

# Mason County Hazardous Substances Commodity Flow Study

Mason County, Illinois

Prepared for:

Mason County Local Emergency  
Planning Committee

September 2022

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# MASON COUNTY HAZARDOUS SUBSTANCES COMMODITY FLOW STUDY

## MASON COUNTY, ILLINOIS

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*Researched and written for the Mason County Local Emergency Planning Committee  
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## EXECUTIVE SUMMARY

The 2020-2022 Mason County Hazardous Substances Commodity Flow Study (CFS or Study) focuses on highway, rail, and barge transportation of chemicals and other hazardous substances within and through the County. This Study also includes a vulnerability analysis of select community resources (such as schools, government services, health care, etc.) to evaluate their relative susceptibility to a chemical release from highway and rail incidents.

### ***Findings***

Highlights of this CFS include the following:

- ❖ Eight of the nine hazard classes were observed being transported through the County by rail while seven of the nine hazard classes were observed being transported by highway.
- ❖ Flammable Liquids (Class 3) were the most frequently transported hazard class by highway and rail.

### ***Highways***

- Truck counts were conducted during the summer and fall of 2020 and the winter and spring of 2021 at nine highway locations within the County.
- The percentage of trucks carrying hazardous substances was at or above what the US Department of Transportation considers the national average of 7% for six (6) of the eight (8) truck count locations.
- Flammable Liquids (Class 3) accounted for 51.5% of the hazardous substances transported by highway.
- Gases (Class 2) were the second largest category of hazardous substances shipped on highways at 31.4% while Poisons (Class 6) accounted for 8.9% of all hazardous substance truck shipments.
- US Route 136 in Havana has the highest frequency of truck shipments carrying hazardous substances in the County while Illinois Route 10 at Mason City has the highest percentage of truck shipments carrying hazardous substances in the County.

### ***Rail Lines***

- ❖ There is one Class I rail line, Union Pacific Railroad, which transports hazardous substances through Schuyler County.
- ❖ Flammable Liquids (Class 3) are by far the most frequently transported hazard class accounted for 83.7% of all the hazardous substances transported by rail.

### ***Barge***

- ❖ There is one navigable waterway, the Illinois River, running along the western boundary of Mason County.

- ❖ Commodity Group 30 Chemicals & Related Products account for the second largest group of commodities shipped by barge through both the LaGrange and Peoria Locks.
- ❖ Commodity Group 20 Petroleum & Petroleum Products were the fourth largest commodity group shipped by barge through both the LaGrange and Peoria locks.
- ❖ Together, commodity Groups 20 and 30 account for approximately 34.78% and 37.03% of all commodities shipped by barge through the LaGrange and Peoria Locks respectively. It is likely that a majority of these commodities are hazardous substances.

### Vulnerability Analysis

A vulnerability analysis was completed of 20 key community resources including some critical infrastructure. The following identifies the number and type of resources that have a high vulnerability to highway and/or rail hazardous materials (hazmat) incidents by municipality.

- Bath, Easton, and Kilbourn all have one government facility with a high vulnerability to highway hazmat incidents.
- San Jose has two government facilities with a high vulnerability to highway hazmat incidents.
- Mason City has one educational facility, three government facilities, and one healthcare facility with high vulnerabilities to highway hazmat incidents.
- Havana has two educational facilities, four government facilities, and two healthcare facilities with high vulnerabilities to highway hazmat incidents.
- None of the identified community resources have a high vulnerability to rail hazmat incidents.

## **1.0 INTRODUCTION**

### **What is a Commodity Flow Study?**

A Commodity Flow Study (CFS or Study) identifies the types, quantities, and transportation routes of hazardous substances in and out of a County and how they could affect susceptible populations and impact the environment. Routes of transportation include highway, rail, and barge.

### **What is a hazardous substance?**

A hazardous substance is any substance that because of its physical or chemical characteristics, quantity, or concentration poses a present or potential hazard to human health and safety or the environment. Hazardous substances include, but are not limited to hazardous materials, hazardous waste, infectious and bio-hazardous wastes (such as those generated by medical facilities) and radioactive materials.

### **Why prepare a CFS?**

Upon completion of this Study, Mason County will have a better understanding of the highway and rail locations where hazardous substance transportation poses the greatest risk to people and critical infrastructure within the County. This information will help government officials, emergency responders and residents make informed choices on how to better protect themselves and the resources important to them.

### **How is a CFS funded and directed?**

A CFS is typically funded through the USDOT Hazardous Materials Emergency Preparedness (HMEP) Planning Grant Program administered by the Illinois Emergency Management Agency (IEMA). These grants are awarded on a three-year cycle to multi-county coalitions. The work done under the current grant cycle must be completed prior to the end of the 2022 federal fiscal year (September 30). The lead County's emergency management agency with support from the Local Emergency Planning Committee (LEPC) are normally tasked with directing the CFS.

Mason County formed a coalition with Schuyler County in 2019 and was awarded a HMEP Grant by IEMA for FY2020-2022. This Study was directed by the Mason County Emergency Management Agency (EMA) and supported by the Mason County LEPC. American Environmental Corporation (AEC), a consulting firm specializing in environmental and emergency management, was selected to provide technical and administrative support for this effort.



## 2.0 SETTING

Mason County is located in west-central Illinois and covers approximately 563 square miles. The County is bounded on the north by Tazewell County, to the east by Tazewell and Logan counties, to the south by Menard and Cass counties, and to the west by the Illinois River beyond which is Schuyler and Fulton counties. Havana is the county seat. The County is generally flat to gently sloping and consists of uplands, stream terraces, dunes, and floodplains. **Figure S-1** provides a location map of Mason County.

Mason is served by one US Route, four Illinois Routes, one Class I rail line, one hazardous liquid pipeline, and one navigable waterway. US Route 136 runs east to west across the County and serve as a conduit for the transportation to nearby urban centers. Barge, rail, and pipelines also provide transcontinental connections through the County.

All of these transportation connections underscore the importance in identifying the types and relative quantities of hazardous substances moving through the area. While Mason County is home to several companies that receive hazardous substances, transportation brings a larger variety and quantity of hazardous substances through the area than what is generated or stored.

When identifying the types and quantities of hazardous substances transported through a county, it is important to look at not only the facilities that store, use, generate, and dispose of substances within a county, but to look at those that are located within the region. These regional facilities and companies have the ability to influence the amount of hazardous substances that flow through a county. **Figure S-2** illustrates the locations of a few of the regional facilities with respect to Mason County.

Figure S-1: Mason County Location Map

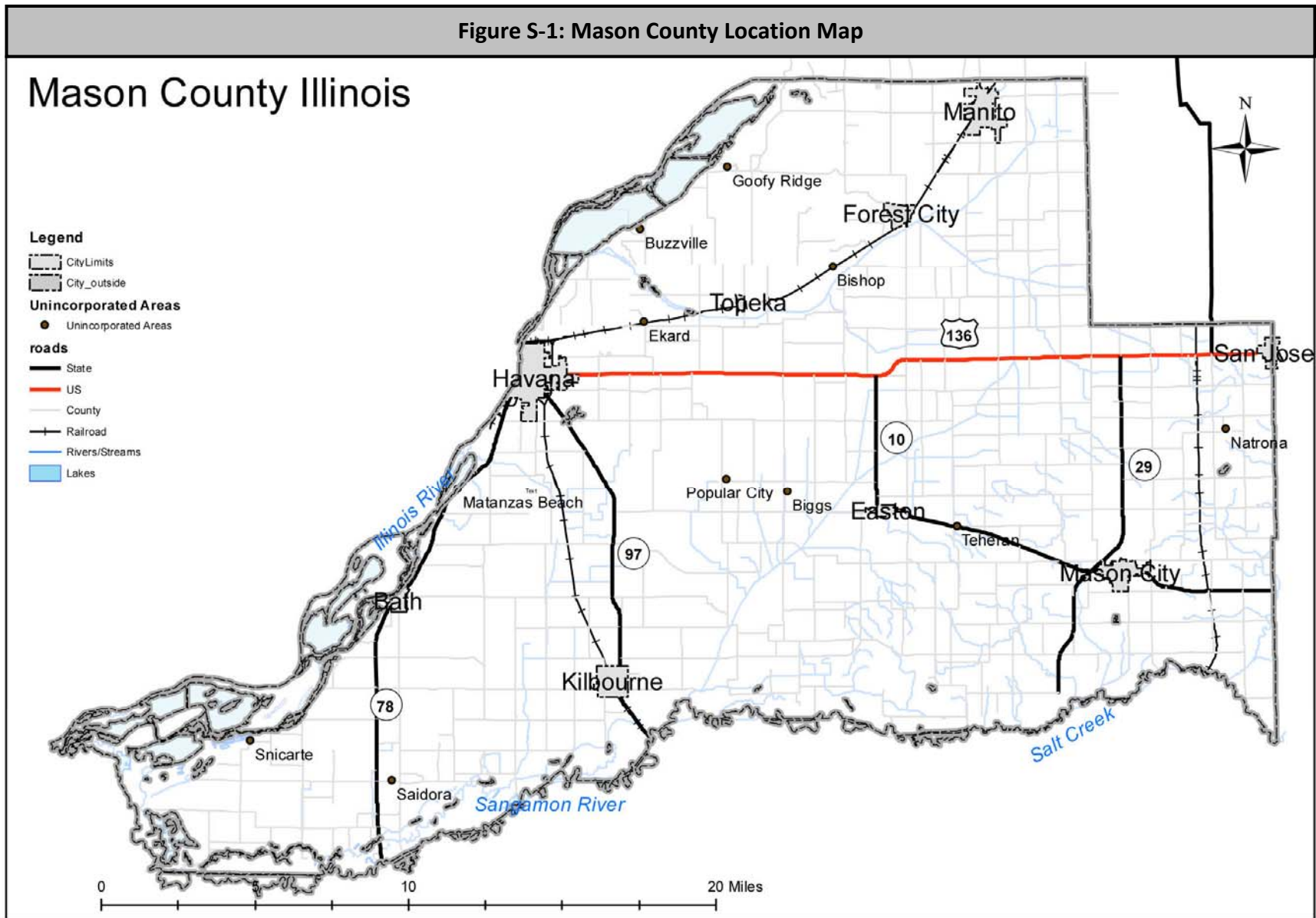
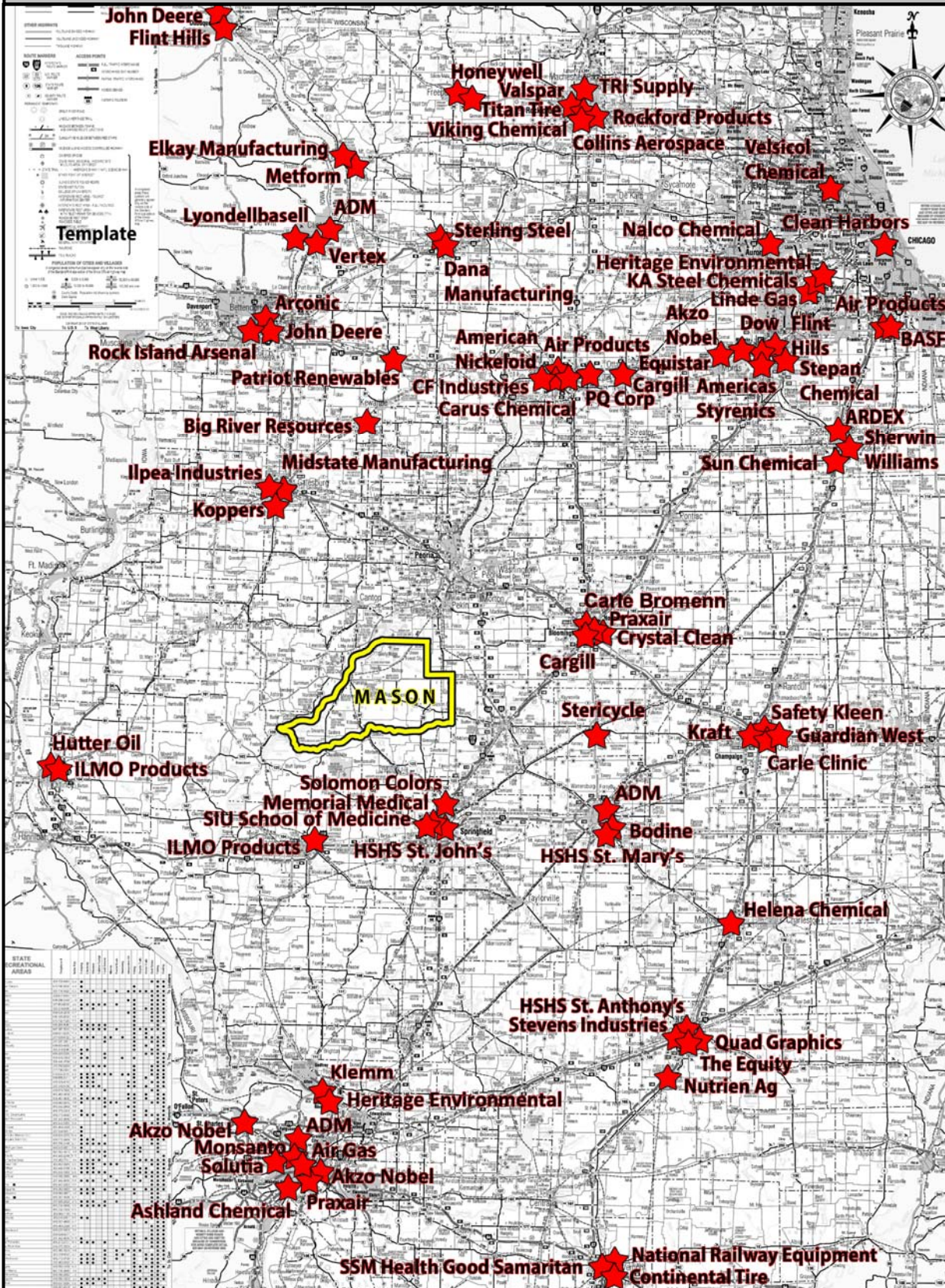


Figure S-2: Regional Map



### **3.0 CFS DESIGN**

#### **What is the Scope of Work for this CFS and how was it developed?**

The Scope of Work for the 2020-2021 Mason County LEPC Commodity Flow Study was developed through discussions with Greg Griffin, the Mason County Emergency Management Agency (EMA) Director, the Mason County LEPC and the Consultant through the fall of 2020. The Scope of Work includes:

1. Identifying the types of hazardous substances transported by trucks, rail, and barge through Mason County.
2. Identifying the highways and rail lines where most of the hazardous substances are being transported.
3. Identifying critical facilities, locations, and infrastructure in close proximity to high-risk highway and rail transportation areas.

#### **How did the LEPC provide input into this Study?**

The Consultant met with the LEPC three times over the course of the Study to: 1) discuss the benefits of conducting a CFS; 2) outline the scope of work for the Study; 3) review the results of the highway and rail counts and barge commodity request; and 4) discuss the vulnerability analysis. At these meetings members were given the opportunity to ask questions, provide feedback and obtain additional information. The Consultant provided written progress reports detailing the results of the truck and rail counts, barge commodity analysis, and selection of community resources.

#### **What resources were utilized to conduct this Study?**

Resources and support were provided by the following agencies: Illinois Commerce Commission (ICC), Illinois Department of Transportation (IDOT), Illinois Emergency Management Agency (IEMA), Illinois Environmental Protection Agency (IEPA), the Illinois State Police, Norfolk Southern (NS) Railway, Union Pacific (UP) Railroad, and the US Army Corps of Engineers (USACE).

Information gathered from various sources was evaluated and incorporated where applicable into the Study. The following provides a brief list of the type of information evaluated:

- ❖ ICC Annual Rail Hazardous Materials Accident/Incident Reports
- ❖ IDOT AADT Traffic Counts
- ❖ IEMA Hazmat Incident Reports
- ❖ UP Hazardous Materials Commodity Flow Study
- ❖ USACE Lock Performance Monitoring System Monthly Tonnage Reports by Lock

**What limitations were experienced during this Study?**

This Study was conducted during the COVID-19 Pandemic which almost certainly altered the types and quantities of hazardous substances transported by highway and rail. The amount of chemicals and hazardous substances transported during most of 2020 and the beginning of 2021 was likely less than what was transported prior to the Pandemic.

## 4.0 HIGHWAYS



### 4.1 Methodology

Illinois has one of the nation's largest highway systems, claiming the third largest interstate system and the fourth largest highway system. According to the Illinois Department of Transportation (IDOT), there were over 147,000 miles of highways and streets in Illinois in 2021. This advanced system of roadways aids in-state and intra-state commerce which includes the transportation of chemicals and hazardous substances, generally by truck. Therefore, it is important to determine the types of chemicals being transported by truck within and through a county and which highways are most frequently used.

Data obtained from IDOT provided information on the Average Annual Daily Truck (AADT) counts for the highways in Mason County. While these counts do differentiate between trucks and passenger vehicles, they do not differentiate between trucks that carry chemicals and hazardous substances and those that do not. As a result, traffic specialists reviewed the AADT counts and identified locations where truck volumes were the highest and locations of special interest. **Figure H-1** identifies the highways studied and provides a brief description of each truck count location while **Figure H-2** depicts each the truck count location. The truck count locations in Figure H-2, correspond to the identification number provided in Figure H-1. At these locations, truck counts were conducted to determine the number of placarded and unplacarded trucks carrying chemicals and hazardous substances.

Four seasons of truck counts were conducted by the Consultant during the summer and fall of 2020 and during the winter and spring of 2021. The Consultant recorded the hazardous materials warning placard and, when included, the placard's 4-digit identification number. The placards were validated using *DOT CHART 17 Hazardous Materials Markings, Labeling and Placarding Guide* produced by US Department of Transportation's Pipeline and Hazardous Materials Safety Administration. A copy of the chart update is located in **Appendix A**. In addition, the Consultant identified known chemical shipments on **unplacarded trucks**. Trucks can legally haul chemical substances without a placard when the quantities transported do not exceed the threshold amount required for placarding.

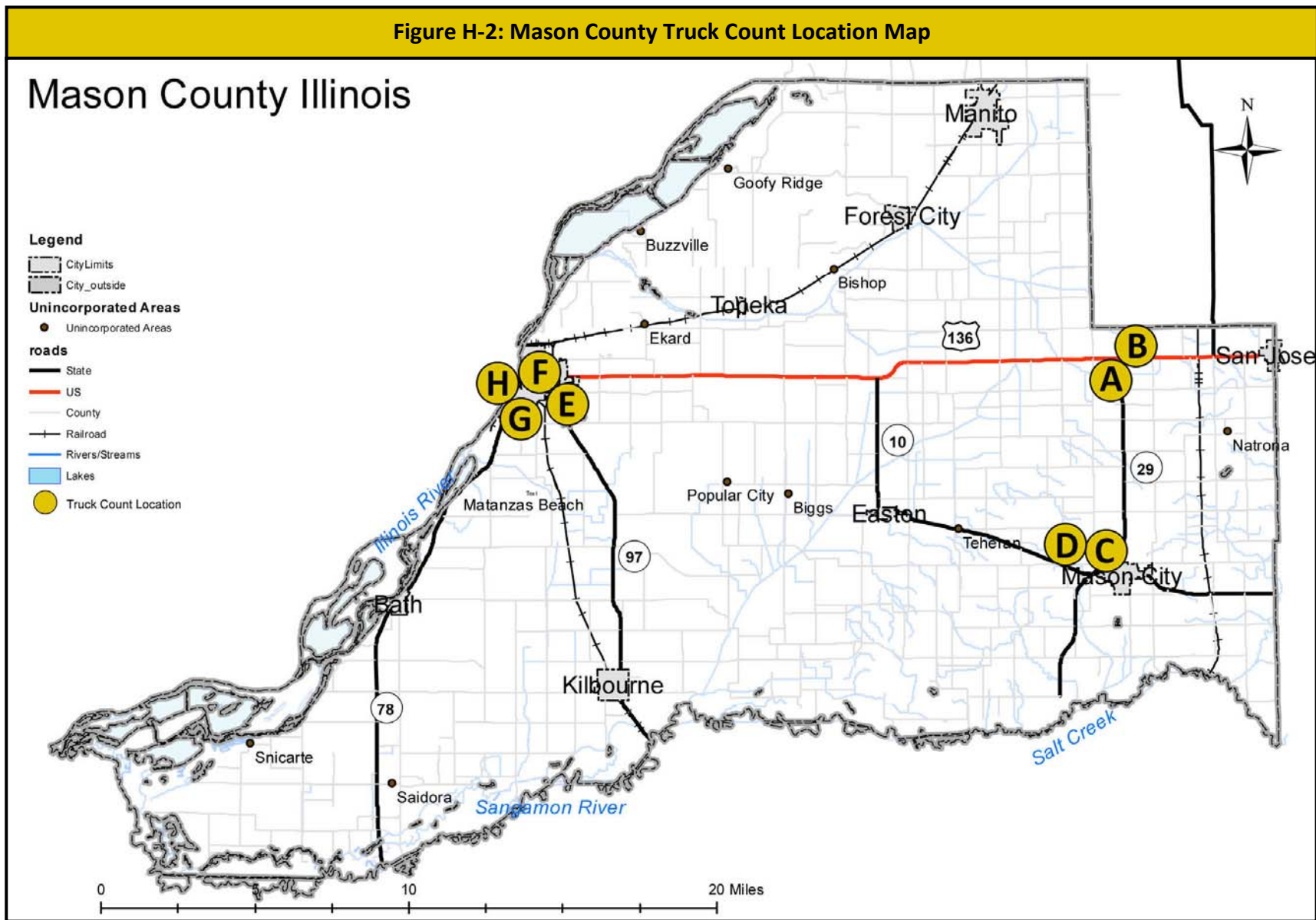
Supplemental truck counts were conducted by LEPC members during the summer and fall of 2021 and during the winter of 2022. These counts provided additional insight into the four seasons of truck count data compiled by the Consultant.

A minimum of one hour of observation was undertaken at each location for each seasonal count. The consultant performed the truck counts during the week and avoided taking counts on Sundays. Approximately 66 hours of actual observations were used to compile the four seasons of truck counts and three seasons of supplemental counts.

For the purposes of this Study, hazardous substances that can legally be placarded under more than one USDOT hazard class will only be assigned to one class instead of multiples. The decision as to which class to assign the substance is based on one of the following factors: a) most frequently used class; b) market targeted by the generator; c) destination; and d) specific formulation.

**Figure H-1: Mason County Truck Count Location Descriptions**

<b>ID No.</b>	<b>Highway</b>	<b>Location Description</b>
A	IL Rte. 29	northbound and southbound counts were taken at intersection with US Route 136 west of San Jose
B	US Rte. 136	eastbound and westbound counts were taken at intersection with IL Route 29 west of San Jose
C	IL Rte. 29	northbound and southbound counts were taken at intersection with IL Route 10 west of Mason City
D	IL Rte. 10	eastbound and westbound counts were taken at intersection with IL Route 29 west of Mason City
E	IL Rte. 97	northbound and southbound counts were taken at intersection with US Route 136 in Havana
F	US Rte. 136	eastbound and westbound counts were taken at intersection with IL Route 97 in Havana
G	IL Rte. 78	northbound and southbound counts were taken at intersection with US Route 136 in Havana
H	US Rte. 136	eastbound and westbound counts were taken at intersection with IL Route 78 in Havana





## 4.2 Findings

The following summarizes the truck count findings.

### 4.2.1 Frequency

**Figure H-3** summarizes the total number of trucks identified as carrying hazardous substances for all four seasons at the eight truck count locations. Data from two of the supplemental counts is also summarized. **Appendix B** provides a detailed breakdown of the cumulative and seasonal truck count results by hazard class and 4-digit identification number for each location for the four seasons. Truck counts were *not* conducted simultaneously for segments on the same highway. Counts occurred at different times and days. As a result, no double-counting of any trucks on the same highway occurred.

Figure H-3: Mason County Total Number of Trucks Carrying Hazardous Substances by Location			
Location ID Number	Total # of Trucks Counted	Total # of Trucks Carrying Hazardous Substances	% of Trucks Carrying Hazardous Substances
<b>2020-2021 Counts (4 seasons)</b>			
A. Illinois Route 29 west of San Jose	111	16	14.4%
B. US Route 136 west of San Jose	276	22	8.0%
C. Illinois Route 29 at Mason City	140	14	10.0%
D. Illinois Route 10 at Mason City	100	15	15.0%
E. Illinois Route 97 in Havana	173	16	9.2%
F. US Route 136 @ IL-97 in Havana	346	33	9.5%
G. Illinois Route 78 in Havana	298	20	6.7%
H. US Route 136 @ IL-78 in Havana	492	33	6.7%
<b>Supplemental Counts 2021-2022 (2 seasons)</b>			
A. Illinois Route 29 west of San Jose	77	5	6.5%
B. US Route 136 west of San Jose	149	14	9.4%
C. Illinois Route 29 at Mason City	76	3	3.9%
D. Illinois Route 10 at Mason City	76	1	1.3%
E. Illinois Route 97 in Havana	48	4	8.3%
F. US Route 136 @ IL-97 in Havana	109	6	5.5%
G. Illinois Route 78 in Havana	292	5	1.7%

Based on the four seasons of truck counts from 2020-2021:

- ❖ US Route 136 in Havana has the highest **frequency** of truck shipments carrying hazardous substances in Mason County.
- ❖ Illinois Route 10 at Mason City has the highest **percentage** of truck shipments carrying hazardous substances in Mason County.

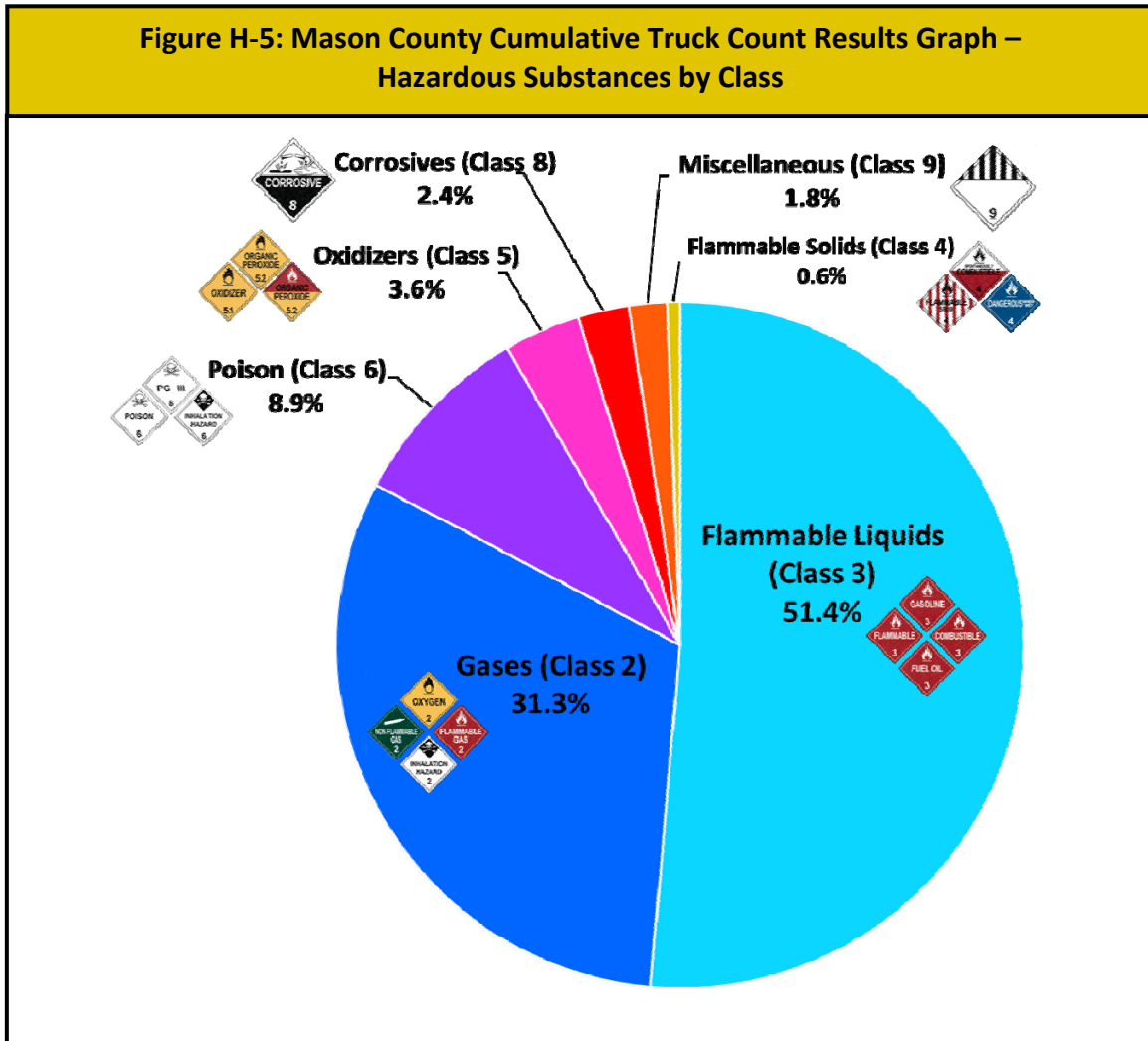
#### 4.2.2 Breakdown of Hazardous Substances by Hazard Class

Figure H-4 provides a cumulative summary of the number of trucks carrying hazardous substances by hazard class by location for all four seasons while Figure H-5 depicts the cumulative number of hazardous substances transported by hazard class. Appendix C provides a summary by season of the number of trucks carrying hazardous substances by hazard class by location as well as depicts the number of hazardous substances transported by hazard class.

