 147. The dock is located at the end of the 12th Street extension.

Thru-Put Terminal, Dubuque, Iowa - No. 63

Access is good, just off Kerper Boulevard on a paved street in a new industrial park area.

Grain is shipped from the facility, while ice control salt, industrial salt, steel, dry fertilizer, coal, coke, and pig iron are received.

Storage facilities are comprised of 60,000 tons of open storage for road salt, 25,000 tons of coverage storage for industrial salt, 8,000 tons for package goods, and 50,000 tons of closed storage for fertilizer. Handling facilities consist of a crane rated at approximately 150 tons an hour and a conveyor belt that runs at about 300 tons an hour. Two separate docks are used -- one for unloading and one for loading.

Operations are from March to December. April, May, and the fall months are peak periods for fertilizer and grain; August and September are the slow months for fertilizer.

Operations began in 1961; in the past five years, there has been a 10 percent growth each year. In 1972, the grain facility was added in order to be able to send loaded barges back. Proposed expansions at Savage, Minnesota; Seneca, Illinois; St. Louis, Missouri; and Cincinnati, Ohio, have target dates for completion of June, 1976.

The terminal owns no barges, but works with 15 to 20 different barge lines. Commodities are distributed to and from the terminal

by truck and rail to all of Iowa, southern Minnesota, southwestern Wisconsin, Illinois, and Nebraska. Although the rail siding is with Chicago & North Western Railway, cars are received from the Illinois Central Gulf, Burlington Northern, and the Milwaukee railroads as well.

The terminal does not take possession of goods; it acts only as a handling agent. Approximately 36,000 trucks and 2,000 railroad cars were handled in 1973. Grain records for 1974 truck trips were unavailable at the terminal.

TERMINAL: Thru-Put Terminal

LOCATION: Dubuque, Iowa

COMMODITY FLOW

(FISCAL) YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Grain	248,000					
Salt				102,072		
Coal				1,619		
Fertilizer				76,075		
TOTAL				Continued on 2nd sheet		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	9	4
APRIL	23	11
MAY	20	14
JUNE	24	13
JULY	29	17
AUGUST	14	20
SEPTEMBER	8	18
OCTOBER	18	11
NOVEMBER	22	17
DECEMBER	8	4
TOTAL	175	129

TERMINAL: Thru-Put Terminal

LOCATION: Dubuque, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
--continued						
Steel				1,299		
TOTAL	248,000			191,065		

MONTHLY BARGE MOVEMENTS

YEAR 1974

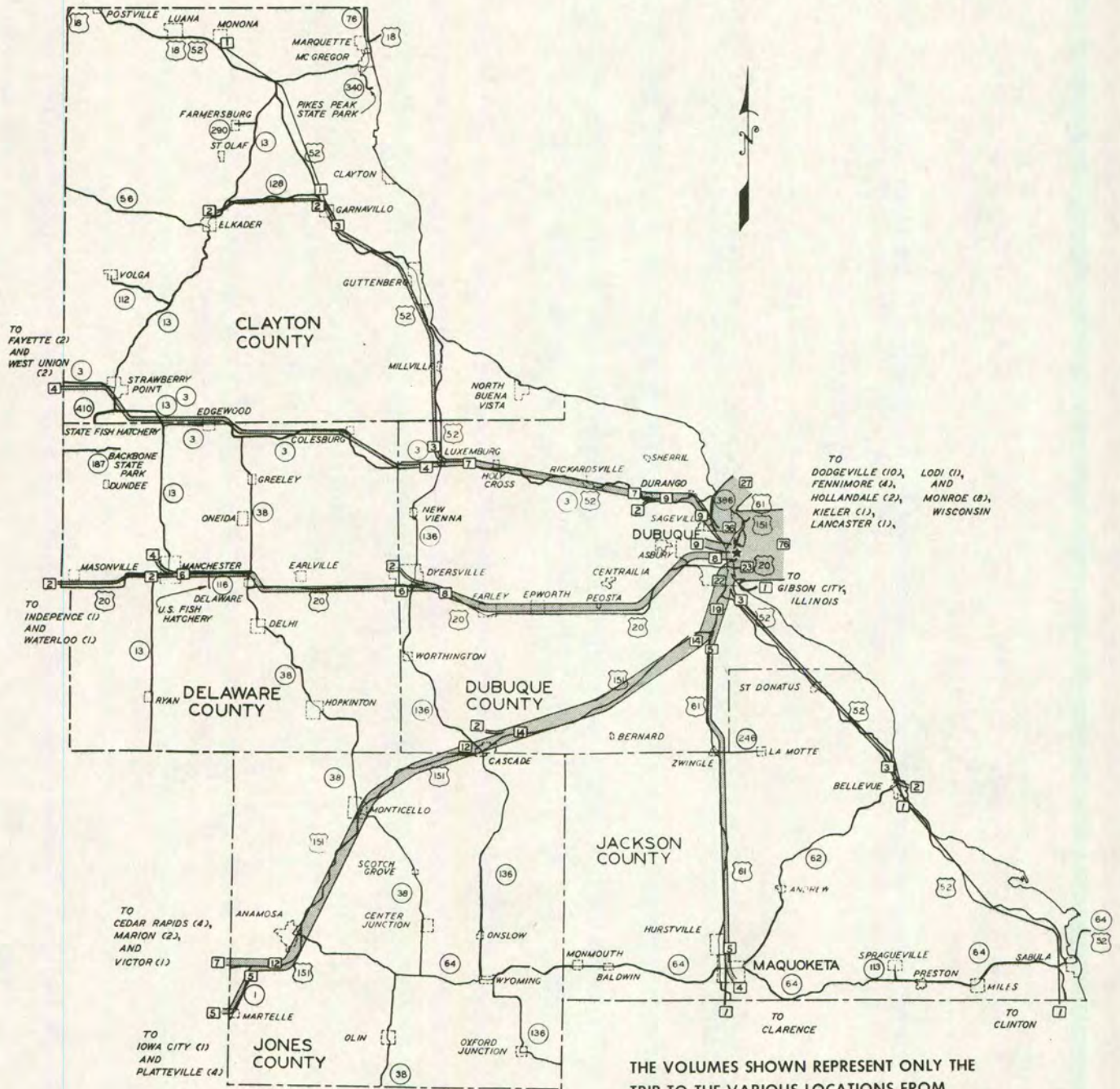
MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
TOTAL	See Previous Page	

TERMINAL: Thru-Put Terminal
 LOCATION: Dubuque, Iowa
 COMMODITY: Ice Control Salt
 DATE: February 19, 1975 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
	Dubuque		6	6
	Fennimore, Wisconsin		4	4
	Hollandale, Wisconsin		2	2
	Waterloo		1	1
	Monroe, Wisconsin		8	8
	Maquoketa		4	4
	Bellevue		2	2
	Monona		1	1
	Fayette		2	2
	Elkader		2	2
	Manchester		4	4
	Dodgeville, Wisconsin		10	10
	Marion		2	2
	West Union		2	2
	Platteville		4	4
	Lancaster, Wisconsin		1	1
	Cascade		2	2
	Durango		2	2
	Dyersville		2	2
	Kieler, Wisconsin		1	1
	DAYS TOTAL	0	62	62

**DISPERSION OF TRUCK TRIPS FROM THE
THRU PUT TERMINAL
AT DUBUQUE, IOWA FEBRUARY 19, 1975
TO POINTS WITHIN DUBUQUE AND ADJACENT COUNTIES**



THE VOLUMES SHOWN REPRESENT ONLY THE TRIP TO THE VARIOUS LOCATIONS FROM THE TERMINAL AND DO NOT ACCOUNT FOR THE PRIOR TRIP

Non-Operational Docks in the Rock Island District

A number of commercial docks listed with the Army Corps of Engineers are either no longer in operation or have not yet been constructed. The organizations listed below as "non-operating" have operated dock facilities in the past but no longer ship or receive commodities by barge at the present time. The organizations listed as "not completed" have submitted applications to the Army Corps of Engineers to ship and receive commodities by barge, but have not yet begun the actual construction of dock facilities.

<u>Miles Above Ohio River</u>	<u>Non-Operating</u>	<u>Identification Number</u>
381.0	First Mississippi, Inc., Ft. Madison	5
404.1	City of Burlington, Burlington	10
404.4	Wayne Brothers Grain Company, Burlington	11
	<u>Not Completed</u>	
451.2	W. G. Block, Muscatine	17
455.2	Lee I. Osborn, Muscatine	23
477.8	W. G. Block, Davenport	31
513.5	Acme Fuel and Materials Co., Clinton	45
558.7	Bellevue Sand and Gravel Co., Bellevue	53
582.6	Perfection Oil Co., Dubuque	64

TOTALS - ROCK ISLAND DISTRICT - 1974

Below is a table illustrating the Rock Island District's total tonnage of grain, coal, petroleum, and other commodities originating or terminating in Iowa.

COMMODITIES (TONS)				Originate	Terminate	Total
Grain	Coal	Petroleum	Other			
3,513,484	965,489	1,145,963	2,550,768	3,744,745	4,430,959	8,175,704

Pattison Grain Terminal, Clayton, Iowa - No. 65

The terminal is located south of Clayton, about two miles from Clayton County Road X-56. Access to the terminal is via a very steep winding gravel road.

Corn and soybeans are trucked to the terminal primarily from Clayton and surrounding counties. Grain is shipped from the terminal by barge to New Orleans. Approximately 11.5 million bushels were shipped in 1973 and 9.5 million in 1974.

Storage facilities at the terminal have a total capacity of 300,000 bushels. Barges are loaded by means of a chute and bucket elevator at a rate of 10,000 bushels per hour.

Since operations began in 1969, a growth of 100 percent has occurred. No definite plans have been made to expand the facility.

Information on truck trip traffic for 1974 was not available. However, data for early 1975 was obtained. Included with this terminal's data are tables and flow maps from a special survey conducted in 1973.

The traffic for July 1975 shows a significant decline over July 1973.

TERMINAL: Pattison Grain Terminal

LOCATION: Clayton, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
GRAIN	263,900	100				
TOTAL	263,900	100				

MONTHLY BARGE MOVEMENTS

YEAR 1974

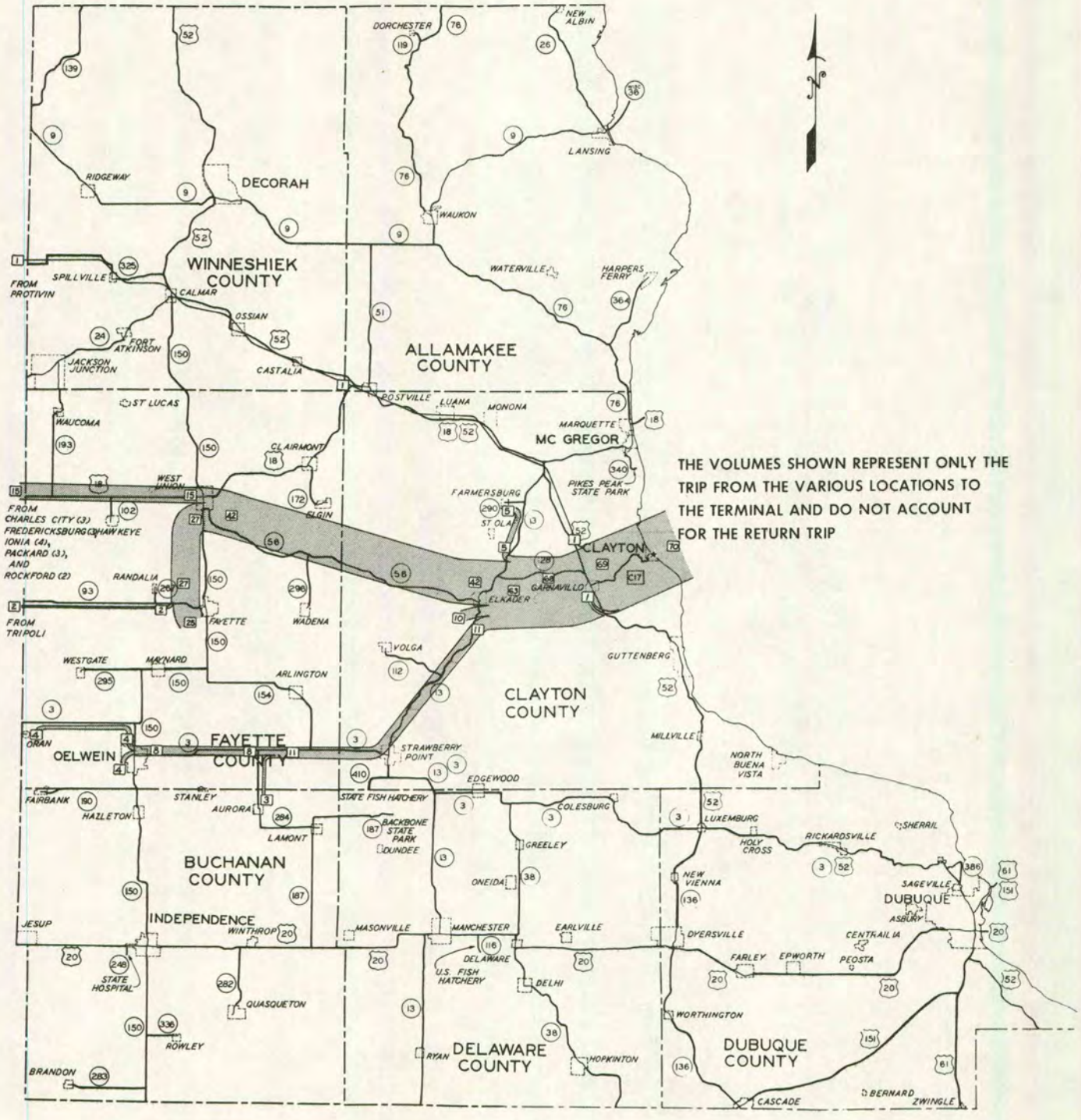
MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		
FEBRUARY		
MARCH		
APRIL	No figures are given by	
MAY	month.	
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
TOTAL	185	

TERMINAL: Pattison Grain Terminal
LOCATION: Clayton, Iowa
COMMODITY: Grain (Corn and Soybeans)
DATE: April 18, 1975 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Ionia			4	4
Oran			4	4
Charles City		3		3
Elkader		10		10
Fayette		7	18	25
Tripoli			2	2
Fredericksburg			3	3
Garnavillo		1		1
Packard			3	3
Protivin			1	1
Farmersburg		5		5
Oelwein		2	2	4
Rockford			2	2
Aurora		1	2	3
DAYS TOTAL		29	41	70

**DISPERSION OF TRUCK TRIPS TO THE
PATTISON GRAIN TERMINAL
AT CLAYTON, IOWA APRIL 18, 1975
FROM POINTS WITHIN CLAYTON AND ADJACENT COUNTIES**

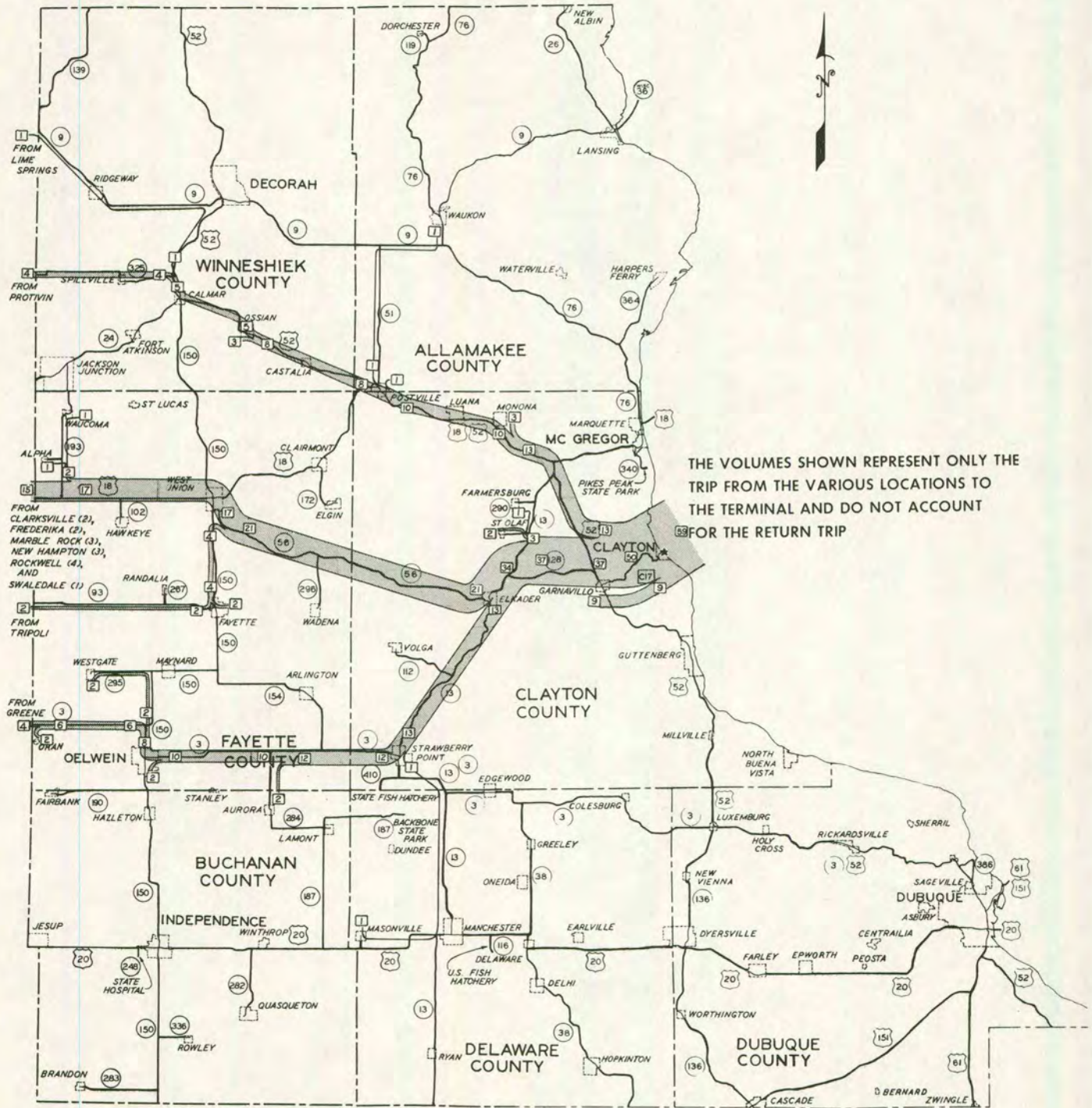


TERMINAL: Pattison Grain Terminal
LOCATION: Clayton, Iowa
COMMODITY: Grain (Corn and Soybeans)
DATE: July 17, 1975 (Normal)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Oran		0	2	2
Ossian		3	0	3
Fayette		0	2	2
Marble Rock		0	3	3
Tripoli		0	2	2
Fredericka		0	2	2
Greene		1	3	4
Lime Springs		0	1	1
Masonville		0	1	1
Westgate		2	0	2
Protivin		2	2	4
Clarksville		0	2	2
Garnavillo		8	1	9
Waukon		1	0	1
St. Olaf		2	0	2
Swaledale		0	1	1
Aurora		2	0	2
Postville		1	0	1
Rockwell		0	4	4
New Hampton		1	2	3
DAYS TOTAL		(Cont. on next page)		

**DISPERSION OF TRUCK TRIPS TO THE
PATTISON GRAIN TERMINAL
AT CLAYTON, IOWA JULY 17, 1975
FROM POINTS WITHIN CLAYTON AND ADJACENT COUNTIES**



TERMINAL: Pattison Grain Terminal

LOCATION: Clayton, Iowa

COMMODITY: Grain

DATE: November 13, 1973

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Fayette		4	9	13
Monona		10	9	19
Tripoli			1	1
New Hampton			6	6
Elkader		8		8
Postville		7	4	11
Masonville			1	1
Protivin		1	17	18
Farmersburg		2	3	5
Garnavillo		7	9	16
Nashua		1	1	2
Edgewood		6	3	9
Guttenberg		4		4
Cresco			2	2
Eitzen, Minn.			2	2
Grove, Wisconsin		2		2
Lime Springs			1	1
Chester			2	2
Fredericksburg			2	2
Packard			2	2
	DAYS TOTAL		Continued on next page--	

TERMINAL: Pattison Grain Terminal
LOCATION: Clayton, Iowa
COMMODITY: Grain
DATE: November 13, 1973

DISPERSION OF TRUCK TRIPS

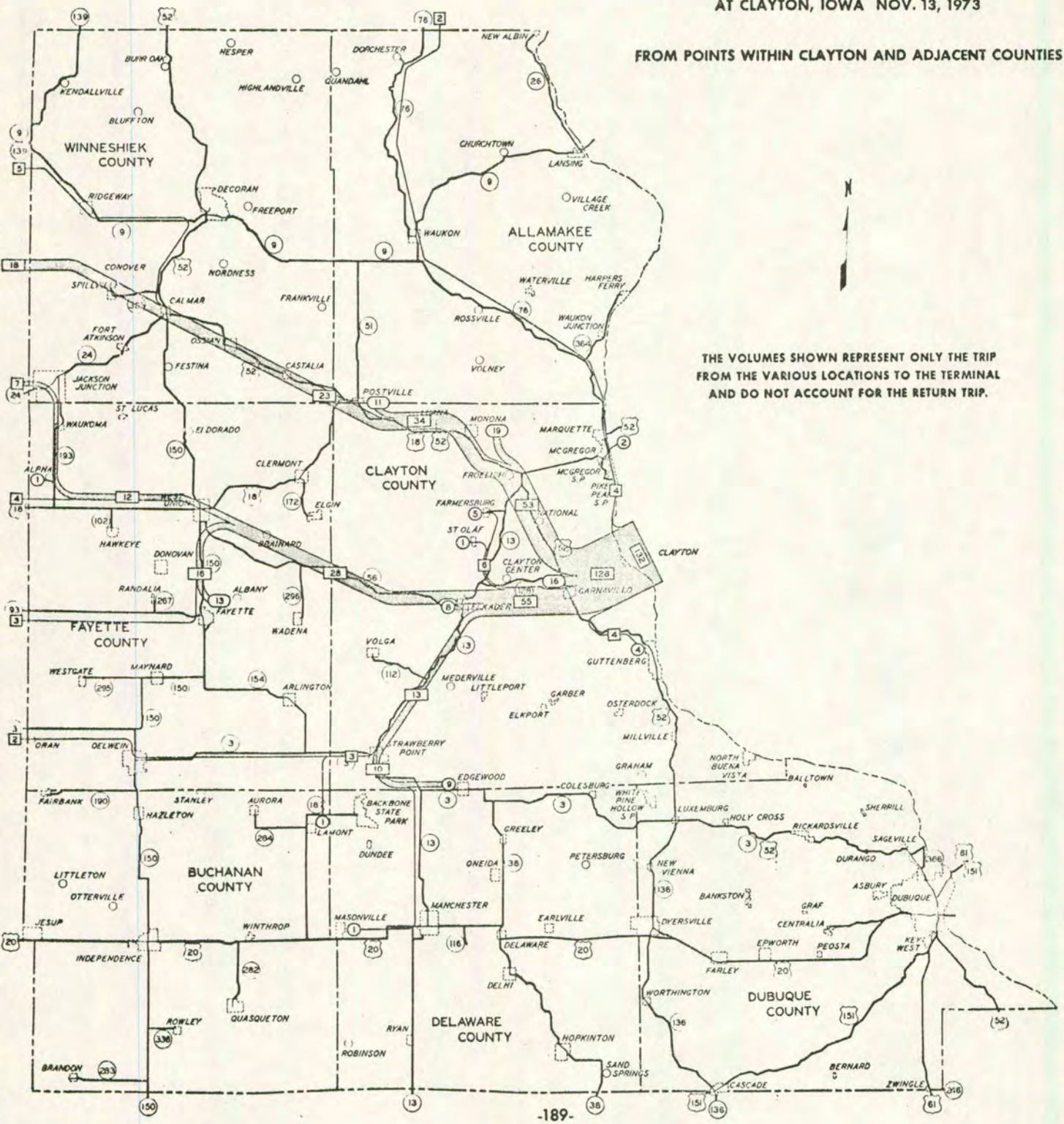
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ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
North Washington		1		1
Denver			2	2
St. Olaf		1		1
Lamont			1	1
Alpha		1		1
DAYS TOTAL		55	77	132

DISPERSION OF TRUCK TRIPS TO THE PATTISON GRAIN TERMINAL

AT CLAYTON, IOWA NOV. 13, 1973

FROM POINTS WITHIN CLAYTON AND ADJACENT COUNTIES



THE VOLUMES SHOWN REPRESENT ONLY THE TRIP FROM THE VARIOUS LOCATIONS TO THE TERMINAL AND DO NOT ACCOUNT FOR THE RETURN TRIP.

