

# State of the Inland Barge Industry

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September 18, 2019



@IEG\_Vantage  
@keriksen

# Charting the Course

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- ▶ **IEG Vantage**
- ▶ **Barge Fleet Profile Service**
- ▶ **Macro Drivers**
- ▶ **Barge Fleet Situation and Outlook**
- ▶ **Barge Commodity Situation and Outlook**
- ▶ **Barge Freight Rates**
- ▶ **Infrastructure Investment**
- ▶ **Questions and Answers**



# IEG Vantage

A business unit of IHS Markit



# IHS Markit™ Agribusiness intelligence

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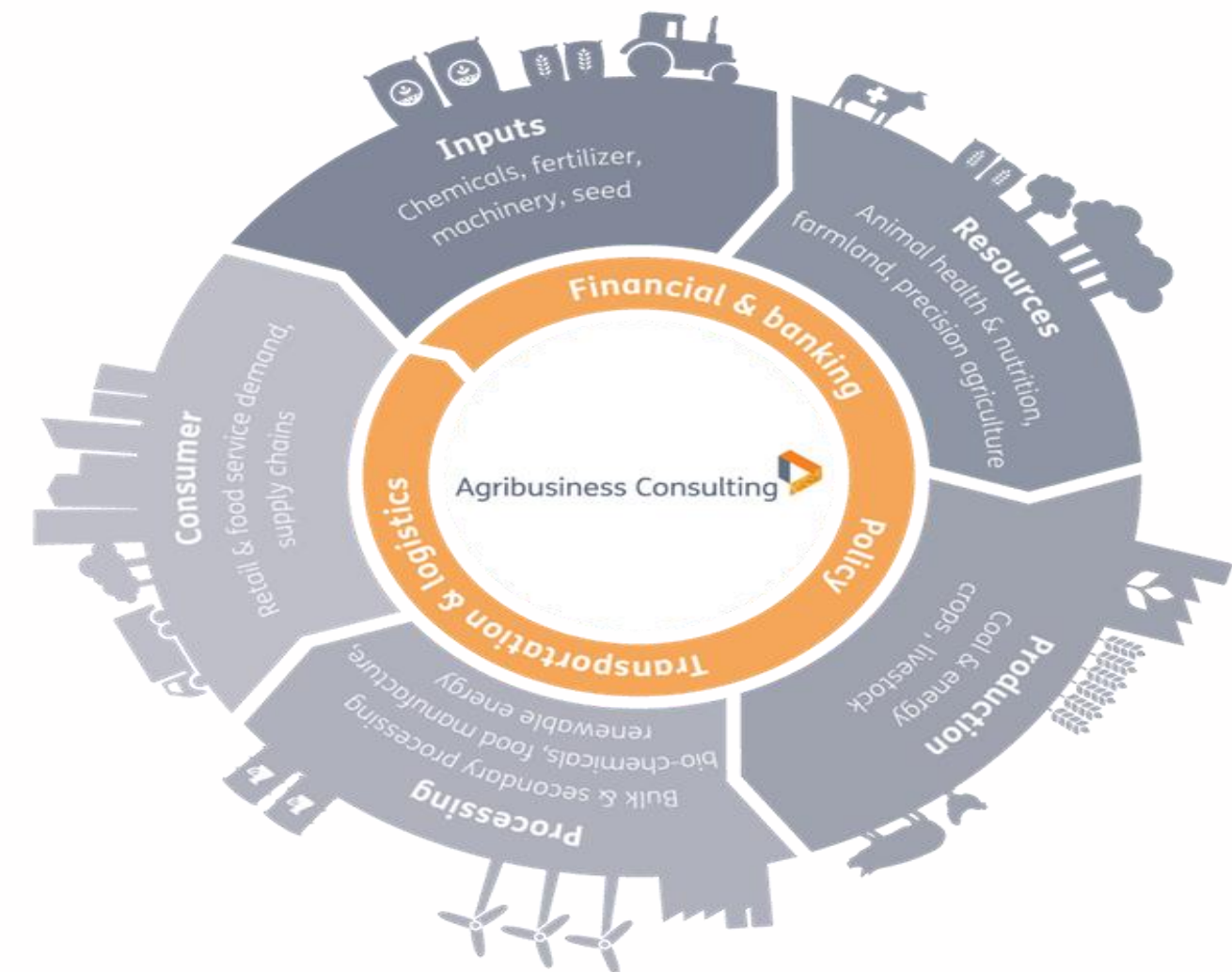
**Animal Pharm**  
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**DTC**  
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**Fertecon**  
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**International Sugar Journal**  
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**Phillips McDougall**  
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# Macro Drivers