#### Cumulative Summary

- ❖ Flammable and Combustible Liquids (Class 3) comprised 51.3% of all truck shipments of hazardous substances.
- ❖ Gases (Class 2) were the second largest category of hazardous substances shipped on highways at 31.4%.
- ❖ Poisons (Class 6) accounted for 8.9% while Oxidizers (Class 5) accounted for 3.6% of all truck shipments of hazardous substances.

Figure H-4: Mason County Cumulative Truck Count Results – Hazardous Substances by Class by Location											
Hazardous Materials Warning Placard Class	Truck Count Location								TOTAL	% OF TOTAL	
	A. IL Rte. 29 at US Rte. 136/ CH 9 Intersection (west of San Jose)	B. US Rte. 136 at IL Rte. 29/ CH 9 Intersection (west of San Jose)	C. IL Rte. 29 at IL Rte. 10 (Mason City)	D. IL Rte. 10 at IL Rte. 29 (Mason City)	E. IL Rte. 97 at US Rte. 136 (Havana)	F. US Rte. 136 at IL Rte. 97 (Havana)	G. IL Rte. 78 at US Rte. 136 (Havana)	H. US Rte. 136 at IL Rte. 78 (Havana)			
Class 1 - Explosives	0	0	0	0	0	0	0	0	0	0	0.0%
Class 2 - Gases	4	3	10	10	3	12	4	7	53	31.4%	
Class 3 - Flammable Liquids	10	16	2	2	9	14	14	20	87	51.5%	
Class 4 - Flammable Solids	0	0	0	0	0	1	0	0	1	0.6%	
Class 5 - Oxidizers	0	1	0	0	3	1	0	1	6	3.6%	
Class 6 - Poisons	1	1	1	2	1	3	2	4	15	8.9%	
Class 7 - Radioactives	0	0	0	0	0	0	0	0	0	0.0%	
Class 8 - Corrosives	1	1	0	0	0	1	0	1	4	2.4%	
Class 9 - Misc.	0	0	1	1	0	1	0	0	3	1.8%	
<b>Total</b>	<b>16</b>	<b>22</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>33</b>	<b>20</b>	<b>33</b>	<b>169</b>		



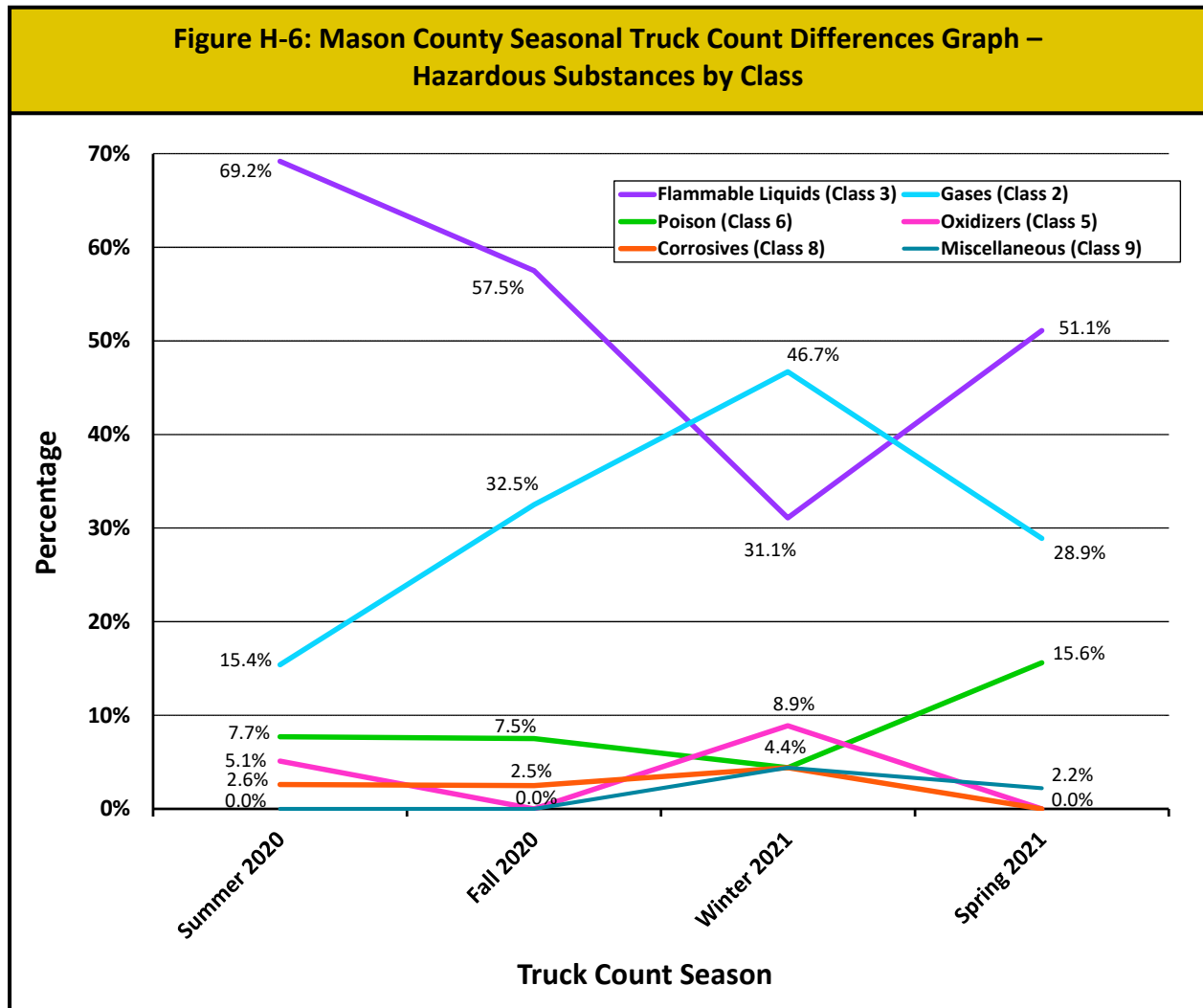
### 4.2.3 Seasonal Differences

Flammable and Combustible Liquids (Class 3) was the most frequently shipped category of hazardous substances during three of the four truck count seasons. Gases (Class 2) held the top spot during the winter 2021. The quantities of Flammable and Combustible Liquids (Class 3) during those three seasons were more than all other classes observed combined.

**Figure H-6** charts the seasonal differences of the hazardous substances transported via highway through Mason County by hazard class. Flammable Solids (Class 4) was only observed during one season while Explosives (Class 1) and Radioactives (Class 7) were not observed during any seasons and therefore are not depicted. The following gives a brief narrative description of the differences identified in the chart.

During the first truck count conducted in summer 2020, Flammable and Combustible Liquids (Class 3) were the most shipped category of hazardous substances followed by Gases (Class 2), Poisons (Class 6), Oxidizers (Class 5), and Corrosives (Class 8). In fall 2020, Flammable and Combustible Liquids (Class 3) decreased slightly while Gases (Class 2) more than doubled. Both

Poisons (Class 6) and Corrosives (Class 8) remained stable, while Oxidizers (Class 5) were not observed.



Flammable Solids (Class 4) were only observed during one season while Explosives (Class 1) and Radioactives (Class 7) were not observed during any seasons and therefore are not depicted.

Flammable and Combustible Liquids (Class 3) decreased considerably in winter 2021 as Gases (Class 2) surged d into the top spot. Oxidizers (Class 5) rebounded into third place, while Poisons (Class 6), Corrosives (Class 8) and Miscellaneous (Class 9) tied for fourth. In the final season, spring 2021, Flammable and Combustible Liquids (Class 3) rebounded into the top spot and Gases (Class 2) returned to second place. Poisons (Class 6) tripled from the previous season to place third and Miscellaneous (Class 9) decreased slightly. Oxidizers (Class 5) and Corrosives (Class 8) were not observed in spring 2021.

### 4.3 Potential Impacts – Community Resources

The following provides a listing of select *community resources* (i.e., schools, government services, healthcare facilities, and other locations deemed to be critical or key) *located within*

**300 feet of the studied highways.** The list was compiled by the Consultant with assistance from the LEPC. A hazardous materials (hazmat) incident on any of the studied highways could impact these resources. Depending upon the type of chemical or substance released, the quantity, and the weather conditions, an evacuation of these resources might be necessary.

Bath

*Government Services*

- ❖ Bath Fire Protection District, 115 East 1<sup>st</sup> St.

Havana

*Educational Facilities*

- ❖ Havana Jr. High School, 801 E. Laurel St.
- ❖ Havana High School, 501 McKinley St.

*Government Services*

- ❖ Havana Rural Fire Protection District, 318 S. McKinley St.

Mason City

*Educational Facilities*

- ❖ Illini Central Schools, 208 N. West St.

*Government Services*

- ❖ Mason City Ambulance, 151 N. Tonica St.
- ❖ Mason City City Hall, 145 S. Main St.
- ❖ Mason City Fire Protection District, 409 W. Pine St.

## 5.0 RAIL



### 5.1 Methodology

Rail is an efficient means of transporting all types of cargo, including chemicals and hazardous substances, across and throughout the US. According to the USDOT Bureau of Transportation Statistics, it takes three to four trucks to move the same amount of product transported by one rail car. Illinois has the second largest rail system in the US., second only to Texas, and carries all hazard classes of chemical and hazardous substances. As a result, it is important to identify and locate the rail lines in the County to better understand how hazardous substances are being transported.

According to the Surface Transportation Board there are three classes of railroads in the US., Class I, II, and III. Classes are based on annual operating revenues. Class I railroads, the top class, generate at least \$504.8 million in revenue annually. Currently there are seven Class I railroads operating in the US. All seven of the Class I railroads operate in Illinois and include: Burlington Northern Santa Fe Railway, Kansas City Southern Railway, Union Pacific Railroad, Canadian Pacific Railway, CSX Transportation Inc., Norfolk Southern Railway and Canadian National Railway.

Mapping obtained from the Illinois Department of Transportation provided information on the locations and operators of the rail line within Mason County. The Mason County Emergency Management Agency (EMA) Director filed formal requests with Union Pacific, the only Class I rail line in the County, to obtain hazardous materials commodity flow information summary reports. This information is considered to be restricted information of a security sensitive nature and is only provided to bona fide emergency planning and response organizations for the express purpose of emergency and contingency planning. To protect the confidentiality of this information, discussions will focus on the shipment of hazardous substances by USDOT hazard classes rather than on specific chemicals and hazardous substances.

For the purposes of this Study, hazardous substances that can legally be placarded under more than one USDOT hazard class will only be assigned to one class instead of multiples. The decision as to which class to assign the substance is based on one of the following factors: a) most frequently used class; b) market targeted by the generator; c) destination; and d) specific formulation.

For the purposes of this Study, only the data relating to “loaded cars” was analyzed. Hazardous substances transported by rail are equal to, and in some instances, exceed the quantities transported by truck.

## 5.2 Rail Lines Studied

There is one Class I rail line in Mason County operated by Union Pacific Railroad (UP). **Figure R-1** illustrates its location. The UP line enters the County from the north and generally travels south across the eastern edge of the County. The line passes just west of the unincorporated area of Natrona before crossing Salt Creek into Menard County.

There is one other rail line in Mason County, the Illinois & Midland Railroad (IMRR), that enters the County from the north and travels southwest through Manito, Forest City, Topeka and Havana. At Havana the line changes direction and travels south through Kilbourne before crossing the Sangamon River into Menard County. Historically the line has been used to haul coal. Since it is not a Class I rail line, it was not included in this Study.

In response to the formal requests filed by the Mason County EMA Director, UP provided hazardous materials traffic flow summaries for 2019, 2020, and 2021.

### 5.2.1 Frequency

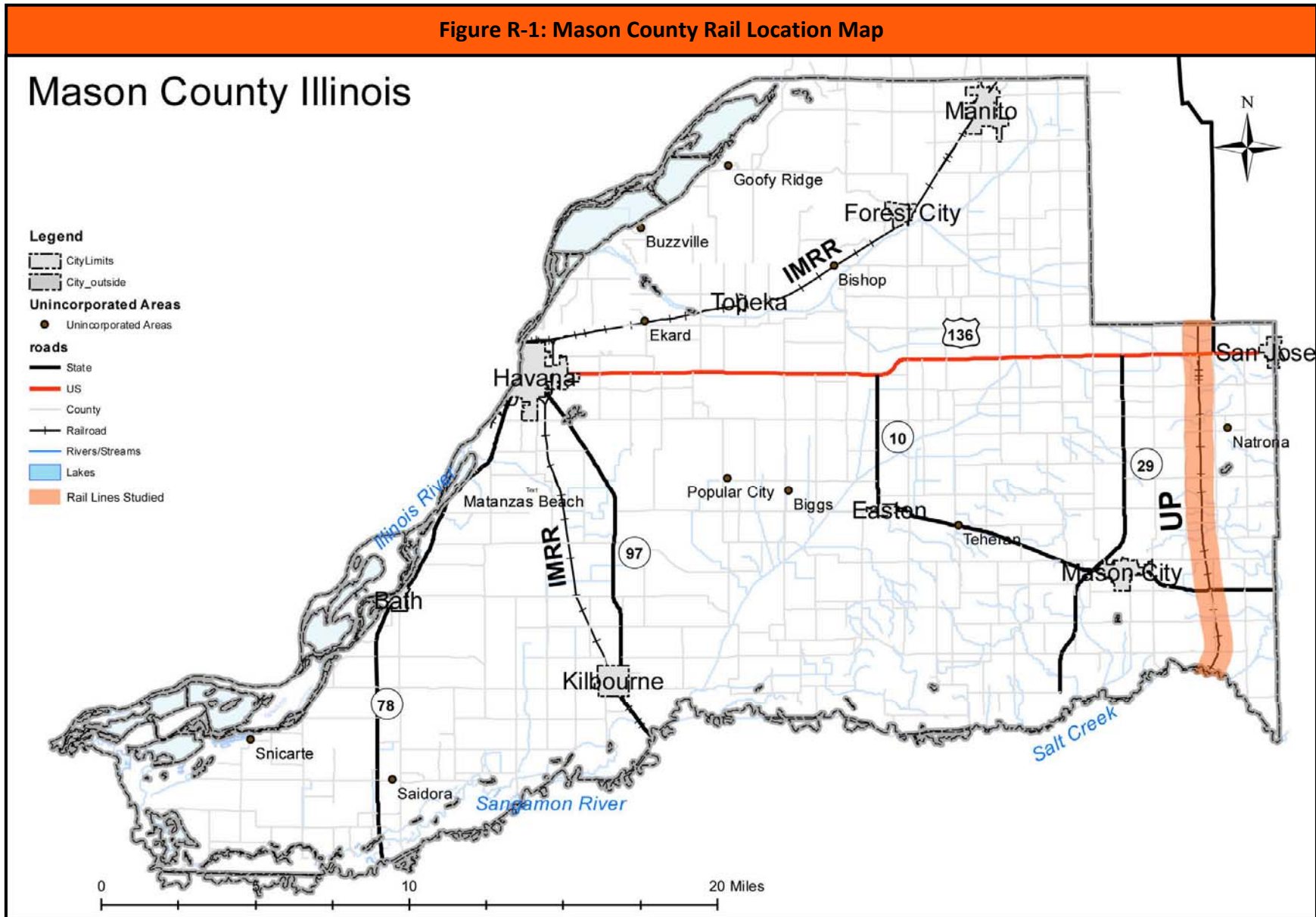
According to the traffic flow summaries provided by UP, there was a 23% increase in the number of total loaded cars carrying hazardous substances between 2019 and 2020 before a dramatic decrease occurred between 2020 and 2021.

In 2019 a total of 637 loaded cars transported hazardous substances through the County while 833 loaded cars transported hazardous substances through the County in 2020. In 2021 the number of total loaded cars transporting hazardous substances dropped to 16.

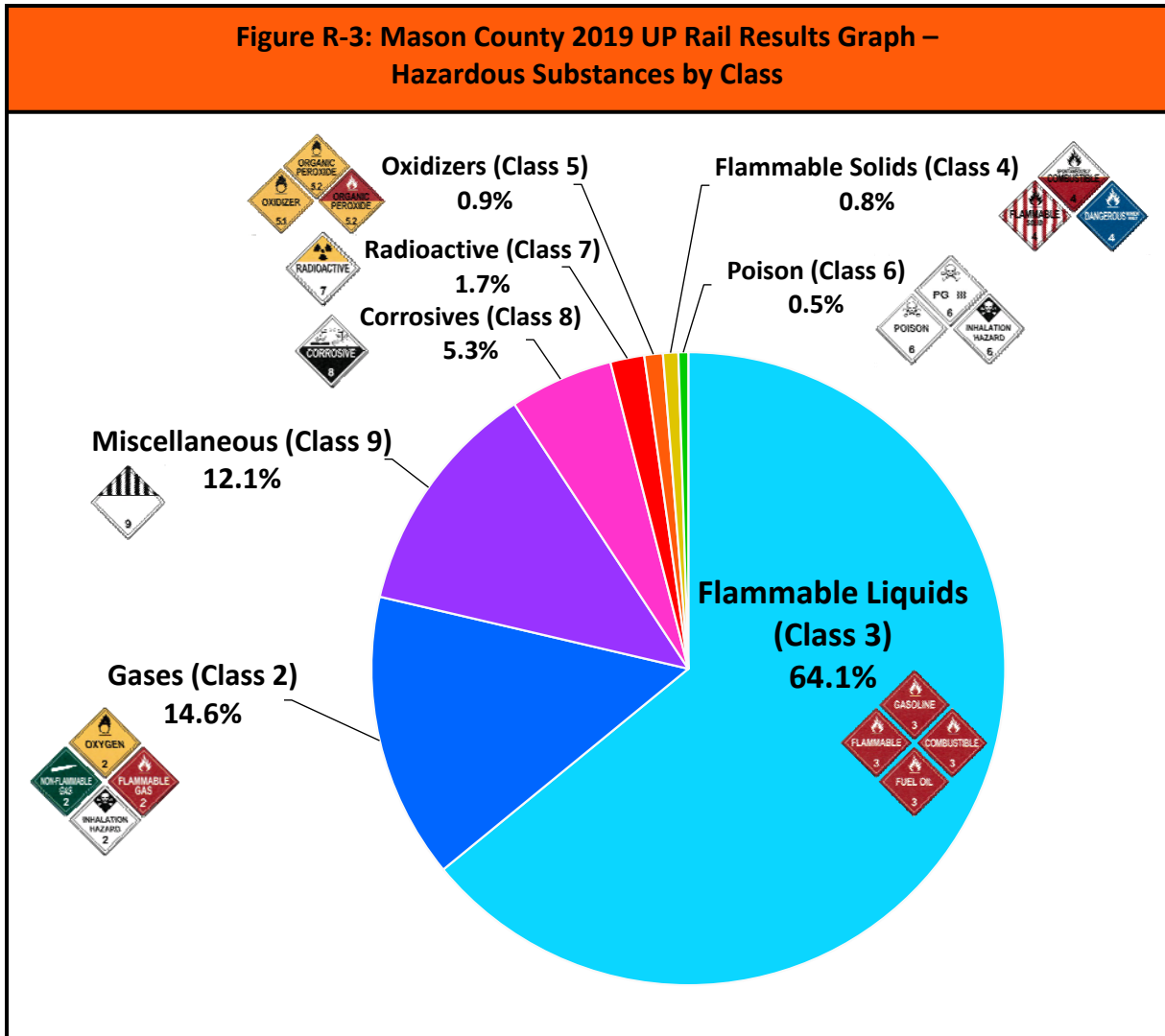
### 5.2.2 Breakdown of Hazardous Substances by Hazard Class

**Figure R-2** summarizes the number of loaded rail cars carrying hazardous substances by hazard class by year while **Figures R-3** and **R-4** depict the percentage of hazardous substances transported by hazard class for 2019 and 2021. The only hazard class transported by rail in 2020 was Flammable and Combustible Liquids (Class 3).

Figure R-2: Mason County UP Results – Hazardous Substances by Class by Year								
Hazardous Materials Warning Placard Class	2019		2020		2021		TOTAL	% TOTAL
	Number of Total Loaded Rail Cars	% of Total	Number of Total Loaded Rail Cars	% of Total	Number of Total Loaded Rail Cars	% of Total		
Class 1 - Explosives	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Class 2 - Gases	93	14.6%	0	0.0%	0	0.0%	93	6.3%
Class 3 - Flammable Liquids	408	64.1%	833	100.0%	3	18.8%	1,244	83.7%
Class 4 - Flammable Solids	5	0.8%	0	0.0%	0	0.0%	5	0.3%
Class 5 - Oxidizers	6	0.9%	0	0.0%	0	0.0%	6	0.4%
Class 6 - Poisons	3	0.5%	0	0.0%	1	6.3%	4	0.3%
Class 7 - Radioactives	11	1.7%	0	0.0%	0	0.0%	11	0.7%
Class 8 - Corrosives	34	5.3%	0	0.0%	11	68.8%	45	3.0%
Class 9 - Misc.	77	12.1%	0	0.0%	1	6.3%	78	5.2%
<b>Total</b>	<b>637</b>		<b>833</b>		<b>16</b>		<b>1,486</b>	

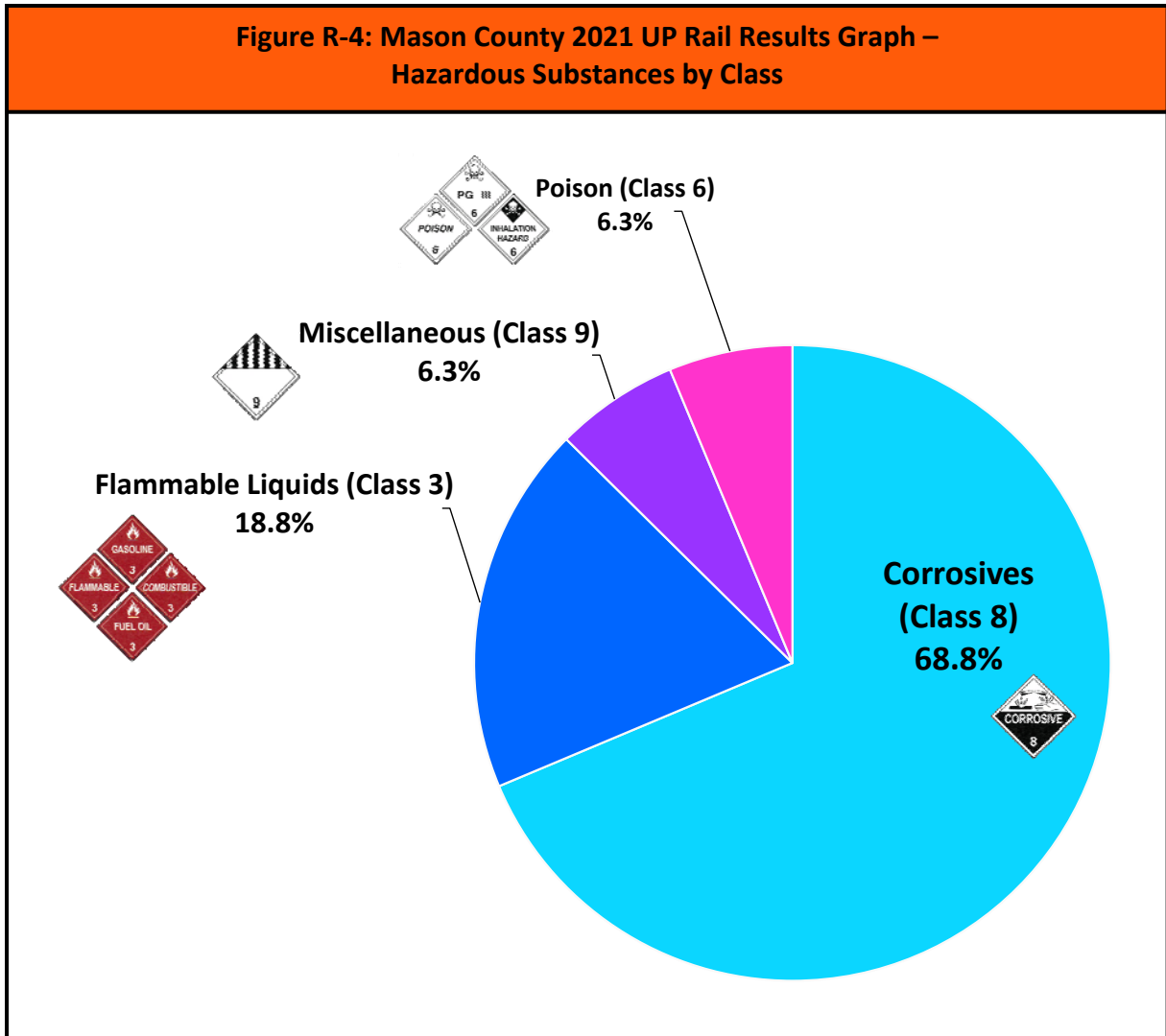






**2019 Rail Summary**

- ❖ Flammable and Combustible Liquids (Class 3) comprised the largest category of hazardous substances shipped by rail at 64.1%.
- ❖ Gases (Class 2) accounted for 14.6% of all hazardous substances shipped by rail.
- ❖ Miscellaneous Hazardous Materials (Class 9) was the third largest category of hazardous substances shipped by rail at 12.1%.
- ❖ Corrosives (Class 8) accounted for 5.3% of all hazardous substances shipped by rail.



**2021 Rail Summary**

- ❖ Corrosives (Class 8) comprised the largest category of hazardous substances shipped by rail at 68.8%.
- ❖ Flammable and Combustible Liquids (Class 3) accounted for 18.8% of all hazardous substances shipped by rail.
- ❖ Miscellaneous Hazardous Materials (Class 9) and Poisons (Class 6) were the third largest category of hazardous substances shipped by rail at 6.3% each.

### 5.3 Potential Impacts – Community Resources

In Mason County, there were no selected *community resources* (i.e., schools, healthcare facilities, utilities, public safety services, drinking water supplies, and other locations deemed to be critical or key) are *located within 300 feet of the studied rail line*.

## 6.0 BARGE



### 6.1 Methodology

Barges travel up, down and across some 12,000 miles of commercially navigable inland and intracoastal waterways in the US. This inland waterway system moves commerce to and from 38 states throughout the nation's heartland and Pacific Northwest, serves industrial and agricultural centers and facilitates imports and exports at gateway ports on the Gulf Coast.

The National Waterways Foundation estimates that the inland waterways system transports more than 60% of the nation's grain exports, about 22% of domestic petroleum and petroleum products and 20% of the coal used for electricity. In 2018, the inland waterways system handled roughly 766.3 million tons of freight valued at more than \$507.3 billion.

Transporting freight via the inland waterways system is more efficient. A typical barge moves much more cargo than a single truck or rail car. The Center for Ports and Waterways at the Texas Transportation Institute determined that one barge load of gasoline (equal to 27,500 barrels) would require 46 rail cars or 144 trucks to move the same amount of product to market. In terms of dry bulk goods, one barge of dry bulk cargo (approximately 1,750 short tons) carries the equivalent of 16 rail cars or 70 trucks. In addition, a barge can move one ton of cargo 616 miles per gallon of fuel while a rail car can move the same ton 478 miles and a truck can only move it 150 miles.

Illinois lays claim to nearly 10 percent of the nation's inland waterways system mileage – some 1,118 miles of navigable waterways. Included in this total are:

- ❖ 580 miles of the Mississippi River and
- ❖ 327 miles of the Illinois Waterway flowing from the O'Brien Lock in Chicago to the Mississippi River at Grafton, with the Illinois River making up the largest section.

In 2018, Illinois ranked seventh in terms of the number of tons of commodities shipped on its inland waterways with 90.6 million tons, according to the US Army Corps of Engineers (USACE) Navigation Data Center. As a result, it is important to determine the types and quantities of chemicals and hazardous substance being transported via barge.

Data obtained from the USACE Rock Island District office provided information on the location of the navigable waterways and locks and dams in the Mason County area while USACE's Navigation and Civil Works Decision Support Center provided information on the lock characteristics. Data obtained from the USACE Lock Performance Monitoring System (LPMS) provided information on the amount and type of commodities shipped up and down the navigable waterways by lock by month.

It should be noted that the barge information obtained is not categorized by the placarded classes used by highway and rail. Instead, the information is categorized by commodity codes. The commodity codes include all commodities shipped by barge, even those that are not considered to be hazardous in nature. The first two digits identify the major groups and include:

- ❖ 10 All Coal, Lignite and Coal Coke
- ❖ 20 All Petroleum & Petroleum Products
- ❖ 30 All Chemicals & Related Products
- ❖ 40 All Crude Materials, Inedible, Except Fuels
- ❖ 50 All Primary Manufactured Goods
- ❖ 60 All Food & Farm Products
- ❖ 70 All Manufactured Equipment & Machinery
- ❖ 80 All Waste Material
- ❖ 90 All Unknown or Not Elsewhere Classified (NEC)

**Appendix D** contains a listing of the USACE Lock Performance Monitoring System (LPMS) commodity codes list. The four digit minor group codes provide the reader with an idea of the types of individual commodities found under each of the major groups even though the data reported by USACE is not reported by minor group. Based on the individual commodities contained within the major groups, it is likely that hazardous substances are found in major groups 20, 30, 80, and possibly 90.