TERMINAL: Pattison Grain Terminal
 LOCATION: Clayton, Iowa
 COMMODITY: Grain
 DATE: July 11, 1973

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Fayette		1	3	4
Monona		8		8
Tripoli			10	10
Elkader		19		19
Masonville			3	3
Protivin		3	3	6
Farmersburg			1	1
Garnavillo		13	4	17
Nashua		1		1
Eitzen, Minn.			6	6
Oran		2	1	5
Fairbank		1	4	5
Clear Lake			1	1
St. Ansgar			1	1
Arlington		3	1	4
Strawberry Point			3	3
Packard		2	3	5
Carterville		1	1	2
Oelwein		1	5	6
Aurora		2	1	3
DAYS TOTAL				

Continued on Next Page --

Farmers Grain Dealers, McGregor, Iowa - No. 66

The terminal is located two blocks from U.S. 18 on a paved city street. Grain is shipped to the terminal by truck and rail (Chicago, Milwaukee, St. Paul and Pacific) primarily from farmers' elevators in Clayton and surrounding counties. The grain is shipped from the terminal by barge to New Orleans. About 15 million bushels of grain are handled each year.

Grain is stored in a 500,000 bushel elevator. Barges are loaded by means of three bucket elevators and a chute at the rate of 12,000 bushels per hour. There is usually a slow period each year during August and September, with shipping remaining fairly stable throughout the remainder of the year. A significant growth has occurred in shipping over the past few years (1968 - 83 barges, 1974 - 301 barges). Future plans include obtaining a rail siding for approximately 45 hopper cars (one mile of track) by the fall of 1976.

Included with this terminal's 1974 data are tables and flow maps from a special survey conducted in 1973.

TERMINAL: Farmers Grain Dealers

LOCATION: McGregor, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Grain	437,500	67	33			
TOTAL	437,500	67	33			

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	0	
MARCH	16	
APRIL	24	
MAY	29	
JUNE	35	
JULY	47	
AUGUST	43	
SEPTEMBER	22	
OCTOBER	48	
NOVEMBER	33	
DECEMBER	4	
TOTAL	301	

TERMINAL: Farmers Grain Dealers
LOCATION: McGregor, Iowa
COMMODITY: Grain
DATE: October 14, 1974 (Peak)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Elma			7	7
Lime Springs			2	2
Maynard		6	3	9
Dougherty			2	2
New Hampton			8	8
Ionia			3	3
Fredericksburg		2	7	9
Monona		2	3	5
Burchinal			1	1
Luana		5	1	6
Garner			2	2
Cresco		1	4	5
Nashua			5	5
Postville		4		4
Greene			4	4
Colwell			4	4
Dunkerton		1		1
Decorah			3	3
Ventura			2	2
DAYS TOTAL				

--Continued

TERMINAL: Farmers Grain Dealers
 LOCATION: McGregor, Iowa
 COMMODITY: Grain
 DATE: June 18, 1975 (Average)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Le Roy			1	1
Colwell			9	9
West Union			3	3
Dougherty			3	3
Northwood			2	2
Greene			2	2
Nashua			7	7
Plymouth			3	3
Readlyn			1	1
Maynard		3	1	4
Ionia		2	2	4
Arlington			2	2
Lawler			2	2
Rockwell		2	5	7
Thornton			2	2
Little Cedar			2	2
Toeterville			2	2
New Hampton			2	2
Osage			2	2
DAYS TOTAL				

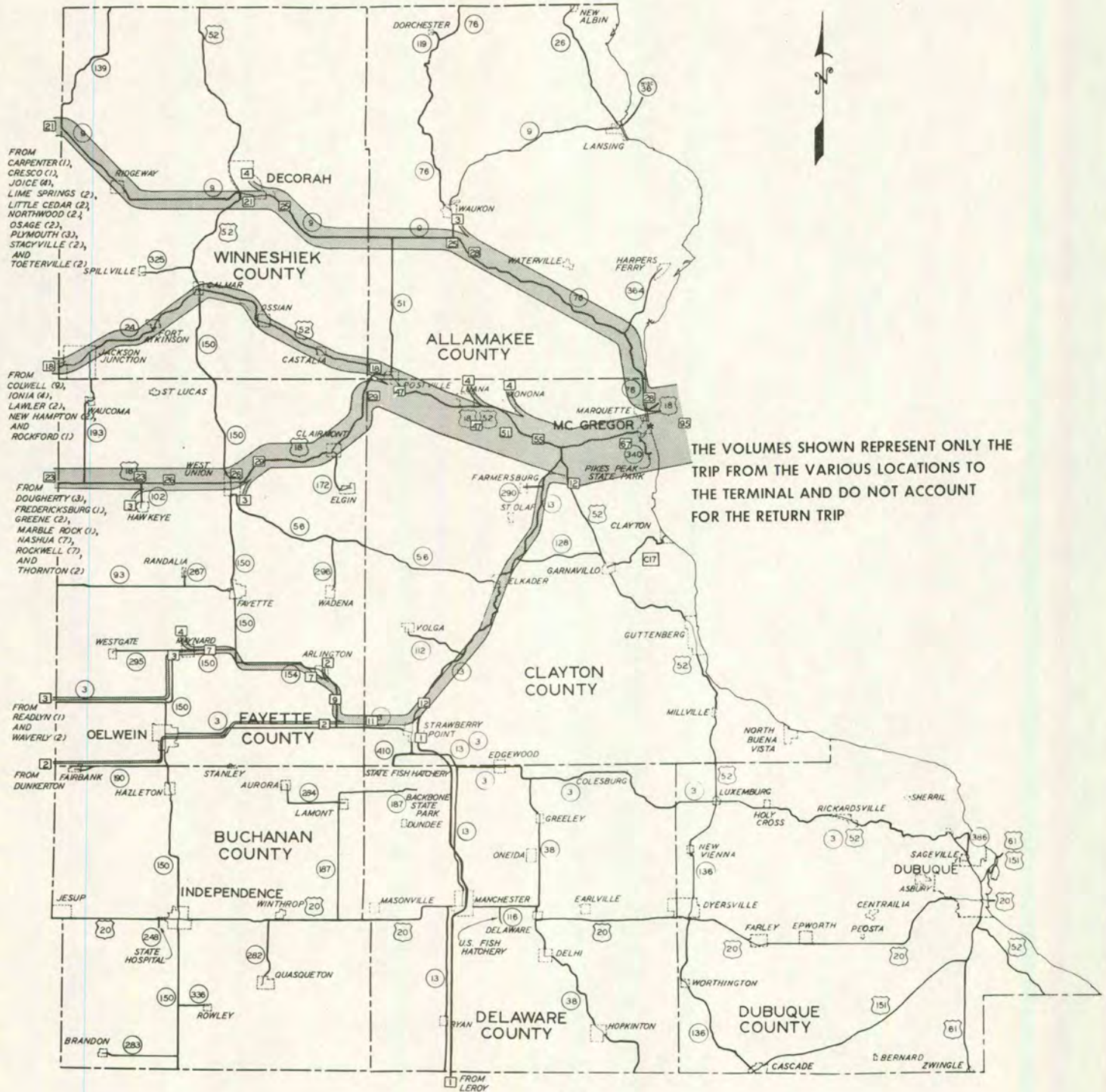
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TERMINAL: Farmers Grain Dealers
 LOCATION: McGregor, Iowa
 COMMODITY: Grain
 DATE: June 18, 1975 (Average)

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Waukon		3		3
Joice			4	4
Decorah		3	1	4
Monona		4		4
Waverly			2	2
Stacyville			2	2
Luana		4		4
Hawkeye			3	3
Dunkerton			2	2
Cresco			1	1
Lime Springs			2	2
Carpenter			1	1
Marble Rock			1	1
Rockford		1		1
Fredericksburg			1	1
DAYS TOTAL		22	73	95

**DISPERSION OF TRUCK TRIPS TO THE
FARMER'S GRAIN DEALERS
AT MCGREGOR, IOWA JUNE 18, 1975
FROM POINTS WITHIN CLAYTON AND ADJACENT COUNTIES**



THE VOLUMES SHOWN REPRESENT ONLY THE TRIP FROM THE VARIOUS LOCATIONS TO THE TERMINAL AND DO NOT ACCOUNT FOR THE RETURN TRIP

TERMINAL: Farmers Grain Terminal
LOCATION: McGregor, Iowa
COMMODITY: Grain
DATE: November 13, 1973

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
Fredericksburg		3	5	8
Elkader		24		24
Monona		6		6
Readlyn			4	4
Postville		2		2
Colwell			4	4
Ventura			3	3
Thornton			2	2
Luana		3		3
Grafton			1	1
St. Olaf		3		3
Cresco		2	9	11
Maynard			8	8
Waukon		10		10
Greene			2	2
Dunkerton			4	4
Allendorf			3	3
Rockford			2	2
New Hampton			1	1
Marble Rock			1	1
DAYS TOTAL			Continued on Next Page --	

TERMINAL: Farmers Grain Terminal
 LOCATION: McGregor, Iowa
 COMMODITY: Grain
 DATE: November 13, 1973

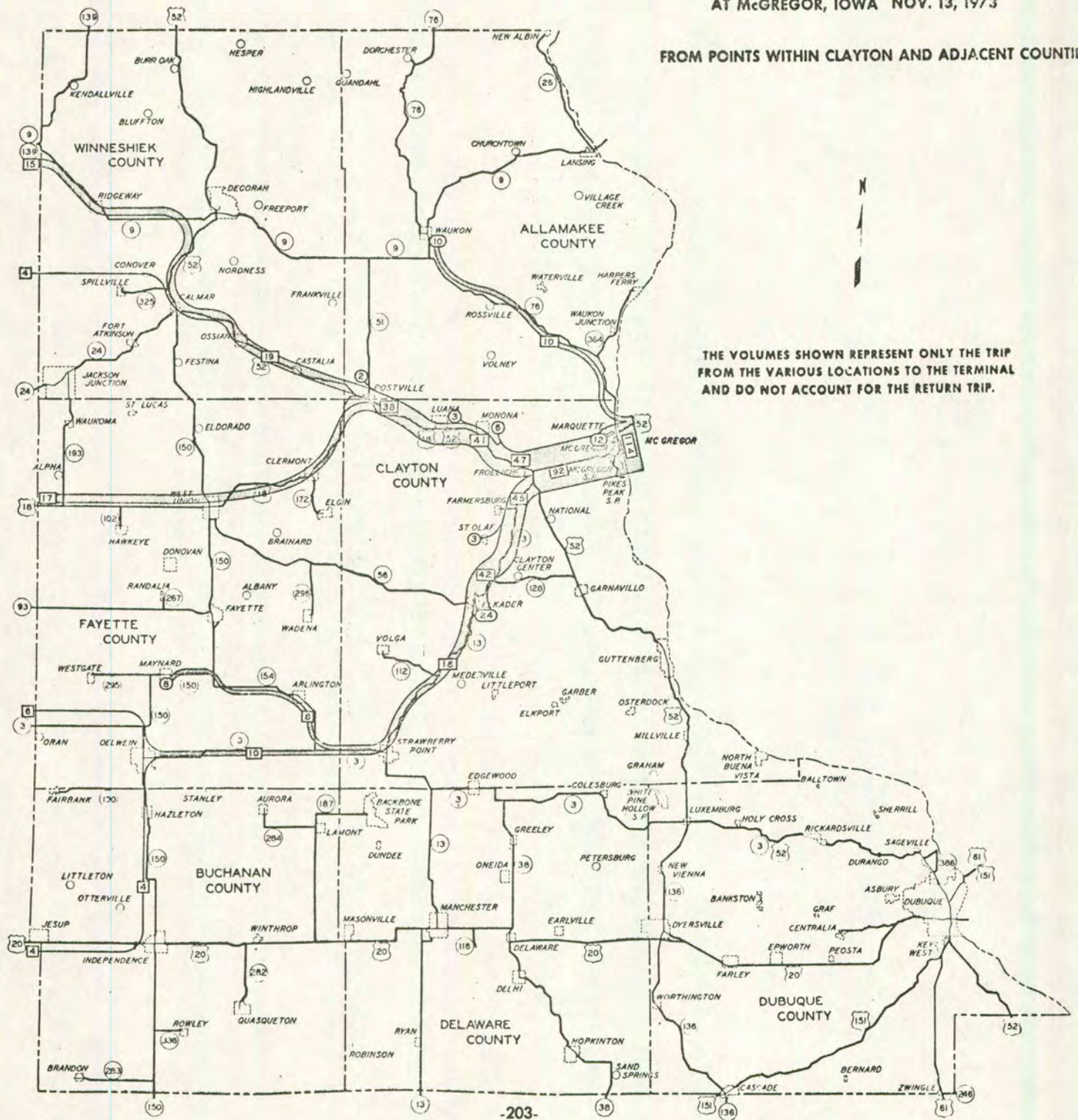
DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
McGregor		11	1	12
DAYS TOTAL		64	50	114

DISPERSION OF TRUCK TRIPS TO THE FARMER'S GRAIN DEALERS

AT MCGREGOR, IOWA NOV. 13, 1973

FROM POINTS WITHIN CLAYTON AND ADJACENT COUNTIES



THE VOLUMES SHOWN REPRESENT ONLY THE TRIP FROM THE VARIOUS LOCATIONS TO THE TERMINAL AND DO NOT ACCOUNT FOR THE RETURN TRIP.

TERMINAL: Farmers Grain Terminal
LOCATION: McGregor, Iowa
COMMODITY: Grain
DATE: May 25, 1973

DISPERSION OF TRUCK TRIPS

ORIGIN OF TRUCK TRIPS TO TERMINAL	DESTINATION OF TRUCK TRIPS FROM TERMINAL	SINGLE UNITS	TRUCK TRACTOR SEMI TRAILER	TOTAL
McGregor		4		4
Fredericksburg		10	6	16
Ventura			1	1
Dunkerton			2	2
St. Olaf		2		2
Cresco			9	9
Maynard		16	3	19
Greene			7	7
Dougherty			1	1
Luana		1		1
Nashua			4	4
West Union		3		3
Lake Mills			1	1
Rockford			2	2
Thornton			1	1
Carpenter			2	2
Ionia			1	1
Rockwell			2	2
Kanawah			1	1
	DAYS TOTAL	36	43	79

Interstate Power Company, Lansing, Iowa - No. 67

The Lansing Generating Station of Interstate Power Company receives approximately 150,000 tons of coal annually by barge from Kellogg, Illinois. Barges are contracted through Midwest Towing. Using a crane with a three cubic yard bucket, the average barge (1,400 tons) can be unloaded in 12 hours.

Open storage for 80,000 tons of coal is available, with this to increase to 550,000 tons in 1975. With the new addition to the plant to be completed by 1977, an additional 850,000 tons of coal per year will be received. A siding with the Milwaukee Railroad is used only for bringing in new material for the addition to the plant. They are located two miles south of Lansing on a county road.

TERMINAL: Interstate Power Company

LOCATION: Lansing, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Coal				148,400		
TOTAL				148,400		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		7
APRIL		12
MAY		12
JUNE		0
JULY		14
AUGUST		25
SEPTEMBER		20
OCTOBER		14
NOVEMBER		2
DECEMBER		0
TOTAL		106

TOTALS - ST. PAUL DISTRICT - 1974

Below is a table illustrating the St. Paul District's total tonnage of grain, coal, petroleum, and other commodities originating or terminating in Iowa.

COMMODITIES (TONS)				Originate	Terminate	Total
Grain	Coal	Petroleum	Other			
701,400	148,400	0	0	701,400	148,400	849,800

Cargill, Inc., Council Bluffs, Iowa - No. 71

The terminal is located about one-half mile from I-29 on 37th Street. Corn and a small amount of soybeans and wheat are handled here. Grain is transported to the terminal by truck and rail (Union Pacific) from Iowa and Nebraska locations within a 90 mile radius of Council Bluffs and is shipped from the terminal by barge to Louisiana. On an average day 35 to 40 trucks are unloaded at the terminal. Barges are shipped out at the rate of 60 to 70 per year. Grain is stored at the terminal in concrete silos and steel tanks with a total capacity of 1,704,000 bushels. Barges are loaded by means of a conveyor system at the rate of 12,000 bushels per hour.

Peak periods tend to occur in the early spring and late fall and operations are relatively steady during the remainder of the year. Operations began at this facility in 1971, and since that time have grown approximately 100 percent. There are no definite plans to expand the facility.

TERMINAL: Cargill, Inc.

LOCATION: Council Bluffs, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Grain	76,700	95	5			
TOTAL	76,700					

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	
FEBRUARY	0	
MARCH	0	
APRIL	15	
MAY	12	
JUNE	10	
JULY	15	
AUGUST	9	
SEPTEMBER	2	
OCTOBER	6	
NOVEMBER	0	
DECEMBER	0	
TOTAL	69	

Farmland Industries, Council Bluffs, Iowa - No. 72

The terminal is located off I-29 near the interchange of I-29 and I-80.

Bulk fertilizer is received at the terminal by barge from Florida and Louisiana. The fertilizer is distributed by truck and rail (Union Pacific) to locations in western Iowa and eastern Nebraska. Trucks dispatched from the terminal during 1974 ranged from 29 in February to 72 in January and to 138 in March.

Fertilizer is stored in an A-frame wooden building with a capacity of 25,000 tons. A dragline and conveyor belt system is used to transfer fertilizer from barges to the storage area. It requires 12-16 hours to offload a 1,200-ton barge.

Seasonal variation fluctuates from year to year due to the variance in the supply of fertilizer each year.

This terminal is mainly used as a stockpile for periods of great demand and has not experienced a significant growth over the past years. There are no plans for expansion at this facility.

TERMINAL: Farmland Industries

LOCATION: Council Bluffs, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
FERTILIZER				22,800	75	25
TOTAL				22,800		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY		0
FEBRUARY		0
MARCH		0
APRIL		0
MAY		1
JUNE		0
JULY		6
AUGUST		8
SEPTEMBER		3
OCTOBER		1
NOVEMBER		0
DECEMBER		0
TOTAL		19

Pilus Transfer Point, Blencoe, Iowa - No. 73

Operation of this facility began in 1971. The Blencoe Co-op is generally the only shipper; however, in 1972 the National Farmers Organization loaded some barges, but have no ownership of the dock. Barges are loaded with 39,000 to 47,000 bushels of grain, with an average load of 42,000 bushels. It takes a minimum of 12 hours to load the barges directly from trucks using two augers. Once loaded, barges are shipped to New Orleans, Louisiana. The terminal operates from April 15 to October 15, with traffic too slow to have any seasonal variation.

The facility has had no real growth since opening, but would like to add storage facilities for fertilizer. Access is 2.5 miles west of I-29 at the Blencoe interchange.

TERMINAL: Pilus Transfer Point

LOCATION: Blencoe, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Grain	10,278	100				
TOTAL	10,278					

(Estimate)

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	0	0
APRIL	0	0
MAY	2	0
JUNE	2	0
JULY	2	0
AUGUST	3	0
SEPTEMBER	0	0
OCTOBER	0	0
NOVEMBER	0	0
DECEMBER	0	0
TOTAL	9	0

Jebro, Inc., Sioux City, Iowa - No. 77

Access to this facility is good -- off I-29 at Industrial Road Interchange and on Bridgeport Drive.