# Key Themes and Trade Issues Impacting Macro Environment

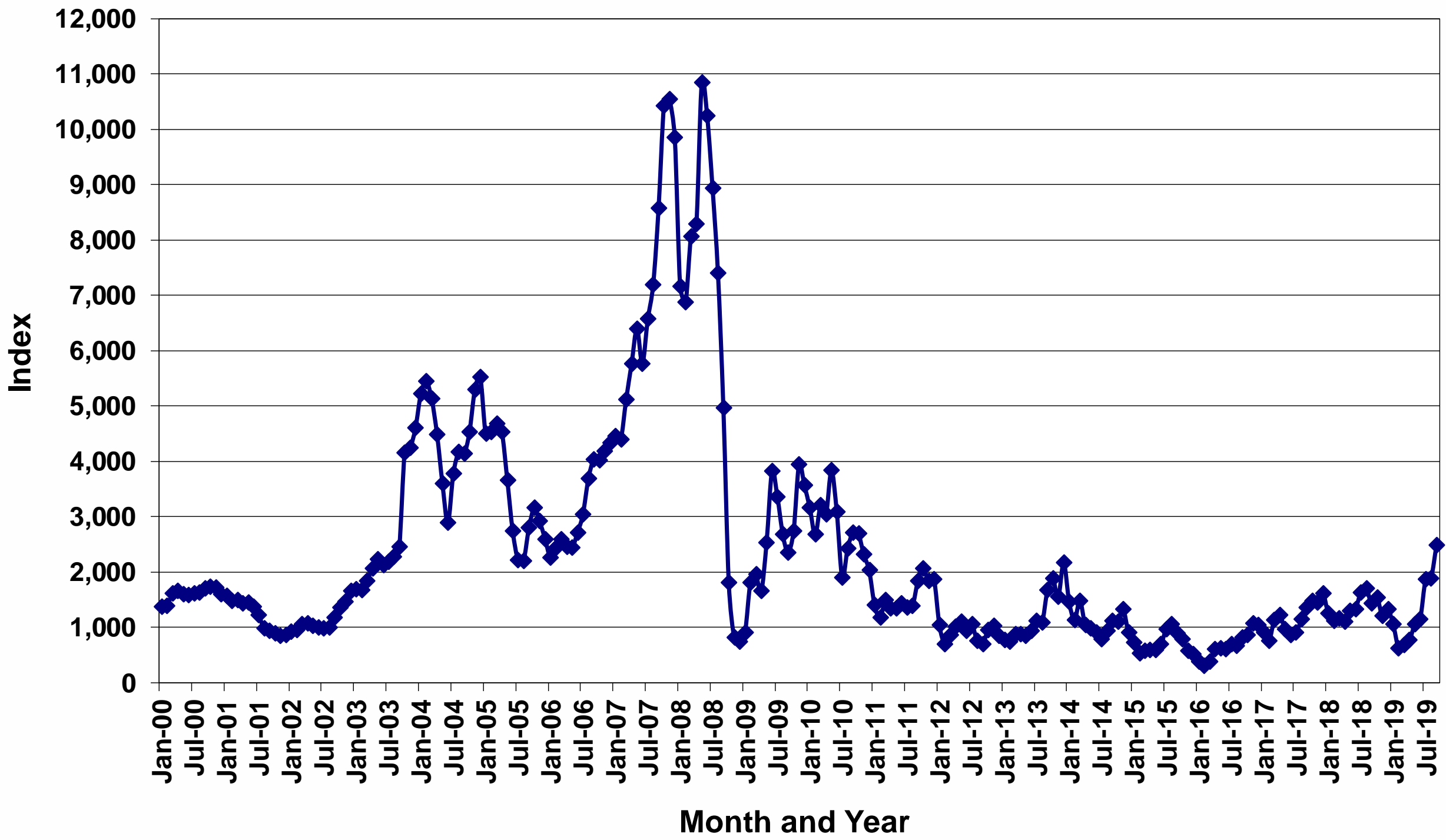
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- ▶ **Trade disputes and tariffs**
- ▶ **Geopolitical events**
- ▶ **Global macroeconomic activity demonstrating mixed opportunity**
- ▶ **Global supply shift underway in volume and location**
- ▶ **Cropping area, herd and exploration expansion; mine contraction**
- ▶ **Infrastructure issues, and improvements**
- ▶ **Global consumption not slowing, but China is**
- ▶ **Margin compression**
- ▶ **Farmer, producer, manufacturer profitability at risk**
- ▶ **Merger and acquisition continues; grain alphabet in jeopardy?**
- ▶ **Revolving door traders, merchandisers & leadership across supply-chain**
- ▶ **Technology enhancements and interruption from farm gate to consumer**
  - **Big data, AI, blockchain, autonomous functions**
- ▶ **Consumer preferences:**
  - **Impossible meat, non-GMO, organic, renewables, electric vehicles, emissions**
- ▶ **Weather Still Matters**