## 6.2 Findings

There is one navigable waterway, the Illinois River, running along the eastern boundary of Mason County. The River runs from northeast to southwest and forms the boundary between Mason and Schuyler counties and Mason and Fulton counties. Approximately 28.5 miles downstream of Mason County, is the LaGrange Lock and Dam in Brown County while the Peoria Lock and Dam is 24.5 miles upstream in Peoria County. **Figure B-1** identifies the general location of each lock and dam while **Figure B-2** provides a brief description of each lock. **Appendix E** contains detailed USACE charts on the section of the Illinois Waterway (Illinois River) in Mason County.

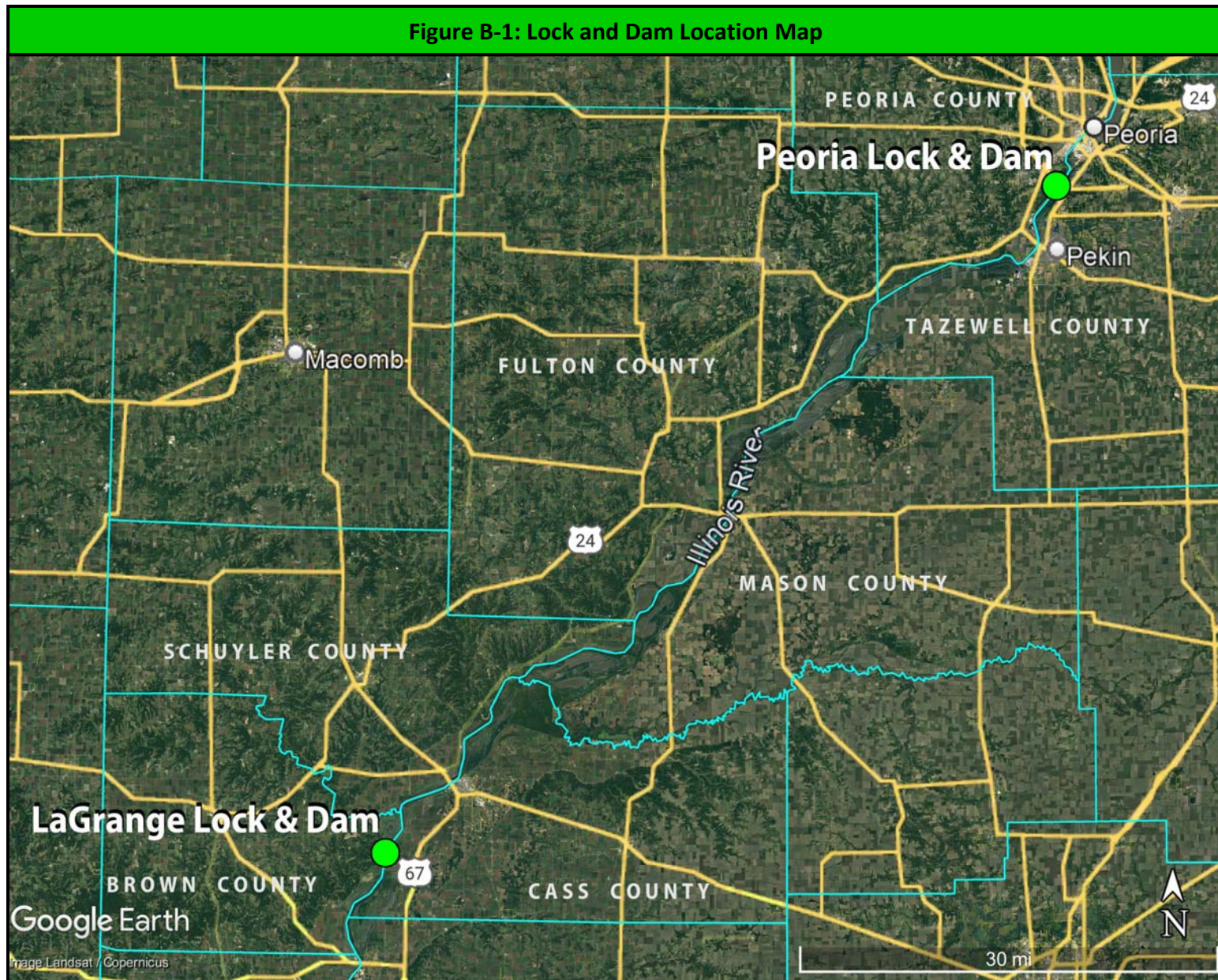


Figure B-2: Illinois River Locks Serving Mason County						
Lock Name	Location (Mile Marker)	Year Opened	Length (ft.)	Width (ft.)	Lift (ft.)	Owner / Operator
LaGrange	80.2	1939	600	110	10	USACE
Peoria	157.7	1938	600	110	11	USACE

### 6.2.1 Frequency

Figure B-3 summarizes the total kilotons of major commodity groups transported upbound and downbound by lock in the Mason County area during 2019 as reported by the USACE Lock Performance Monitoring System. Barge data for 2019 was analyzed instead of 2020 due to traffic disruptions resulting from the rehabilitation of the Interstate 74 Murray Baker Bridge over the Illinois River in Peoria. Appendix F contains a summary of the tonnage reports by month by lock for 2019.

Figure B-3: 2019 Summarized Monthly Tonnage Reports by Lock for Mason County								
LPMS Commodity Product Code	Illinois Waterway River System							
	Monthly Tonnage Reports by Lock: January 1, 2019 through December 31, 2019							
	08 - LaGrange		Total (Ktons)	% Total	07 - Peoria		Total (Ktons)	% Total
Upbound (Ktons)	Downbound (Ktons)	Upbound (Ktons)			Downbound (Ktons)			
10 All Coal, Lignite & Coal Coke	158.00	219.84	377.84	1.56%	509.60	227.40	737.00	3.57%
20 All Petroleum & Petroleum Products	636.60	2,527.60	3,164.20	13.06%	645.80	2,573.60	3,219.40	15.60%
30 All Chemicals & Related Products	3,738.58	1,524.31	5,262.89	21.72%	3,329.08	1,094.66	4,423.74	21.43%
40 All Crude Materials, Inedible, Except Fuel	2,957.90	801.84	3,759.74	15.52%	2,678.40	845.90	3,524.30	17.07%
50 All Primary Manufactured Goods	2,044.04	495.00	2,539.04	10.48%	1,967.34	501.70	2,469.04	11.96%
60 All Food & Farm Products	626.02	8,370.91	8,996.93	37.13%	639.40	5,510.97	6,150.37	29.79%
70 All Manufactured Equipment & Machinery	58.60	2.95	61.55	0.25%	60.85	8.90	69.75	0.34%
80 All Waste Material	4.80	29.40	34.20	0.14%	1.60	16.60	18.20	0.09%
90 All Unknown or Not Elsewhere Classified (NEC)	4.70	31.50	36.20	0.15%	4.70	26.80	31.50	0.15%
<b>Totals</b>	<b>10,229.24</b>	<b>14,003.35</b>	<b>24,232.59</b>		<b>9,836.77</b>	<b>10,806.53</b>	<b>20,643.30</b>	

## 6.2.2 Breakdown by Major Commodity Group

Figures B-4 and B-5 provide graphic depictions of the major commodity groups shipped through each lock serving Mason County. The following provides a summary of the differences by lock. As discussed previously, hazardous substances are most likely to be found in Commodity Groups 20, 30, 80, and 90. Negligible quantities of Commodity Group 80 Waste Material, Garbage, Landfill, Sewage Sludge & Waste Water and Commodity Group 90 Other, Not Elsewhere Categorized were transported by barge through either lock during 2019.

### 6.2.2.1 LaGrange Lock

- ❖ Commodity Group 30 Chemicals & Related Products account for the second largest group of commodities shipped by barge through this lock at 21.72%.
- ❖ Commodity Group 20 Petroleum & Petroleum Products were the fourth largest commodity group shipped by barge through this lock at 13.06%.
- ❖ Together, commodity Groups 20 and 30 account for approximately 34.78% of all commodities shipped by barge. It is likely that a majority of these commodities are hazardous substances.

### 6.2.2.2 Peoria Lock

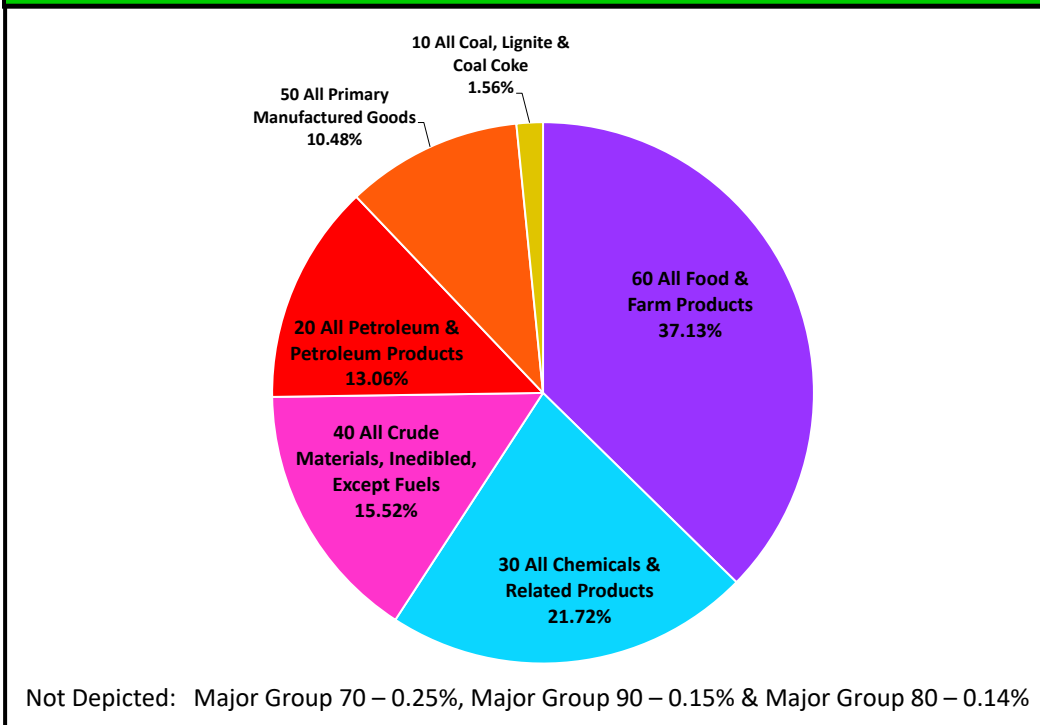
- ❖ Commodity Group 30 Chemicals & Related Products account for the second largest group of commodities shipped by barge through this lock at 21.43%.
- ❖ Commodity Group 20 Petroleum & Petroleum Products was the fourth largest commodity group shipped by barge through this lock at 15.60%.
- ❖ Together, commodity Groups 20 and 30 account for approximately 37.03% of all commodities shipped by barge. It is likely that a majority of these commodities are hazardous substances.

### 6.2.2.3 Differences in Commodities Transported

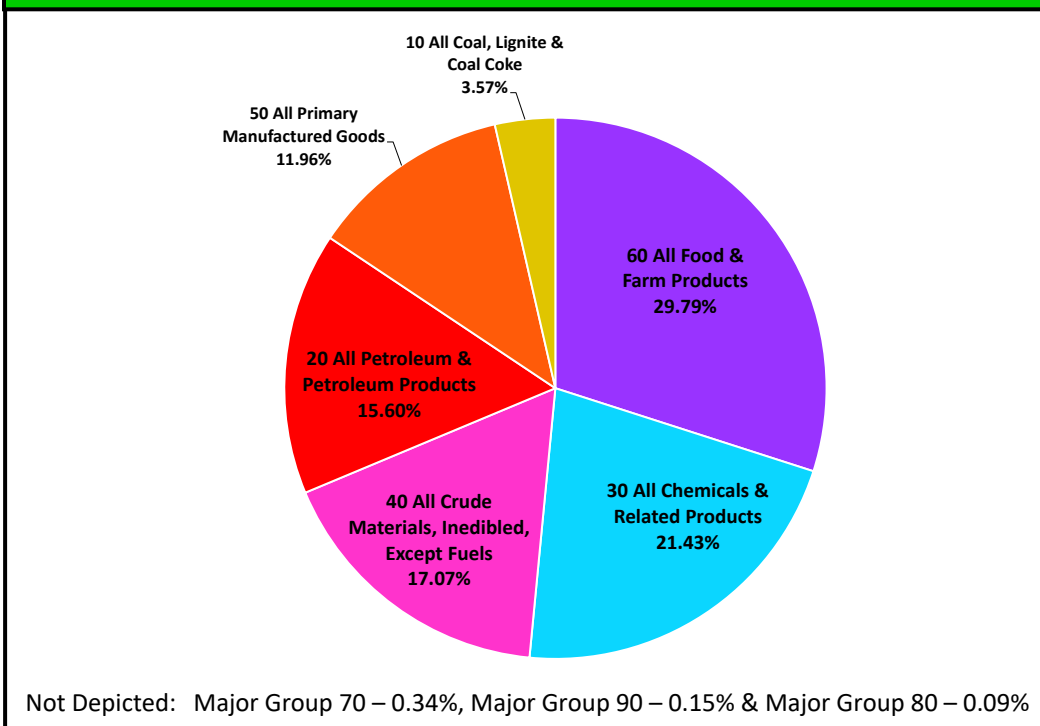
- ❖ Approximately 9 kilotons of Commodity Group 20 Petroleum & Petroleum Products originate locally between the LaGrange Lock and the Peoria Lock and are shipped upbound while about 46 kilotons are off loaded locally between the Peoria Lock and LaGrange Lock as they are shipped downbound.
- ❖ Approximately 410 kilotons of Commodity Group 30 Chemicals & Related Products are off loaded locally between the LaGrange Lock and the Peoria Lock as they are shipped upbound while approximately 430 kilotons are on loaded locally between the Peoria Lock and LaGrange Lock as they are shipped downbound.



**Figure B-4: Graph –2019 Monthly Tonnage Report Summary of Commodities Shipped by Barge through the LaGrange Lock**



**Figure B-5: Graph –2019 Monthly Tonnage Report Summary of Commodities Shipped by Barge through the Peoria Lock**



## 7.0 VULNERABILITY ANALYSIS

### 7.1 Methodology

The purpose of this vulnerability analysis is to determine the relative susceptibility of community resources (such as schools, healthcare facilities, government services, etc.) to incidents involving the transportation of chemicals and hazardous substances. The results of this analysis will help municipal and county officials make informed decisions about how they can better protect their communities.

It should be noted that this analysis is meant to provide a **general idea** of the magnitude of the potential impacts that could occur. Depending on market fluctuations and development trends in the area, these impacts have the potential to change based on the types and quantities of chemicals and hazardous substances being transported through the County.

The modes of transportation to be analyzed include highway and rail. The community resources to be evaluated were assembled by Consultant and reviewed by the Mason County Local Emergency Planning Committee and Mason County Emergency Management Agency. A detailed listing of the community resources evaluated by municipality is located in **Appendix G**.

The community resources used in this vulnerability analysis should be viewed as a starting point for those who are involved with protecting public health and emergency management. The number of facilities and structures considered to be part of the list of community resources will change as additional facilities are built and when locations of vital services change. Some resources that can be considered “critical infrastructure” such as communication towers were not included in this analysis because they have a low likelihood of becoming disabled by a hazardous materials release.

#### 7.1.1 Assumptions

To analyze the impacts that a highway or rail hazardous substances transportation incident would have on the selected community resources, several decisions/assumptions must be made. The following provides a brief description of each decision/assumption.

- ❖ **Exposure.** The initial isolation distances (IID) or protective action distances (PAD) prescribed in the US Department of Transportation’s Emergency Response Guide (ERG) will be used to determine potential exposures. The IID used assumes that the tank, rail car or tank truck is involved in a fire while the PAD used assumes that a large spill occurs at night. If the community resource only operates during the day (any time after sunrise and before sunset), then the PAD used will assume that a large spill occurs during the day.
  - The IID identifies an area or zone *surrounding* the release in which persons may be exposed to dangerous (upwind) and life threatening (downwind) concentrations of the substance. For certain chemicals (i.e., flammable and combustible liquids, corrosives, etc.) the ERG only lists an IID. In those cases, the IID will be used in place of the PAD.

- The PAD identifies an area or zone *downwind* from the release in which persons may become incapacitated and/or incur serious or irreversible health effects if they are not evacuated or sheltered in place.

❖ **Incident Location and Wind Direction.** The IID or PAD prescribed in the ERG will be plotted along the entire length of the studied highways and rail lines. An analysis of approximately 20 years of hazardous materials (hazmat) incidents in Illinois and an evaluation of the hazmat incident reports for the County revealed that the number of locations where transportation incidents recur is generally few in number. In addition, many transportation hazmat incidents, including some of the larger ones, have occurred on straight and level segments of highway and rail where accidents would be least suspected of occurring.

Since the wind direction for a future event is unknown, the downwind distance will be plotted on both sides of the highways and rail lines for the PAD.

❖ **Scope of the Incident.** There are several scenarios that can be used to determine the scope or magnitude of the hazardous substances transportation incident. For this analysis both the “worst case” and “probable case” scenarios will be evaluated.

- The “worst case” scenario is based on the chemical/substance with the greatest IID/PAD as specified in the ERG. ***This scenario, while not likely, is included to identify the largest area and the greatest number of people who would be potentially impacted by an incident.*** In the smaller municipalities the IID/PAD for the “worst case” scenario is anticipated to more often than not encompass the entire municipality.
- ***The “probable case” scenario is based on the chemical/substance that is most frequently transported through the County and most likely to be involved in an incident.*** In most cases, the “probable case” scenario chemical IID/PAD is smaller than the “worst case” scenario chemical/substance IID/PAD.

The chemicals/hazardous substances chosen for these scenarios were documented as having been transported through the County during this Study. **Figure VA-1** identifies the chemicals/hazardous substances and their IIDs/PADs by scenario for the studied highways while **Figure VA-2** identifies the hazard class and associated IIDs/PADs by scenario for the studied rail line. To protect the confidentiality of the information provided by the rail lines, the hazard class is identified instead of the specific chemicals/hazardous substances.

### 7.1.2 Analysis

In order to provide a level of objectivity when evaluating the vulnerability of each community resource, a scoring system was developed by the Consultant with input from the Illinois Environmental Protection Agency and the Illinois Department of Transportation. Each community resource was scored on three categories: Exposure, Sensitivity and Adaptive Capacity. The following provides a brief description of each.

Figure VA-1: Chemicals/Hazardous Substances by Scenario for Highway				
Transportation Route	"Probable Case" Scenario		"Worst Case" Scenario	
	Chemical/Hazardous Substance	IID/PAD (miles)	Chemical/Hazardous Substance	IID/PAD (miles)
<b>Mason County</b>				
A. Illinois Rte. 29 – Tazewell County line to US Rte. 136	gasoline*	1.0	anhydrous ammonia	1.3
B. US Rte. 136 – Illinois Rte. 29 to Logan County line	gasoline*	0.5	anhydrous ammonia	1.3
C. Illinois Rte. 29 – US Rte. 136 to Menard County line	anhydrous ammonia	1.3	anhydrous ammonia	1.3
D. Illinois Rte. 10 – Easton to Logan County line	anhydrous ammonia	1.3	anhydrous ammonia	1.3
E. Illinois Rte. 97 – US Rte. 136 to Kilbourne	gasoline*	0.5	anhydrous ammonia	1.3
F. US Rte. 136 – Illinois Rte. 78 to Promenade St./US Rte. 136	gasoline*	0.5	anhydrous ammonia	1.3
G. Illinois Rte. 78 – US Rte. 136 to Bath	gasoline*	0.5	anhydrous ammonia	1.3
H. US Rte. 136 -- Fulton County line to Illinois Rte. 97	gasoline*	0.5	anhydrous ammonia	1.3

\* Other flammable liquids were identified along these routes; however, they all have the exact same IID/PAD as gasoline.

Figure VA-2: Chemicals/Hazardous Substances by Scenario for Rail				
Transportation Route	"Probable Case" Scenario		"Worst Case" Scenario	
	Hazard Class	IID/PAD (miles)	Hazard Class	IID/PAD (miles)
<b>Mason County</b>				
Union Pacific	Flammable Liquids (Class 3)	0.5	Gases (Class 2)	7.0+

- ❖ **Exposure** indicates whether the community resource falls within or in close proximity to the prescribed IID/PAD and the likelihood that individuals using the community resource will be exposed to unsafe concentrations of the chemical/substance. Exposure is based on the IID/PAD.
- ❖ **Sensitivity** indicates whether the community resource is likely to experience structural damage from the hazmat incident and/or a disruption in service as a result of the incident. Sensitivity is based on the answer to these two questions:
  - Is damage to the resource’s physical structure from a fire or explosion likely? A fire or explosion that occurs next to a community resource might result in substantive physical damage to the resource thus impairing service.
  - Would the incident disrupt service at the resource? An incident could result in evacuation, which disrupts service, without harming the physical structure.

Of the three factors, measuring sensitivity involves the most subjectivity. Hazardous substance transport incidents do not always result in fire or explosion, but when they do severe disruptions or damage can occur.

- ❖ **Adaptive Capacity** refers to a municipality's access to services provided by the resource. If the service provided is disrupted or lost due to an incident, and the service isn't available elsewhere in the municipality or nearby, then the municipality has less ability to adapt to the impacts caused by an incident.

Each category is scored based on a set of factors and assigned a point value of 0, 1, 2, 3, or 4 for each community resource. **A higher score indicates a greater vulnerability.** Figure VA-3 identifies the factors and points associated with each category. It should be noted that the risk assessors also took into consideration factors such as health effects and chemical characteristics when scoring each resource.

- ❖ A community resource that receives **a score of 5 through 7 points has a relative vulnerability of "medium"** from a highway or rail line.
- ❖ A community resource that receives **a score of 8 or more points has a relative "high" vulnerability** from a highway or rail line.
- ❖ A community resource that receives **a score of 11 to 12 points** for a specific scenario **suggests a degree of vulnerability that deserves mitigation consideration.**
- ❖ Resources that **score higher than 12 points** indicate a **vulnerability posed by more than one mode of transportation or dual threats from the "worst case" chemical and "probable case" chemical.**

### 7.1.3 Acknowledgements

This vulnerability analysis methodology was developed by Greg Michaud, former Community Relations Manager at the Illinois Environmental Protection Agency (IEPA) with the input and assistance of environmental risk assessment and environmental public health assessment experts at IEPA, the Illinois Department of Public Health, and the University of Illinois Springfield. For close to a decade, this method has proven useful and effective in the evaluation of risk and vulnerability associated with transportation-related hazardous substances incidents.

**Figure VA-3: Vulnerability Analysis Scoring System  
(Sheet 1 of 2)**

Category	Factors	Point Value
Exposure	<ul style="list-style-type: none"> <li>- Within the PAD and adjacent to the hazmat incident</li> <li>- Strong likelihood that individuals will be exposed to unsafe concentrations</li> </ul>	4
	<ul style="list-style-type: none"> <li>- Within the PAD but not adjacent to the hazmat incident</li> <li>- Individuals are likely to be exposed; however, the concentration may not be harmful</li> </ul>	3
	<ul style="list-style-type: none"> <li>- At the edge of the PAD</li> <li>- Individuals may be exposed; however, the concentration is not expected to be harmful</li> </ul>	2
	<ul style="list-style-type: none"> <li>- Outside the PAD; however, topography and prevailing wind direction may be used to determine if a resource is sufficiently close to result in an exposure</li> </ul>	1
	<ul style="list-style-type: none"> <li>- Outside the PAD; no exposure is anticipated</li> <li>- If no exposure is anticipated, then the resource has a virtually non-existent vulnerability to the scenario and will not be scored for Sensitivity and Adaptive Capacity</li> </ul>	0
Sensitivity	<ul style="list-style-type: none"> <li>- Within the Pad and adjacent to the hazmat incident</li> <li>- The resource is likely to experience significant structural damage from the hazmat incident resulting in loss of operation; and/or</li> <li>- Service will be disrupted for an extended period of time</li> </ul>	4
	<ul style="list-style-type: none"> <li>- Within the PAD and near the hazmat incident</li> <li>- The resource is likely to experience only superficial structural damage from the hazmat incident that would not result in the loss of operation and/or</li> <li>- Service will be disrupted for an extended period of time</li> </ul>	3
	<ul style="list-style-type: none"> <li>- Within the PAD of the hazmat incident</li> <li>- Service will be disrupted for a short period of time</li> <li>- The resource is not likely to experience any structural damage from the hazmat incident</li> </ul>	2
	<ul style="list-style-type: none"> <li>- Within the PAD of the hazmat incident / At the edge of the PAD</li> <li>- There is the potential for a short service disruption based on the topography and prevailing wind direction</li> <li>- The resource is not expected to experience any structural damage from the hazmat incident</li> </ul>	1
	<ul style="list-style-type: none"> <li>- At the edge of the PAD</li> <li>- No structural damage or service disruptions are anticipated</li> <li>- If no structural damage or disruptions in service are anticipated, then the resource is considered to have a very low vulnerability to the scenario and will not be scored for Adaptive Capacity</li> </ul>	0

Figure VA-3: Vulnerability Analysis Scoring System (Sheet 2 of 2)		
Category	Factors	Point Value
Adaptive Capacity ➤ Government Services ➤ Health Services ➤ Educational Facilities ➤ Other Services/ Facilities <ul style="list-style-type: none"> <li>• Shelters</li> <li>• Utilities</li> <li>• Business/Industry</li> <li>• Tourist Attractions</li> </ul>	<ul style="list-style-type: none"> <li>- Critical services will be disrupted for an extended period of time and cannot be provided by the resource</li> <li>- There are no other resources within the jurisdiction and no mutual aid agreements in place to provide the disrupted critical services</li> </ul>	4
	<ul style="list-style-type: none"> <li>- Critical services will be disrupted for an extended period of time and cannot be provided by the resource; however,</li> <li>- Mutual aid agreements allow outside resources to provide critical services; and/or</li> <li>- Some of the critical services can be provided at an alternate or remote location</li> </ul>	3
	<ul style="list-style-type: none"> <li>- Critical services will be temporarily disrupted and cannot be provided by the resource</li> <li>- There are no other or not enough resources within the jurisdiction and no mutual aid agreements in place to provide the disrupted critical services; or</li> <li>- While the service is provided by other resource(s) in the jurisdiction, capacity/logistical limitations prevent the use of this resource(s)</li> </ul>	2
	<ul style="list-style-type: none"> <li>- Some services are temporarily disrupted and cannot be provided by the resource; however,</li> <li>- Critical services can be provided from an alternate or remote location or through mutual aid agreements; or</li> <li>- While minor service disruptions may occur the resource is considered to have the ability to adapt in-place and critical services will still be provided</li> </ul>	1
	<ul style="list-style-type: none"> <li>- Critical services are not likely to experience any disruptions</li> </ul>	0

## 7.2 Findings

The following summarizes the vulnerability of selected community resources to incidents involving the transportation of chemicals and hazardous substances by highway and rail.

**Figures VA-4 through VA-9**, located at the end of this subsection, summarize the scoring results of the vulnerability analysis for each identified community resource by municipality for both highway and rail. For a detailed breakdown of how each community resource scored by category, the base scoring sheets are located in **Appendix H**. Caution is advised when reviewing the base and cumulative scores. Additional factors such as health impacts and chemical characteristics were also considered during scoring.

### 7.2.1 Highway

While all the studied highways were scored for the identified community resources in Mason County, only those highways that have the potential to impact the identified community resources are included in the figures, narrative or base scoring sheets.

**Bath**

- ❖ Highways of Concern: Illinois Route 78
- ❖ Number of Community Resources Scored: 1
- ❖ The Bath Fire Protection District has a high vulnerability to both the “probable” and “worst” case scenarios.

**Easton**

- ❖ Highways of Concern: Illinois Route 10
- ❖ Number of Community Resources Scored: 1
- ❖ The Easton Rural Fire Protection District has a high vulnerability to both the “probable” and “worst” case scenarios.

**Havana**

- ❖ Highways of Concern: US Route 136, Illinois Route 78, Illinois Route 97
- ❖ Number of Community Resources Scored: 10
- ❖ “Probable” Case Scenario Results:
  - Three of the community resources identified have a high vulnerability to the highways of concern.
    - Three of the community resources identified (Havana Jr. High School, Havana High School, and Havana Rural Fire Protection District) have a high vulnerability to US Route 136.
    - One of the identified community resources (Havana High School) has a high vulnerability to Illinois Route 97.
    - None of the community resources identified have a medium or high vulnerability to Illinois Route 78
- ❖ “Worst” Case Scenario Results:
  - Eight of the community resources identified have a high vulnerability to the highways of concern.
    - Two of the identified community resources (Havana Jr. High School and Havana High School) has a high vulnerability to Illinois Route 97.
    - Eight of the community resources identified (Havana Jr. High School, Havana High School, Havana City Hall, Havana Rural Fire Protection District, Mascon County Courthouse, Mason County Sheriff’s Office, Havana Health Care Center, and Mason District Hospital) have a high vulnerability to US Route 136.
    - All of the community resources identified have a medium vulnerability to Illinois Route 78.