Four steel tanks with a capacity of 87,000 barrels are used for storing asphalt oil. The asphalt oil is shipped from Sugar Creek (Kansas City), Missouri, on the company's own barges. The barges are 2,000 ton capacity, but are loaded with only 1,000 tons due to the low channel. Once the oil is steamed to pumping consistency (48 hours) it takes approximately 12 hours to unload a barge with an eight inch pipe.

Initially, 10 barges were received when operations began in 1973. Seven barges were received in 1974, with none expected in 1975 due to a decrease in construction.

During 1974, 200 rail tank cars were brought in during the winter months. Barge shipping costs are estimated at \$4.40 per ton for tow boat and an additional \$2.00 per ton for handling and barge depreciation. Rail costs are estimated at \$11.50 per ton. The product is distributed by truck for the most part, within a 100 mile radius. Distribution to the north and south is limited due to terminals in Sioux Falls, South Dakota, and Omaha, Nebraska. Truck traffic varies from 0 to 18 trucks per day, with seven loads (150 tons) per day an average. Fifty percent of the trucks go to Nebraska, 40 percent to Iowa, and 10 percent to South Dakota.

TERMINAL: Jebro, Inc.

LOCATION: Sioux City, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Asphaltic oil				7,000	100	
TOTAL						

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	0	0
APRIL	0	1
MAY	0	1
JUNE	0	2
JULY	0	2
AUGUST	0	1
SEPTEMBER	0	0
OCTOBER	0	0
NOVEMBER	0	0
DECEMBER	0	0
TOTAL	0	7

Big Soo Terminal, Sioux City, Iowa - No. 78

The terminal is readily accessible approximately .5 mile from I-29 via the Industrial Area exit. The terminal is owned and operated by Terminal Grain Corp. of Sioux City. The terminal has facilities to handle almost every commodity that utilizes river transportation.

Storage facilities include three wooden A-frame buildings for 100,000 tons of dry fertilizer and salt, seven steel tanks for 6,000,000 gallons of liquids, six concrete silos for 250,000 bushels of grain, and over 30,000 square feet for miscellaneous materials. Handling facilities include a crane with a clamshell bucket, conveyor belts, and a six inch pipe for liquids. Plans are to add storage for an additional 20,000 tons of fertilizer in the next two years.

Approximately 95 percent of the barges are contracted from a tow company, with five percent owned by the customer.

The navigational period is approximately eight months a year (March to December) with the spring and fall months peak periods and summer months normal. The terminal's growth has been steady over the last few years, with 1974 showing the largest increase of 30 percent.

All grain is trucked to the terminal for outbound shipment, while only 70 percent of the inbound merchandise is trucked out. The remaining 30 percent is shipped by the Chicago & North Western Railway Company.

Listed below are commodities handled at the facility and their origin or destination:

Inbound

<u>Commodity</u>	<u>Origin</u>
Dry fertilizer	50% Florida, 50% Louisiana
Dry bulk salt	Belle Isle, Louisiana
Petroleum pitch	Venezuela
Molasses	South America
Newsprint	Calhoun, Tennessee
Roll steel	Cincinnati, Ohio
Steel pipe	Birmingham, Alabama
Slag	Mobile, Alabama
Binder twine	Gulf
Rock	Arkansas

Outbound

<u>Commodity</u>	<u>Destination</u>
Grain	New Orleans, Louisiana
Soybean meal	New Orleans, Louisiana
Tallow	Memphis, Tennessee
Soybean oil	New Orleans, Louisiana

Detailed information on origins and destinations of the truck trips to and from the terminal was not available; however, most commodities are trucked to or from locations in Iowa, Minnesota, South Dakota, and Nebraska within a 200 mile radius of the terminal. The table below illustrates the approximate annual number of trucks by commodity:

Grain	3,400	Dry Fertilizer	6,980
Soybean Meal	3,300	Molasses	1,200
Soybean Oil	80	Salt	1,600
Tallow	910	Newsprint	50

TERMINAL: Big Soo Terminal

LOCATION: Sioux City, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
GRAIN	51,800	100				
SALT				42,000	70	30
FERTILIZER				63,000	70	30
NEWSPRINT				1,000	70	30
TOTAL	Cont. on next page			Cont. on next page		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	0	1
APRIL	20	15
MAY	15	10
JUNE	22	17
JULY	16	14
AUGUST	7	15
SEPTEMBER	10	16
OCTOBER	14	16
NOVEMBER	13	7
DECEMBER	0	0
TOTAL	117	111

TERMINAL: Big Soo Terminal

LOCATION: Sioux City, Iowa

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
SOYBEAN MEAL	68,000	100				
TALLOW	7,500	100				
SOYBEAN OIL	1,000	100				
PETROLEUM PITCH MOLASSES				1,000 12,000	70 70	30 30
TOTAL	128,300			119,000		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	See Previous	Sheet
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
TOTAL		

Nutra Flo Chemical Company and Industrial Molasses, Sioux City,
Iowa - No. 79

Nutra Flo Chemical Company and Industrial Molasses share the use of this terminal.

The storage capacity for industrial molasses is 25,000 tons. The molasses is pumped from barges through an eight inch pipe (after heating) into the storage tank in approximately 24 hours. It takes two to three weeks for a 1,000 ton barge to arrive from Port Allen, Louisiana.

Tallow is received from Liberty, Flavorland, Pacific Molasses, and other plants from the surrounding area, and then shipped to the Gulf. It takes approximately four to six hours to load a 1,000 ton barge. Barges are chartered through Sioux City - New Orleans, Twin Cities, and Port City barge lines.

All of the products are distributed from the terminal to locations within a 100 to 150 mile radius.

The terminal has storage for 6,000,000 gallons of fertilizer, which has for the past two years been shipped in by the Chicago & North Western Railway Company.

The volume of business has not increased in the last five to ten years, and no future expansions are planned.

Access is off I-29 via a local city street.

TERMINAL: Industrial Molasses and Nutra Flo Chemical Company

LOCATION: Sioux City

COMMODITY FLOW

YEAR 1974

COMMODITY	TONS SHIPPED OUT BY BARGE	% SHIPPED IN BY		TONS RECEIVED BY BARGE	% SHIPPED OUT BY	
		TRUCK	RAIL		TRUCK	RAIL
Tallow	10,788	100				
Industrial Molasses				13,186	90	10
TOTAL	10,788			13,186		

MONTHLY BARGE MOVEMENTS

YEAR 1974

MONTH	BARGES SHIPPED	BARGES RECEIVED
JANUARY	0	0
FEBRUARY	0	0
MARCH	0	1
APRIL	3	1
MAY	3	0
JUNE	1	1
JULY	0	2
AUGUST	1	1
SEPTEMBER	0	2
OCTOBER	1	4
NOVEMBER	2	0
DECEMBER	0	0
TOTAL	11	12

Farmland Industries, Sioux City, Iowa - No. 74

Access is about three miles from I-29 by asphalt road. Soybean meal and soybean oil will be shipped out from this newly constructed facility. It is anticipated production will have begun by or about August 18, 1975. Barge traffic is not expected to begin until next year.

There are storage facilities for 3,250,000 bushels of soybeans and 3,200 tons (two days' production) of soybean meal.

A conveyor will load meal from the plant to the barge. Oil will be loaded through a six inch pipe.

Operations are from mid-March to late October with business steady throughout the year. Approximately 144 barges of meal, and 80 of oil are expected to be shipped to New Orleans, Louisiana for export.

Farmland expects to produce 544,000 tons of meal per year, which will be distributed in the following way (estimated):

- 54,400 tons customer pickup;
- 148,500 tons out by barge;
- 102,000 tons out by rail (eight cars per day);
- 238,000 tons out by truck (28 per day during the barge season; 60 per day when river is closed).

Beans will come in all year, with the heaviest months being September, October, and November. The terminal has facilities to handle 400 to 500 truck-tractor semi-trailers per day. An anticipated 20 to 22 million bushels of soybeans per year will be crushed

for meal and oil. The area of distribution to the terminal will cover an area within a 100 mile radius of the terminal.

Truck-tractor semi-trailers will carry meal and oil to Iowa, Nebraska, Minnesota, North Dakota, and South Dakota, and occasionally to Missouri, Colorado, and Utah.

Non-Operational Docks in the Omaha District

A number of commercial docks listed with the Army Corps of Engineers are either no longer in operation or have not yet been constructed. The organizations listed below as "non-operating" have operated dock facilities in the past but no longer ship and receive commodities by barge at this time. The organizations listed as "not completed" have submitted applications to the Army Corps of Engineers to ship and receive commodities by barge but have not yet begun the actual construction of dock facilities.

<u>Miles Above</u> <u>Mouth of Mo. River</u>	<u>Non-Operating</u>	<u>Identification</u> <u>Number</u>
614.1	Terminal Packaging Corp., Council Bluffs	70
716.6	Borden Chemical Co., Sioux City	75
718.7	Terra Chemicals International, Sioux City	76
731.4	Municipal Dock, Sioux City	80
731.7	L. G. Everist, Sioux City	81
	<u>Not Completed</u>	
554.3	Cargill, Hamburg	68
587.4	No name, Pacific Junction	69

TOTALS - OMAHA DISTRICT - 1974

Below is a table illustrating the Omaha District's total tonnage of grain, coal, petroleum, and other commodities originating or terminating in Iowa.

COMMODITIES (TONS)				Originate	Terminate	Total
Grain	Coal	Petroleum	Other			
207,778	0	8,000	172,274	226,066	161,986	388,052

TOTALS - ALL DISTRICTS - 1974

Below is a table illustrating the Rock Island, Omaha, and St. Paul Districts' total tonnage of grain, coal, petroleum, and other commodities originating or terminating in Iowa.

COMMODITIES (TONS)				Originate	Terminate	Total
Grain	Coal	Petroleum	Other			
4,422,662	1,113,889	1,153,963	2,723,042	4,672,211	4,741,345	9,413,556

APPENDIX I
COMMERCIAL DOCK
LOCATION MAPS



IOWA COMMERCIAL DOCK LOCATIONS

- OPERATIONAL
- NON-OPERATIONAL . . .
- UNDER CONSTRUCTION

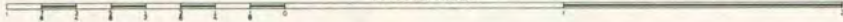
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- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD

- LEGEND**
- LEVEE
 - BANK PROTECTION
 - COMMERCIAL DOCK
 - RECREATIONAL SITE
 - RECREATIONAL SITE WITH RAMP
 - COMMERCIAL RECREATIONAL SITE
 - HISTORIC SITE
 - SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - PRIVATE NAVIGATION LIGHT

- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT-DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES





IOWA COMMERCIAL DOCK LOCATIONS

- OPERATIONAL
- NON-OPERATIONAL
- UNDER CONSTRUCTION

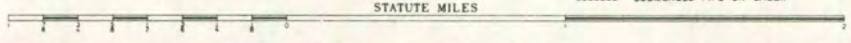
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- STATE HIGHWAY
- COUNTY ROAD

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- LEVEE
 - BANK PROTECTION
 - AERIAL CABLE CROSSING
 - COMMERCIAL DOCK
 - RECREATIONAL SITE
 - RECREATIONAL SITE WITH RAMP
 - COMMERCIAL RECREATIONAL SITE
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 - SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - PRIVATE NAVIGATION LIGHT

- RIVER GAGE
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- GOVERNMENT DAYMARK
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- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

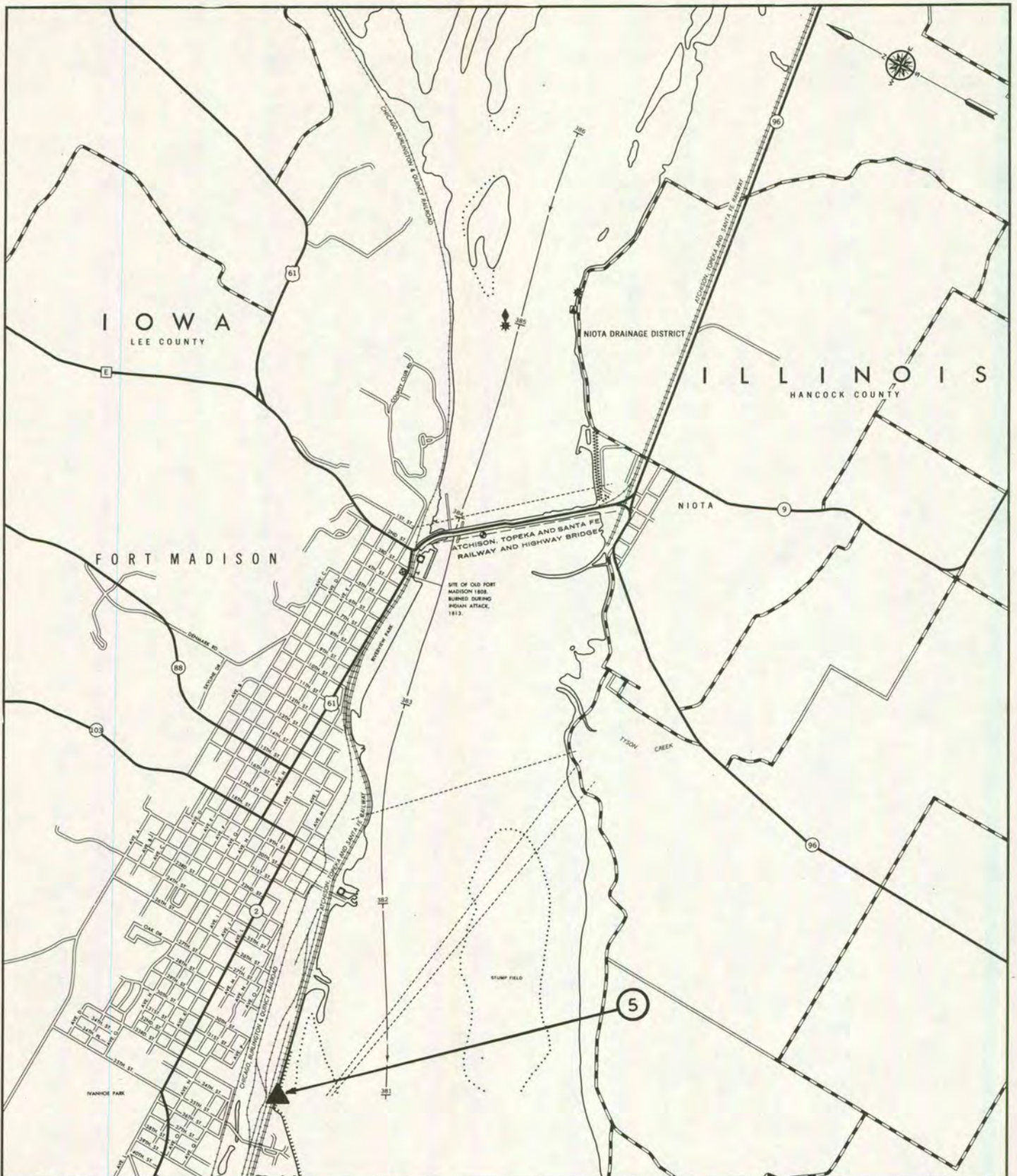
* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES



TO IOWA

20



IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL

NON-OPERATIONAL

UNDER CONSTRUCTION

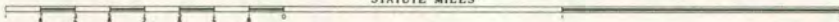
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- ▬ WING DAM
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- STATE HIGHWAY
- COUNTY ROAD

- LEGEND**
- ▬ LEVEE
 - ▬ BANK PROTECTION
 - ▬ AERIAL CABLE CROSSING
 - ▬ COMMERCIAL DOCK
 - ▬ RECREATIONAL SITE
 - ▬ RECREATIONAL SITE WITH RAMP
 - ▬ COMMERCIAL RECREATIONAL SITE
 - ▬ HISTORIC SITE
 - ▬ SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - ▬ PRIVATE NAVIGATION LIGHT

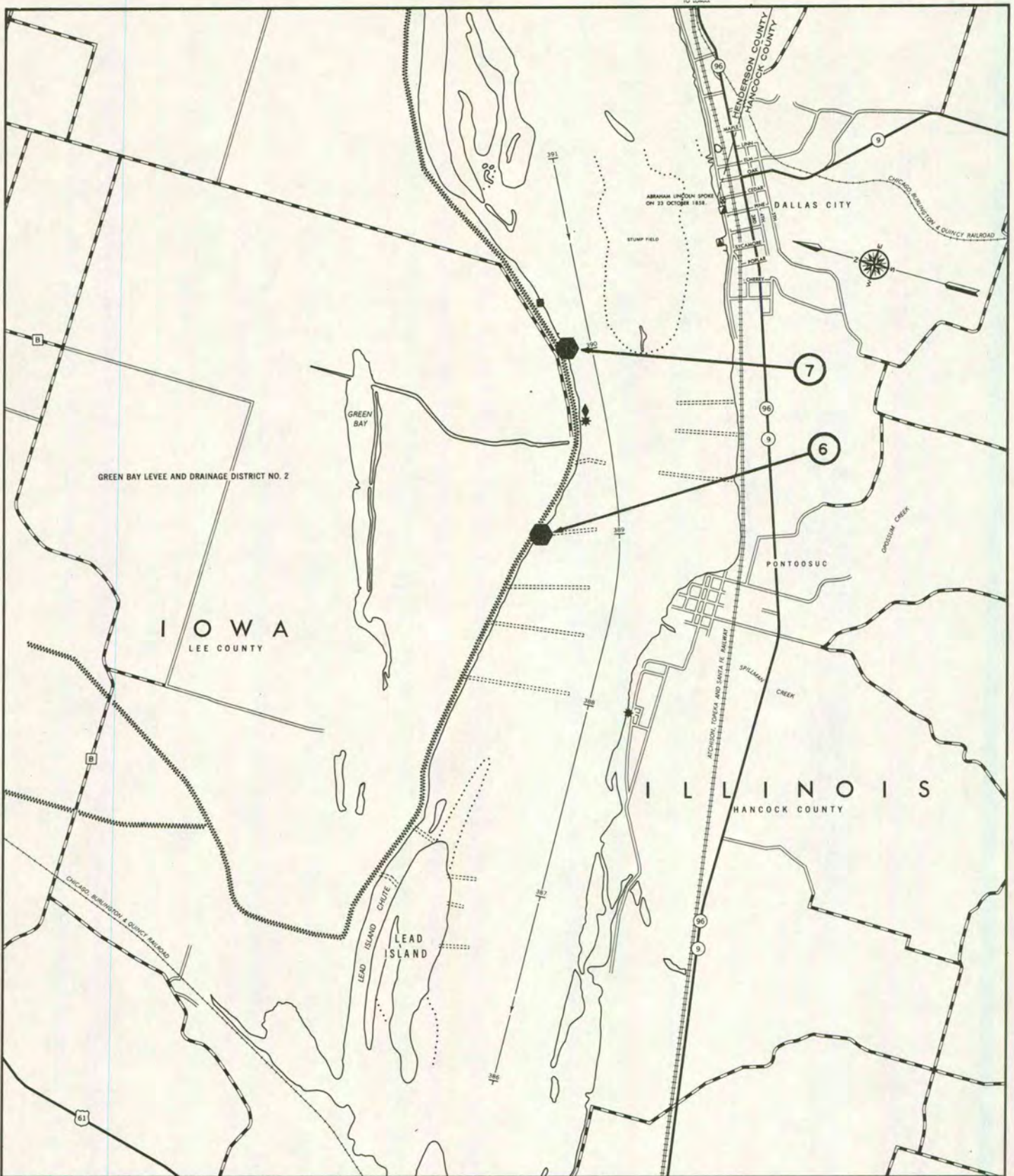
- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT-DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
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- ▬ CURRENT
- ▬ SUBMERGED WING DAM
- ▬ SUBMERGED BANK PROTECTION
- ▬ SUBMERGED FEATURE
- ▬ SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA




STATUTE MILES



W



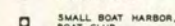
IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL 
 NON-OPERATIONAL 
 UNDER CONSTRUCTION 

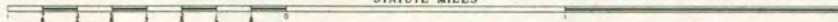
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-  GRAVEL ROAD
-  UNIMPROVED ROAD
-  FEDERAL HIGHWAY
-  STATE HIGHWAY
-  COUNTY ROAD