### **Kilbourne**

- ❖ Highways of Concern: Illinois Route 97
- ❖ Number of Community Resources Scored: 1
- ❖ The Kilbourne Fire Department has a high vulnerability to both the “probable” and “worst” case scenarios.

### **Mason City**

- ❖ Highways of Concern: Illinois Route 10, Illinois Route 29
- ❖ Number of Community Resources Scored: 5
- ❖ “Probable” & “Worst” Case Scenario Results:
  - ❑ All of the community resources identified have a high vulnerability to the highways of concern for both scenarios.
    - All five of the community resources identified (Illini Central Schools, Mason City Ambulance, Mason City Hall, Mason City Fire Protection District, and Mason City Area Nursing Home) have a high vulnerability to US Route 10 for both scenarios.
    - One of the identified community resources (Illini Central Schools) has a high vulnerability to US Route 29 for both scenarios.

### **San Jose**

- ❖ Highways of Concern: US Route 136
- ❖ Number of Community Resources Scored: 2
- ❖ Both of the identified community resources (San Jose Village Hall and the San Jose Fire Protection District) have a high vulnerability to both the “probable” and “worst” case scenarios.

## **7.2.2 Rail**

While the UP rail line was scored for all the identified community resources in Mason County, only the community resources potentially impacted by this rail line are included in the figures, narrative or base scoring sheets.


### **Mason City**

- ❖ Rail lines of Concern: UP
- ❖ Number of Community Resources Scored: 5
- ❖ All of the identified community resources have a medium vulnerability to the “worst” case scenario.

### **San Jose**

- ❖ Rail lines of Concern: UP
- ❖ Number of Community Resources Scored: 2
- ❖ Both of the identified community resources have a medium vulnerability to the “worst” case scenario.

Figure VA-4: Bath – Vulnerability Analysis Scoring Summary			
Community Resource	IL Route 78		TOTAL HIGHWAY (Max. Point Total = 24)
	Probable Case (gasoline)	Worst Case (anhydrous ammonia)	
<i>Government Services</i>			
Bath Fire Protection District	9	12	21

 = Community Resource with a High Vulnerability

- ❖ The maximum score for each scenario is 12 points.
- ❖ The higher the score, the greater the vulnerability.
- ❖ A community resource that receives a score of 8 or more points for a specific scenario has a relative “high” vulnerability.
- ❖ A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.

Figure VA-5: Easton – Vulnerability Analysis Scoring Summary			
Community Resource	IL Route 10		TOTAL HIGHWAY (Max. Point Total = 24)
	Probable Case (anhydrous ammonia)	Worst Case (anhydrous ammonia)	
<i>Government Services</i>			
Easton Rural Fire Protection District	10	10	20

Figure VA-6: Havana – Vulnerability Analysis Scoring Summary							
Community Resource	US Route 136		IL Route 78		IL Route 97		TOTAL HIGHWAY (Max. Point Total = 72)
	Probable Case (gasoline)	Worst Case (anhydrous ammonia) <sup>‡</sup>	Probable Case (gasoline)	Worst Case (anhydrous ammonia)	Probable Case (gasoline)	Worst Case (anhydrous ammonia)	
<i>Educational Facilities</i>							
New Central Elementary School	1	7	0	7	1	7	15
Havana Jr. High School	9	12	0	7	7	9	28
Havana High School	9	12	0	7	9	12	28
<i>Government Services</i>							
Havana City Hall	7	9	4	7	6	7	27
Havana Fire/Police Department	1	7	0	7	1	7	15
Havana Rural Fire Protection District	9	12	0	7	6	7	28
Mason County Courthouse	7	9	0	7	4	7	23
Mason County Sheriff's Office	4	9	0	7	4	7	20
<i>Health Services</i>							
Havana Health Care Center	0	9	0	6	0	7	15
Mason District Hospital	0	9	0	5	0	7	14


Figure VA-7: Kilbourne – Vulnerability Analysis Scoring Summary			
Community Resource	IL Route 97		TOTAL HIGHWAY (Max. Point Total = 24)
	Probable Case (gasoline)	Worst Case (anhydrous ammonia)	
<i>Government Services</i>			
Kilbourne Fire Department	9	10	19

Figure VA-8: Mason City – Vulnerability Analysis Scoring Summary								
Community Resource	IL Route 10		IL Route 29		TOTAL HIGHWAY (Max. Point Total = 48)	Union Pacific		TOTAL RAIL (Max. Point Total = 24)
	Probable Case (anhydrous ammonia)	Worst Case (anhydrous ammonia)	Probable Case (anhydrous ammonia)	Worst Case (anhydrous ammonia)		Probable Case (Flammable Liquids - Class 3 <sup>‡</sup> )	Worst Case (Gases - Class 2 <sup>‡</sup> )	
<i>Educational Facilities</i>								
Illini Central Schools	12	12	9	9	42	0	7	7
<i>Government Services</i>								
Mason City Ambulance	12	12	7	7	38	0	7	7
Mason City City Hall	12	12	7	7	38	0	7	7
Mason City Fire Protection District	11	11	6	6	34	0	6	6
<i>Health Services</i>								
Mason City Area Nursing Home	10	10	4	4	28	0	7	7

‡ To protect the confidentiality of the information provided by the rail lines, the hazard class is identified instead of specific chemical/hazardous substance.

Figure VA-9: San Jose – Vulnerability Analysis Scoring Summary						
Community Resource	US Route 136		TOTAL HIGHWAY (Max. Point Total = 24)	Union Pacific		TOTAL RAIL (Max. Point Total = 24)
	Probable Case (gasoline)	Worst Case (anhydrous ammonia)		Probable Case (Flammable Liquids - Class 3 <sup>‡</sup> )	Worst Case (Gases - Class 2 <sup>‡</sup> )	
<i>Government Services</i>						
San Jose Village Hall	9	10	19	0	7	7
San Jose Fire Protection District	9	10	19	0	6	6

‡ To protect the confidentiality of the information provided by the rail lines, the hazard class is identified instead of specific chemical/hazardous substance.

 = Community Resource with a High Vulnerability

- ❖ The maximum score for each scenario is 12 points.
- ❖ The higher the score, the greater the vulnerability.
- ❖ A community resource that receives a score of 8 or more points for a specific scenario has a relative “high” vulnerability.
- ❖ A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.

## 8.0 RECOMMENDATIONS

The following recommendations are based on the results of this CFS. These recommendations should be reviewed and discussed with the appropriate professional staff and elected officials to determine what actions should be taken.

1. **Truck Counts.** While four regular seasons of truck counts and three supplemental seasons truck counts were conducted, the COVID-19 Pandemic almost certainly altered the types and quantities of hazardous substances transported by highway. Additional truck counts are recommended to identify seasonal differences, better characterize chemical movements following market fluctuations and address observational inconsistencies identified in the supplemental counts.
2. **Rail Data.** To help determine if the shift in types and quantities of hazardous substances transported by Union Pacific noted between 2019 and 2021 is a long-term trend or related to the COVID-19 Pandemic, acquisition of an additional two years of rail data is recommended.
3. **Additional Critical Infrastructure & Key Resource Analysis.** The Vulnerability Analysis in this CFS provides a foundation to see how vulnerable some educational facilities, government services, and health services are to hazmat incidents on highways and railroads. Financial limitations prevented a *comprehensive* vulnerability analysis of additional types of critical infrastructure and key resources.
4. **Community Resources.** Based on the number of community resources located adjacent to the studied highways, discussions should be initiated with facility personnel to review appropriate evacuation procedures and conduct drills to prepare for a possible hazmat incident.
5. **Non-Tier II Facilities.** Facilities which handle hazardous substances (but do not submit Tier II reports) and are adjacent to community facilities should be identified. Incidents at these facilities can pose risks to public health and the environment equal to and sometimes greater than the risks posed by Tier II facilities.
6. **Ecological Resources.** Ecological resources, including wetlands associated with surface waters and threatened and endangered species, were not evaluated for vulnerability to transportation incidents involving hazardous substances in Mason County. Identifying the location of these resources can be crucial to limiting damages from a potential release as well as identifying additional remediation costs that can be incurred and charged as part of the cleanup.

## 9.0 REFERENCES

Provided below is a listing of the resources utilized to create this document.

**2020 Emergency Response Guidebook.** Pipeline and Hazardous Materials Safety Administration. US Department of Transportation. 2020. <<https://www.phmsa.dot.gov/hazmat/erg/emergency-response-guidebook-erg>>

**Annual Report on Accidents/Incidents Involving Hazardous Materials on Railroads in Illinois.** Illinois Commerce Commission. 2005 – 2020. <<http://www.icc.illinois.gov/reports/report.aspx?rt=19>>

**Code of Federal Regulations.** Title 40 – Protection of Environment. Chapter 1 – Environmental Protection Agency. Subchapter J – Superfund, Emergency Planning, and Community Right-To-Know Programs. Part 355 – Emergency Planning and Notification. Appendix A to 355 – The List of Extremely Hazardous Substances and Their Threshold Planning Quantities.

**CAMEO (Computer-Aided Management of Emergency Operations).** National Oceanic and Atmospheric Administration, US Environmental Protection Agency and US Coast Guard. <<https://cameochemicals.noaa.gov/>>

**DOT CHART 17: Hazardous Materials Markings, Labeling and Placarding Guide.** Pipeline and Hazardous Materials Safety Administration. US Department of Transportation. <<https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2021-11/USDOT%20Chart%2017.pdf>>

**Economic Data.** Surface Transportation Board. <<https://prod.stb.gov/reports-data/economic-data/>>

**Freight Transportation System Condition & Performance.** United States Department of Transportation, Bureau of Transportation Statistics. <<https://data.bts.gov/stories/s/Freight-Transportation-System-Condition-Performanc/vvk5-xjjp>>

**Getting Around Illinois Interactive Map.** Map Type: Traffic Count. Illinois Department of Transportation. <<http://www.gettingaroundillinois.com/gai.htm?mt=aadt>>

**Hazardous Materials Incident Reports Database.** Illinois Emergency Management Agency. <<https://public.iema.state.il.us/FOIAHazmatSearch/>>

**RCRA Database.** Illinois Environmental Protection Agency. <<http://epadata.epa.state.il.us/land/rcra/MasterSearch.asp>>

**Transportation Fast Facts.** Illinois Department of Transportation. March 2021. <<https://idot.illinois.gov/Assets/uploads/files/Transportation-System/Fact-Sheets/transportation-fast-facts.pdf>>

**Union Pacific Railroad Hazardous Materials Commodity Flow Study.** Union Pacific Railroad. Douglas County, Illinois. 2019.

**Union Pacific Railroad Hazardous Materials Commodity Flow Study.** Union Pacific Railroad. Douglas County, Illinois. 2020.

**Union Pacific Railroad Hazardous Materials Commodity Flow Study.** Union Pacific Railroad. Douglas County, Illinois. 2021.

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# **APPENDIX A**

## **DOT Chart 17 Hazardous Materials Markings, Labeling and Placarding Guide**

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U.S. Department  
of Transportation  
Pipeline and  
Hazardous Materials  
Safety Administration

# DOT CHART 17

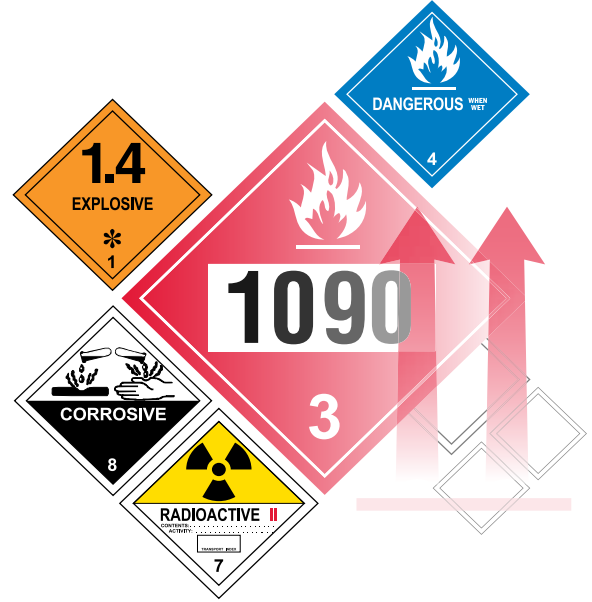
## Hazardous Materials Markings, Labeling and Placarding Guide

Refer to 49 CFR, Part 172:

Marking - Subpart D

Labeling - Subpart E

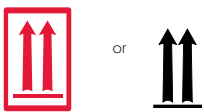
Placarding - Subpart F



NOTE: This document is for general guidance only and should not be used to determine compliance with 49 CFR, Parts 100-185.

### HAZARDOUS MATERIALS MARKINGS

Package Orientation  
(Red/Black)



§172.312(a)

Keep Away from Heat



§172.317

Overpack Mark



§173.25(a)(4)

Fumigant Marking



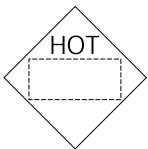
§172.302(g) and §173.9

Material Poisonous by Inhalation



§172.313(a)

Elevated Temperature Material



§172.325

UN ID Number Mark



§§172.332 and §172.336

Biological Substances, Category B



§173.199 (a)(5)

Lithium Battery Handling Mark



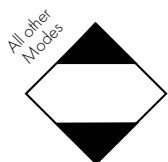
§173.185

Marine Pollutant



§172.322

Limited Quantity



§172.315



Biohazard Mark



§172.323

Petroleum Sour Crude Oil



§172.327

Excepted Quantity



§173.4a(g)



# Hazardous Materials Warning Labels

Actual label size: at least 100 mm (3.9 inches) on all sides

**CLASS 1 Explosives:**  
Divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6



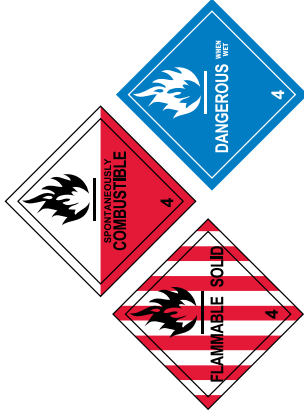
**CLASS 2 Gases:**  
Divisions 2.1, 2.2, 2.3



**CLASS 3 Flammable Liquid**



**CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet:**  
Divisions 4.1, 4.2, 4.3



**CLASS 5 Oxidizer, Organic Peroxide:** Divisions 5.1 and 5.2



§172.411

§172.405(b), §172.415, §172.416, §172.417

§172.419

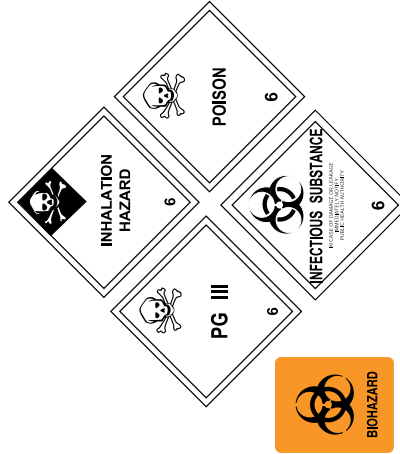
§172.420, §172.422, §172.423

§172.426, §172.427

\* Replace with compatibility group letter.

\*\* Replace with division number and compatibility group letter.

**CLASS 6 Poison (Toxic), Poison Inhalation Hazard, Infectious Substance:** Divisions 6.1 and 6.2

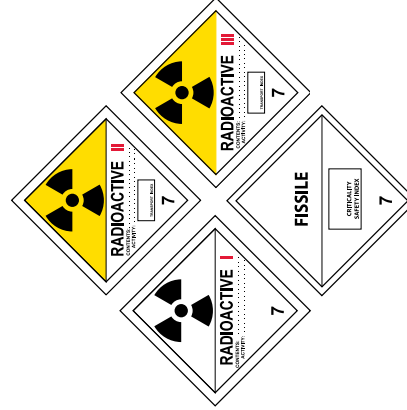


§172.323, §172.405(c), §172.429, §172.430, §172.432

For Regulated Medical Waste (RMW), an Infectious Substance label is not required on an outer packaging if the OSHA Biohazard marking is used as prescribed in 29 CFR 1910.1030(g) (see § 173.134(c)). A bulk package of RMW must display a BIOHAZARD marking (see § 172.323(a)).



**CLASS 7 Radioactive**



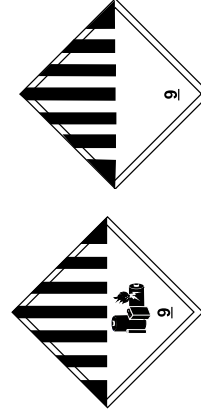
§172.436, §172.438, §172.440, §172.441

**CLASS 8 Corrosive**



§172.442

**CLASS 9 Miscellaneous Hazardous Material**



§§172.446, §172.447

**Cargo Aircraft Only**



§172.448

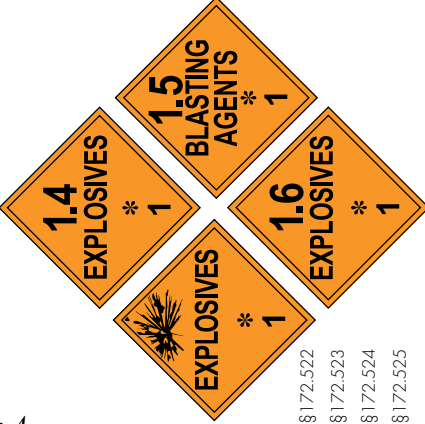
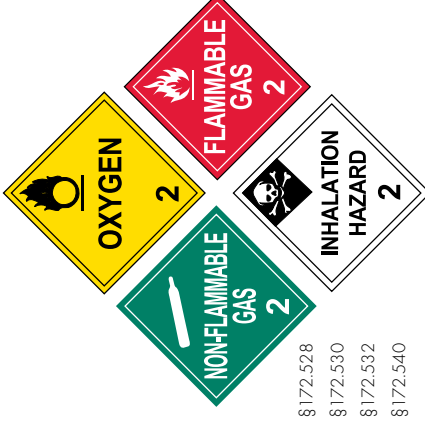
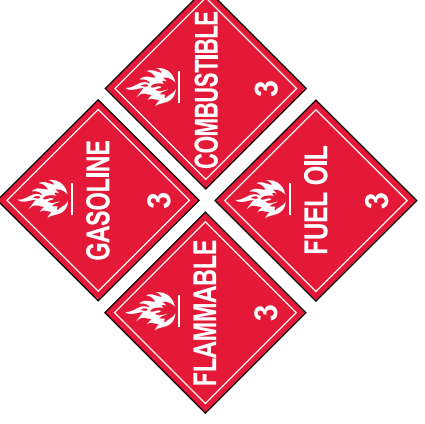
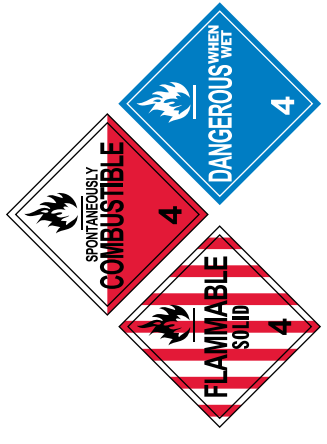

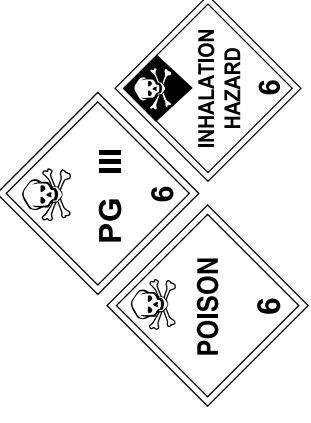


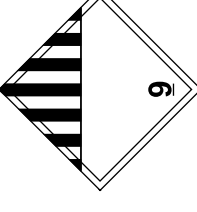
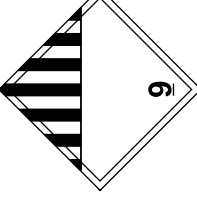
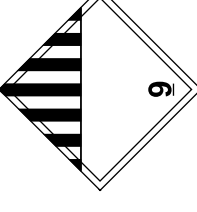

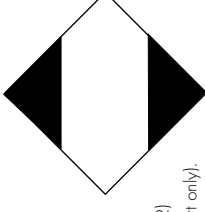
Empty Label

EMPTY

§172.450

# Hazardous Materials Warning Placards

Actual placard size: at least 250 mm (9.84 inches) on all sides

CLASS 1 Explosives	CLASS 2 Gases	CLASS 3 Flammable Liquid and Combustible Liquid	CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet
 <p>§172.522 §172.523 §172.524 §172.525</p>	 <p>§172.528 §172.530 §172.532 §172.540</p>	 <p>§172.542 §172.544</p>	 <p>§172.546, §172.547, §172.548</p>
<p>* For Divisions 1.1, 1.2, or 1.3, enter division number and compatibility group letter, when required; placard any quantity. For Divisions 1.4, 1.5, and 1.6, enter compatibility group letter, when required; placard 454 kg (1,001 lbs) or more.</p>	<p>For NON-FLAMMABLE GAS, OXYGEN (compressed gas or refrigerated liquid), and FLAMMABLE GAS, placard 454 kg (1,001 lbs) or more gross weight. For POISON GAS (Division 2.3), placard any quantity.</p>	<p>For FLAMMABLE placard 454 kg (1,001 lbs) or more. GASOLINE may be used in place of FLAMMABLE placard displayed on a cargo tank or portable tank transporting gasoline by highway. Placard combustible liquid transported in bulk. See §172.504(f) (2) for use of FLAMMABLE placard in place of COMBUSTIBLE. FUEL OIL may be used in place of COMBUSTIBLE on a cargo or portable tank transporting fuel oil not classed as a flammable liquid by highway.</p>	<p>For FLAMMABLE SOLID and SPONTANEOUSLY COMBUSTIBLE, placard 454 kg (1,001 lbs) or more. For DANGEROUS WHEN WET (Division 4.3), placard any quantity.</p>
<p>CLASS 5 Oxidizer &amp; Organic Peroxide</p>  <p>§172.550, §172.552</p>	<p>CLASS 6 Poison (Toxic) and Poison Inhalation Hazard</p>  <p>§172.504(f)(10), §172.554, §172.555</p>	<p>CLASS 7 Radioactive</p>  <p>§172.556</p> <p>Placard all shipments that contain a package labeled as Radioactive Yellow-III; all shipments of unpackaged LSA-I material or SCO-I; all shipments required by §§173.427, 173.441, and 173.457 of this subchapter to be operated under exclusive use; and all closed vehicles used in accordance with §173.443(d)."</p>	<p>CLASS 8 Corrosive</p>  <p>§172.558</p> <p>For CORROSIVE, placard 454 kg (1,001 lbs) or more.</p>
<p>CLASS 9 Miscellaneous</p>  <p>§172.560</p> <p>Not required for domestic transportation. A bulk packaging containing a Class 9 hazardous material must be marked with the appropriate ID number displayed on a Class 9 placard, an orange square-on-point display.</p>	<p>CLASS 9 Miscellaneous</p>  <p>§172.560</p> <p>Not required for domestic transportation. A bulk packaging containing a Class 9 hazardous materials that require different placards specified in Table 2 §172.504(e) may be placarded with DANGEROUS placards instead of the specific placards required for each of the materials in Table 2. However, when 1,000 kg (2,205 lbs) or more of one category of material is loaded at one loading facility, the placard specified in Table 2, must be applied.</p>	<p>CLASS 9 Miscellaneous</p>  <p>§172.560</p> <p>Not required for domestic transportation. A bulk packaging containing a Class 9 hazardous materials that require different placards specified in Table 2 §172.504(e) may be placarded with DANGEROUS placards instead of the specific placards required for each of the materials in Table 2. However, when 1,000 kg (2,205 lbs) or more of one category of material is loaded at one loading facility, the placard specified in Table 2, must be applied.</p>	<p>Dangerous</p>  <p>§172.521</p> <p>A freight container, unit load device, transport vehicle, or rail car which contains non-bulk packages with two or more categories of hazardous materials that require different placards specified in Table 2 §172.504(e) may be placarded with DANGEROUS placards instead of the specific placards required for each of the materials in Table 2. However, when 1,000 kg (2,205 lbs) or more of one category of material is loaded at one loading facility, the placard specified in Table 2, must be applied.</p>
			<p>Limited Quantity Marking</p>  <p>§172.315(a)(2) (Vessel transport only).</p>

# General Guidelines on Use of Warning Labels and Placards

## LABELS

See 49 CFR, Part 172, Subpart E, for complete labeling regulations.

- The Hazardous Materials Table [§172.101, Col. 6] identifies the proper label(s) for the hazardous material listed.
- Any person who offers a hazardous material for transportation **MUST** label the package, if required [§172.400(a)].
- Labels may be affixed to packages when not required by regulations, provided each label represents a hazard of the material contained in the package [§172.401].
- For labeling mixed or consolidated packages, see §172.404.
- The appropriate hazard class or division number must be displayed in the lower corner of a primary and subsidiary hazard label [§172.402(b)].
- For classes 1,2,3,4,5,6, and 8, text indicating a hazard (e.g., "CORROSIVE") is **NOT** required on a primary or subsidiary label. The label must otherwise conform to Subpart E of Part 172 [§172.405].
- Labels must be printed on or affixed to the surface of the package near the proper shipping name marking [§172.406(a)].
- When primary and subsidiary labels are required, they must be displayed next to each other [§172.406(c)].
- For a package containing a Division 6.1, PG III material, the POISON label specified in §172.430 may be modified to display the text PG III instead of POISON or TOXIC. Also see §172.313(d) [§172.405(c)].
- The ORGANIC PEROXIDE label (§172.427) indicates that organic peroxides are highly flammable. The color of the border must be black and the color of the flame may be black or white (see §172.407(d)(2)(iii)).

## PLACARDS

See 49 CFR, Part 172, Subpart F, for complete placarding regulations.

- Each person who offers for transportation or transports any hazardous material subject to the Hazardous Materials Regulations must comply with all applicable requirements of Subpart F [§172.500].
- Placards may be displayed for a hazardous material, even when not required, if the placarding otherwise conforms to the requirements of Subpart F of Part 172 [§172.502(c)].
- For other than Class 7 or the DANGEROUS placard, text indicating a hazard (e.g., "FLAMMABLE") is not required. Text may be omitted from the OXYGEN placard only if the specific ID number is displayed on the placard [§172.519(b)(3)].
- For a placard corresponding to the primary or subsidiary hazard class of a material, the hazard class or division number must be displayed in the lower corner of the placard [§172.519(b)(4)].
- Except as otherwise provided, any bulk packaging, freight container, unit load device, transport vehicle or rail car containing any quantity of material listed in Table 1 must be placarded [§172.504].
- When the aggregate gross weight of all hazardous materials in non-bulk packages covered in Table 2 is less than 454 kg (1,001 lbs.), no placard is required on a transport vehicle or freight container when transported by highway or rail [§172.504(c)].
- Notes: See §172.504(f)(10) for placarding Division 6.1, PG III materials.
- Placarded loads require registration with USDOT. See §107.601 for registration regulations.

## PLACARDING TABLES

[§172.504(e)]

TABLE 1

Category of material (Hazard Class or division number and additional description, as appropriate)	Placard name
1.1.....	EXPLOSIVES 1.1.....
1.2.....	EXPLOSIVES 1.2.....
1.3.....	EXPLOSIVES 1.3.....
2.3.....	POISON GAS.....
4.3.....	DANGEROUS WHEN WET.....
5.2 (Organic peroxide, Type B, liquid or solid, temperature controlled).....	ORGANIC PEROXIDE.....
6.1 (Materials poisonous by inhalation (see §171.8)).....	POISON INHALATION HAZARD.....
7 (Radioactive Yellow III label only).....	RADIOACTIVE <sup>1</sup> .....

<sup>1</sup>RADIOACTIVE placards are also required for: all shipments of unpackaged LSA-I material or SCO-I; all shipments required by §§173.427, 173.441, and 173.457 of this subchapter to be operated under exclusive use; and all closed vehicles used in accordance with §173.443(d).

TABLE 2

Category of material (Hazard Class or division number and additional description, as appropriate)	Placard name
1.4.....	EXPLOSIVES 1.4.....
1.5.....	EXPLOSIVES 1.5.....
1.6.....	EXPLOSIVES 1.6.....
2.1.....	FLAMMABLE GAS.....
2.2.....	NON-FLAMMABLE GAS.....
3.....	FLAMMABLE.....
Combustible Liquid.....	COMBUSTIBLE.....
4.1.....	FLAMMABLE SOLID.....
4.2.....	SPONTANEOUSLY COMBUSTIBLE.....
5.1.....	OXIDIZER.....
5.2 (Other than organic peroxide, Type B, liquid or solid, temperature controlled).....	ORGANIC PEROXIDE.....
6.1 (Other than materials poisonous by inhalation).....	POISON.....
6.2.....	(None).....
8.....	CORROSIVE.....
9.....	Class 9 (See §172.504(f)(9)).....

## IDENTIFICATION NUMBER DISPLAYS

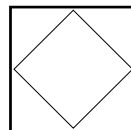


§172.332, 172.332(c)(4)

\* Appropriate placard must be used with orange panel or white square-on-point configuration.

\*\* For a COMBUSTIBLE placard used to display an identification number, the entire background below the white background for the identification number must be white during transportation by rail and may be white during transportation by highway.

IDENTIFICATION NUMBER MARKINGS ON ORANGE PANELS, WHITE SQUARES-ON-POINT, OR APPROPRIATE PLACARDS MUST BE DISPLAYED ON: (1) Tank Cars, Cargo Tanks, Portable Tanks, and other Bulk Packagings; (2) Transport vehicles or freight containers containing 4,000 kg (8,820 lbs.) in non-bulk packages of only a single hazardous material having the same proper shipping name and identification number loaded at one facility and transport vehicle contains no other material, hazardous or otherwise; and (3) transport vehicles or freight containers containing 1,000 kg (2,205 lbs.) of non-bulk packages of materials poisonous by inhalation in Hazard Zone A or B. See §§172.301(a)(3), 172.313(c), 172.326, 172.328, 172.330, and 172.331.



§172.527

Square white background required for placard for highway- route-controlled quantity radioactive material and for rail shipment of certain explosives and poisons, and for flammable gas in a DOT 113 tank car (§172.507 and §172.510).

For additional information contact the Hazardous Materials Info Center  
1-800-HMR-4922 (1-800-467-4922)

E-mail: [infocntr@dot.gov](mailto:infocntr@dot.gov) <http://phmsa.dot.gov>

This Chart is available on line at the following link:

<https://www.phmsa.dot.gov/training/hazmat/publications>



**U.S. Department of Transportation**  
**Pipeline and Hazardous Materials Safety Administration**



**CHART 17 Now Available AS FREE MOBILE APP**



PHH50-0190-1121

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## **APPENDIX B**

### **Cumulative & Seasonal Summaries of Truck Count Results by 4-Digit Identification Number & Location**

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**Mason County: Cumulative Summary of Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>A. IL Rte. 29 at IL Rte. 136/CH 9 Intersection west of San Jose</b>	<b>16</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
1075 - propane; liquefied petroleum gas; butane; butylene; isobutane; isobutylene; propylene	1
other (placarded - identification number unavailable)	1
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	1
other (placarded - identification number unavailable)	1
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	3
1210 - ink, printer's, flammable; printing ink, flammable; printing ink related material, flammable	1
1219 - isopropanol; isopropyl alcohol	1
1987 - alcohols, n.o.s.; denatured alcohol	2
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	2
3065 - alcoholic beverages	1
other (unplacarded solvents)	
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	---
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
other (unplacarded garbage)	1
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	
1824 - caustic soda, solution; sodium hydroxide, solution	1
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Cumulative Summary of Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>B. IL Rte. 136 at IL Rte. 29/CH 9 Intersection west of San Jose</b>	<b>22</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
other (placarded - identification number unavailable)	1
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	1
other (placarded - identification number unavailable)	1
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	8
1210 - ink, printer's, flammable; printing ink, flammable; printing ink related material, flammable	1
1219 - isopropanol; isopropyl alcohol	1
1987 - alcohols, n.o.s.; denatured alcohol	2
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; combustible liquid, n.o.s.	3
3065 - alcoholic beverages	1
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	
other (unplacarded fertilizer)	1
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
other (unplacarded garbage)	1
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	
1824 - caustic soda, solution; sodium hydroxide, solution	1
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Cumulative Summary of Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>C. IL Rte. 29 at IL Rte. 10 Intersection west of Mason City</b>	<b>14</b>
<b>Class 1 - Explosives</b>	---
<b>Class 2 - Gases</b>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	3
<u>Non-Flammable Gases</u>	
1005 - anhydrous ammonia	5
2187 - carbon dioxide, refrigerated liquid	1
other (placarded - identification number unavailable)	1
<b>Class 3 - Flammable Liquids</b>	
1203 - gasoline; gasohol; motor spirit; petrol	2
<b>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</b>	---
<b>Class 5 - Oxidizers, Organic Peroxide</b>	---
<b>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</b>	
other (unplacarded pesticide)	1
<b>Class 7 - Radioactives</b>	---
<b>Class 8 - Corrosives</b>	---
<b>Class 9 - Miscellaneous Hazardous Materials</b>	
3082 - environmentally hazardous substance, liquid, n.o.s.; hazardous waste, liquid, n.o.s.;	
other regulated substances, liquid, n.o.s.	1

**Mason County: Cumulative Summary of Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>D. IL Rte. 10 at IL Rte. 29 Intersection west of Mason City</b>	<b>15</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	4
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	5
other (placarded - identification number unavailable)	1
<b><i>Class 3 - Flammable Liquids</i></b>	
1210 - ink, printer's, flammable; printing ink, flammable; printing ink related material, flammable	1
other (unplacarded flammable liquid)	1
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	---
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
other (unplacarded pesticide)	2
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	---
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	
3082 - environmentally hazardous substance, liquid, n.o.s.; hazardous waste, liquid, n.o.s.; other regulated substances, liquid, n.o.s.	1



**Mason County: Cumulative Summary of Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>E. IL Rte. 97 at IL Rte. 136 Intersection in Havana</b>	<b>16</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	2
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	3
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; combustible liquid, n.o.s.	3
other (unplacarded lubricants)	1
other (unplacarded alcoholic beverages)	2
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	
other (unplacarded fertilizer)	3
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
other (unplacarded garbage)	1
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	---
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Cumulative Summary of Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>F. IL Rte. 136 at IL Rte. 97 Intersection in Havana</b>	<b>33</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
other (placarded - identification number unavailable)	2
other (unplacarded acetylene)	5
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	2
1072 - oxygen; oxygen, compressed	1
other (placarded - identification number unavailable)	2
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	7
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; combustible liquid, n.o.s.	3
other (unplacarded lubricants)	2
other (unplacarded alcoholic beverages)	1
other (unplacarded paint)	1
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	
other (placarded - dangerous when wet)	1
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	
other (unplacarded fertilizer)	1
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
other (unplacarded garbage)	3
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	
other (placarded - identification number unavailable)	1
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	
dangerous	1

**Mason County: Cumulative Summary of Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>G. IL Rte. 78 at IL Rte. 136 Intersection in Havana</b>	<b>20</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
1075 - propane; liquefied petroleum gas; butane; butylene; isobutane; isobutylene; propylene	1
other (unplacarded acetylene)	3
<u>Non-Flammable Gases</u>	---
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	8
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	3
other (unplacarded alcoholic beverages)	1
other (unplacarded lubricants)	1
other (unplacarded flammable liquid)	1
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	---
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
infectious (unplacarded septic)	1
other (unplacarded garbage)	1
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	---
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Cumulative Summary of Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>H. IL Rte. 136 at IL Rte. 78 Intersection in Havana</b>	<b>33</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
1075 - propane; liquefied petroleum gas; butane; butylene; isobutane; isobutylene; propylene	1
other (placarded - identification number unavailable)	1
other (unplacarded acetylene)	3
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	1
other (placarded - identification number unavailable)	1
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	12
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	4
other (unplacarded alcoholic beverages)	1
other (unplacarded lubricants)	1
other (unplacarded flammable liquid)	2
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	
other (unplacarded fertilizer)	1
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
infectious (unplacarded septic)	2
other (unplacarded garbage)	1
other (unplacarded herbicide)	1
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	
other (placarded - identification number unavailable)	1
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Summary of Summer 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>A. IL Rte. 29 at IL Rte. 136/CH 9 Intersection west of San Jose</b>	<b>5</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	---
1203 - gasoline; gasohol; motor spirit; petrol	1
1987 - alcohols, n.o.s.; denatured alcohol	2
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	2
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Summer 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>B. IL Rte. 136 at IL Rte. 29/CH 9 Intersection west of San Jose</b>	<b>6</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	---
1203 - gasoline; gasohol; motor spirit; petrol	1
1987 - alcohols, n.o.s.; denatured alcohol	2
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	2
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
other (unplacarded fertilizer)	1
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Summer 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>C. IL Rte. 29 at IL Rte. 10 Intersection west of Mason City</b>	<b>1</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	---
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Summer 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>D. IL Rte. 10 at IL Rte. 29 Intersection west of Mason City</b>	<b>1</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	---
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---



**Mason County: Summary of Summer 2020 Truck Count Results  
by Class & Identification Number**

<b>Location / Hazardous Materials Warning Placard Class / Placard Identification Number</b>	<b># of Placarded Trucks</b>
<b>E. IL Rte. 97 at IL Rte. 136 Intersection in Havana</b>	<b>1</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	---
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i> other (unplacarded fertilizer)	1
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Summer 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>F. IL Rte. 136 at IL Rte. 97 Intersection in Havana</b>	<b>4</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i> <u>Flammable Gases</u> other (unplacarded acetylene) <u>Non-Flammable Gases</u> 1072 - oxygen; oxygen, compressed	1   1
<i>Class 3 - Flammable Liquids</i> 1203 - gasoline; gasohol; motor spirit; petrol	2
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Summer 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>G. IL Rte. 78 at IL Rte. 136 Intersection in Havana</b>	<b>8</b>
<b>Class 1 - Explosives</b>	---
<b>Class 2 - Gases</b>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
<b>Class 3 - Flammable Liquids</b>	---
1203 - gasoline; gasohol; motor spirit; petrol	5
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	1
other (unplacarded alcoholic beverages)	1
<b>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</b>	---
<b>Class 5 - Oxidizers, Organic Peroxide</b>	---
<b>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</b>	---
other (unplacarded garbage)	1
<b>Class 7 - Radioactives</b>	---
<b>Class 8 - Corrosives</b>	---
<b>Class 9 - Miscellaneous Hazardous Materials</b>	---

**Mason County: Summary of Summer 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>H. IL Rte. 136 at IL Rte. 78 Intersection in Havana</b>	<b>13</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
other (placarded - identification number unavailable)	1
<u>Non-Flammable Gases</u>	
other (placarded - identification number unavailable)	1
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	5
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	2
other (unplacarded alcoholic beverages)	1
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	---
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
other (unplacarded garbage)	1
other (unplacarded herbicide)	1
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	
other (placarded - identification number unavailable)	1
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Summary of Fall 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>A. IL Rte. 29 at IL Rte. 136/CH 9 Intersection west of San Jose</b>	<b>3</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	
<u>Flammable Gases</u>	
1075 - propane; liquefied petroleum gas; butane; butylene; isobutane; isobutylene; propylene	1
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	1
<i>Class 3 - Flammable Liquids</i>	
3065 - alcoholic beverages	1
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Fall 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>B. IL Rte. 136 at IL Rte. 29/CH 9 Intersection west of San Jose</b>	<b>4</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
1005 - ammonia, anhydrous; anhydrous ammonia	1
<i>Class 3 - Flammable Liquids</i>	---
1203 - gasoline; gasohol; motor spirit; petrol	2
3065 - alcoholic beverages	1
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Fall 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>C. IL Rte. 29 at IL Rte. 10 Intersection west of Mason City</b>	<b>1</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
2187 - carbon dioxide, refrigerated liquid	1
<i>Class 3 - Flammable Liquids</i>	---
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Fall 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>D. IL Rte. 10 at IL Rte. 29 Intersection west of Mason City</b>	<b>0</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	---
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---



**Mason County: Summary of Fall 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>E. IL Rte. 97 at IL Rte. 136 Intersection in Havana</b>	<b>6</b>
<b>Class 1 - Explosives</b>	---
<b>Class 2 - Gases</b>	
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	1
<b>Class 3 - Flammable Liquids</b>	
1203 - gasoline; gasohol; motor spirit; petrol	2
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; combustible liquid, n.o.s.	1
other (unplacarded lubricants)	1
other (unplacarded alcoholic beverages)	1
<b>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</b>	---
<b>Class 5 - Oxidizers, Organic Peroxide</b>	---
<b>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</b>	---
<b>Class 7 - Radioactives</b>	---
<b>Class 8 - Corrosives</b>	---
<b>Class 9 - Miscellaneous Hazardous Materials</b>	---

**Mason County: Summary of Fall 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>F. IL Rte. 136 at IL Rte. 97 Intersection in Havana</b>	<b>10</b>
<b>Class 1 - Explosives</b>	---
<b>Class 2 - Gases</b>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	2
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	1
<b>Class 3 - Flammable Liquids</b>	
1203 - gasoline; gasohol; motor spirit; petrol	2
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	1
other (unplacarded lubricants)	1
other (unplacarded alcoholic beverages)	1
<b>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</b>	---
<b>Class 5 - Oxidizers, Organic Peroxide</b>	---
<b>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</b>	
other (unplacarded garbage)	1
<b>Class 7 - Radioactives</b>	---
<b>Class 8 - Corrosives</b>	
other (placarded - identification number unavailable)	1
<b>Class 9 - Miscellaneous Hazardous Materials</b>	---

**Mason County: Summary of Fall 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>G. IL Rte. 78 at IL Rte. 136 Intersection in Havana</b>	<b>7</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	2
<u>Non-Flammable Gases</u>	---
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	2
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	1
other (unplacarded lubricants)	1
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	---
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
infectious (unplacarded septic)	1
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	---
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Summary of Fall 2020 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>H. IL Rte. 136 at IL Rte. 78 Intersection in Havana</b>	<b>9</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	2
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	1
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	3
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	1
other (unplacarded lubricants)	1
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	---
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
infectious (unplacarded septic)	1
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	---
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Summary of Winter 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>A. IL Rte. 29 at IL Rte. 136/CH 9 Intersection west of San Jose</b>	<b>2</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	---
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i> other (unplacarded garbage)	1
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i> 1824 - caustic soda, solution; sodium hydroxide, solution	1
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Winter 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>B. IL Rte. 136 at IL Rte. 29/CH 9 Intersection west of San Jose</b>	<b>3</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	1
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	1
other (unplacarded garbage)	
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	1
1824 - caustic soda, solution; sodium hydroxide, solution	
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Winter 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>C. IL Rte. 29 at IL Rte. 10 Intersection west of Mason City</b>	<b>9</b>
<b>Class 1 - Explosives</b>	---
<b>Class 2 - Gases</b>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	
1005 - anhydrous ammonia	5
<b>Class 3 - Flammable Liquids</b>	
1203 - gasoline; gasohol; motor spirit; petrol	2
<b>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</b>	---
<b>Class 5 - Oxidizers, Organic Peroxide</b>	---
other (unplacarded biomedical - sharps disposal)	---
<b>Class 7 - Radioactives</b>	---
<b>Class 8 - Corrosives</b>	---
<b>Class 9 - Miscellaneous Hazardous Materials</b>	
3082 - environmentally hazardous substance, liquid, n.o.s.; hazardous waste, liquid, n.o.s.; other regulated substances, liquid, n.o.s.	1

**Mason County: Summary of Winter 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>D. IL Rte. 10 at IL Rte. 29 Intersection west of Mason City</b>	<b>8</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	2
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	5
<i>Class 3 - Flammable Liquids</i>	---
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	
3082 - environmentally hazardous substance, liquid, n.o.s.; hazardous waste, liquid, n.o.s.; other regulated substances, liquid, n.o.s.	1



**Mason County: Summary of Winter 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>E. IL Rte. 97 at IL Rte. 136 Intersection in Havana</b>	<b>6</b>
<b>Class 1 - Explosives</b>	---
<b>Class 2 - Gases</b>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	1
<b>Class 3 - Flammable Liquids</b>	
1203 - gasoline; gasohol; motor spirit; petrol	1
other (unplacarded alcoholic beverages)	1
<b>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</b>	---
<b>Class 5 - Oxidizers, Organic Peroxide</b>	---
other (unplacarded fertilizer)	2
<b>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</b>	---
<b>Class 7 - Radioactives</b>	---
<b>Class 8 - Corrosives</b>	---
<b>Class 9 - Miscellaneous Hazardous Materials</b>	---

**Mason County: Summary of Winter 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>F. IL Rte. 136 at IL Rte. 97 Intersection in Havana</b>	<b>7</b>
<b>Class 1 - Explosives</b>	---
<b>Class 2 - Gases</b>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	
1005 - ammonia, anhydrous; anhydrous ammonia	1
<b>Class 3 - Flammable Liquids</b>	
1203 - gasoline; gasohol; motor spirit; petrol	2
other (unplacarded paint)	1
other (unplacarded lubricants)	1
<b>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</b>	---
<b>Class 5 - Oxidizers, Organic Peroxide</b>	
other (unplacarded fertilizer)	1
<b>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</b>	---
<b>Class 7 - Radioactives</b>	---
<b>Class 8 - Corrosives</b>	---
<b>Class 9 - Miscellaneous Hazardous Materials</b>	---

**Mason County: Summary of Winter 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>G. IL Rte. 78 at IL Rte. 136 Intersection in Havana</b>	<b>4</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
1075 - propane; liquefied petroleum gas; butane; butylene; isobutane; isobutylene; propylene	1
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	---
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	1
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	1
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	---
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	---
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	---
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Summary of Winter 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>H. IL Rte. 136 at IL Rte. 78 Intersection in Havana</b>	<b>6</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
1075 - propane; liquefied petroleum gas; butane; butylene; isobutane; isobutylene; propylene	1
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	---
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	2
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	1
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	---
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	
other (unplacarded fertilizer)	1
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	---
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	---
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	---

**Mason County: Summary of Spring 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>A. IL Rte. 29 at IL Rte. 136/CH 9 Intersection west of San Jose</b>	<b>6</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	
<u>Flammable Gases</u>	1
other (placarded - identification number unavailable)	
<u>Non-Flammable Gases</u>	
other (placarded - identification number unavailable)	1
<i>Class 3 - Flammable Liquids</i>	
1203 - gasoline; gasohol; motor spirit; petrol	2
1210 - ink, printer's, flammable; printing ink, flammable; printing ink related material, flammable	1
1219 - isopropanol; isopropyl alcohol	1
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Spring 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>B. IL Rte. 136 at IL Rte. 29/CH 9 Intersection west of San Jose</b>	<b>9</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	
<u>Flammable Gases</u>	
other (placarded - identification number unavailable)	1
<u>Non-Flammable Gases</u>	
other (placarded - identification number unavailable)	1
<i>Class 3 - Flammable Liquids</i>	
1203 - gasoline; gasohol; motor spirit; petrol	5
1210 - ink, printer's, flammable; printing ink, flammable; printing ink related material, flammable	1
1219 - isopropanol; isopropyl alcohol	1
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Spring 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>C. IL Rte. 29 at IL Rte. 10 Intersection west of Mason City</b>	<b>3</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	
other (placarded - identification number unavailable)	1
<i>Class 3 - Flammable Liquids</i>	---
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	
other (unplacarded pesticide)	1
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Spring 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>D. IL Rte. 10 at IL Rte. 29 Intersection west of Mason City</b>	<b>6</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	
<u>Flammable Gases</u>	
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	
other (placarded - identification number unavailable)	1
<i>Class 3 - Flammable Liquids</i>	
1210 - ink, printer's, flammable; printing ink, flammable; printing ink related material, flammable	1
other (unplacarded flammable liquid)	1
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	
other (unplacarded pesticide)	2
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---



**Mason County: Summary of Spring 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>E. IL Rte. 97 at IL Rte. 136 Intersection in Havana</b>	<b>3</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	2
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	1
other (unplacarded garbage)	
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Spring 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>F. IL Rte. 136 at IL Rte. 97 Intersection in Havana</b>	<b>12</b>
<b><i>Class 1 - Explosives</i></b>	---
<b><i>Class 2 - Gases</i></b>	
<u>Flammable Gases</u>	
other (placarded - identification number unavailable)	2
other (unplacarded acetylene)	1
<u>Non-Flammable Gases</u>	
other (placarded - identification number unavailable)	2
<b><i>Class 3 - Flammable Liquids</i></b>	
1203 - gasoline; gasohol; motor spirit; petrol	1
1993 - diesel fuel; fuel oil; cleaning liquid (flammable); tree or weed killing, liquid (flammable); flammable liquid, n.o.s.; comubustible liquid, n.o.s.	2
<b><i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i></b>	
other (placarded - dangerous when wet)	1
<b><i>Class 5 - Oxidizers, Organic Peroxide</i></b>	---
<b><i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i></b>	
other (unplacarded garbage)	2
<b><i>Class 7 - Radioactives</i></b>	---
<b><i>Class 8 - Corrosives</i></b>	---
<b><i>Class 9 - Miscellaneous Hazardous Materials</i></b>	
dangerous	1

**Mason County: Summary of Spring 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>G. IL Rte. 78 at IL Rte. 136 Intersection in Havana</b>	<b>1</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	--
<i>Class 3 - Flammable Liquids</i> other (unplacarded)	1
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

**Mason County: Summary of Spring 2021 Truck Count Results  
by Class & Identification Number**

Location / Hazardous Materials Warning Placard Class / Placard Identification Number	# of Placarded Trucks
<b>H. IL Rte. 136 at IL Rte. 78 Intersection in Havana</b>	<b>5</b>
<i>Class 1 - Explosives</i>	---
<i>Class 2 - Gases</i>	---
<u>Flammable Gases</u>	---
<u>Non-Flammable Gases</u>	---
<i>Class 3 - Flammable Liquids</i>	---
1203 - gasoline; gasohol; motor spirit; petrol	2
other (unplacarded flammable liquid)	2
<i>Class 4 - Flammable Solids, Spontaneously Combustible, &amp; Dangerous When Wet</i>	---
<i>Class 5 - Oxidizers, Organic Peroxide</i>	---
<i>Class 6 - Poisons (Toxic), Poison Inhalation Hazard, &amp; Infectious Substances</i>	---
infectious (unplacarded septic)	1
<i>Class 7 - Radioactives</i>	---
<i>Class 8 - Corrosives</i>	---
<i>Class 9 - Miscellaneous Hazardous Materials</i>	---

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# **APPENDIX C**

## **Seasonal Summaries of Truck Count Results by Hazard Class & Location**

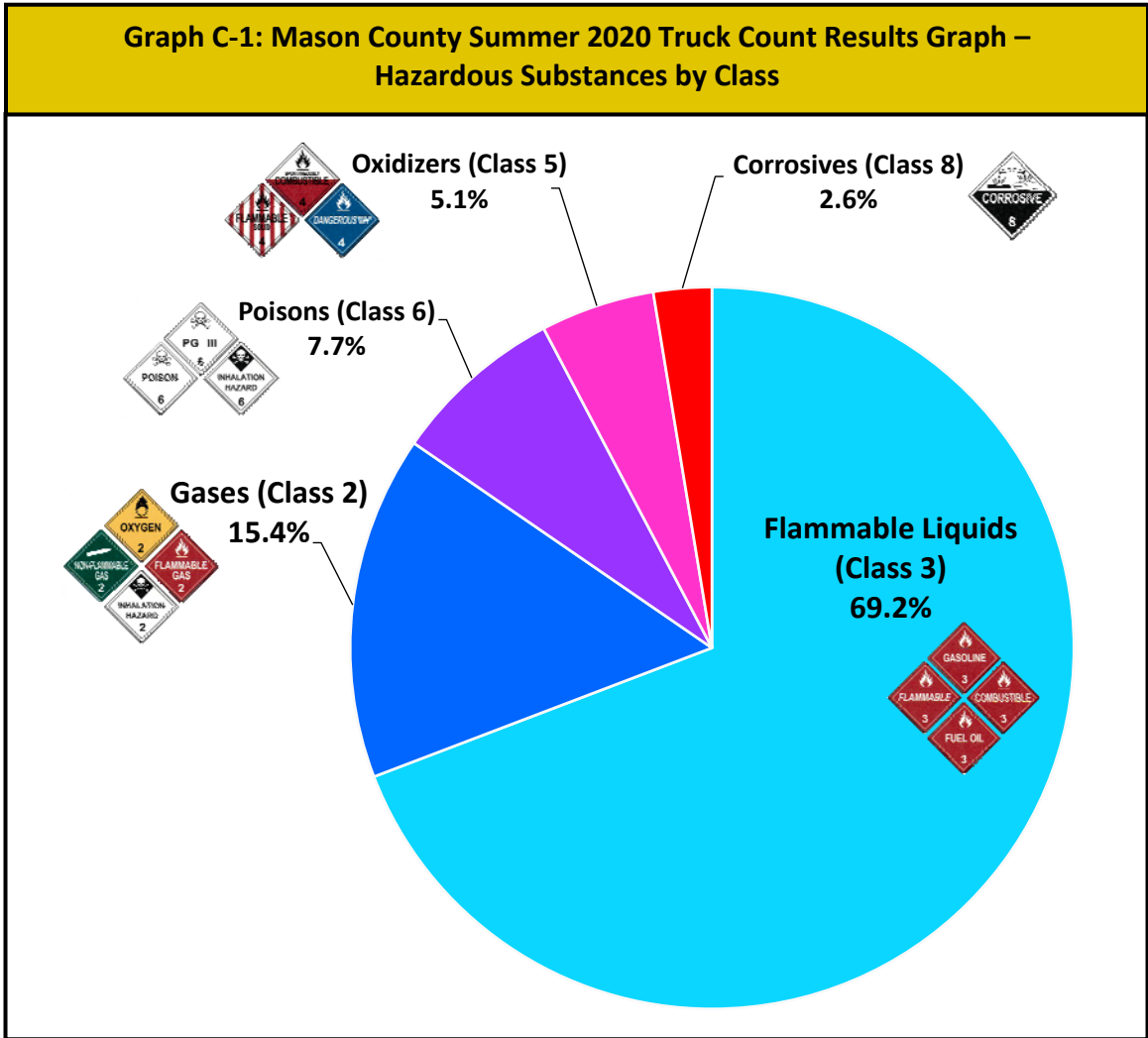
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**Summer 2020 Results**

- ❖ Flammable and Combustible Liquids (Class 3) comprised 69.2% of all truck shipments of hazardous substances.
- ❖ Gases (Class 2) were the second largest category of hazardous substances shipped on highways at 15.4%.
- ❖ Poisons (Class 6) accounted for 7.7% of all truck shipments of hazardous substances.
- ❖ Oxidizers (Class 5) were the fourth largest category at 5.1% of all truck shipments of hazardous substances.

**Table C-1: Mason County Summer 2020 Truck Count Results – Hazardous Substances by Class by Location**

Hazardous Materials Warning Placard Class	Truck Count Location								TOTAL	% OF TOTAL
	A. IL Rte. 29 at IL Rte. 136/ CH 9 Intersection (west of San Jose)	B. IL Rte. 136 at IL Rte. 29/ CH 9 Intersection (west of San Jose)	C. IL Rte. 29 at IL Rte. 10 (Mason City)	D. IL Rte. 10 at IL Rte. 29 (Mason City)	E. IL Rte. 97 at IL Rte. 136 (Havana)	F. IL Rte. 136 at IL Rte. 97 (Havana)	G. IL Rte. 78 at IL Rte. 136 (Havana)	H. IL Rte. 136 at IL Rte. 78 (Havana)		
Class 1 - Explosives	0	0	0	0	0	0	0	0	0	0.0%
Class 2 - Gases	0	0	1	1	0	2	0	2	6	15.4%
Class 3 - Flammable Liquids	5	5	0	0	0	2	7	8	27	69.2%
Class 4 - Flammable Solids	0	0	0	0	0	0	0	0	0	0.0%
Class 5 - Oxidizers	0	1	0	0	1	0	0	0	2	5.1%
Class 6 - Poisons	0	0	0	0	0	0	1	2	3	7.7%
Class 7 - Radioactives	0	0	0	0	0	0	0	0	0	0.0%
Class 8 - Corrosives	0	0	0	0	0	0	0	1	1	2.6%
Class 9 - Misc.	0	0	0	0	0	0	0	0	0	0.0%
<b>Total</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>8</b>	<b>13</b>	<b>39</b>	



**Fall 2020 Results**

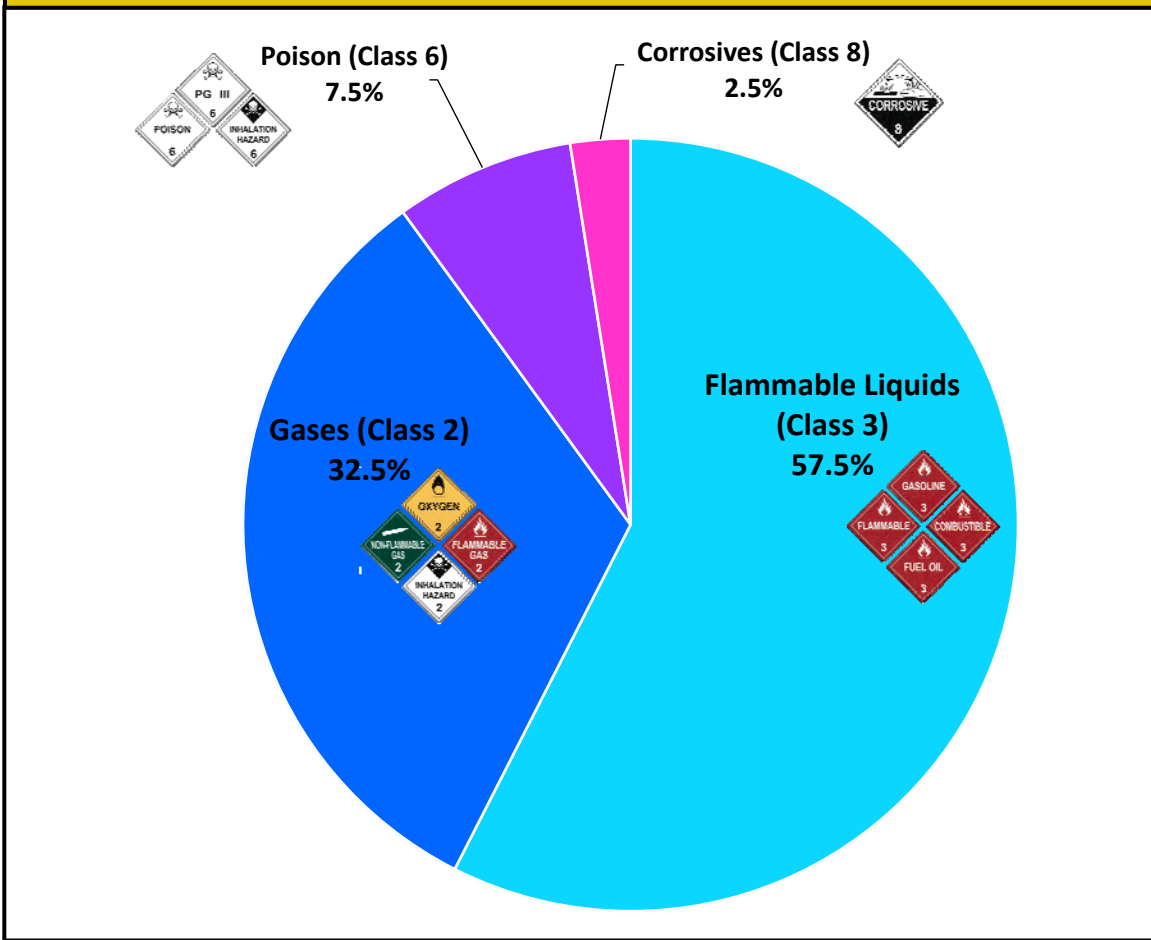
- ❖ Flammable and Combustible Liquids (Class 3) comprised 57.5% of all truck shipments of hazardous substances.
- ❖ Gases (Class 2) were the second largest category of hazardous substances shipped on highways at 32.5%.
- ❖ Poisons (Class 6) accounted for 7.5% of all truck shipments of hazardous substances.
- ❖ Corrosives (Class 8) were the fourth largest category at 2.5% of all truck shipments of hazardous substances.