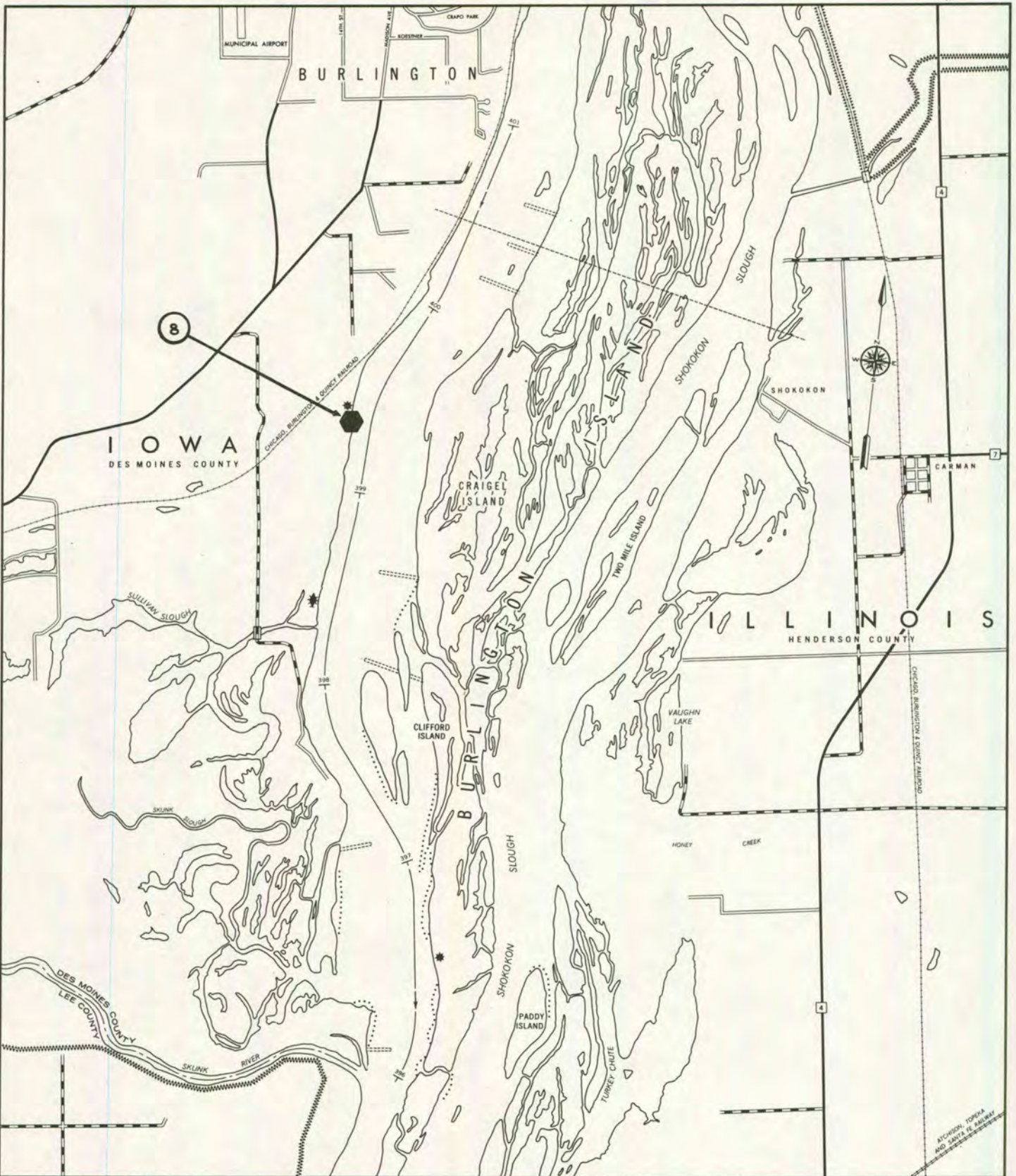
* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM: THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

LEGEND

-  LEVEE
-  BANK PROTECTION
-  AERIAL CABLE CROSSING
-  COMMERCIAL DOCK
-  RECREATIONAL SITE
-  RECREATIONAL SITE WITH RAMP
-  COMMERCIAL RECREATIONAL SITE
-  HISTORIC SITE
-  SMALL BOAT HARBOR, MARINA, BOAT CLUB
-  PRIVATE NAVIGATION LIGHT
-  RIVER GAGE
-  GOVERNMENT LIGHT
-  GOVERNMENT DAYMARK
-  GOVERNMENT LIGHT-DAYMARK
-  GOVERNMENT LIGHTED BUOY
-  MOORINGS
-  MILEAGE ABOVE OHIO RIVER
-  MIDCHANNEL SAILING LINE
-  CURRENT
-  SUBMERGED WING DAM
-  SUBMERGED BANK PROTECTION
-  SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

STATUTE MILES





IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL

NON-OPERATIONAL

UNDER CONSTRUCTION

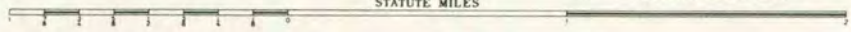
- GOVERNMENT PROPERTY
- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD

- LEGEND**
- LEVEE
 - BANK PROTECTION
 - AERIAL CABLE CROSSING
 - COMMERCIAL DOCK
 - RECREATIONAL SITE
 - RECREATIONAL SITE WITH RAMP
 - COMMERCIAL RECREATIONAL SITE
 - HISTORIC SITE
 - SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - PRIVATE NAVIGATION LIGHT

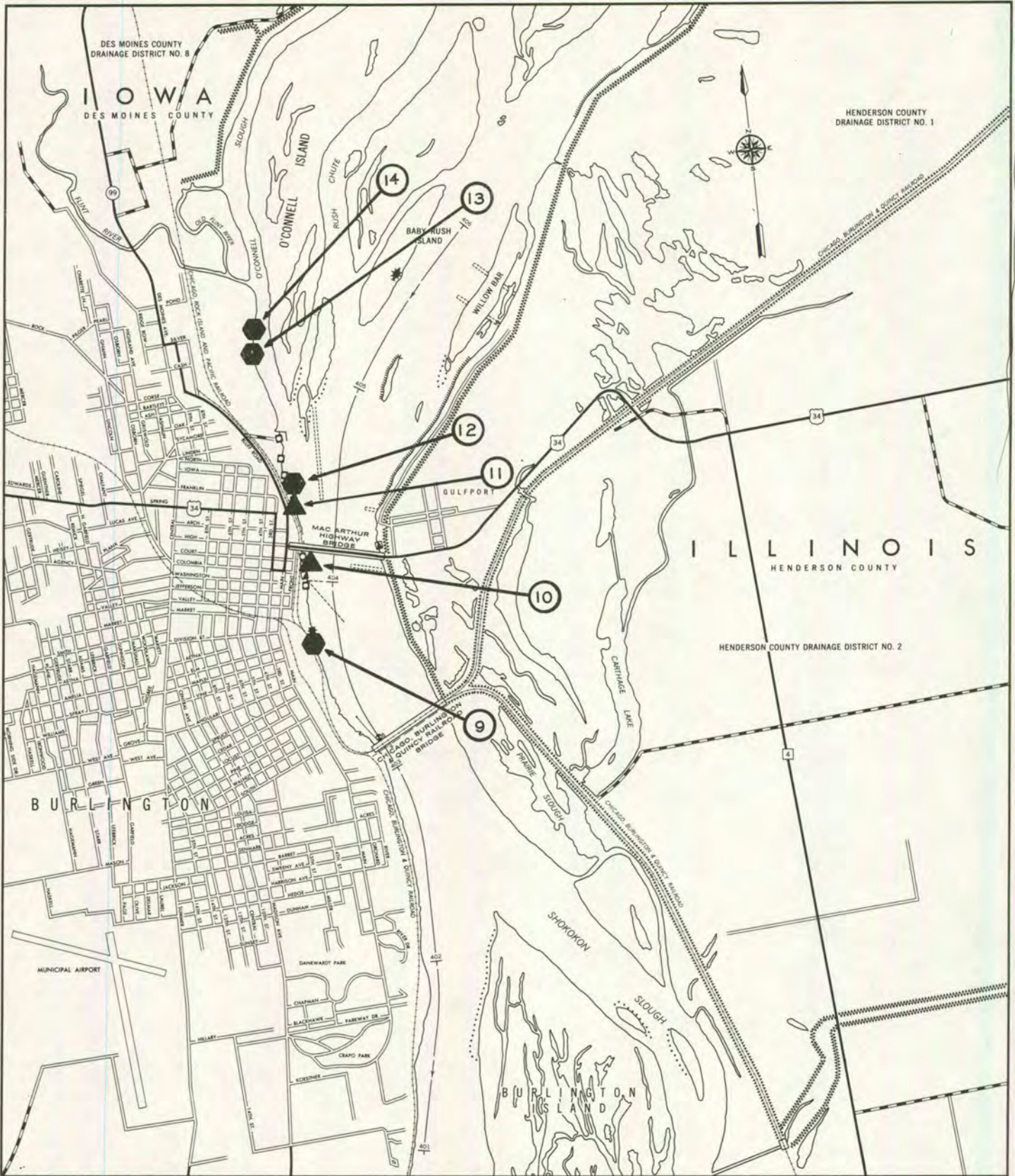
- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT - DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES



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IOWA COMMERCIAL DOCK LOCATIONS

- OPERATIONAL**
- NON-OPERATIONAL**
- UNDER CONSTRUCTION**

- GOVERNMENT PROPERTY
- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD

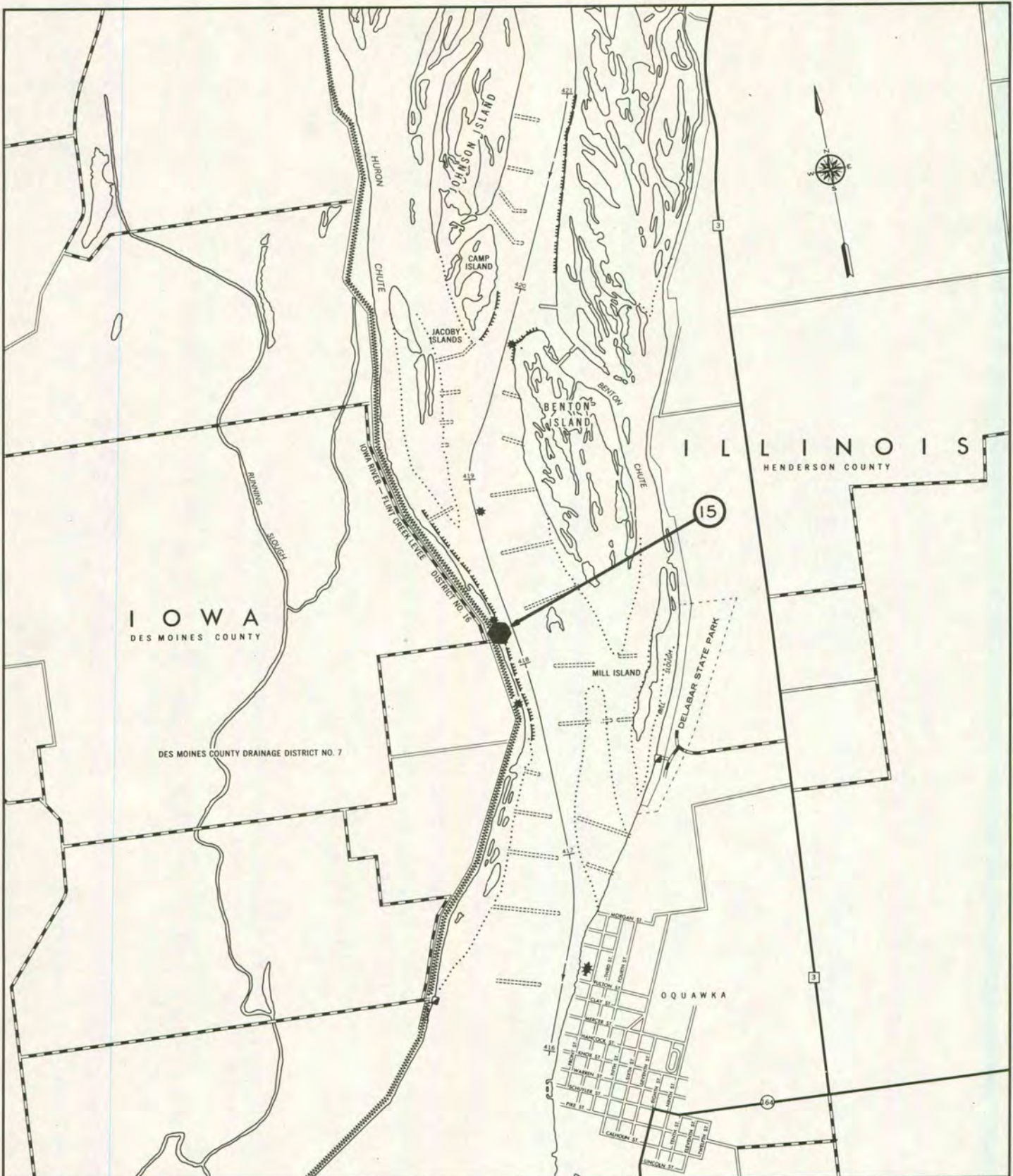
- LEGEND**
- LEVEE
 - BANK PROTECTION
 - AERIAL CABLE CROSSING
 - COMMERCIAL DOCK
 - RECREATIONAL SITE
 - RECREATIONAL SITE WITH RAMP
 - COMMERCIAL RECREATIONAL SITE
 - HISTORIC SITE
 - SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - PRIVATE NAVIGATION LIGHT

- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT - DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE




*RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA



6



IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL 
 NON-OPERATIONAL 
 UNDER CONSTRUCTION 

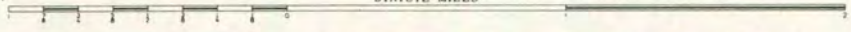
-  GOVERNMENT PROPERTY
-  WILDLIFE SANCTUARY*
-  WING DAM
-  PAVED ROAD
-  GRAVEL ROAD
-  UNIMPROVED ROAD
-  FEDERAL HIGHWAY
-  STATE HIGHWAY
-  COUNTY ROAD

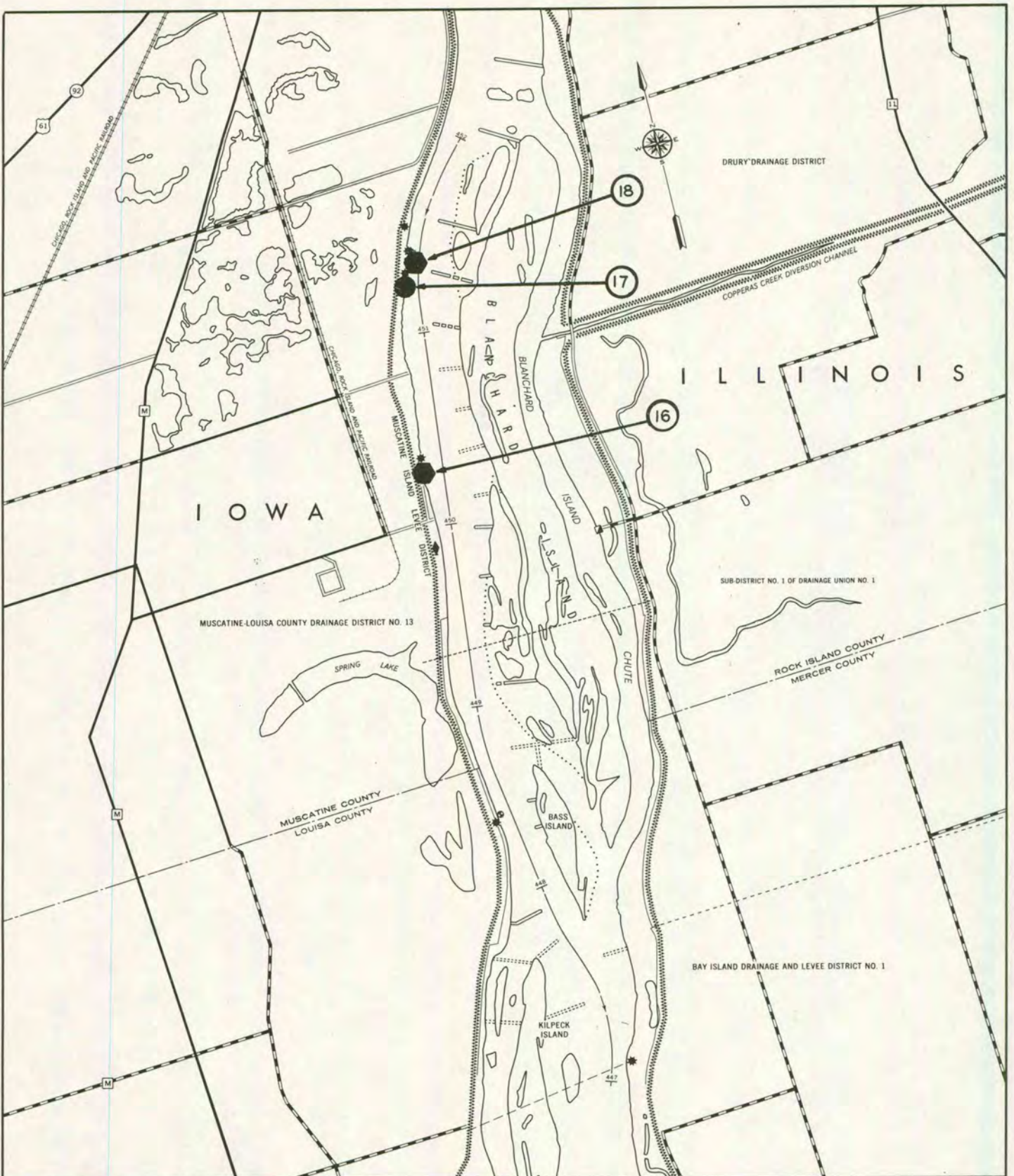
- LEGEND**
-  LEVEE
 -  BANK PROTECTION
 -  AERIAL CABLE CROSSING
 -  COMMERCIAL DOCK
 -  RECREATIONAL SITE
 -  RECREATIONAL SITE WITH RAMP
 -  COMMERCIAL RECREATIONAL SITE
 -  HISTORIC SITE
 -  SMALL BOAT HARBOR, MARINA, BOAT CLUB
 -  PRIVATE NAVIGATION LIGHT

-  RIVER GAGE
-  GOVERNMENT LIGHT
-  GOVERNMENT DAYMARK
-  GOVERNMENT LIGHT-DAYMARK
-  GOVERNMENT LIGHTED BUOY
-  MOORINGS
-  MILEAGE ABOVE OHIO RIVER
-  MIDCHANNEL SAILING LINE
-  CURRENT
-  SUBMERGED WING DAM
-  SUBMERGED BANK PROTECTION
-  SUBMERGED FEATURE
-  SUBMERGED PIPE OR CABLE




* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES





IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL 
 NON-OPERATIONAL ... 
 UNDER CONSTRUCTION 

-  GOVERNMENT PROPERTY
-  WILDLIFE SANCTUARY*
-  WING DAM
-  PAVED ROAD
-  GRAVEL ROAD
-  UNIMPROVED ROAD
-  FEDERAL HIGHWAY
-  STATE HIGHWAY
-  COUNTY ROAD

- LEGEND**
-  LEVEE
 -  BANK PROTECTION
 -  AERIAL CABLE CROSSING
 -  COMMERCIAL DOCK
 -  RECREATIONAL SITE
 -  RECREATIONAL SITE WITH RAMP
 -  COMMERCIAL RECREATIONAL SITE
 -  HISTORIC SITE
 -  SMALL BOAT HARBOR, MARINA, BOAT CLUB
 -  PRIVATE NAVIGATION LIGHT

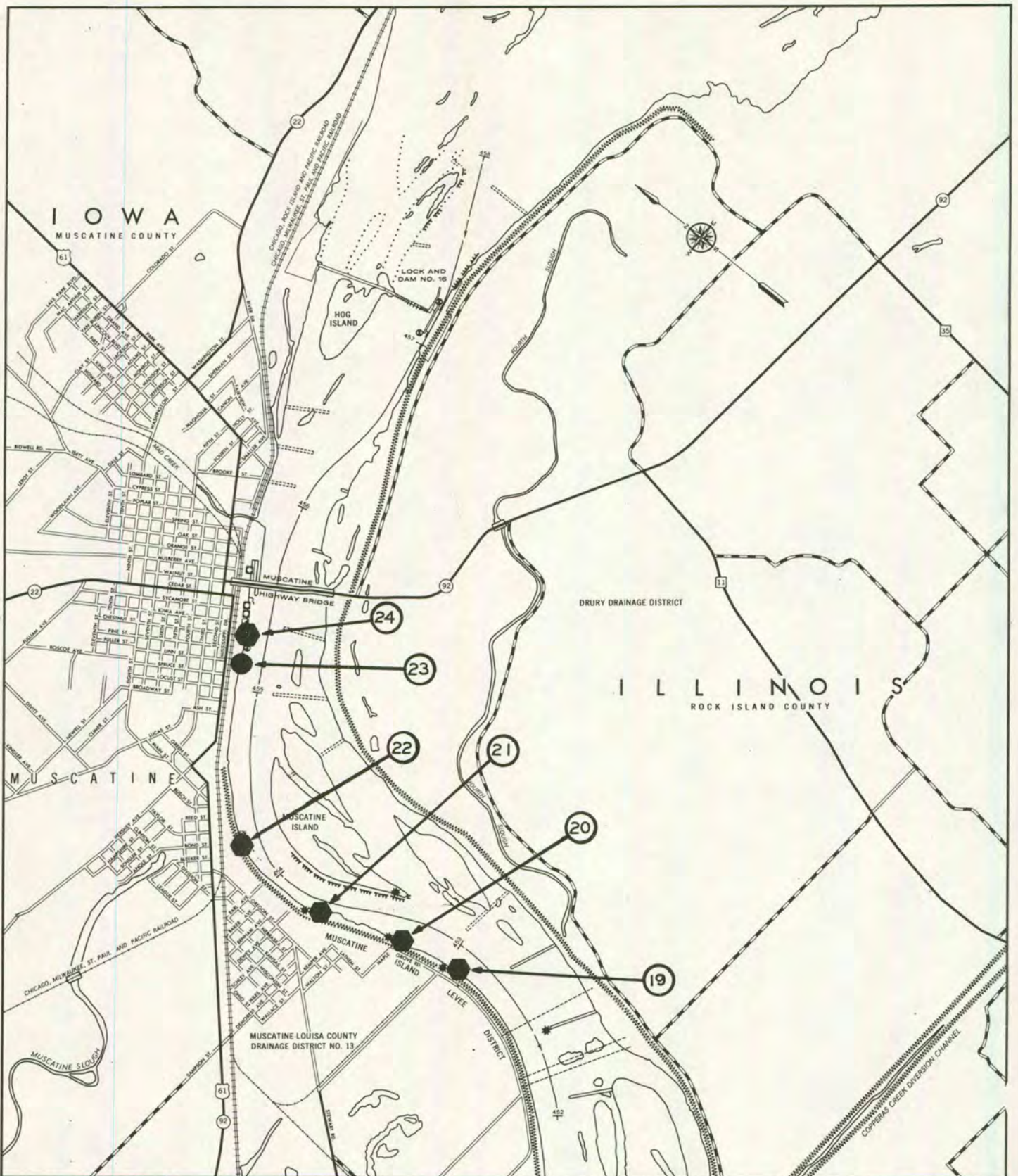
-  RIVER GAGE
-  GOVERNMENT LIGHT
-  GOVERNMENT DAYMARK
-  GOVERNMENT LIGHT-DAYMARK
-  GOVERNMENT LIGHTED BUOY
-  MOORINGS
-  MILEAGE ABOVE OHIO RIVER
-  MIDCHANNEL SAILING LINE
-  CURRENT
-  SUBMERGED WING DAM
-  SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHING AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES



2



IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL

NON-OPERATIONAL

UNDER CONSTRUCTION

- GOVERNMENT PROPERTY
- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD

LEGEND

- LEVEE
- BANK PROTECTION
- AERIAL CABLE CROSSING
- COMMERCIAL DOCK
- RECREATIONAL SITE
- RECREATIONAL SITE WITH RAMP
- COMMERCIAL RECREATIONAL SITE
- HISTORIC SITE
- SMALL BOAT HARBOR, MARINA, BOAT CLUB
- PRIVATE NAVIGATION LIGHT

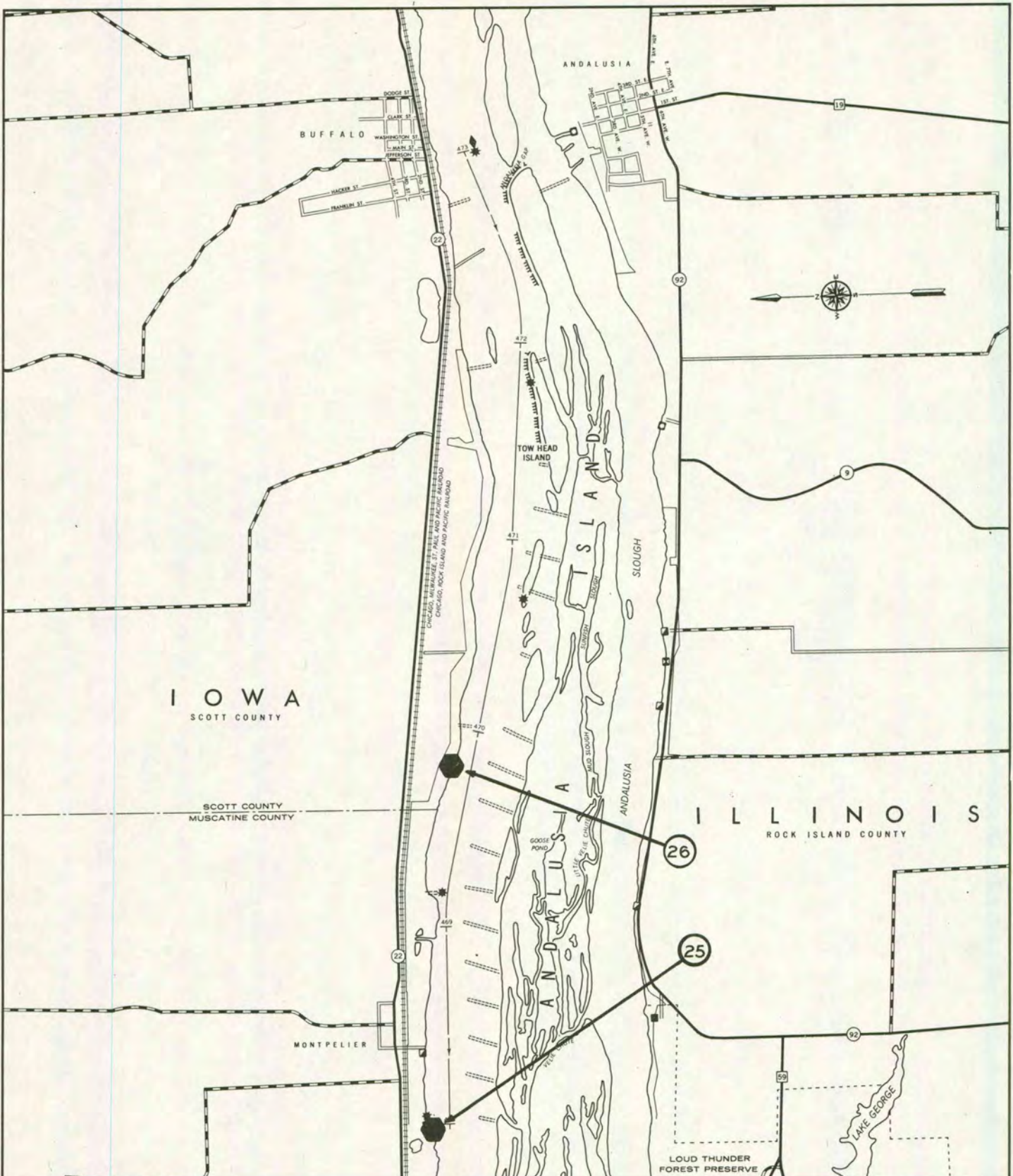
- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT-DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO FEASIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES



9



IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL

NON-OPERATIONAL

UNDER CONSTRUCTION

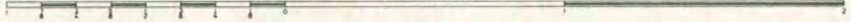
- GOVERNMENT PROPERTY
- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD

- LEGEND**
- LEVEE
 - BANK PROTECTION
 - AERIAL CABLE CROSSING
 - COMMERCIAL DOCK
 - RECREATIONAL SITE
 - RECREATIONAL SITE WITH RAMP
 - COMMERCIAL RECREATIONAL SITE
 - HISTORIC SITE
 - SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - PRIVATE NAVIGATION LIGHT

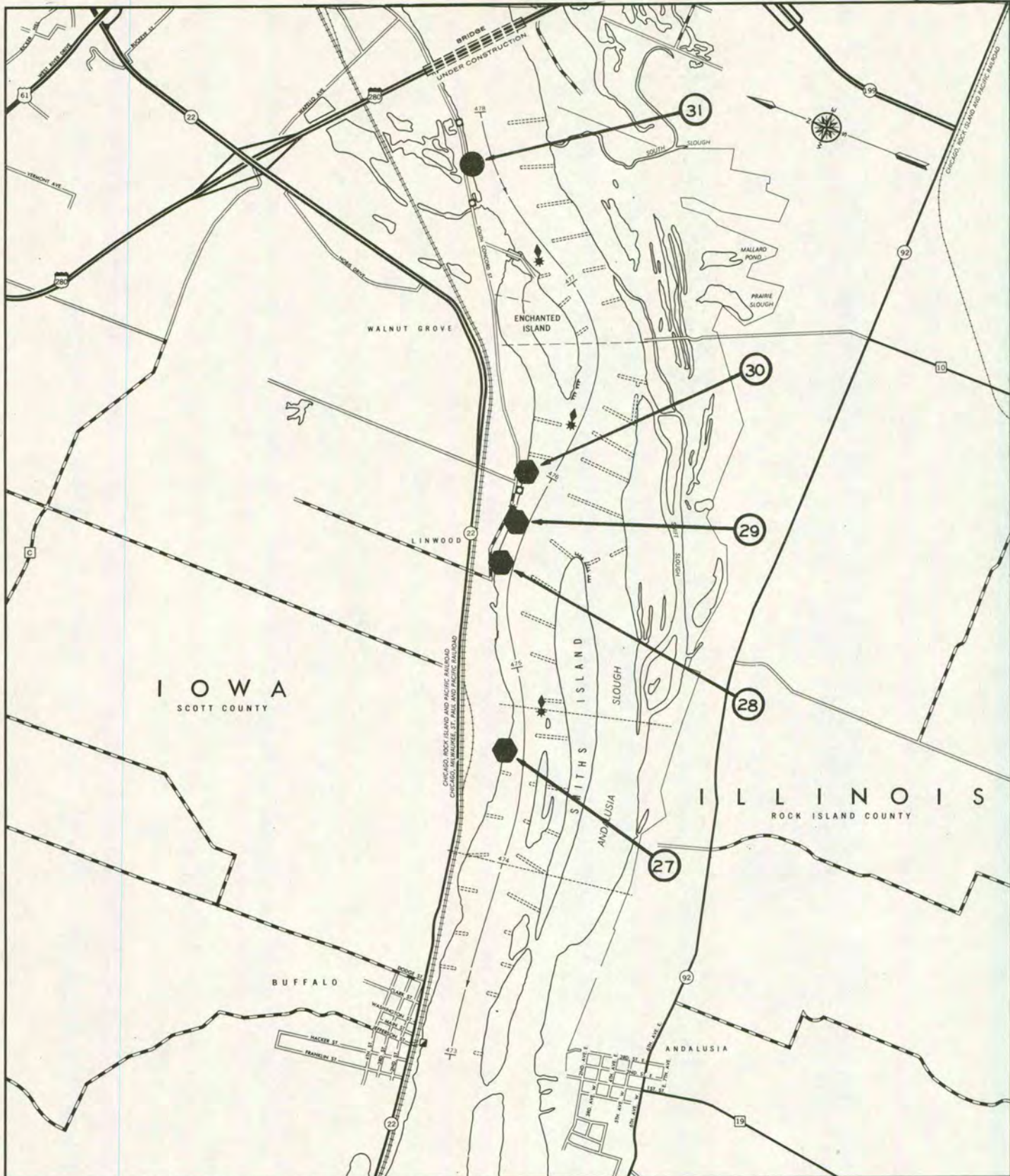
- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT-DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHES AND WILDLIFE, MINNEAPOLIS, MINNESOTA




STATUTE MILES



10



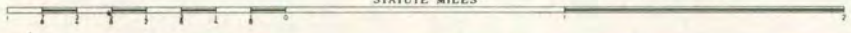
IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL 
NON-OPERATIONAL ... 
UNDER CONSTRUCTION 

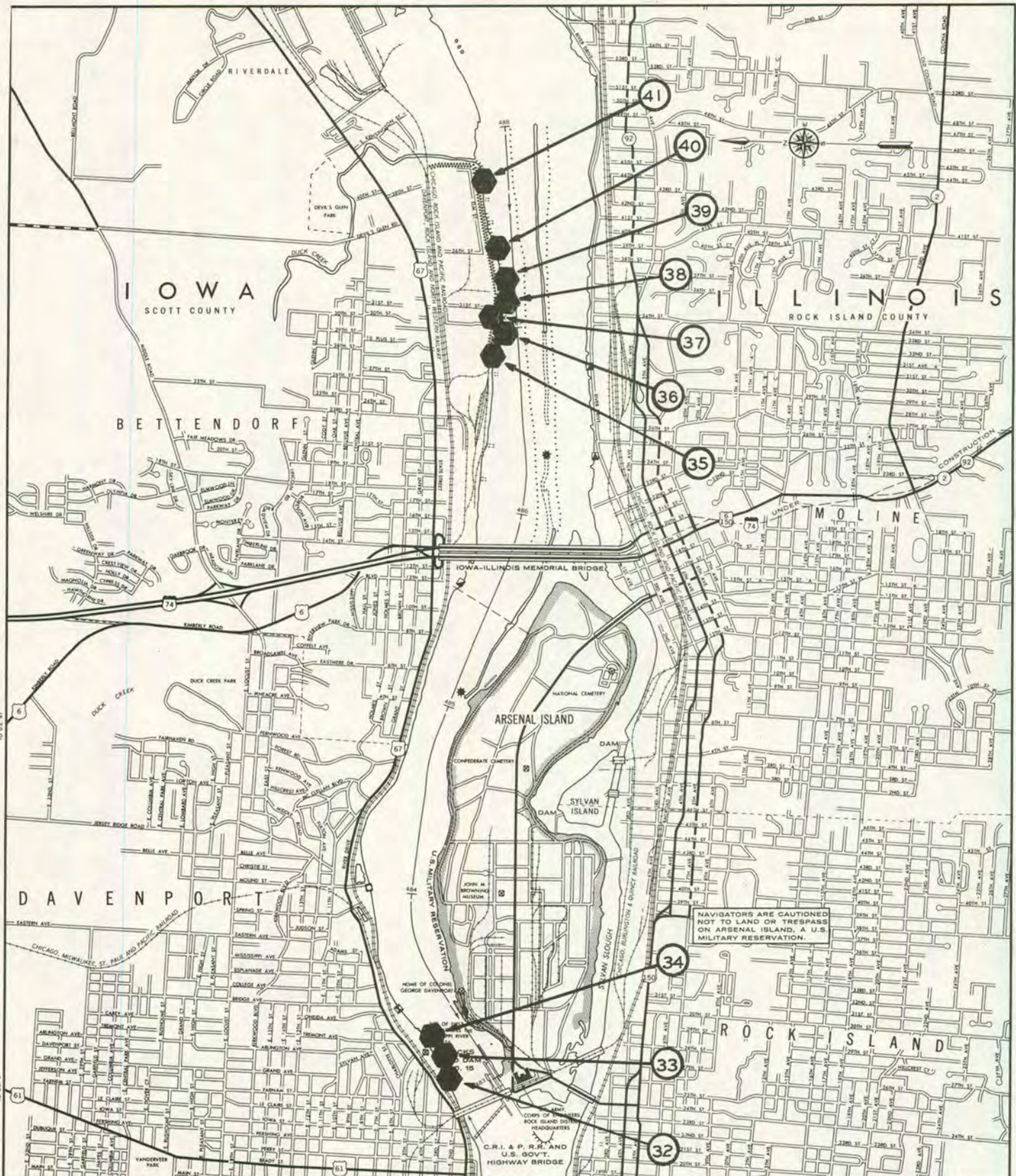
LEGEND					
	GOVERNMENT PROPERTY		LEVEE		RIVER GAGE
	WILDLIFE SANCTUARY*		BANK PROTECTION		GOVERNMENT LIGHT
	WING DAM		AERIAL CABLE CROSSING		GOVERNMENT DAYMARK
	PAVED ROAD		COMMERCIAL DOCK		GOVERNMENT LIGHT-DAYMARK
	GRAVEL ROAD		RECREATIONAL SITE		GOVERNMENT LIGHTED BUOY
	UNIMPROVED ROAD		RECREATIONAL SITE WITH RAMP		MOORINGS
	FEDERAL HIGHWAY		COMMERCIAL RECREATIONAL SITE		MILEAGE ABOVE OHIO RIVER
	STATE HIGHWAY		HISTORIC SITE		MIDCHANNEL SAILING LINE
	COUNTY ROAD		SMALL BOAT HARBOR, MARINA, BOAT CLUB		CURRENT
			PRIVATE NAVIGATION LIGHT		SUBMERGED WING DAM

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES



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IOWA COMMERCIAL DOCK LOCATIONS

- OPERATIONAL
- NON-OPERATIONAL . . .
- UNDER CONSTRUCTION

- GOVERNMENT PROPERTY
- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD

- LEGEND**
- LEVEE
 - BANK PROTECTION
 - AERIAL CABLE CROSSING
 - COMMERCIAL DOCK
 - RECREATIONAL SITE
 - RECREATIONAL SITE WITH RAMP
 - COMMERCIAL RECREATIONAL SITE
 - HISTORIC SITE
 - SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - PRIVATE NAVIGATION LIGHT

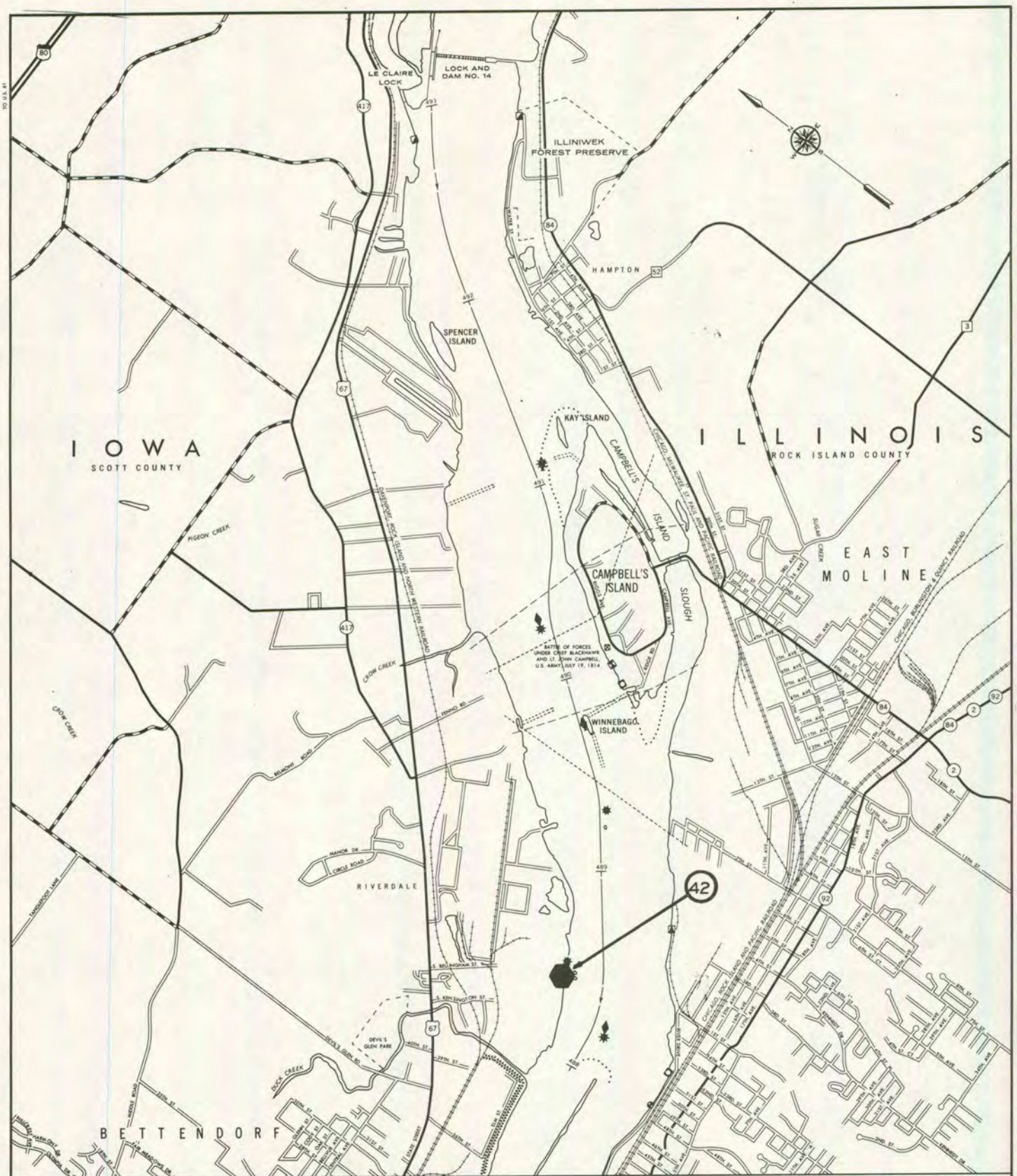
- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT-DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES

NAVIGATORS ARE CAUTIONED NOT TO LAND OR TRESPASS ON ARSENAL ISLAND, A U.S. MILITARY RESERVATION.

12



IOWA COMMERCIAL DOCK LOCATIONS

- OPERATIONAL
- NON-OPERATIONAL ..
- UNDER CONSTRUCTION

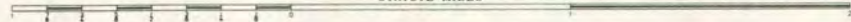
- GOVERNMENT PROPERTY
- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD

- LEGEND**
- LEVEE
 - BANK PROTECTION
 - AERIAL CABLE CROSSING
 - COMMERCIAL DOCK
 - RECREATIONAL SITE
 - RECREATIONAL SITE WITH RAMP
 - COMMERCIAL RECREATIONAL SITE
 - HISTORIC SITE
 - SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - PRIVATE NAVIGATION LIGHT

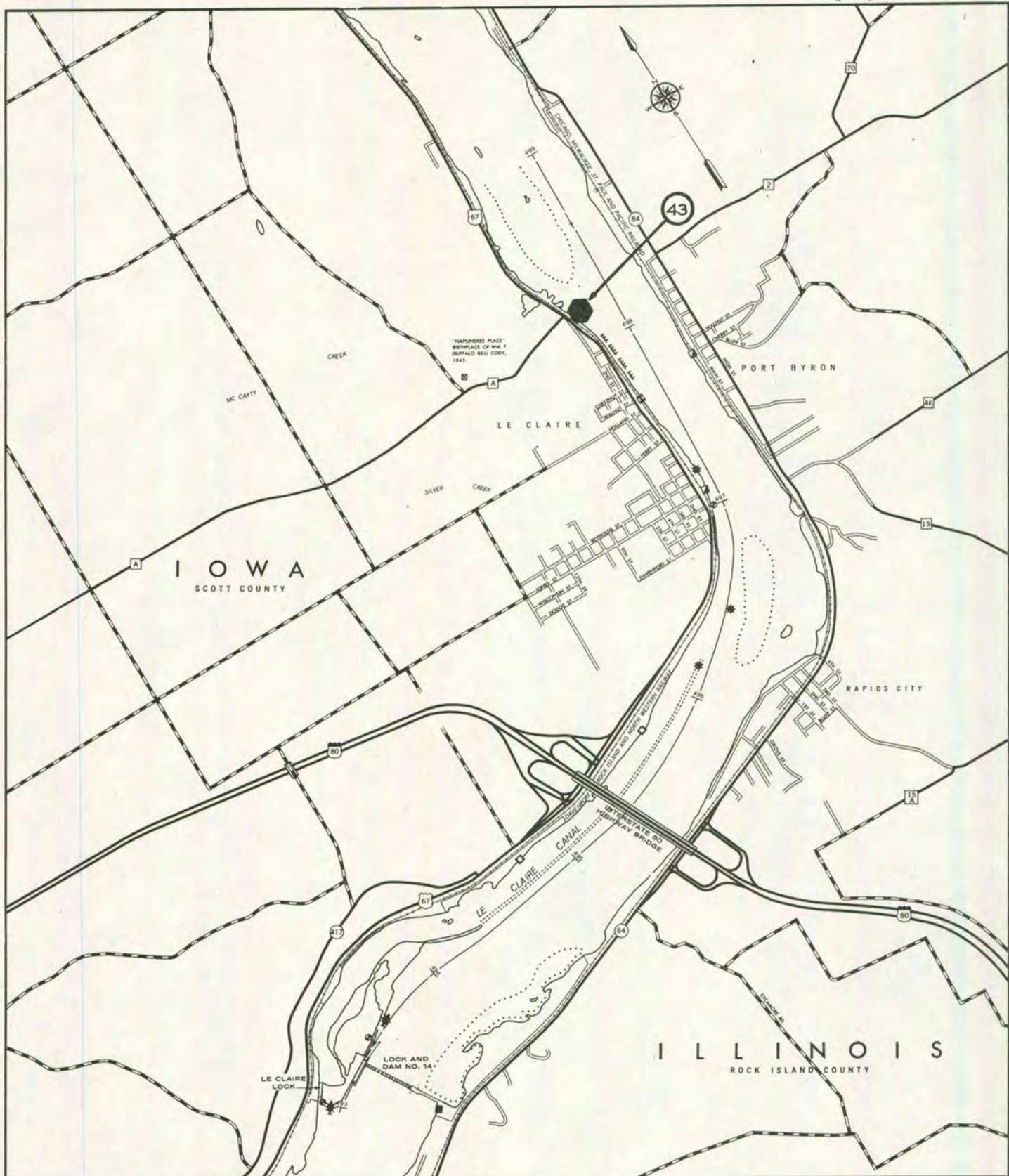
- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT-DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, WINNEBAGO, MINNESOTA