**Table C-2: Mason County Fall 2020 Truck Count Results – Hazardous Substances by Class by Location**

Hazardous Materials Warning Placard Class	Truck Count Location								TOTAL	% OF TOTAL
	A. IL Rte. 29 at IL Rte. 136/ CH 9 Intersection (west of San Jose)	B. IL Rte. 136 at IL Rte. 29/ CH 9 Intersection (west of San Jose)	C. IL Rte. 29 at IL Rte. 10 (Mason City)	D. IL Rte. 10 at IL Rte. 29 (Mason City)	E. IL Rte. 97 at IL Rte. 136 (Havana)	F. IL Rte. 136 at IL Rte. 97 (Havana)	G. IL Rte. 78 at IL Rte. 136 (Havana)	H. IL Rte. 136 at IL Rte. 78 (Havana)		
Class 1 - Explosives	0	0	0	0	0	0	0	0	0	0.0%
Class 2 - Gases	2	1	1	0	1	3	2	3	13	32.5%
Class 3 - Flammable Liquids	1	3	0	0	5	5	4	5	23	57.5%
Class 4 - Flammable Solids	0	0	0	0	0	0	0	0	0	0.0%
Class 5 - Oxidizers	0	0	0	0	0	0	0	0	0	0.0%
Class 6 - Poisons	0	0	0	0	0	1	1	1	3	7.5%
Class 7 - Radioactives	0	0	0	0	0	0	0	0	0	0.0%
Class 8 - Corrosives	0	0	0	0	0	1	0	0	1	2.5%
Class 9 - Misc.	0	0	0	0	0	0	0	0	0	0.0%
<b>Total</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>10</b>	<b>7</b>	<b>9</b>	<b>40</b>	



**Graph C-2: Mason County Fall 2020 Truck Count Results Graph – Hazardous Substances by Class**

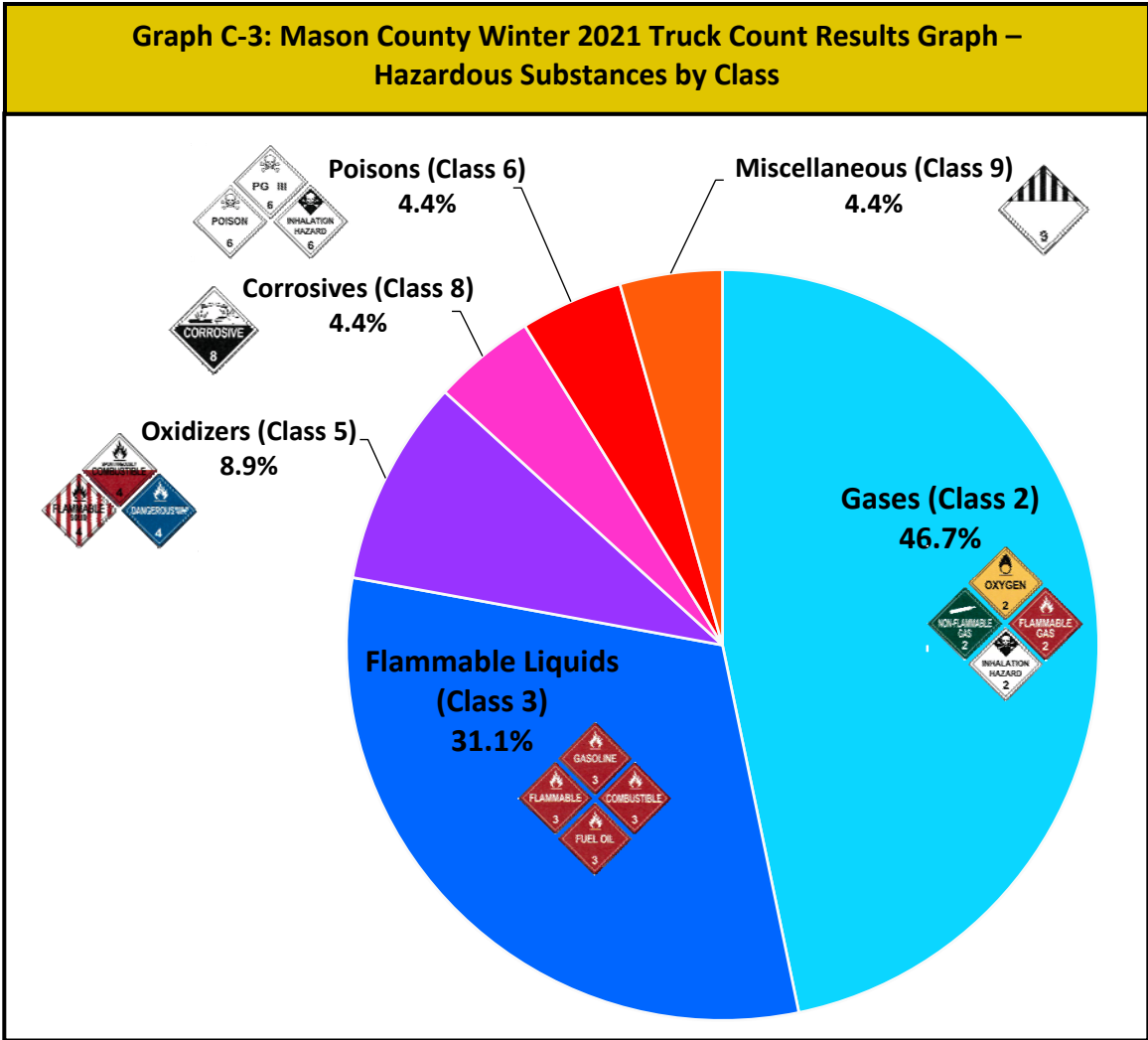


**Winter 2021 Results**

- ❖ Gases (Class 2) comprised 46.7% of all truck shipments of hazardous substances.
- ❖ Flammable and Combustible Liquids (Class 3) were the second largest category of hazardous substances shipped on highways at 31.1%.
- ❖ Oxidizers (Class 5) accounted for 8.9% of all truck shipments of hazardous substances.
- ❖ Poisons (Class 6), Corrosives (Class 8), and Miscellaneous (Class 9) each accounted for 4.4% of all truck shipments of hazardous substances and tied for the fourth largest category.

**Table C-3: Mason County Winter 2021 Truck Count Results – Hazardous Substances by Class by Location**

Hazardous Materials Warning Placard Class	Truck Count Location								TOTAL	% OF TOTAL
	A. IL Rte. 29 at IL Rte. 136/ CH 9 Intersection (west of San Jose)	B. IL Rte. 136 at IL Rte. 29/ CH 9 Intersection (west of San Jose)	C. IL Rte. 29 at IL Rte. 10 (Mason City)	D. IL Rte. 10 at IL Rte. 29 (Mason City)	E. IL Rte. 97 at IL Rte. 136 (Havana)	F. IL Rte. 136 at IL Rte. 97 (Havana)	G. IL Rte. 78 at IL Rte. 136 (Havana)	H. IL Rte. 136 at IL Rte. 78 (Havana)		
Class 1 - Explosives	0	0	0	0	0	0	0	0	0	0.0%
Class 2 - Gases	0	0	6	7	2	2	2	2	21	46.7%
Class 3 - Flammable Liquids	0	1	2	0	2	4	2	3	14	31.1%
Class 4 - Flammable Solids	0	0	0	0	0	0	0	0	0	0.0%
Class 5 - Oxidizers	0	0	0	0	2	1	0	1	4	8.9%
Class 6 - Poisons	1	1	0	0	0	0	0	0	2	4.4%
Class 7 - Radioactives	0	0	0	0	0	0	0	0	0	0.0%
Class 8 - Corrosives	1	1	0	0	0	0	0	0	2	4.4%
Class 9 - Misc.	0	0	1	1	0	0	0	0	2	4.4%
<b>Total</b>	<b>2</b>	<b>3</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>7</b>	<b>4</b>	<b>6</b>	<b>45</b>	

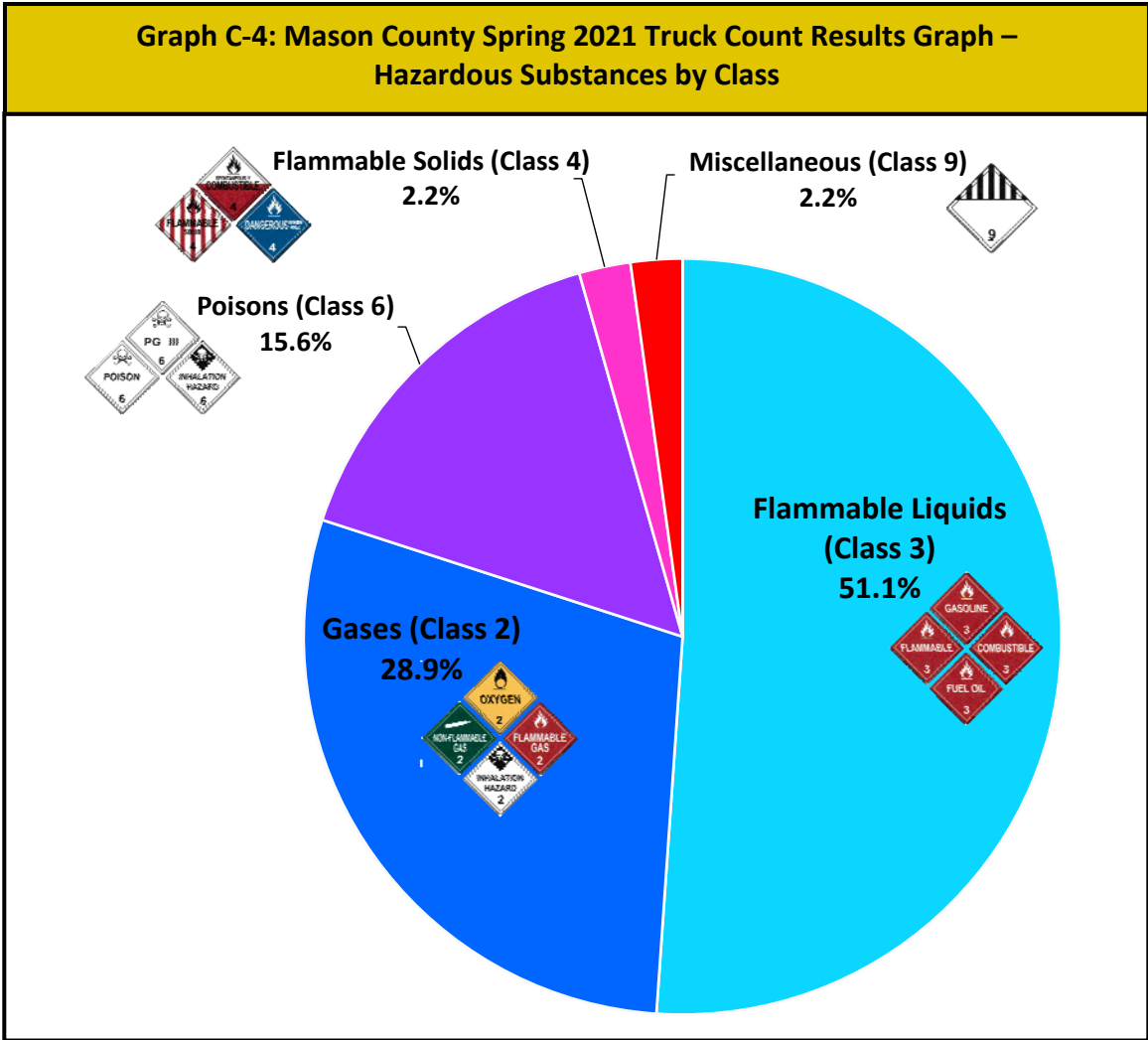


**Spring 2021 Results**

- ❖ Flammable and Combustible Liquids (Class 3) accounted for 51.1% of all truck shipments of hazardous substances.
- ❖ Gases (Class 2) were the second largest category of hazardous substances shipped on highways at 28.9%.
- ❖ Poisons (Class 6) accounted for 15.6% of all truck shipments of hazardous substances.
- ❖ Flammable Solids (Class 4) and Miscellaneous (Class 9) each accounted for 2.2% of all truck shipments of hazardous substances and tied for the fourth largest category.

**Table C-4: Mason County Spring 2021 Truck Count Results – Hazardous Substances by Class by Location**

Hazardous Materials Warning Placard Class	Truck Count Location								TOTAL	% OF TOTAL
	A. IL Rte. 29 at IL Rte. 136/ CH 9 Intersection (west of San Jose)	B. IL Rte. 136 at IL Rte. 29/ CH 9 Intersection (west of San Jose)	C. IL Rte. 29 at IL Rte. 10 (Mason City)	D. IL Rte. 10 at IL Rte. 29 (Mason City)	E. IL Rte. 97 at IL Rte. 136 (Havana)	F. IL Rte. 136 at IL Rte. 97 (Havana)	G. IL Rte. 78 at IL Rte. 136 (Havana)	H. IL Rte. 136 at IL Rte. 78 (Havana)		
Class 1 - Explosives	0	0	0	0	0	0	0	0	0	0.0%
Class 2 - Gases	2	2	2	2	0	5	0	0	13	28.9%
Class 3 - Flammable Liquids	4	7	0	2	2	3	1	4	23	51.1%
Class 4 - Flammable Solids	0	0	0	0	0	1	0	0	1	2.2%
Class 5 - Oxidizers	0	0	0	0	0	0	0	0	0	0.0%
Class 6 - Poisons	0	0	1	2	1	2	0	1	7	15.6%
Class 7 - Radioactives	0	0	0	0	0	0	0	0	0	0.0%
Class 8 - Corrosives	0	0	0	0	0	0	0	0	0	0.0%
Class 9 - Misc.	0	0	0	0	0	1	0	0	1	2.2%
<b>Total</b>	<b>6</b>	<b>9</b>	<b>3</b>	<b>6</b>	<b>3</b>	<b>12</b>	<b>1</b>	<b>5</b>	<b>45</b>	



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# **APPENDIX D**

## **USACE Lock Performance Monitoring System (LPMS) Commodity Codes List**

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CODE	DESCRIPTION
<b>00 - All Units (Ferried Autos, Passengers, Railway Cars)</b>	
0001	Empty Barges
<b>10 - All Coal, Lignite, and Coal Coke</b>	
1100	Coal Lignite
1200	Coal Coke
<b>20 - All Petroleum and Petroleum Products</b>	
2100	Crude Petroleum
2211	Gasoline
2221	Kerosene
2330	Distillate Fuel Oil
2340	Residual Fuel Oil
2350	Lube Oil and Greases
2410	Petro. Jelly and Waxes
2429	Naphtha and Solvents
2430	Asphalt, Tar and Pitch
2540	Petroleum Coke
2640	Hydrocarbon & Petrol Gases, Liquefied and Gaseous
2990	Petro. Products NEC
<b>30 - All Chemicals and Related Products</b>	
3110	Fertilizers, Urea & Ammonium Nitrate Mixes, Nitrogenous Fert. etc.
3120	Phosphatic Fert.
3130	Potassic Fert.
3190	Fert. and Mixes NEC
3211	Acyclic Hydrocarbons
3212	Benzene and Toluene
3219	Other Hydrocarbons
3220	Alcohols
3230	Carboxylic Acids
3240	Nitrile-Function Comp, Amino Acids and Esters, or Other Cyclic Amides NEC
3250	Organo-Inorganic Comp.
3260	Organic Comp. NEC
3271	Sulphur (Liquid)
3272	Sulphuric Acid
3273	Ammonia
3274	Sodium Hydroxide
3275	Inorg. Elem., Oxides, and Halogen S
3276	Metallic Salts
3279	Inorganic Chem. NEC

CODE	DESCRIPTION
3281	Radioactive Material
3282	Pigments and Paints
3283	Coloring Mat. NEC
3284	Medicines
3285	Perfumes and Cleansers
3286	Plastics
3291	Pesticides
3292	Starches, Gluten, Glue
3293	Explosives
3297	Chemical Additives
3298	Wood and Resin Chem.
3299	Chem. Products NEC
<b>40 - All Crude Materials, Inedible, Except Fuels</b>	
4110	Rubber and Gums
4150	Fuel Wood
4161	Wood Chips
4170	Wood in the Rough
4189	Lumber
4190	Forest Products NEC
4225	Pulp and Waste Paper
4310	Building Stone
4322	Limestone
4323	Gypsum
4327	Phosphate Rock
4331	Sand and Gravel
4333	Dredged Material
4335	Waterway Improv. Mat
4338	Soil and Fill Dirt
4410	Iron Ore
4420	Iron and Steel Scrap
4515	Marine Shells
4630	Copper Ore
4650	Aluminum Ore
4670	Manganese Ore
4680	Non-Ferrous Scrap
4690	Non-Ferrous Ores NEC
4741	Sulphur, (Dry)
4782	Clay and Refrac. Mat.
4783	Salt (INTERNAL USE ONLY)



<b>CODE</b>	<b>DESCRIPTION</b>
4860	Slag
4900	Non-Metal. Min. NEC
<b>50 - All Primary Manufactured Goods</b>	
5110	Newsprint
5120	Paper and Paperboard
5190	Paper Products NEC
5210	Lime
5220	Cement and Concrete
5240	Glass and Glass Prod.
5290	Misc. Mineral Prod.
5312	Pig Iron
5315	Ferro Alloys
5320	Iron Primary Forms
5330	Iron Plates and Sheets
5360	Iron Bars and Shapes
5370	Iron Pipe and Tube
5390	Primary Iron NEC
5421	Copper
5422	Aluminum
5429	Smelted Prod. NEC
5480	Fab. Metal Products
5540	Primary Wood Prod.
<b>60 - All Food and Farm Products</b>	
6134	Fish (Not Shellfish)
6136	Shellfish
6241	Wheat
6344	Corn
6442	Rice
6443	Barley and Rye
6445	Oats
6447	Sorghum Grains
6521	Peanuts
6522	Soybeans
6534	Flaxseed
6590	Oilseeds NEC
6653	Vegetable Oils
6654	Vegetables and Prod.
6746	Wheat Flour
6747	Grain Mill Products

<b>CODE</b>	<b>DESCRIPTION</b>
6781	Hay and Fodder
6782	Animal Feed, Prep.
6811	Meat, Fresh, Frozen
6817	Meat, Prepared
6822	Dairy Products
6835	Fish, Prepared
6838	Tallow, Animal Oils
6839	Animals and Prod. NEC
6856	Bananas and Plantains
6857	Fruit and Nuts NEC
6858	Fruit Juices
6861	Sugar
6865	Molasses
6871	Coffee
6872	Cocoa Beans
6885	Alcoholic Beverages
6887	Groceries
6888	Water and Ice
6889	Food Products NEC
6891	Tobacco and Products
6893	Cotton
6894	Natural Fibers NEC
6899	Farm Products NEC
<b>70 - All Manufactured Equipment &amp; Machinery</b>	
7110	Machinery (Not Elec)
7120	Electrical Machinery
7210	Vehicles and Parts
7220	Aircraft and Parts
7230	Ships and Boats
7300	Ordnance and Access.
7400	Manufac. Wood Prod.
7500	Textile Products
7600	Rubber and Plastic Pr.
7800	Empty Containers
7900	Manufac. Prod. NEC
<b>80 - All Waste Material</b>	
8900	Waste and Scrap NEC
<b>90 - All Unknown or Not Elsewhere Classified - 90</b>	

CODE	DESCRIPTION
9900	Unknown or NEC

**Local Commodity Code List**

CODE	DESCRIPTION
5001	Pontoon Pipe (LOCAL COMMODITY)
6002	Fructose (LOCAL COMMODITY)
6003	Barged Juvenile SalmonID (Salmon And Steelhead Fingerings,Smolt,Etc)(LOCAL)
6004	Barged Kelts-Spawned Out Steelhead (LOCAL COMMODITY)
6069	Pottable Water (LOCAL COMMODITY)
7089	Arms And Ammunition (LOCAL COMMODITY)
8002	Waste Water (Salt And/Or Fresh) (LOCAL COMMODITY)
9910	Containers With Multi-Commodities (LOCAL COMMODITY)
9920	Pallets With Muulti-Commodities (LOCAL COMMODITY)

**Provided by the US Army Corps of Engineers, Rock Island District October 21, 2020**

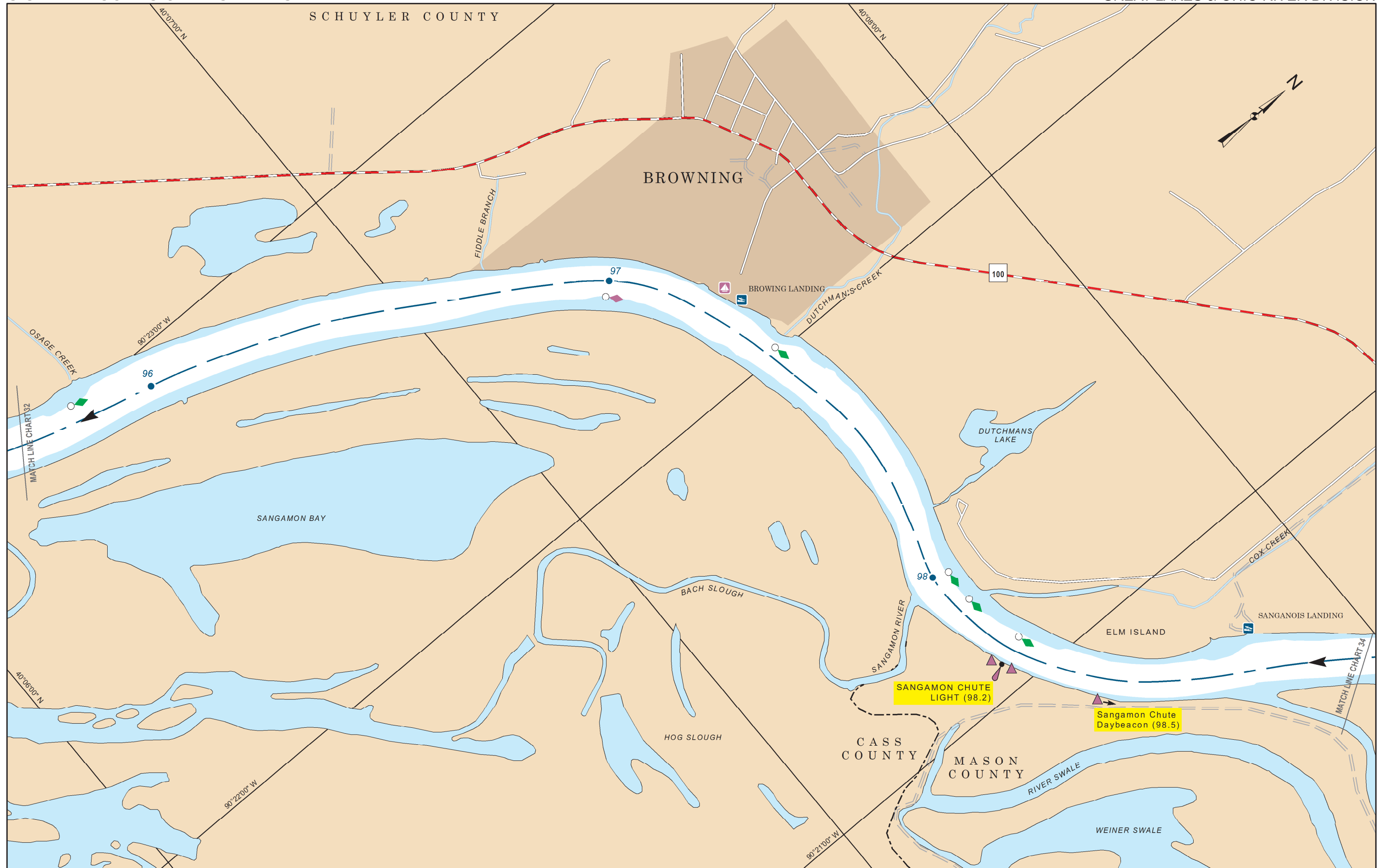
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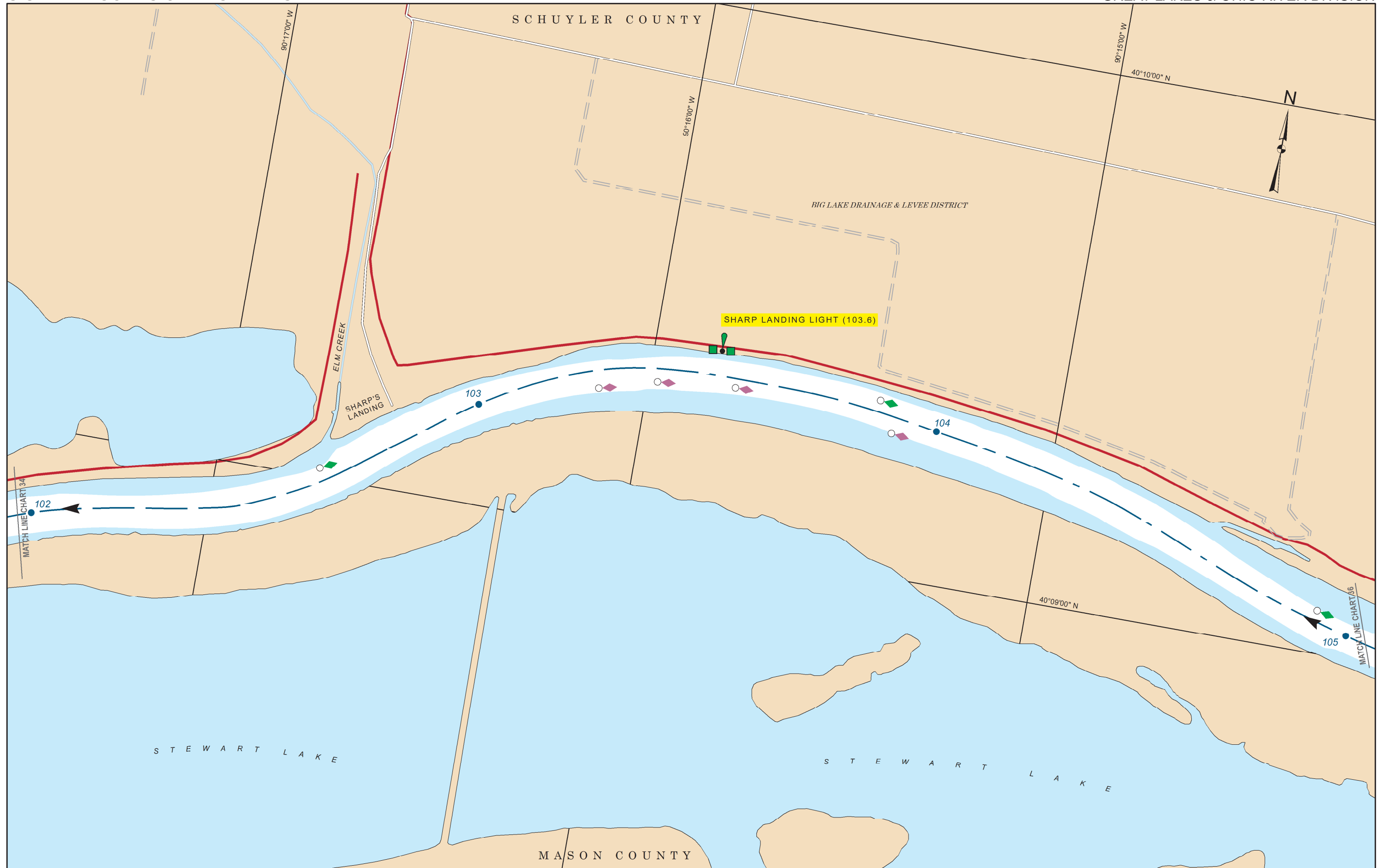
# **APPENDIX E**

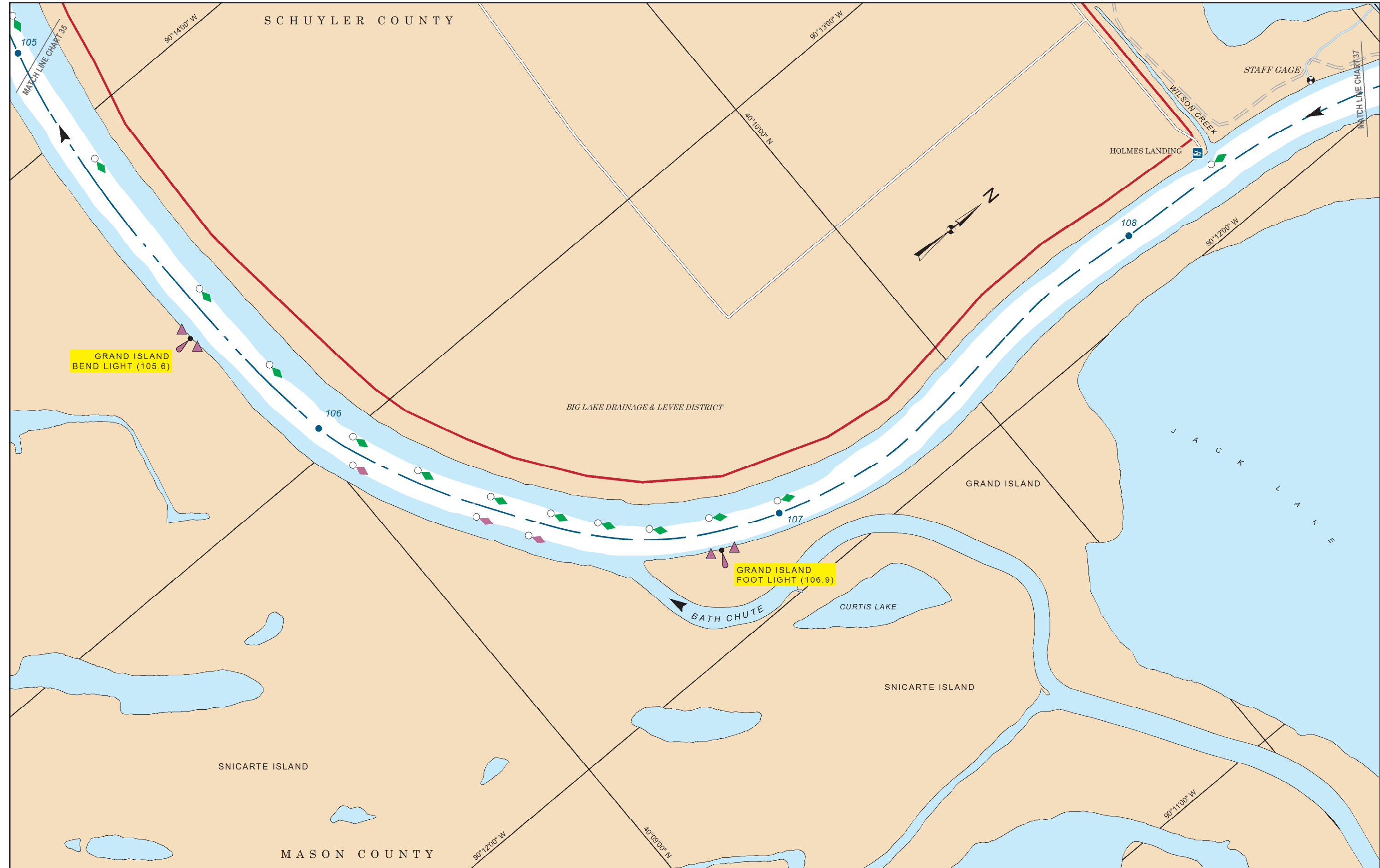
## **USACE Illinois River Maps – Mason County**

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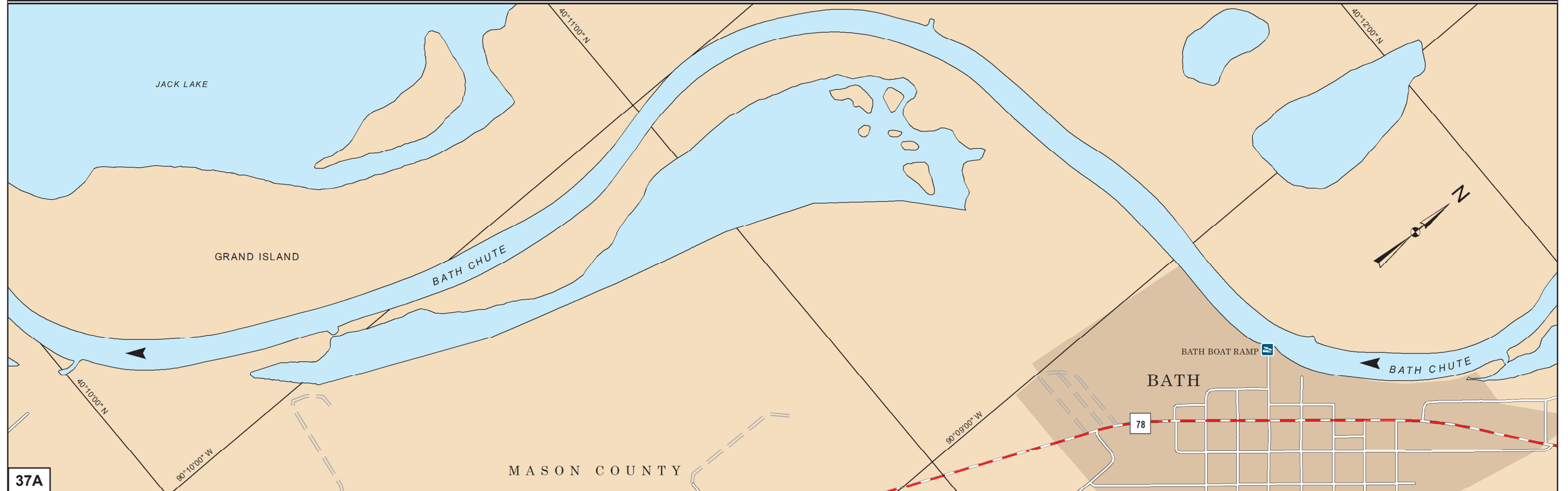
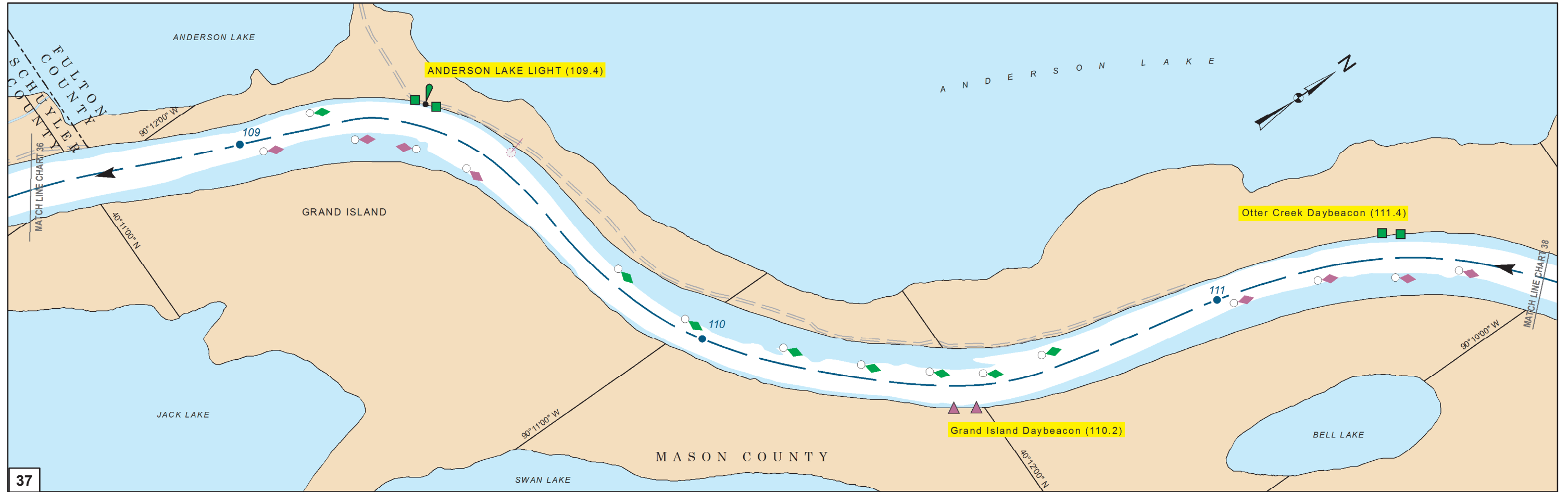




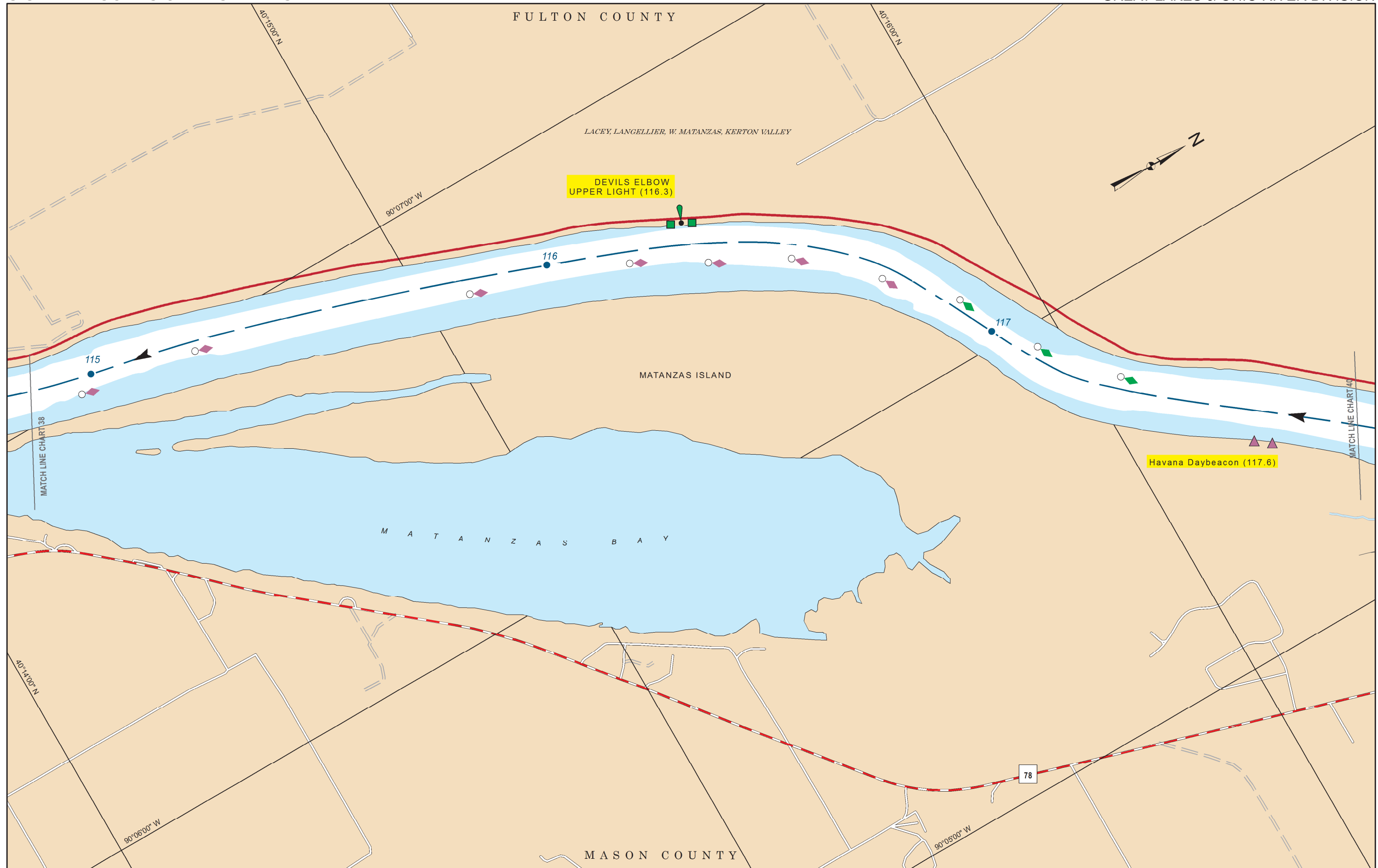


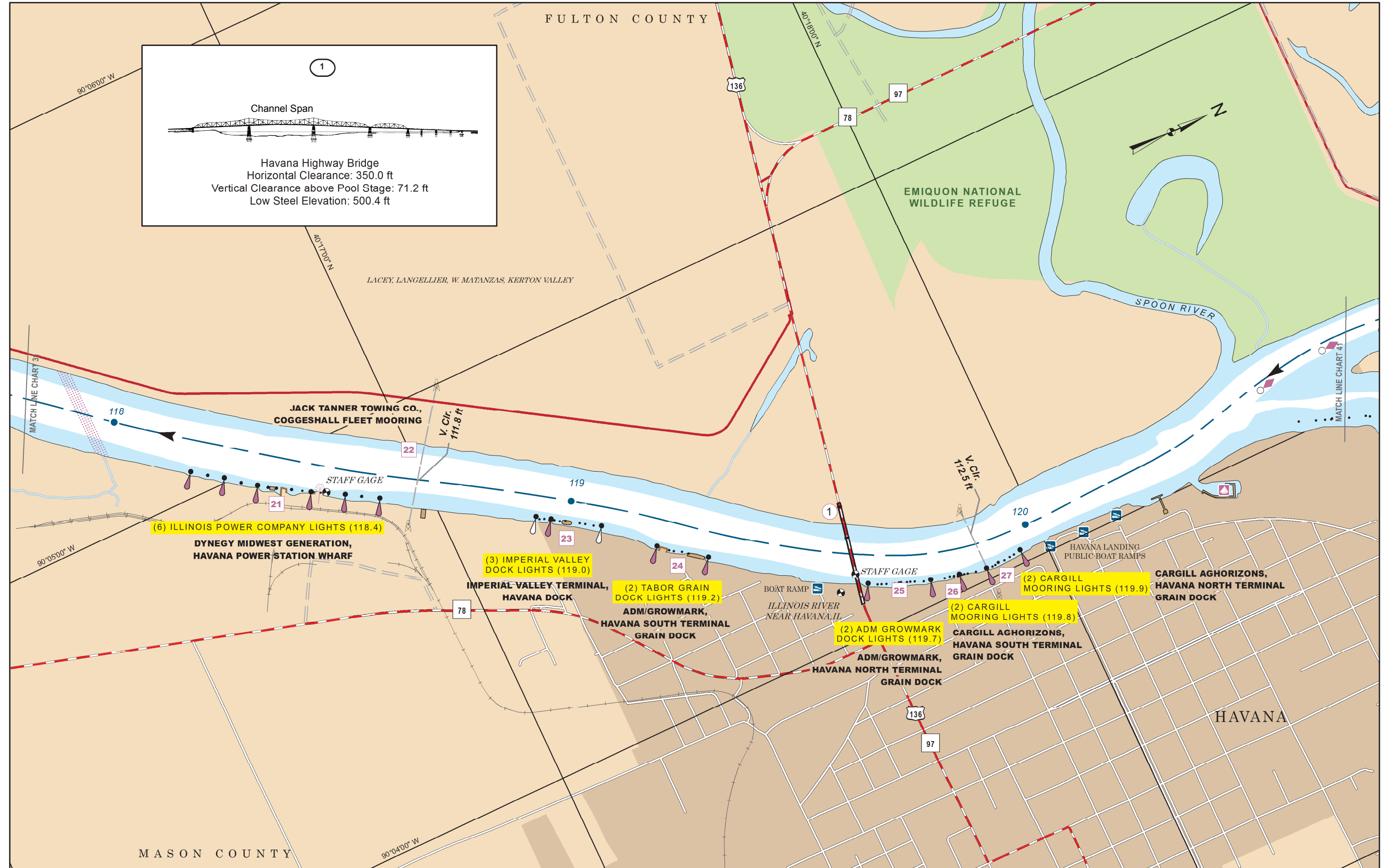


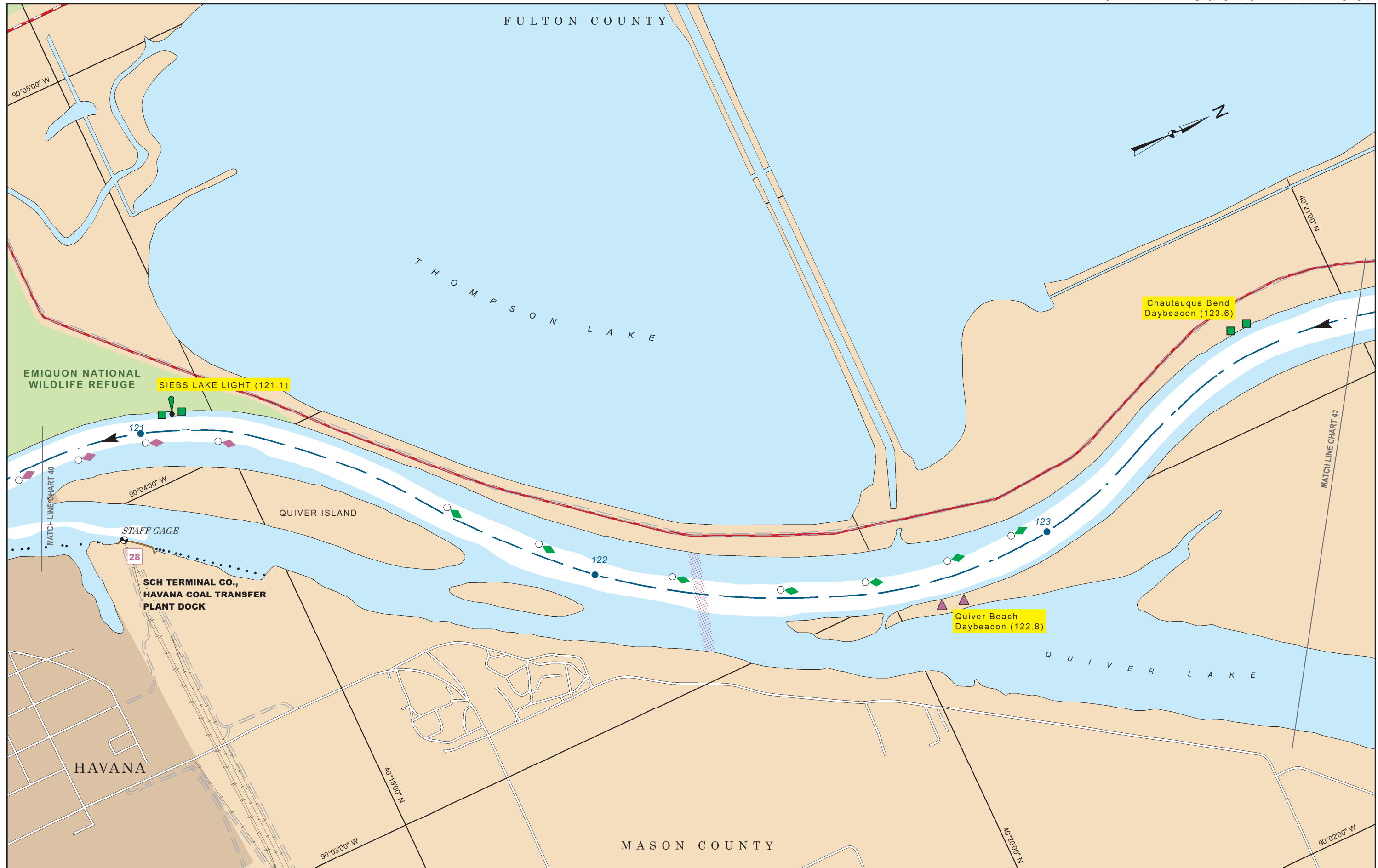


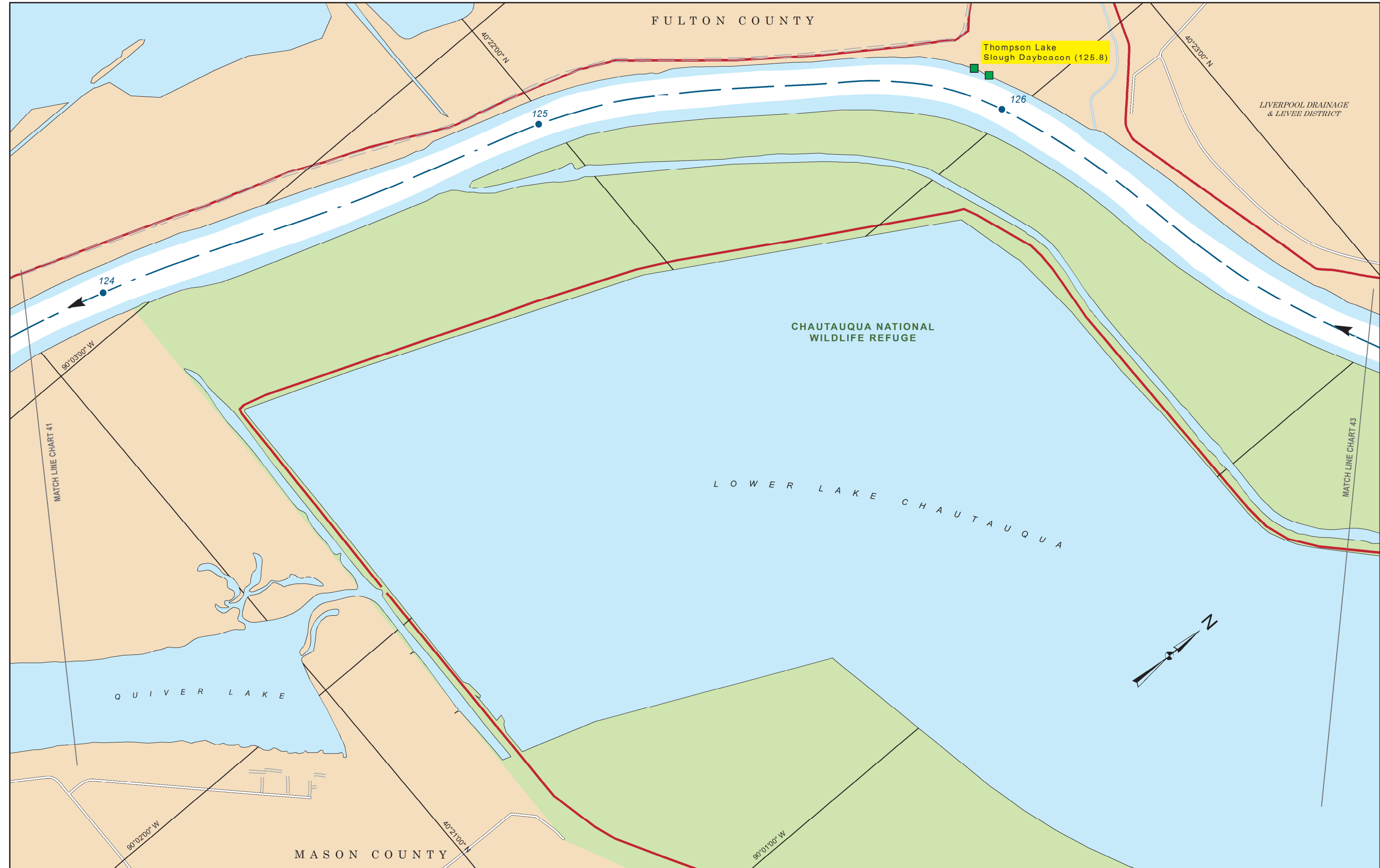




















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# **APPENDIX F**

## **Summary of 2019 Barge Tonnage Reports by Month by Lock**

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2019 Summarized Monthly Tonnage Report

Total (KTons) by Lock and Dam

Commodity Description Code	January		February		March		April		May		June	
	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria
10 All Coal, Lignite & Coke	106.00	99.10	29.00	56.20	10.80	71.60	20.30	82.80	14.10	12.50	11.00	84.60
20 All Petroleum & Petroleum Products	281.90	249.10	237.00	251.70	406.30	402.40	292.00	293.30	78.30	71.90	77.70	87.00
30 All Chemicals & Related Products	462.40	388.20	447.10	336.50	554.89	436.99	580.11	391.21	306.33	279.88	180.40	157.00
40 All Crude Materials, Inedible, Except Fuels	382.90	390.40	256.25	212.15	397.95	309.85	339.42	313.60	95.00	74.40	164.20	124.60
50 All Primary Manufactured Goods	168.90	171.90	209.80	206.50	208.90	194.20	288.98	259.28	112.30	123.70	131.40	114.90
60 All Food & Farm Products	954.40	623.80	698.36	440.10	1220.02	784.66	991.56	542.40	303.90	214.60	431.60	325.40
70 All Manufactured Equipment & Machinery	-	1.00	-	1.25	0.50	1.00	-	-	-	0.20	-	0.50
80 All Waste Material	1.60	-	-	-	-	-	12.80	-	-	-	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	-	-	-	-	11.40	6.70	-	-	-	-	-	-
Total KTons:	2358.10	1923.50	1877.51	1504.40	2810.76	2207.40	2525.17	1882.59	909.93	777.18	996.30	894.00

Commodity Description Code	July		August		September		October		November		December	
	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria
10 All Coal, Lignite & Coke	9.40	79.80	51.94	126.30	30.00	21.80	12.70	23.90	35.40	2.60	47.20	75.80
20 All Petroleum & Petroleum Products	250.50	221.50	244.30	269.50	319.70	296.50	277.80	310.30	431.80	421.30	266.90	344.90
30 All Chemicals & Related Products	542.30	480.70	496.86	414.21	313.70	255.50	452.55	402.65	462.65	425.90	463.60	455.00
40 All Crude Materials, Inedible, Except Fuels	397.80	336.20	279.12	314.30	296.40	355.60	215.30	205.50	459.10	416.90	476.30	470.80
50 All Primary Manufactured Goods	378.76	313.36	211.70	237.60	222.50	241.20	215.60	228.20	204.80	190.90	185.40	187.30
60 All Food & Farm Products	1164.10	706.10	631.22	578.00	461.11	343.91	370.60	234.00	636.16	430.20	1133.90	927.20
70 All Manufactured Equipment & Machinery	21.50	21.50	27.95	27.25	-	2.75	4.80	6.50	2.60	2.60	4.20	5.20
80 All Waste Material	1.60	1.60	15.00	15.00	-	-	1.60	-	1.60	1.60	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	18.50	18.50	6.30	4.70	-	1.60	-	-	-	-	-	-
Total KTons:	2784.46	2179.26	1964.39	1986.86	1643.41	1518.86	1550.95	1411.05	2234.11	1892.00	2577.50	2466.20

**2019 Summarized Monthly Tonnage Report**

**Downbound (KTons) by Lock and Dam**

Commodity Description Code	January		February		March		April		May		June	
	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria
10 All Coal, Lignite & Coke	38.30	38.30	25.80	25.80	6.00	6.00	3.00	12.60	9.30	9.30	11.00	11.00
20 All Petroleum & Petroleum Products	236.70	211.70	182.90	202.60	333.20	325.90	226.60	234.30	49.40	44.80	63.70	73.00
30 All Chemicals & Related Products	174.40	136.20	147.50	94.00	211.10	143.00	164.50	82.80	42.70	39.20	79.70	58.70
40 All Crude Materials, Inedible, Except Fuels	55.60	58.70	40.70	34.20	57.90	66.10	91.02	87.50	31.40	31.40	50.00	50.20
50 All Primary Manufactured Goods	47.20	47.10	56.80	48.70	57.60	66.80	40.10	43.40	22.00	23.60	18.70	35.60
60 All Food & Farm Products	901.00	560.80	656.70	398.60	1174.82	715.96	917.80	500.70	243.30	157.00	406.40	317.40
70 All Manufactured Equipment & Machinery	-	1.00	-	1.25	-	1.00	-	-	-	-	-	-
80 All Waste Material	-	-	-	-	-	-	12.80	-	-	-	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	-	-	-	-	11.40	6.70	-	-	-	-	-	-
<b>Total KTons:</b>	<b>1453.20</b>	<b>1053.80</b>	<b>1110.40</b>	<b>805.15</b>	<b>1852.02</b>	<b>1331.46</b>	<b>1455.82</b>	<b>961.30</b>	<b>398.10</b>	<b>305.30</b>	<b>629.50</b>	<b>545.90</b>