STATUTE MILES



37



IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL 
NON-OPERATIONAL 
UNDER CONSTRUCTION 

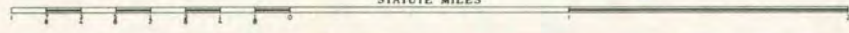
-  GOVERNMENT PROPERTY
-  WILDLIFE SANCTUARY*
-  WING DAM
-  PAVED ROAD
-  GRAVEL ROAD
-  UNIMPROVED ROAD
-  FEDERAL HIGHWAY
-  STATE HIGHWAY
-  COUNTY ROAD

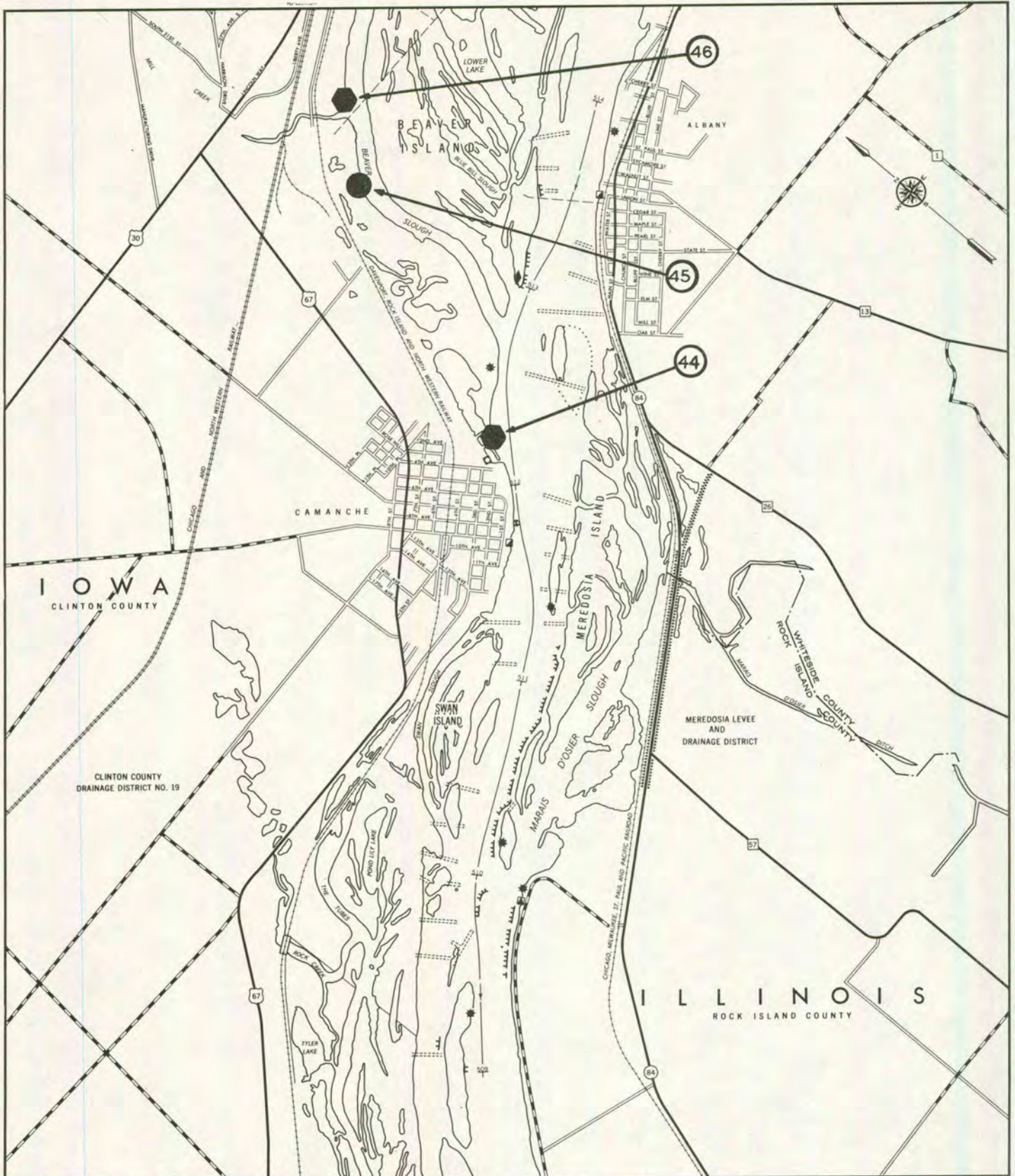
- LEGEND**
-  LEVEE
 -  BANK PROTECTION
 -  AERIAL CABLE CROSSING
 -  COMMERCIAL DOCK
 -  RECREATIONAL SITE
 -  RECREATIONAL SITE WITH RAMP
 -  COMMERCIAL RECREATIONAL SITE
 -  HISTORIC SITE
 -  SMALL BOAT HARBOR, MARINA, BOAT CLUB
 -  PRIVATE NAVIGATION LIGHT

-  RIVER GAGE
-  GOVERNMENT LIGHT
-  GOVERNMENT DAYMARK
-  GOVERNMENT LIGHT-DAYMARK
-  GOVERNMENT LIGHTED BUOY
-  MOORINGS
-  MILEAGE ABOVE OHIO RIVER
-  MIDCHANNEL SAILING LINE
-  CURRENT
-  SUBMERGED WING DAM
-  SUBMERGED BANK PROTECTION
-  SUBMERGED FEATURE
-  SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, WINNEBAGO, WISCONSIN.

STATUTE MILES





IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL

NON-OPERATIONAL

UNDER CONSTRUCTION

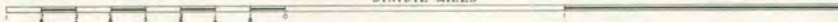
- GOVERNMENT PROPERTY
- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
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- COUNTY ROAD

- LEGEND**
- LEVEE
 - BANK PROTECTION
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 - COMMERCIAL DOCK
 - RECREATIONAL SITE
 - RECREATIONAL SITE WITH RAMP
 - COMMERCIAL RECREATIONAL SITE
 - HISTORIC SITE
 - SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - PRIVATE NAVIGATION LIGHT

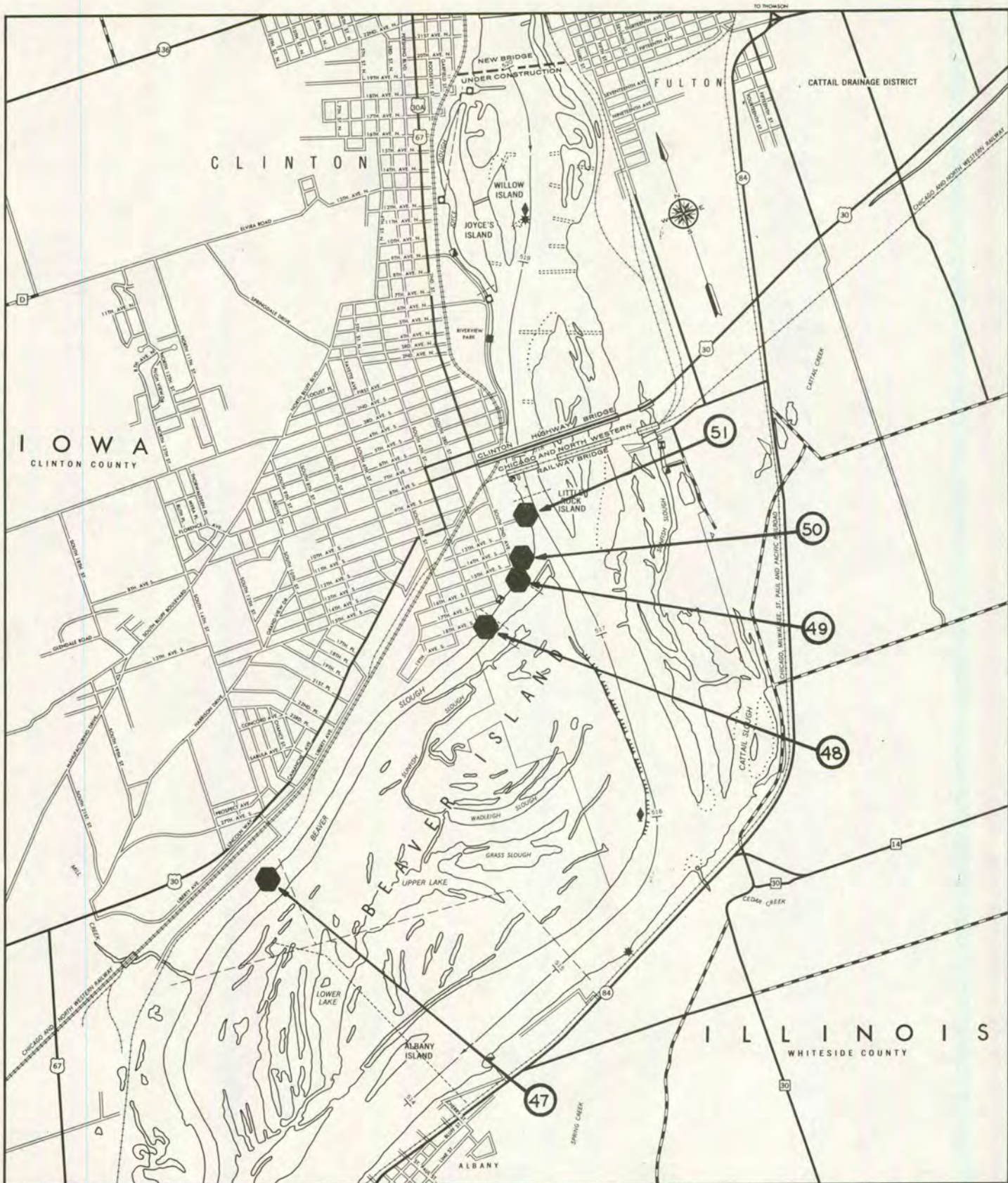
- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT-DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

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STATUTE MILES







15



IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL 
NON-OPERATIONAL .. 
UNDER CONSTRUCTION 

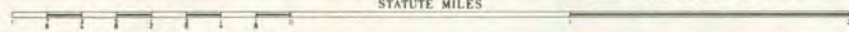
-  GOVERNMENT PROPERTY
-  WILDLIFE SANCTUARY*
-  WING DAM
-  PAVED ROAD
-  GRAVEL ROAD
-  UNIMPROVED ROAD
-  FEDERAL HIGHWAY
-  STATE HIGHWAY
-  COUNTY ROAD

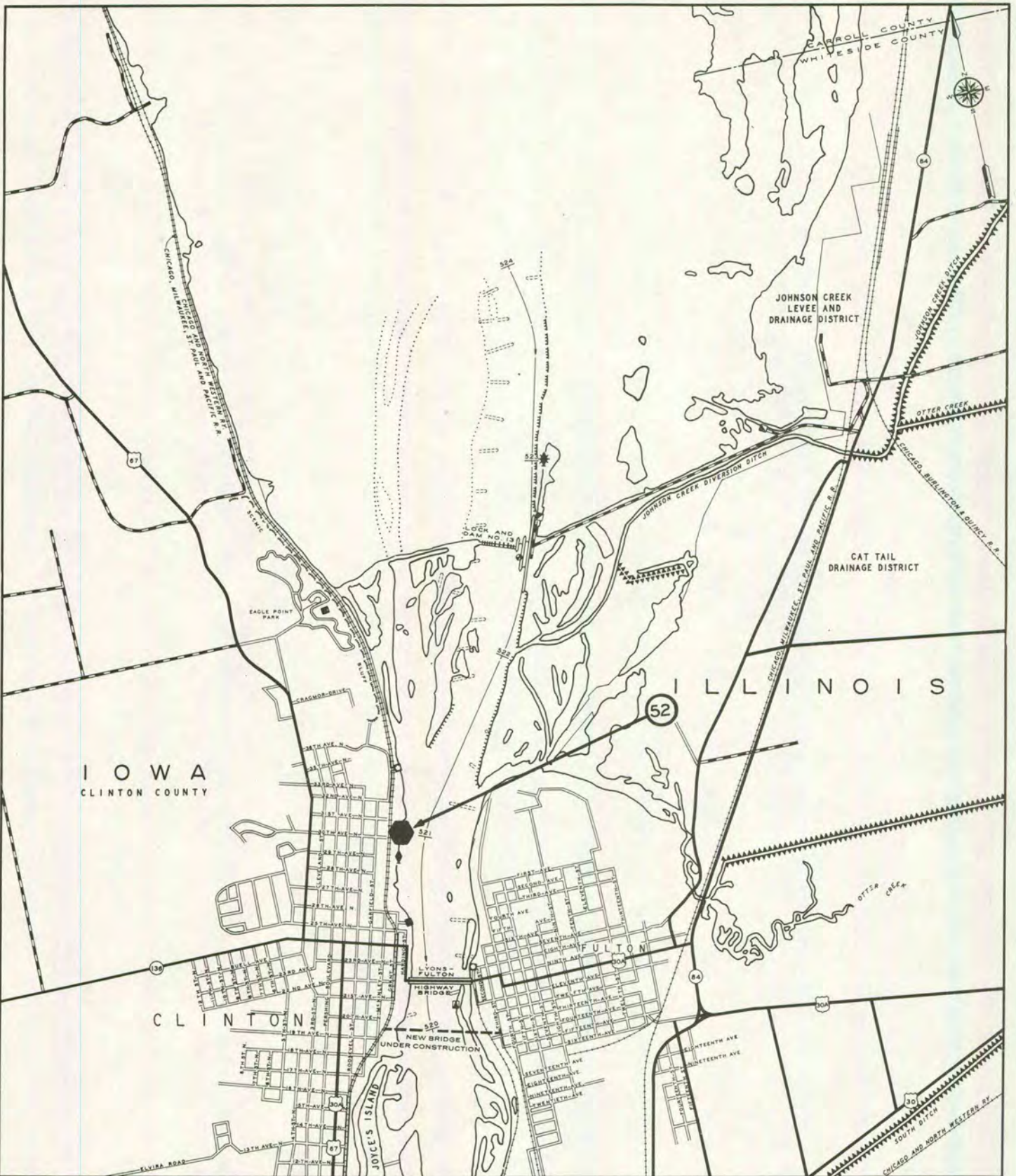
- LEGEND**
-  LEVEE
 -  BANK PROTECTION
 -  AERIAL CABLE CROSSING
 -  COMMERCIAL DOCK
 -  RECREATIONAL SITE
 -  RECREATIONAL SITE WITH RAMP
 -  COMMERCIAL RECREATIONAL SITE
 -  HISTORIC SITE
 -  SMALL BOAT HARBOR, MARINA, BOAT CLUB
 -  PRIVATE NAVIGATION LIGHT

-  RIVER GAGE
-  GOVERNMENT LIGHT
-  GOVERNMENT DAYMARK
-  GOVERNMENT LIGHT-DAYMARK
-  GOVERNMENT LIGHTED BUOY
-  MOORINGS
-  MILEAGE ABOVE OHIO RIVER
-  MIDCHANNEL SAILING LINE
-  CURRENT
-  SUBMERGED WING DAM
-  SUBMERGED BANK PROTECTION
-  SUBMERGED FEATURE
-  SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES





IOWA COMMERCIAL DOCK LOCATIONS

- OPERATIONAL**
- NON-OPERATIONAL** ...
- UNDER CONSTRUCTION**

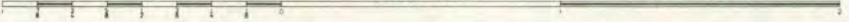
- GOVERNMENT PROPERTY
- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD

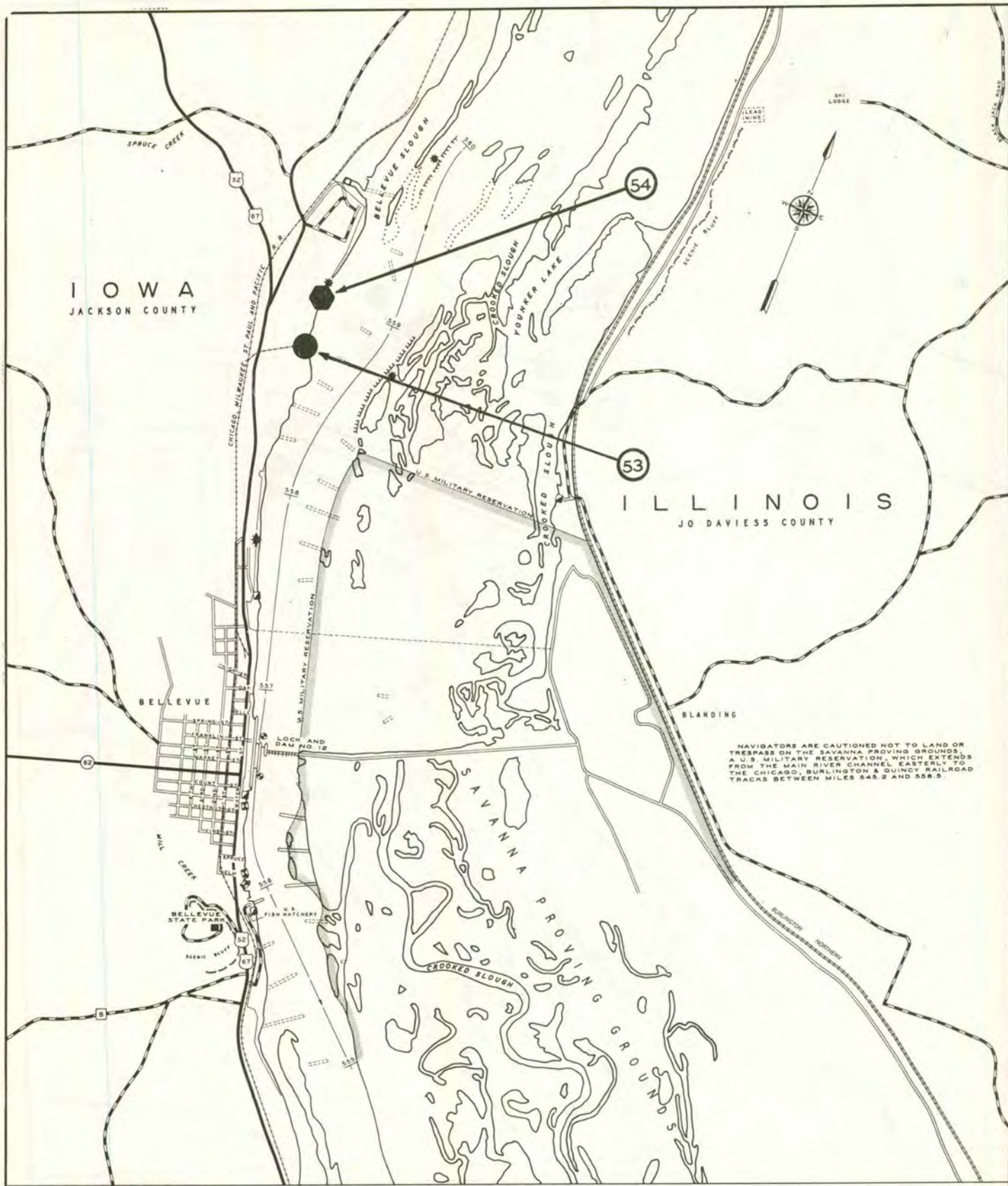
- LEGEND**
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 - COMMERCIAL DOCK
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- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT-DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES





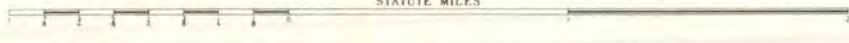
NAVIGATORS ARE CAUTIONED NOT TO LAND OR TRESPASS ON THE SAVANNA PROVING GROUNDS A U.S. MILITARY RESERVATION, WHICH EXTENDS FROM THE MAIN RIVER CHANNEL EASTERLY TO THE CHICAGO, BURLINGTON & QUINCY RAILROAD TRACKS BETWEEN MILES 545.2 AND 558.5.