Commodity Description Code	July		August		September		October		November		December	
	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria
10 All Coal, Lignite & Coke	-	9.60	37.54	27.10	22.00	10.80	3.10	14.30	30.80	1.00	33.00	61.60
20 All Petroleum & Petroleum Products	183.90	157.50	163.40	193.30	271.00	248.10	227.60	241.80	339.60	347.90	249.60	292.70
30 All Chemicals & Related Products	101.10	65.60	134.06	110.11	114.30	71.70	79.65	76.45	121.00	93.90	154.30	123.00
40 All Crude Materials, Inedible, Except Fuels	70.60	53.00	67.02	90.60	127.50	151.70	42.40	71.10	82.00	84.90	85.70	66.50
50 All Primary Manufactured Goods	81.50	47.90	14.40	15.90	33.30	33.30	34.10	48.40	25.40	23.70	63.90	67.30
60 All Food & Farm Products	1072.10	630.90	605.82	530.20	432.31	311.91	310.80	180.60	586.96	368.20	1062.90	838.70
70 All Manufactured Equipment & Machinery	-	-	0.35	0.35	-	1.00	-	1.70	2.60	2.60	-	-
80 All Waste Material	-	-	15.00	15.00	-	-	-	-	1.60	1.60	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	18.50	18.50	1.60	1.60	-	-	-	-	-	-	-	-
<b>Total KTons:</b>	<b>1527.70</b>	<b>983.00</b>	<b>1039.19</b>	<b>984.16</b>	<b>1000.41</b>	<b>828.51</b>	<b>697.65</b>	<b>634.35</b>	<b>1189.96</b>	<b>923.80</b>	<b>1649.40</b>	<b>1449.80</b>

2019 Summarized Monthly Tonnage Report

Upbound (KTons) by Lock and Dam

Commodity Description Code	January		February		March		April		May		June	
	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria
10 All Coal, Lignite & Coke	67.70	60.80	3.20	30.40	4.80	65.60	17.30	70.20	4.80	3.20	-	73.60
20 All Petroleum & Petroleum Products	45.20	37.40	54.10	49.10	73.10	76.50	65.40	59.00	28.90	27.10	14.00	14.00
30 All Chemicals & Related Products	288.00	252.00	299.60	242.50	343.79	293.99	415.61	308.41	263.63	240.68	100.70	98.30
40 All Crude Materials, Inedible, Except Fuels	327.30	331.70	215.55	177.95	340.05	243.75	248.40	226.10	63.60	43.00	114.20	74.40
50 All Primary Manufactured Goods	121.70	124.80	153.00	157.80	151.30	127.40	248.88	215.88	90.30	100.10	112.70	79.30
60 All Food & Farm Products	53.40	63.00	41.66	41.50	45.20	68.70	73.76	41.70	60.60	57.60	25.20	8.00
70 All Manufactured Equipment & Machinery	-	-	-	-	0.50	-	-	-	-	0.20	-	0.50
80 All Waste Material	1.60	-	-	-	-	-	-	-	-	-	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	-	-	-	-	-	-	-	-	-	-	-	-
Total KTons:	904.90	869.70	767.11	699.25	958.74	875.94	1069.35	921.29	511.83	471.88	366.80	348.10

Commodity Description Code	July		August		September		October		November		December	
	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria	LaGrange	Peoria
10 All Coal, Lignite & Coke	9.40	70.20	14.40	99.20	8.00	11.00	9.60	9.60	4.60	1.60	14.20	14.20
20 All Petroleum & Petroleum Products	66.60	64.00	80.90	76.20	48.70	48.40	50.20	68.50	92.20	73.40	17.30	52.20
30 All Chemicals & Related Products	441.20	415.10	362.80	304.10	199.40	183.80	372.90	326.20	341.65	332.00	309.30	332.00
40 All Crude Materials, Inedible, Except Fuels	327.20	283.20	212.10	223.70	168.90	203.90	172.90	134.40	377.10	332.00	390.60	404.30
50 All Primary Manufactured Goods	297.26	265.46	197.30	221.70	189.20	207.90	181.50	179.80	179.40	167.20	121.50	120.00
60 All Food & Farm Products	92.00	75.20	25.40	47.80	28.80	32.00	59.80	53.40	49.20	62.00	71.00	88.50
70 All Manufactured Equipment & Machinery	21.50	21.50	27.60	26.90	-	1.75	4.80	4.80	-	-	4.20	5.20
80 All Waste Material	1.60	1.60	-	-	-	-	1.60	-	-	-	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	-	-	4.70	3.10	-	1.60	-	-	-	-	-	-
Total KTons:	1256.76	1196.26	925.20	1002.70	643.00	690.35	853.30	776.70	1044.15	968.20	928.10	1016.40

**08 - LaGrange Lock  
Summarized Monthly Tonnage Report - 2019**

Commodity Description Code	January			February			March			April			May			June		
	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)
10 All Coal, Lignite & Coke	67.70	38.30	106.00	3.20	25.80	29.00	4.80	6.00	10.80	17.30	3.00	20.30	4.80	9.30	14.10	-	11.00	11.00
20 All Petroleum & Petroleum Products	45.20	236.70	281.90	54.10	182.90	237.00	73.10	333.20	406.30	65.40	226.60	292.00	28.90	49.40	78.30	14.00	63.70	77.70
30 All Chemicals & Related Products	288.00	174.40	462.40	299.60	147.50	447.10	343.79	211.10	554.89	415.61	164.50	580.11	263.63	42.70	306.33	100.70	79.70	180.40
40 All Crude Materials, Inedible, Except Fuels	327.30	55.60	382.90	215.55	40.70	256.25	340.05	57.90	397.95	248.40	91.02	339.42	63.60	31.40	95.00	114.20	50.00	164.20
50 All Primary Manufactured Goods	121.70	47.20	168.90	153.00	56.80	209.80	151.30	57.60	208.90	248.88	40.10	288.98	90.30	22.00	112.30	112.70	18.70	131.40
60 All Food & Farm Products	53.40	901.00	954.40	41.66	656.70	698.36	45.20	1174.82	1220.02	73.76	917.80	991.56	60.60	243.30	303.90	25.20	406.40	431.60
70 All Manufactured Equipment & Machinery	-	-	-	-	-	-	0.50	-	0.50	-	-	-	-	-	-	-	-	-
80 All Waste Material	1.60	-	1.60	-	-	-	-	-	-	-	12.80	12.80	-	-	-	-	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	-	-	-	-	-	-	-	11.40	11.40	-	-	-	-	-	-	-	-	-
<b>Total Ktons:</b>	<b>904.90</b>	<b>1453.20</b>	<b>2358.10</b>	<b>767.11</b>	<b>1110.40</b>	<b>1877.51</b>	<b>958.74</b>	<b>1852.02</b>	<b>2810.76</b>	<b>1069.35</b>	<b>1455.82</b>	<b>2525.17</b>	<b>511.83</b>	<b>398.10</b>	<b>909.93</b>	<b>366.80</b>	<b>629.50</b>	<b>996.30</b>

Commodity Description Code	July			August			September			October			November			December		
	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)
10 All Coal, Lignite & Coke	9.40	-	9.40	14.40	37.54	51.94	8.00	22.00	30.00	9.60	3.10	12.70	4.60	30.80	35.40	14.20	33.00	47.20
20 All Petroleum & Petroleum Products	66.60	183.90	250.50	80.90	163.40	244.30	48.70	271.00	319.70	50.20	227.60	277.80	92.20	339.60	431.80	17.30	249.60	266.90
30 All Chemicals & Related Products	441.20	101.10	542.30	362.80	134.06	496.86	199.40	114.30	313.70	372.90	79.65	452.55	341.65	121.00	462.65	309.30	154.30	463.60
40 All Crude Materials, Inedible, Except Fuels	327.20	70.60	397.80	212.10	67.02	279.12	168.90	127.50	296.40	172.90	42.40	215.30	377.10	82.00	459.10	390.60	85.70	476.30
50 All Primary Manufactured Goods	297.26	81.50	378.76	197.30	14.40	211.70	189.20	33.30	222.50	181.50	34.10	215.60	179.40	25.40	204.80	121.50	63.90	185.40
60 All Food & Farm Products	92.00	1072.10	1164.10	25.40	605.82	631.22	28.80	432.31	461.11	59.80	310.80	370.60	49.20	586.96	636.16	71.00	1062.90	1133.90
70 All Manufactured Equipment & Machinery	21.50	-	21.50	27.60	0.35	27.95	-	-	-	4.80	-	4.80	-	2.60	2.60	4.20	-	4.20
80 All Waste Material	1.60	-	1.60	-	15.00	15.00	-	-	-	1.60	-	1.60	-	1.60	1.60	-	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	-	18.50	18.50	4.70	1.60	6.30	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Ktons:</b>	<b>1256.76</b>	<b>1527.70</b>	<b>2784.46</b>	<b>925.20</b>	<b>1039.19</b>	<b>1964.39</b>	<b>643.00</b>	<b>1000.41</b>	<b>1643.41</b>	<b>853.30</b>	<b>697.65</b>	<b>1550.95</b>	<b>1044.15</b>	<b>1189.96</b>	<b>2234.11</b>	<b>928.10</b>	<b>1649.40</b>	<b>2577.50</b>

**07 - Peoria Lock  
Summarized Monthly Tonnage Report - 2019**

Commodity Description Code	January			February			March			April			May			June		
	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)
10 All Coal, Lignite & Coke	60.80	38.30	99.10	30.40	25.80	56.20	65.60	6.00	71.60	70.20	12.60	82.80	3.20	9.30	12.50	73.60	11.00	84.60
20 All Petroleum & Petroleum Products	37.40	211.70	249.10	49.10	202.60	251.70	76.50	325.90	402.40	59.00	234.30	293.30	27.10	44.80	71.90	14.00	73.00	87.00
30 All Chemicals & Related Products	252.00	136.20	388.20	242.50	94.00	336.50	293.99	143.00	436.99	308.41	82.80	391.21	240.68	39.20	279.88	98.30	58.70	157.00
40 All Crude Materials, Inedible, Except Fuels	331.70	58.70	390.40	177.95	34.20	212.15	243.75	66.10	309.85	226.10	87.50	313.60	43.00	31.40	74.40	74.40	50.20	124.60
50 All Primary Manufactured Goods	124.80	47.10	171.90	157.80	48.70	206.50	127.40	66.80	194.20	215.88	43.40	259.28	100.10	23.60	123.70	79.30	35.60	114.90
60 All Food & Farm Products	63.00	560.80	623.80	41.50	398.60	440.10	68.70	715.96	784.66	41.70	500.70	542.40	57.60	157.00	214.60	8.00	317.40	325.40
70 All Manufactured Equipment & Machinery	-	1.00	1.00	-	1.25	1.25	-	1.00	1.00	-	-	-	0.20	-	0.20	0.50	-	0.50
80 All Waste Material	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	-	-	-	-	-	-	-	6.70	6.70	-	-	-	-	-	-	-	-	-
<b>Total Ktons:</b>	<b>869.70</b>	<b>1053.80</b>	<b>1923.50</b>	<b>699.25</b>	<b>805.15</b>	<b>1504.40</b>	<b>875.94</b>	<b>1331.46</b>	<b>2207.40</b>	<b>921.29</b>	<b>961.30</b>	<b>1882.59</b>	<b>471.88</b>	<b>305.30</b>	<b>777.18</b>	<b>348.10</b>	<b>545.90</b>	<b>894.00</b>

Commodity Description Code	July			August			September			October			November			December		
	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)	Upbound (Ktons)	Downbound (Ktons)	Total (Ktons)
10 All Coal, Lignite & Coke	70.20	9.60	79.80	99.20	27.10	126.30	11.00	10.80	21.80	9.60	14.30	23.90	1.60	1.00	2.60	14.20	61.60	75.80
20 All Petroleum & Petroleum Products	64.00	157.50	221.50	76.20	193.30	269.50	48.40	248.10	296.50	68.50	241.80	310.30	73.40	347.90	421.30	52.20	292.70	344.90
30 All Chemicals & Related Products	415.10	65.60	480.70	304.10	110.11	414.21	183.80	71.70	255.50	326.20	76.45	402.65	332.00	93.90	425.90	332.00	123.00	455.00
40 All Crude Materials, Inedible, Except Fuels	283.20	53.00	336.20	223.70	90.60	314.30	203.90	151.70	355.60	134.40	71.10	205.50	332.00	84.90	416.90	404.30	66.50	470.80
50 All Primary Manufactured Goods	265.46	47.90	313.36	221.70	15.90	237.60	207.90	33.30	241.20	179.80	48.40	228.20	167.20	23.70	190.90	120.00	67.30	187.30
60 All Food & Farm Products	75.20	630.90	706.10	47.80	530.20	578.00	32.00	311.91	343.91	53.40	180.60	234.00	62.00	368.20	430.20	88.50	838.70	927.20
70 All Manufactured Equipment & Machinery	21.50	-	21.50	26.90	0.35	27.25	1.75	1.00	2.75	4.80	1.70	6.50	-	2.60	2.60	5.20	-	5.20
80 All Waste Material	1.60	-	1.60	-	15.00	15.00	-	-	-	-	-	-	-	1.60	1.60	-	-	-
90 All Unknown or Not Elsewhere Classified (NEC)	-	18.50	18.50	3.10	1.60	4.70	1.60	-	1.60	-	-	-	-	-	-	-	-	-
<b>Total Ktons:</b>	<b>1196.26</b>	<b>983.00</b>	<b>2179.26</b>	<b>1002.70</b>	<b>984.16</b>	<b>1986.86</b>	<b>690.35</b>	<b>828.51</b>	<b>1518.86</b>	<b>776.70</b>	<b>634.35</b>	<b>1411.05</b>	<b>968.20</b>	<b>923.80</b>	<b>1892.00</b>	<b>1016.40</b>	<b>1449.80</b>	<b>2466.20</b>

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# **APPENDIX G**

## **Community Resources Evaluated**

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## Select Mason County Community Resources

Community Resource	Location	Transportation Routes To Be Analyzed
<b>Bath</b>		
Bath Fire Protection District	115 East 1st Street	H (IL-78)
<b>Easton</b>		
Easton Rural Fire Protection District	101 East Mason Street	H (IL-10)
<b>Havana</b>		
Mason County Courthouse	100 North Broadway Street	H (US-136, IL-78, IL-97)
Mason County Sheriff's Office	102 West Market Street	H (US-136, IL-78, IL-97)
Havana Rural Fire Protection District	318 South McKinley Street	H (US-136, IL-78, IL-97)
Havana Health Care Center	621 North Harpham Street	H (US-136, IL-78, IL-97)
Mason District Hospital	615 North Promenade Street	H (US-136, IL-78, IL-97)
Havana City Hall	227 West Main Street	H (US-136, IL-78, IL-97)
Havana Fire/Police Department	226 West Market Street	H (US-136, IL-78, IL-97)
New Central Elementary School	215 North Pearl Street	H (US-136, IL-78, IL-97)
Havana Jr. High School	801 East Laurel Street	H (US-136, IL-78, IL-97)
Havana High School	501 South McKinley Street	H (US-136, IL-78, IL-97)
<b>Kilbourne</b>		
Kilbourne Fire Department	308 West Walnut Street	H (IL-97)
<b>Mason City</b>		
Mason County Ambulance	151 North Tonica Street	H (IL-10, IL-29), R (UP)
Mason City Area Nursing Home	520 North Price Avenue	H (IL-10, IL-29), R (UP)
Mason City City Hall	145 South Main Street	H (IL-10, IL-29), R (UP)
Mason City Fire Protection District	409 West Pine Street	H (IL-10, IL-29), R (UP)
Illini Central Schools	208 North West Avenue	H (IL-10, IL-29), R (UP)
<b>San Jose</b>		
San Jose Village Hall	309 South 2nd Street	H (US-136, IL-29), R (UP)
San Jose Fire Protection District	250 South 2nd Street	H (US-136, IL-29), R (UP)

H = Highway (Route)    R = Rail Line (Carrier)

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# **APPENDIX H**

## **Vulnerability Analysis – Community Resource Scoring Sheets**

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**Bath**  
**Vulnerability Analysis - Community Resource Scoring Sheet**

HIGHWAY											
Community Resource (CR)	IL Route 78										
	Distance to CR*	Probable Case (gasoline) <sup>†</sup> (Tank Truck Fire = 0.5 miles)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total
		IID (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity	
<i>Government Services</i>											
Bath Fire Protection District 115 East 1st St.	180 ft.	IN	3	3	3	9	IN	4	4	4	12

\* Distance to CR is the shortest distance from the Community Resource to the highway

<sup>†</sup> Other flammable liquids and poisons were identified along this route; however they all have the exact same IID as gasoline.

- The maximum score for each scenario is 12 points.
- The higher the score, the greater the vulnerability.
- A community resource that receives a score of 8 or more points for a specific scenario has a relative "high" vulnerability.
- A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.

**Easton**  
**Vulnerability Analysis - Community Resource Scoring Sheet**

HIGHWAY											
Community Resource (CR)	IL Route 10										
	Distance to CR*	Probable Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total
		IID (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity	
<i>Government Services</i> Easton Rural Fire Protection District 101 East Mason St.	325 ft.	IN	4	3	3	10	IN	4	3	3	10

\* Distance to CR is the shortest distance from the Community Resource to the highway

- The maximum score for each scenario is 12 points.
- The higher the score, the greater the vulnerability.
- A community resource that receives a score of 8 or more points for a specific scenario has a relative "high" vulnerability.
- A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.

Havana  
Vulnerability Analysis - Community Resource Scoring Sheet

HIGHWAY																						
Community Resource (CR)	US Route 136											IL Route 78										
	Distance to CR*	Probable Case (gasoline) <sup>†</sup> (Tank Truck Fire = 0.5 miles)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total	Distance to CR*	Probable Case (gasoline) <sup>†</sup> (Tank Truck Fire = 0.5 miles)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total
		IID (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity			IID (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity	
<b>Educational Facilities</b>																						
New Central Elementary School 215 N. Pearl St.	0.50 mi.	IN	1	0	NA	1	IN	3	2	2	7	0.64 mi.	OUT	0	NA	NA	0	IN	3	2	2	7
Havana Jr. High School 801 E. Laurel St.	140 ft.	IN	3	3	3	9	IN	4	4	4	12	0.87 mi.	OUT	0	NA	NA	0	IN	3	2	2	7
Havana High School 501 S. McKinley St.	335 ft.	IN	3	3	3	9	IN	4	4	4	12	0.64 mi.	OUT	0	NA	NA	0	IN	3	2	2	7
<b>Government Services</b>																						
Havana City Hall 227 W. Main St.	0.38 mi.	IN	3	2	2	7	IN	3	3	3	9	0.41 mi.	IN	2	1	1	4	IN	3	2	2	7
Havana Fire/Police Department 226 W. Market St.	0.50 mi.	IN	1	0	NA	1	IN	3	2	2	7	0.53 mi.	OUT	0	NA	NA	0	IN	3	2	2	7
Havana Rural Fire Protection District 318 S. McKinley St.	115 ft.	IN	3	3	3	9	IN	4	4	4	12	0.62 mi.	OUT	0	NA	NA	0	IN	3	2	2	7
Mason County Courthouse 100 N. Broadway St.	0.36 mi.	IN	3	2	2	7	IN	3	3	3	9	0.50 mi.	OUT	0	NA	NA	0	IN	3	2	2	7
Mason County Sheriff's Office 102 W. Market St.	0.40 mi.	IN	2	1	1	4	IN	3	3	3	9	0.57 mi.	OUT	0	NA	NA	0	IN	3	2	2	7
<b>Health Services</b>																						
Havana Health Care Center 621 N. Harpham St.	0.64 mi.	OUT	0	NA	NA	0	IN	3	3	3	9	1.10 mi.	OUT	0	NA	NA	0	IN	2	2	2	6
Mason District Hospital 615 Promenade St.	0.54 mi.	OUT	0	NA	NA	0	IN	3	3	3	9	0.98 mi.	OUT	0	NA	NA	0	IN	2	2	1	5

\* Distance to CR is the shortest distance from the Community Resource to the highway

† Other flammable liquids and poisons were identified along this route; however they all have the exact same IID as gasoline.

- The maximum score for each scenario is 12 points.
- The higher the score, the greater the vulnerability.
- A community resource that receives a score of 8 or more points for a specific scenario has a relative "high" vulnerability.
- A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.

Havana  
Vulnerability Analysis - Community Resource Scoring Sheet

HIGHWAY												
Community Resource (CR)	IL Route 97											
	Distance to CR*	Probable Case (gasoline) <sup>†</sup> (Tank Truck Fire = 0.5 miles)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total	
		IID (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		
<b>Educational Facilities</b>												
New Central Elementary School 215 N. Pearl St.	0.50 mi.	IN	1	0	NA	1	IN	3	2	2	7	
Havana Jr. High School 801 E. Laurel St.	0.20 mi.	IN	3	2	2	7	IN	3	3	3	9	
Havana High School 501 S. McKinley St.	225 ft.	IN	3	3	3	9	IN	4	4	4	12	
<b>Government Services</b>												
Havana City Hall 227 W. Main St.	0.38 mi.	IN	3	2	1	6	IN	3	2	2	7	
Havana Fire/Police Department 226 W. Market St.	0.50 mi.	IN	1	0	NA	1	IN	3	2	2	7	
Havana Rural Fire Protection District 318 S. McKinley St.	0.21 mi.	IN	3	2	1	6	IN	3	2	2	7	
Mason County Courthouse 100 N. Broadway St.	0.42 mi.	IN	2	1	1	4	IN	3	2	2	7	
Mason County Sheriff's Office 102 W. Market St.	0.49 mi.	IN	2	1	1	4	IN	3	2	2	7	
<b>Health Services</b>												
Havana Health Care Center 621 N. Harpham St.	0.84 mi.	OUT	0	NA	NA	0	IN	3	2	2	7	
Mason District Hospital 615 Promenade St.	0.73 mi.	OUT	0	NA	NA	0	IN	3	2	2	7	

\* Distance to CR is the shortest distance from the Community Resource to the highway

† Other flammable liquids and poisons were identified along this route; however they all have the exact same IID as gasoline.

- The maximum score for each scenario is 12 points.
- The higher the score, the greater the vulnerability.
- A community resource that receives a score of 8 or more points for a specific scenario has a relative "high" vulnerability.
- A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.

**Kilbourne  
Vulnerability Analysis - Community Resource Scoring Sheet**

HIGHWAY											
Community Resource (CR)	IL Route 97										
	Distance to CR*	Probable Case (gasoline) <sup>†</sup> (Tank Truck Fire = 0.5 miles)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total
		IID (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity	
<i>Government Services</i>											
Kilbourne Fire Department 308 West Walnut St.	0.18 mi.	IN	3	3	3	9	IN	4	3	3	10

\* Distance to CR is the shortest distance from the Community Resource to the highway

<sup>†</sup> Other flammable liquids and poisons were identified along this route; however they all have the exact same IID as gasoline.

- The maximum score for each scenario is 12 points.
- The higher the score, the greater the vulnerability.
- A community resource that receives a score of 8 or more points for a specific scenario has a relative "high" vulnerability.
- A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.

**Mason City  
Vulnerability Analysis - Community Resource Scoring Sheet**

HIGHWAY																						
Community Resource (CR)	IL Route 10										IL Route 29											
	Distance to CR*	Probable Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total	Distance to CR*	Probable Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total
		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity			PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity	
<i>Educational Facilities</i>																						
Illini Central Schools 208 N. West St.	177 ft.	IN	4	4	4	12	IN	4	4	4	12	0.21 mi.	IN	3	3	3	9	IN	3	3	3	9
<i>Government Services</i>																						
Mason City Ambulance 151 N. Tonica St.	270 ft.	IN	4	4	4	12	IN	4	4	4	12	0.67 mi.	IN	3	2	2	7	IN	3	2	2	7
Mason City City Hall 145 S. Main St.	245 ft.	IN	4	4	4	12	IN	4	4	4	12	0.71 mi.	IN	3	2	2	7	IN	3	2	2	7
Mason City Fire Protection District 409 W. Pine St.	298 ft.	IN	4	4	3	11	IN	4	4	3	11	0.42 mi.	IN	3	2	1	6	IN	3	2	1	6
<i>Health Services</i>																						
Mason City Area Nursing Home 520 N. Price St.	0.29 mi.	IN	3	3	4	10	IN	3	3	4	10	1.12 mi.	IN	2	1	1	4	IN	2	1	1	4

\* Distance to CR is the shortest distance from the Community Resource to the highway

- The maximum score for each scenario is 12 points.
- The higher the score, the greater the vulnerability.
- A community resource that receives a score of 8 or more points for a specific scenario has a relative "high" vulnerability.
- A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.



**Mason City  
Vulnerability Analysis - Community Resource Scoring Sheet**

RAIL												
Community Resource (CR)	Union Pacific											
	Distance to CR*	Probable Case (Flammable Liquids - Class 3 <sup>‡</sup> ) (Rail Car Fire = 0.5 miles)				Total	Worst Case (Gases - Class 2 <sup>‡</sup> ) (Large Spill at Night = 7.0+ miles)				Total	
		IID (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		
<i>Educational Facilities</i>												
Illini Central Schools 208 N. West St.	3.25 mi.	OUT	0	NA	NA	0	IN	3	2	2	7	
<i>Government Services</i>												
Mason City Ambulance 151 N. Tonica St.	2.68 mi.	OUT	0	NA	NA	0	IN	3	2	2	7	
Mason City City Hall 145 S. Main St.	2.78 mi.	OUT	0	NA	NA	0	IN	3	2	2	7	
Mason City Fire Protection District 409 W. Pine St.	3.05 mi.	OUT	0	NA	NA	0	IN	3	2	1	6	
<i>Health Services</i>												
Mason City Area Nursing Home 520 N. Price St.	1.75 mi.	OUT	0	NA	NA	0	IN	3	2	2	7	

\* Distance to CR is the shortest distance from the Community Resource to the rail line

‡ To protect the confidentiality of the information provided by the rail lines, the hazard class is identified instead of specific chemical/hazardous substance.

- The maximum score for each scenario is 12 points.
- The higher the score, the greater the vulnerability.
- A community resource that receives a score of 8 or more points for a specific scenario has a relative "high" vulnerability.
- A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.

San Jose  
Vulnerability Analysis - Community Resource Scoring Sheet

HIGHWAY																						
Community Resource (CR)	US Route 136										IL Route 29											
	Distance to CR*	Probable Case (gasoline) <sup>†</sup> (Tank Truck Fire = 0.5 miles)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total	Distance to CR*	Probable Case (gasoline) <sup>†</sup> (Tank Truck Fire = 0.5 miles)				Total	Worst Case (anhydrous ammonia) (Large Spill at Night = 1.3 mile)				Total
		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity			PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity	
<i>Government Services</i>																						
San Jose Village Hall 309 S. 2nd St.	0.14 mi.	IN	3	3	3	9	IN	4	3	3	10	§	OUT	0	NA	NA	0	OUT	0	NA	NA	0
San Jose Fire Protection District 250 S. 2nd St.	0.10 mi.	IN	3	3	3	9	IN	4	3	3	10	§	OUT	0	NA	NA	0	OUT	0	NA	NA	0

\* Distance to CR is the shortest distance from the Community Resource to the highway

§ Community Resource is well beyond the limits of both the IID and PAD.

† Other flammable liquids and poisons were identified along this route; however they all have the exact same IID as gasoline.

- The maximum score for each scenario is 12 points.

- The higher the score, the greater the vulnerability.

- A community resource that receives a score of 8 or more points for a specific scenario has a relative "high" vulnerability.

- A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.

San Jose  
Vulnerability Analysis - Community Resource Scoring Sheet

RAIL											
Community Resource (CR)	Distance to CR*	Union Pacific									
		Probable Case (Flammable Liquids - Class 3 <sup>‡</sup> ) (Rail Car Fire = 0.5 miles)				Total	Worst Case (Gases - Class 2 <sup>‡</sup> ) (Large Spill at Night = 7.0+ miles)				Total
		IID (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity		PAD (IN/OUT)	Exposure	Sensitivity	Adaptive Capacity	
<i>Government Services</i>											
San Jose Village Hall 309 S. 2nd St.	2.41 mi.	OUT	0	NA	NA	0	IN	3	2	2	7
San Jose Fire Protection District 250 S. 2nd St.	2.43 mi.	OUT	0	NA	NA	0	IN	3	2	1	6

\* Distance to CR is the shortest distance from the Community Resource to the rail line

‡ To protect the confidentiality of the information provided by the rail lines, the hazard class is identified instead of specific chemical/hazardous substance.

- The maximum score for each scenario is 12 points.
- The higher the score, the greater the vulnerability.
- A community resource that receives a score of 8 or more points for a specific scenario has a relative "high" vulnerability.
- A community resource that receives a score of 11 to 12 points for a specific scenario suggests a degree of vulnerability that deserves mitigation consideration.