IOWA COMMERCIAL DOCK LOCATIONS

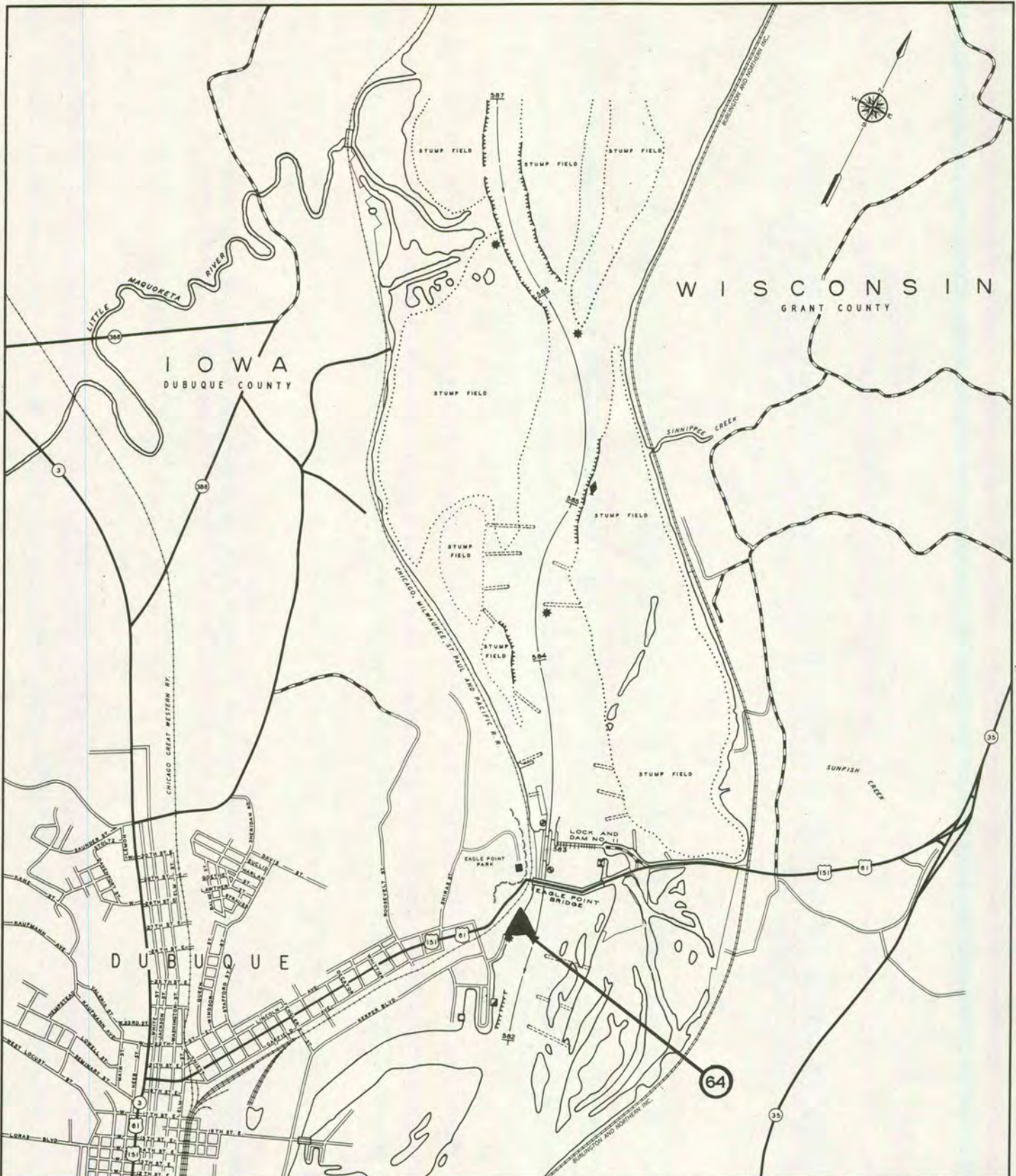
- OPERATIONAL
- NON-OPERATIONAL
- UNDER CONSTRUCTION

LEGEND	
	GOVERNMENT PROPERTY
	WILDLIFE SANCTUARY*
	WING DAM
	PAVED ROAD
	GRAVEL ROAD
	UNIMPROVED ROAD
	FEDERAL HIGHWAY
	STATE HIGHWAY
	COUNTY ROAD
	RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA
	LEVEE
	BANK PROTECTION
	AERIAL CABLE CROSSING
	COMMERCIAL DOCK
	RECREATIONAL SITE
	RECREATIONAL SITE WITH RAMP
	COMMERCIAL RECREATIONAL SITE
	HISTORIC SITE
	SMALL BOAT HARBOR, MARINA, BOAT CLUB
	PRIVATE NAVIGATION LIGHT
	RIVER GAGE
	GOVERNMENT LIGHT
	GOVERNMENT DAYMARK
	GOVERNMENT LIGHT-DAYMARK
	GOVERNMENT LIGHTED BUOY
	MOORINGS
	MILEAGE ABOVE OHIO RIVER
	MIDCHANNEL SAILING LINE
	CURRENT
	SUBMERGED WING DAM
	SUBMERGED BANK PROTECTION
	SUBMERGED FEATURE
	SUBMERGED PIPE OR CABLE


STATUTE MILES





18



IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL 

NON-OPERATIONAL ... 

UNDER CONSTRUCTION 

-  GOVERNMENT PROPERTY
-  WILDLIFE SANCTUARY*
-  WING DAM
-  PAVED ROAD
-  GRAVEL ROAD
-  UNIMPROVED ROAD
-  FEDERAL HIGHWAY
-  STATE HIGHWAY
-  COUNTY ROAD

- LEGEND**
-  LEVEE
 -  BANK PROTECTION
 -  AERIAL CABLE CROSSING
 -  COMMERCIAL DOCK
 -  RECREATIONAL SITE
 -  RECREATIONAL SITE WITH RAMP
 -  COMMERCIAL RECREATIONAL SITE
 -  HISTORIC SITE
 -  SMALL BOAT HARBOR, MARINA, BOAT CLUB
 -  PRIVATE NAVIGATION LIGHT

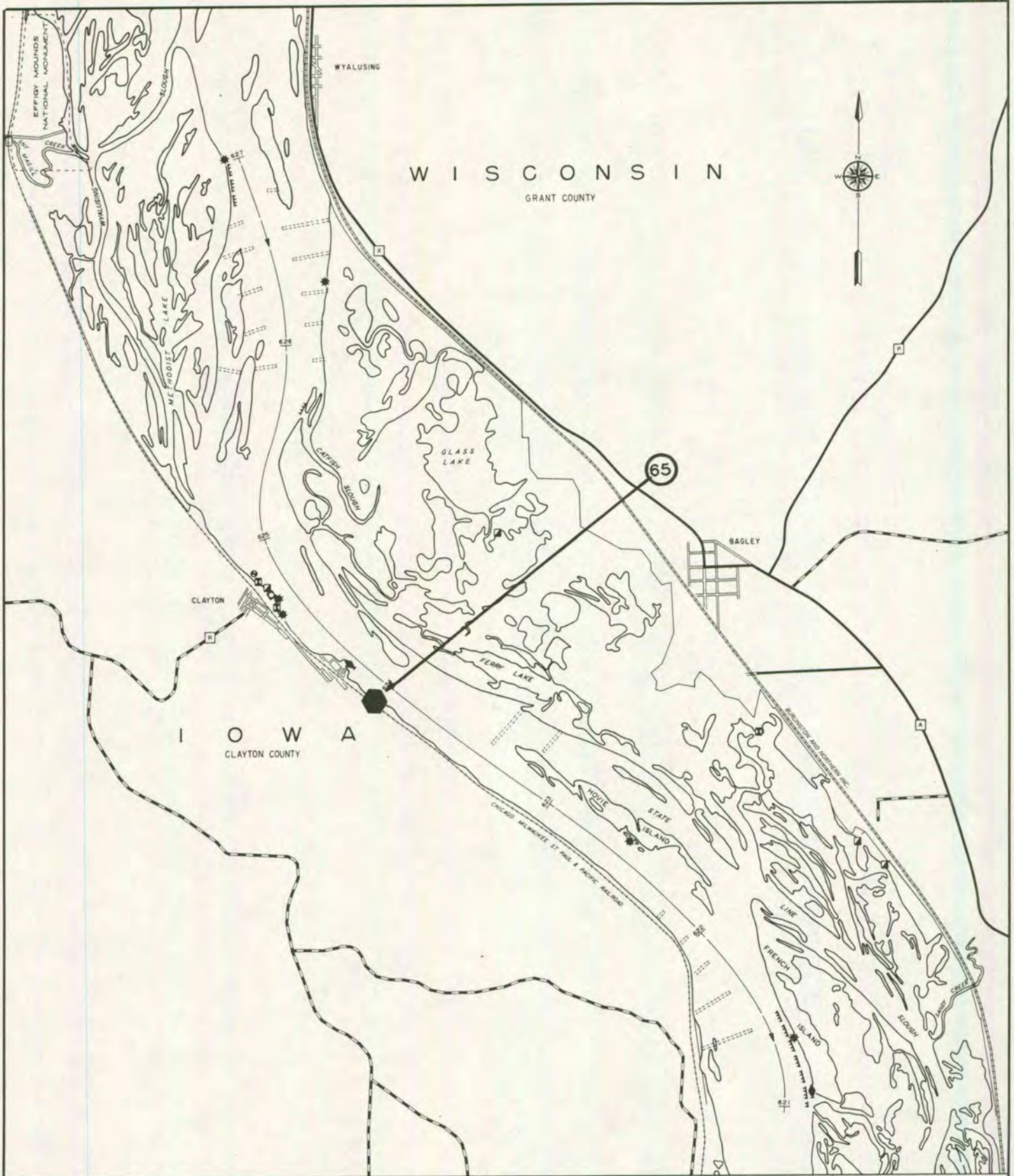
-  RIVER GAGE
-  GOVERNMENT LIGHT
-  GOVERNMENT DAYMARK
-  GOVERNMENT LIGHT-DAYMARK
-  GOVERNMENT LIGHTED BUOY
-  MOORINGS
-  MILEAGE ABOVE OHIO RIVER
-  MIDCHANNEL SAILING LINE
-  CURRENT
-  SUBMERGED WING DAM
-  SUBMERGED BANK PROTECTION
-  SUBMERGED FEATURE
-  SUBMERGED PIPE OR CABLE

*RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES



20



IOWA COMMERCIAL DOCK LOCATIONS

- OPERATIONAL
- NON-OPERATIONAL
- UNDER CONSTRUCTION

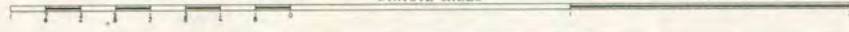
- GOVERNMENT PROPERTY
- WILDLIFE SANCTUARY*
- WING DAM
- PAVED ROAD
- GRAVEL ROAD
- UNIMPROVED ROAD
- FEDERAL HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD

- LEGEND**
- LEVEE
 - BANK PROTECTION
 - AERIAL CABLE CROSSING
 - COMMERCIAL DOCK
 - RECREATIONAL SITE
 - RECREATIONAL SITE WITH RAMP
 - COMMERCIAL RECREATIONAL SITE
 - HISTORIC SITE
 - SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - PRIVATE NAVIGATION LIGHT

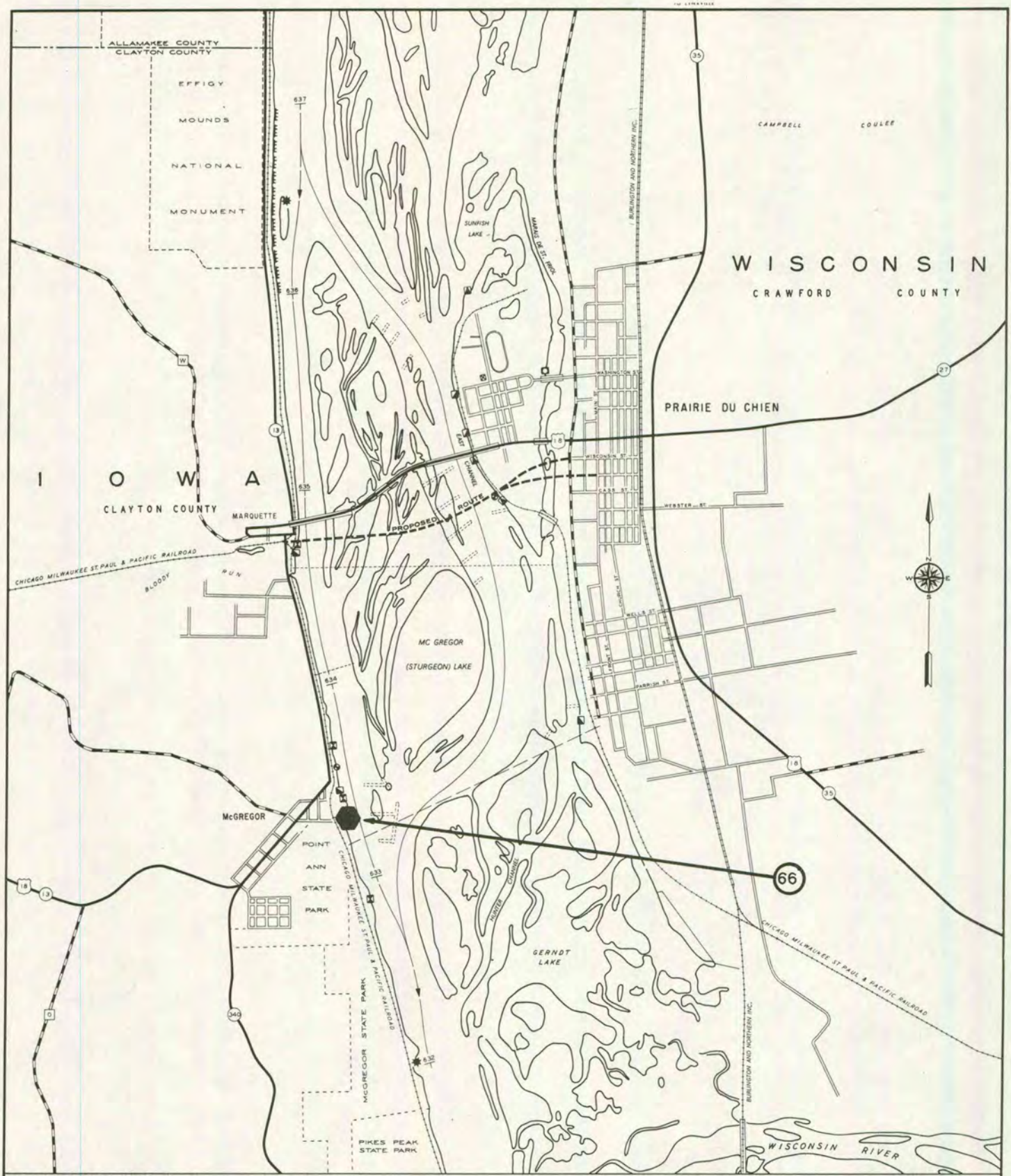
- RIVER GAGE
- GOVERNMENT LIGHT
- GOVERNMENT DAYMARK
- GOVERNMENT LIGHT-DAYMARK
- GOVERNMENT LIGHTED BUOY
- MOORINGS
- MILEAGE ABOVE OHIO RIVER
- MIDCHANNEL SAILING LINE
- CURRENT
- SUBMERGED WING DAM
- SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

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


STATUTE MILES



92



IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL 
NON-OPERATIONAL 
UNDER CONSTRUCTION 

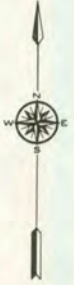
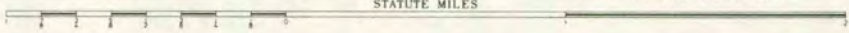
-  GOVERNMENT PROPERTY
-  WILDLIFE SANCTUARY*
-  WING DAM
-  PAVED ROAD
-  GRAVEL ROAD
-  UNIMPROVED ROAD
-  FEDERAL HIGHWAY
-  STATE HIGHWAY
-  COUNTY ROAD

LEGEND

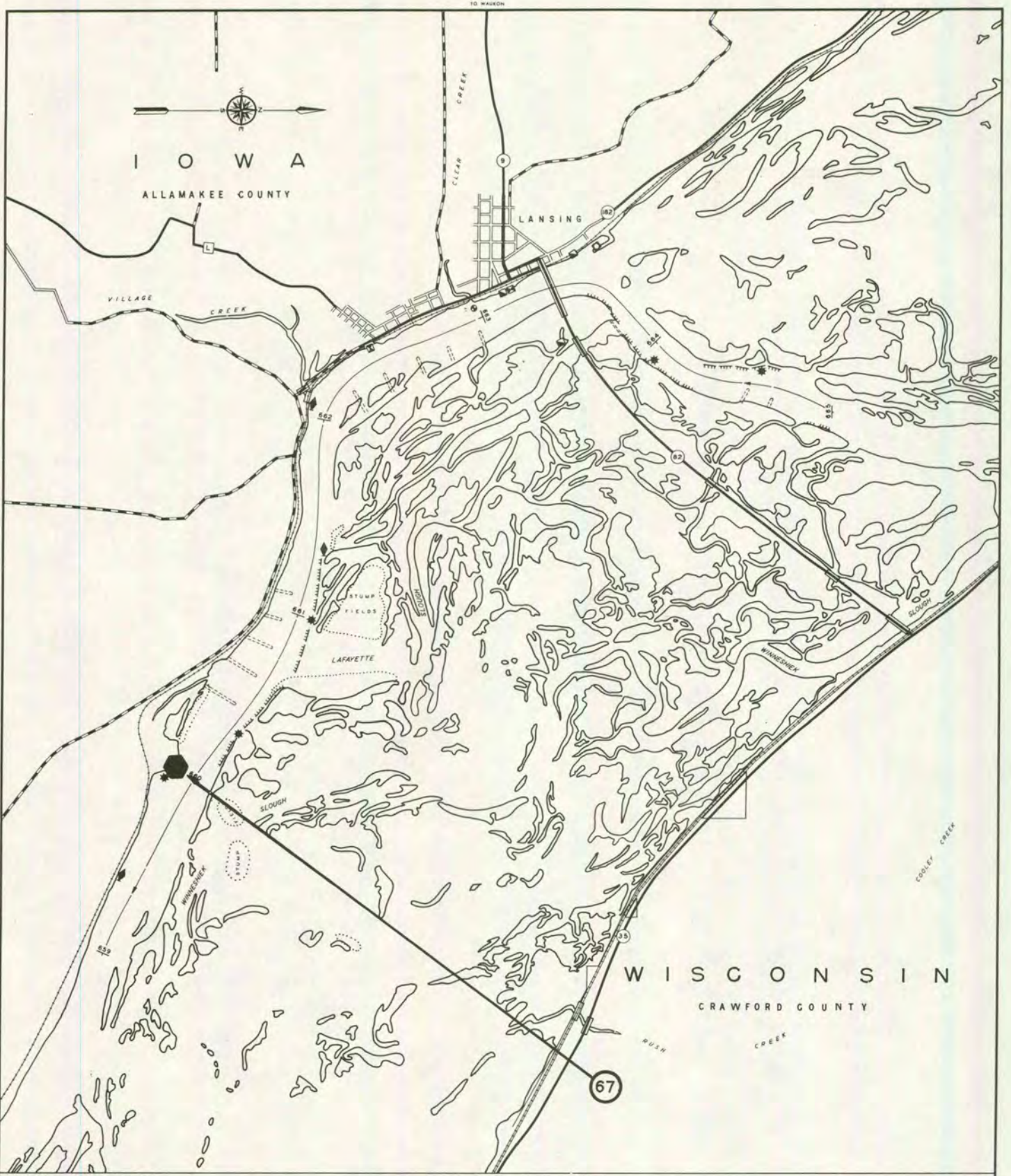
-  LEVEE
-  BANK PROTECTION
-  AERIAL CABLE CROSSING
-  COMMERCIAL DOCK
-  RECREATIONAL SITE
-  RECREATIONAL SITE WITH RAMP
-  COMMERCIAL RECREATIONAL SITE
-  HISTORIC SITE
-  SMALL BOAT HARBOR, MARINA, BOAT CLUB
-  PRIVATE NAVIGATION LIGHT
-  RIVER GAGE
-  GOVERNMENT LIGHT
-  GOVERNMENT DAYMARK
-  GOVERNMENT LIGHT-DAYMARK
-  GOVERNMENT LIGHTED BUOY
-  MOORINGS
-  MILEAGE ABOVE OHIO RIVER
-  MIDCHANNEL SAILING LINE
-  CURRENT
-  SUBMERGED WING DAM
-  SUBMERGED BANK PROTECTION
- SUBMERGED FEATURE
- SUBMERGED PIPE OR CABLE

* RESTRICTED AREA. INFORMATION RELATIVE TO PERMISSIBLE HUNTING OR FISHING MAY BE OBTAINED FROM THE BUREAU OF SPORT FISHERIES AND WILDLIFE, MINNEAPOLIS, MINNESOTA

STATUTE MILES



29



IOWA COMMERCIAL DOCK LOCATIONS

- OPERATIONAL (dotted line)
- NON-OPERATIONAL (dashed line)
- UNDER CONSTRUCTION (solid line with dots)

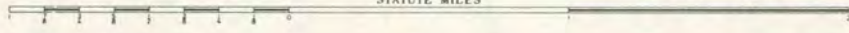
- (White rectangle) GOVERNMENT PROPERTY
- (Hatched rectangle) WILDLIFE SANCTUARY*
- (Wavy line) WING DAM
- (Solid line) PAVED ROAD
- (Dashed line) GRAVEL ROAD
- (Dotted line) UNIMPROVED ROAD
- (Thick solid line) FEDERAL HIGHWAY
- (Thin solid line) STATE HIGHWAY
- (Thin dashed line) COUNTY ROAD

- LEGEND**
- (Wavy line) LEVEE
 - (Dashed line) BANK PROTECTION
 - (Thin solid line) AERIAL CABLE CROSSING
 - (Thick solid line) COMMERCIAL DOCK
 - (Square with dot) RECREATIONAL SITE
 - (Square with ramp) RECREATIONAL SITE WITH RAMP
 - (Square with X) COMMERCIAL RECREATIONAL SITE
 - (Square with circle) HISTORIC SITE
 - (Square with boat) SMALL BOAT HARBOR, MARINA, BOAT CLUB
 - (Star) PRIVATE NAVIGATION LIGHT

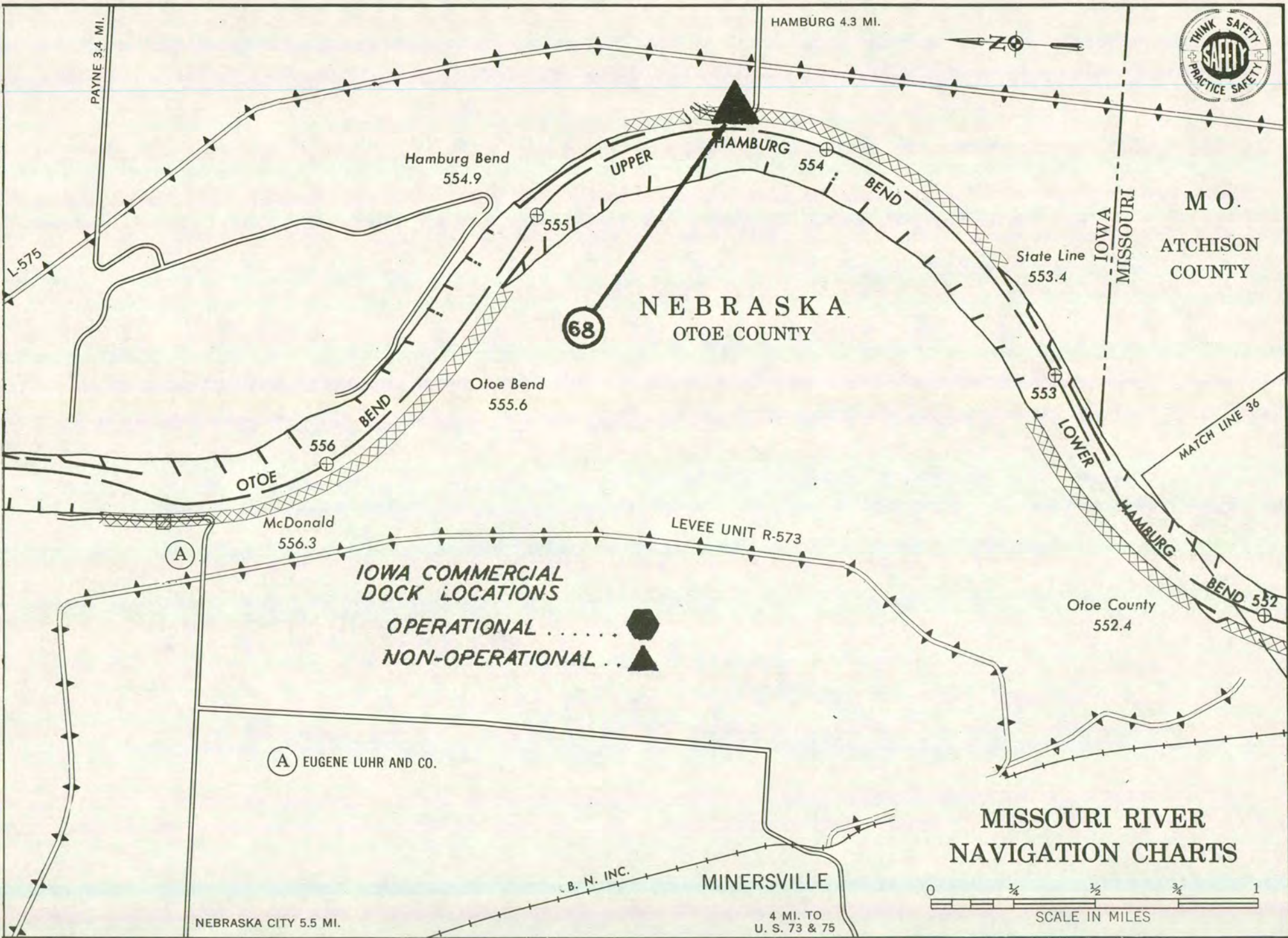
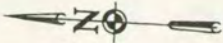
- (Circle with cross) RIVER GAGE
- (Star) GOVERNMENT LIGHT
- (Circle with dot) GOVERNMENT DAYMARK
- (Circle with cross) GOVERNMENT LIGHT-DAYMARK
- (Circle with dot) GOVERNMENT LIGHTED BUOY
- (Circle) MOORINGS
- (T) MILEAGE ABOVE OHIO RIVER
- (Dashed line) MIDCHANNEL SAILING LINE
- (Arrow) CURRENT
- (Dotted line) SUBMERGED WING DAM
- (Wavy line) SUBMERGED BANK PROTECTION
- (Dotted line) SUBMERGED FEATURE
- (Dashed line) SUBMERGED PIPE OR CABLE

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STATUTE MILES



20



PAYNE 3.4 MI.

HAMBURG 4.3 MI.

L-575

Hamburg Bend 554.9

UPPER

HAMBURG

554

BEND

State Line 553.4

IOWA MISSOURI

M O. ATCHISON COUNTY

NEBRASKA OTOE COUNTY

68

Otoe Bend 555.6

556

OTOE

McDonald 556.3

(A)

IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL

NON-OPERATIONAL

LEVEE UNIT R-573

Otoe County 552.4

MATCH LINE 36

LOWER

HAMBURG

BEND 552

(A) EUGENE LUHR AND CO.

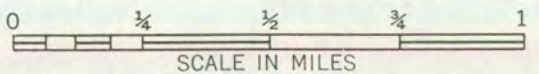
B. N. INC.

MINERSVILLE

NEBRASKA CITY 5.5 MI.

4 MI. TO U. S. 73 & 75

MISSOURI RIVER NAVIGATION CHARTS





PACIFIC JUNCTION 1.8 MI.

1.0 MI. TO INTERSTATE 29 GLENWOOD 6 MI.

IOWA
MILLS COUNTY

IOWA COMMERCIAL DOCK LOCATIONS

OPERATIONAL 
NON-OPERATIONAL ... 

Tobacco Bend
588.6

Keg Creek

LEVEE UNIT L-601



588 BEND

TOBACCO

69

Plattsmouth
589.5

MATCH LINE 30

- 1 NORTHERN NATURAL GAS CO.
- 2 NORTHERN NATURAL GAS CO. (BRIDGE)
- 3 B. N. INC. R. R. BRIDGE
- 4 PLATTSMOUTH HWY. BRIDGE
- 5 GLOBE OIL AND REFINERY CO.
- 6 NATURAL GAS PIPE LINE CO. OF AMERICA

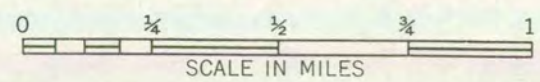
Pollock
591.4

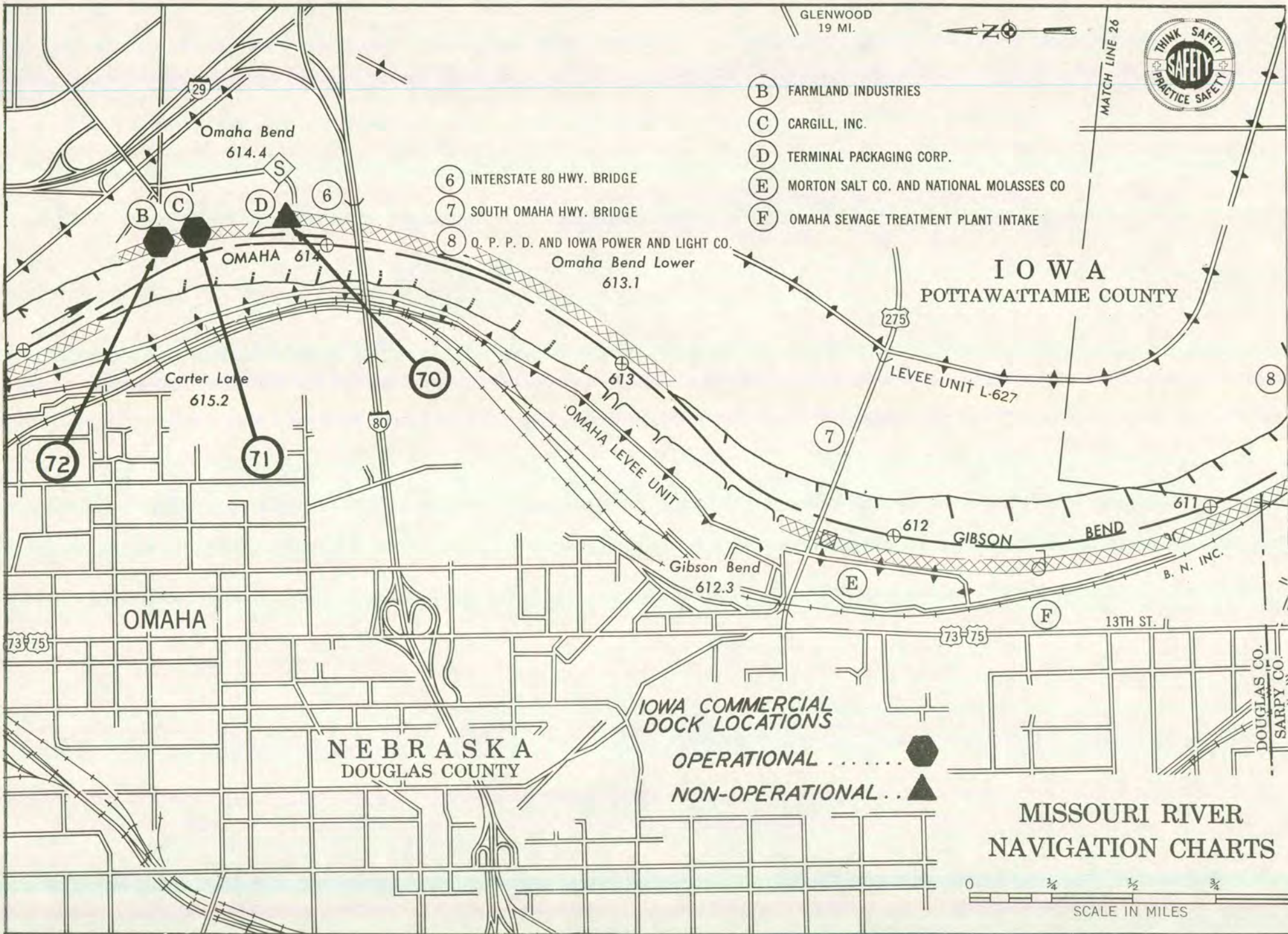
LOWER 591

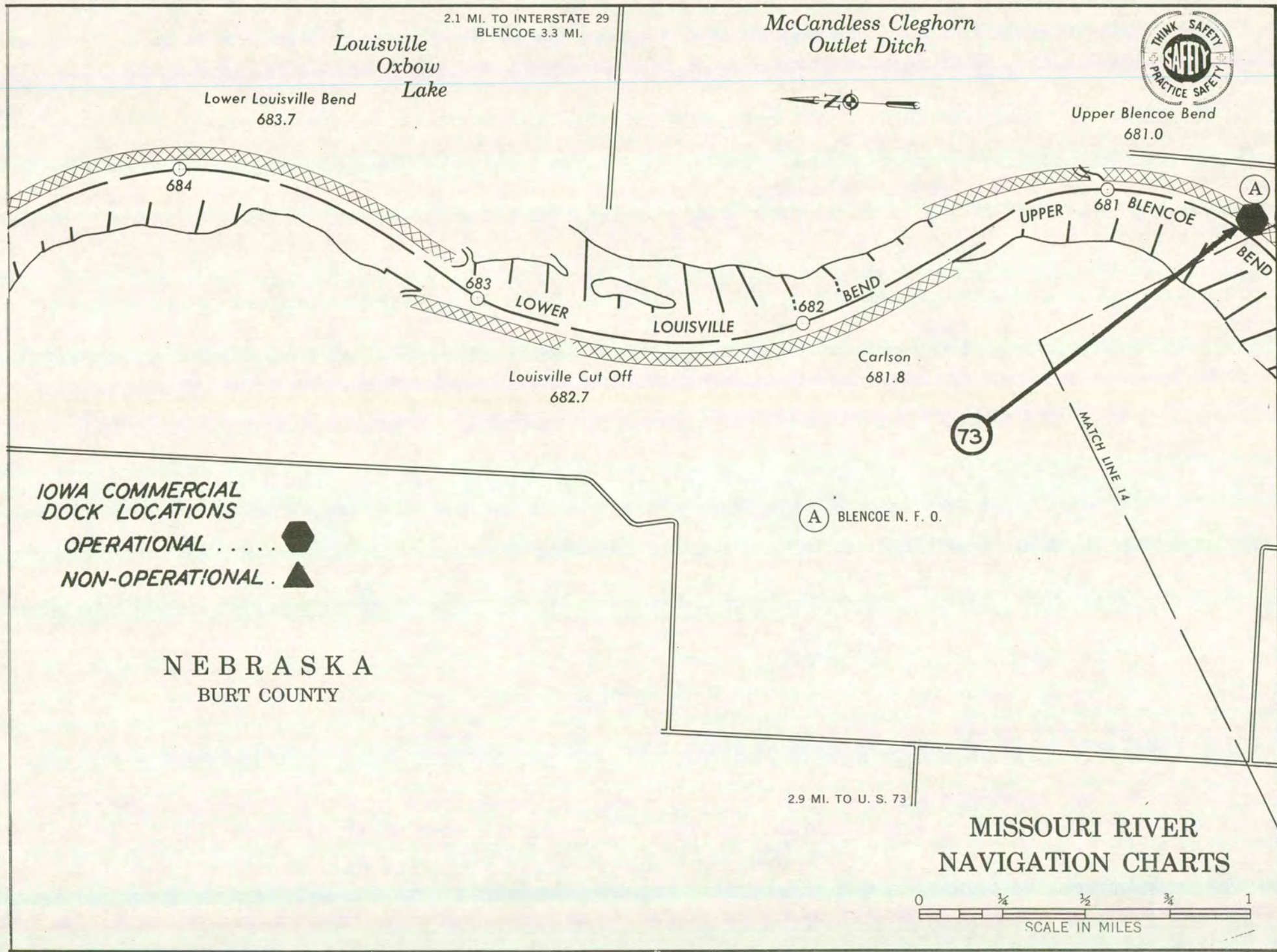
PLATTSMOUTH

1.8 MI. TO U. S. 73, 75 & 34

MISSOURI RIVER NAVIGATION CHARTS







1-20

I O W A
WOODBURY COUNTY

2.5 MI. INTERSTATE 29



Snyder Bend Upper
716.8

Browsers Bend
718.5

(B)

718

(1)

(A)

BROWERS

(74)

(2)

(C)

717

BEND

(1) IOWA PUBLIC SERVICE CO.


(2) OMAHA PUBLIC POWER DISTRICT

(A) TERRA CHEMICAL INT., INC. WATER INTAKE

(B) IOWA PUBLIC SERVICE CO. WATER INTAKE

(C) BORDEN CHEMICAL CO.

IOWA COMMERCIAL
DOCK LOCATIONS

OPERATIONAL 

NON-OPERATIONAL . 

NEBRASKA
DAKOTA COUNTY

MATCH LINE 6A

719

Browsers Bend Upper
719.0

(76)

BEND

720

OMADI

Omaha

Creek

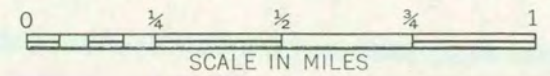
Ditch

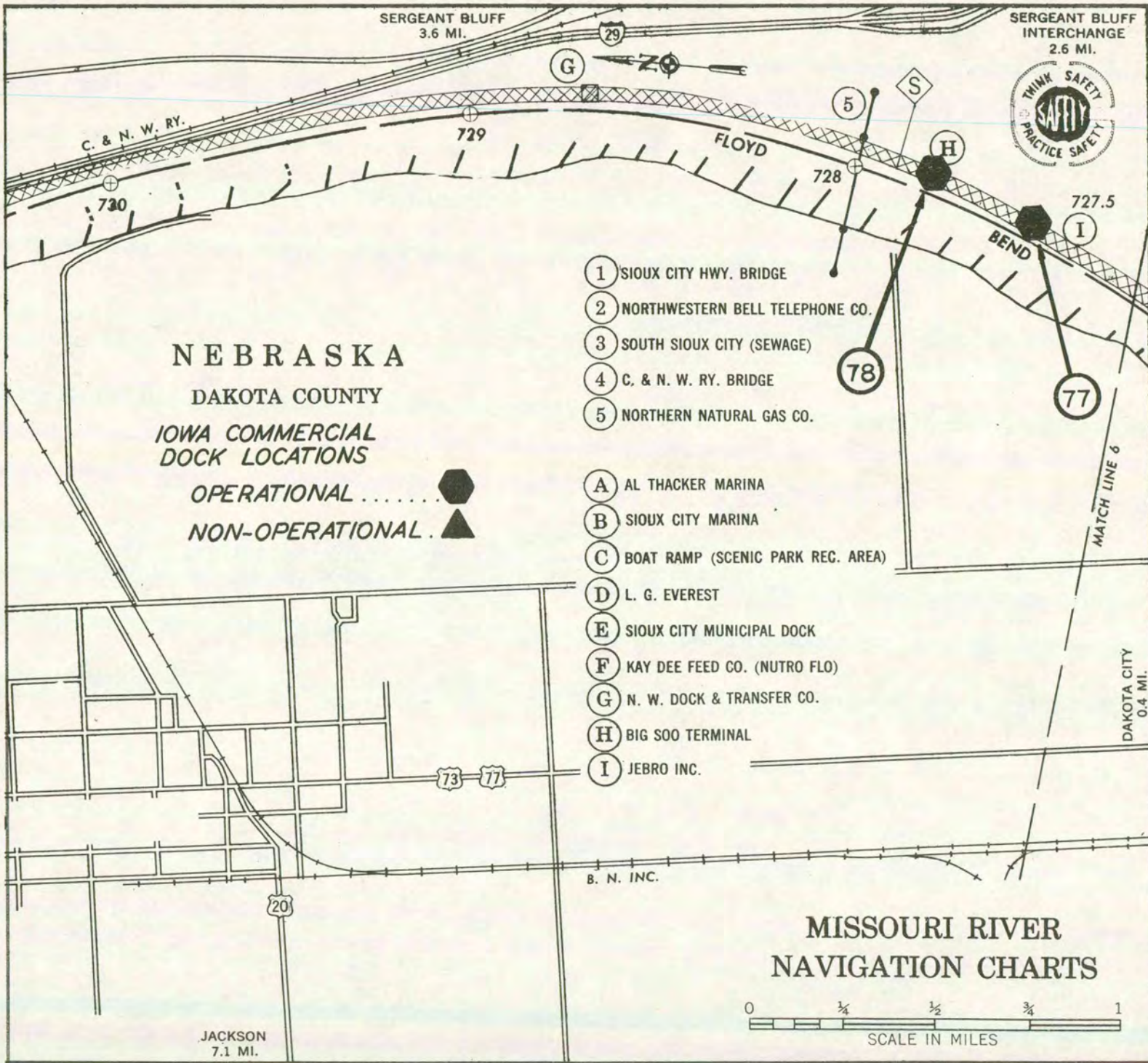
Pigeon

Creek

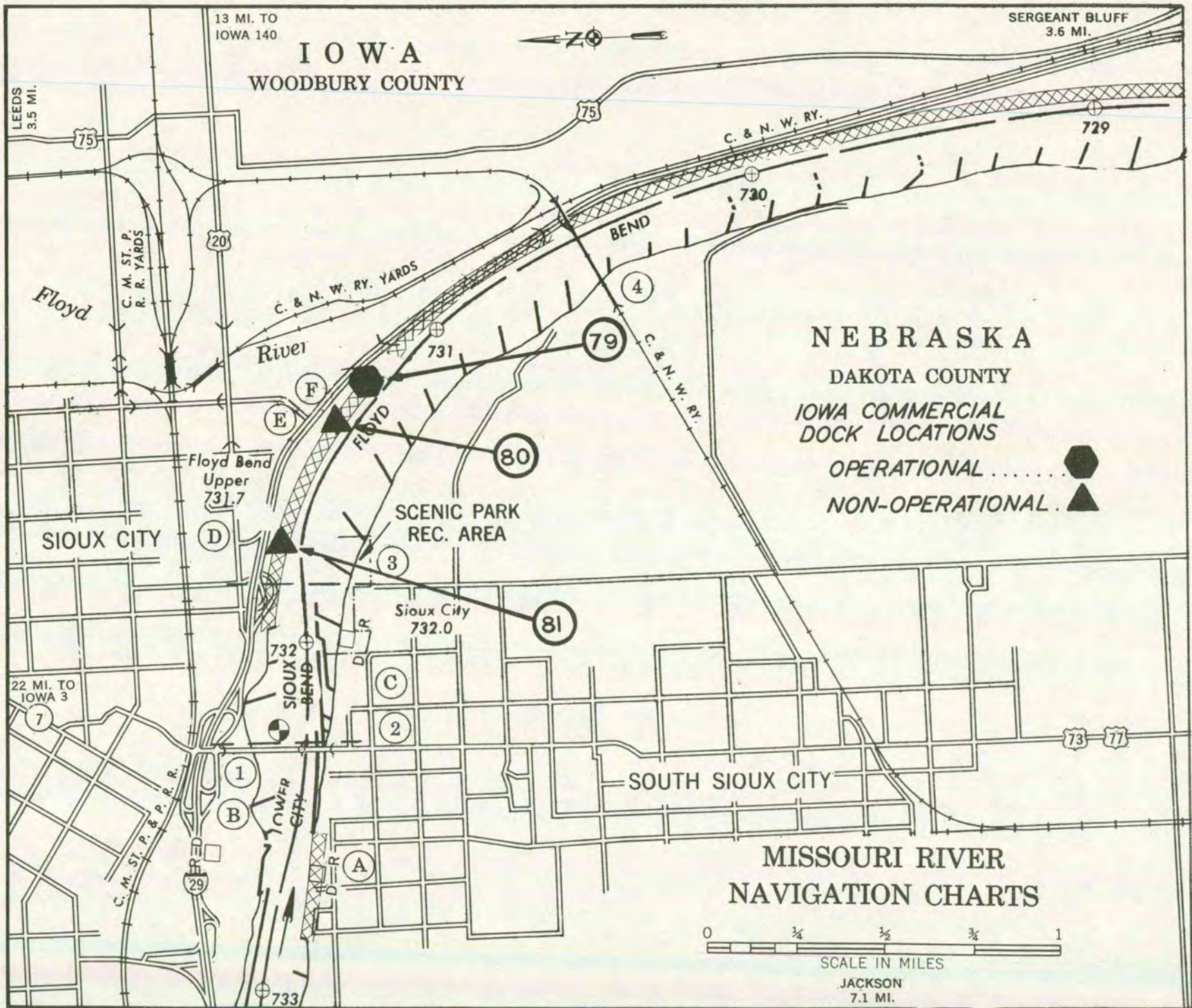
Ditch

MISSOURI RIVER
NAVIGATION CHARTS





29



52