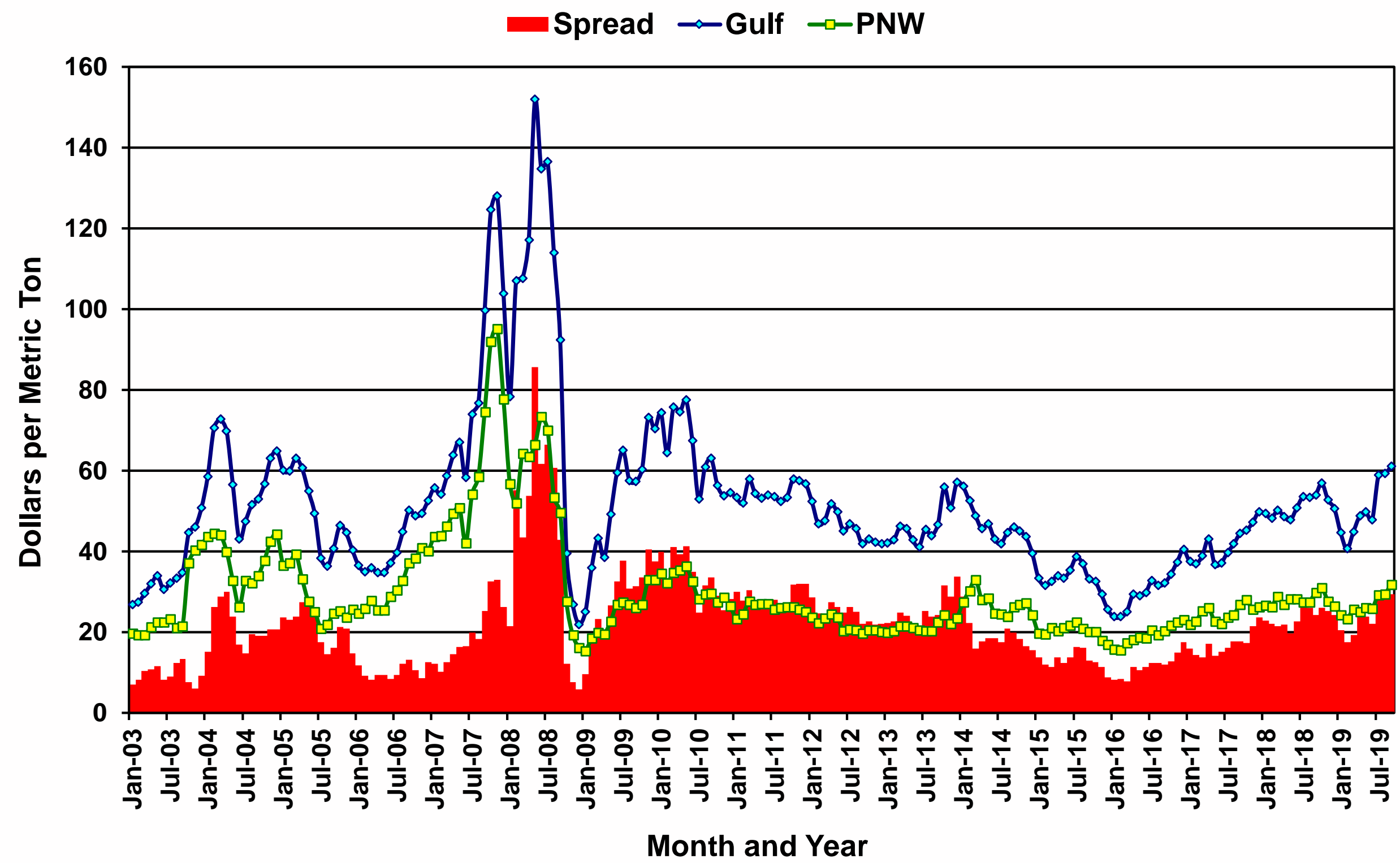
# Dry Bulk Ocean Freight Rates Reaching Levels from Nine Years Ago

## Monthly Average Baltic Dry Index



# Dry Bulk Ocean Freight Rates Out of Center Gulf Strengthening Faster than Pacific Northwest

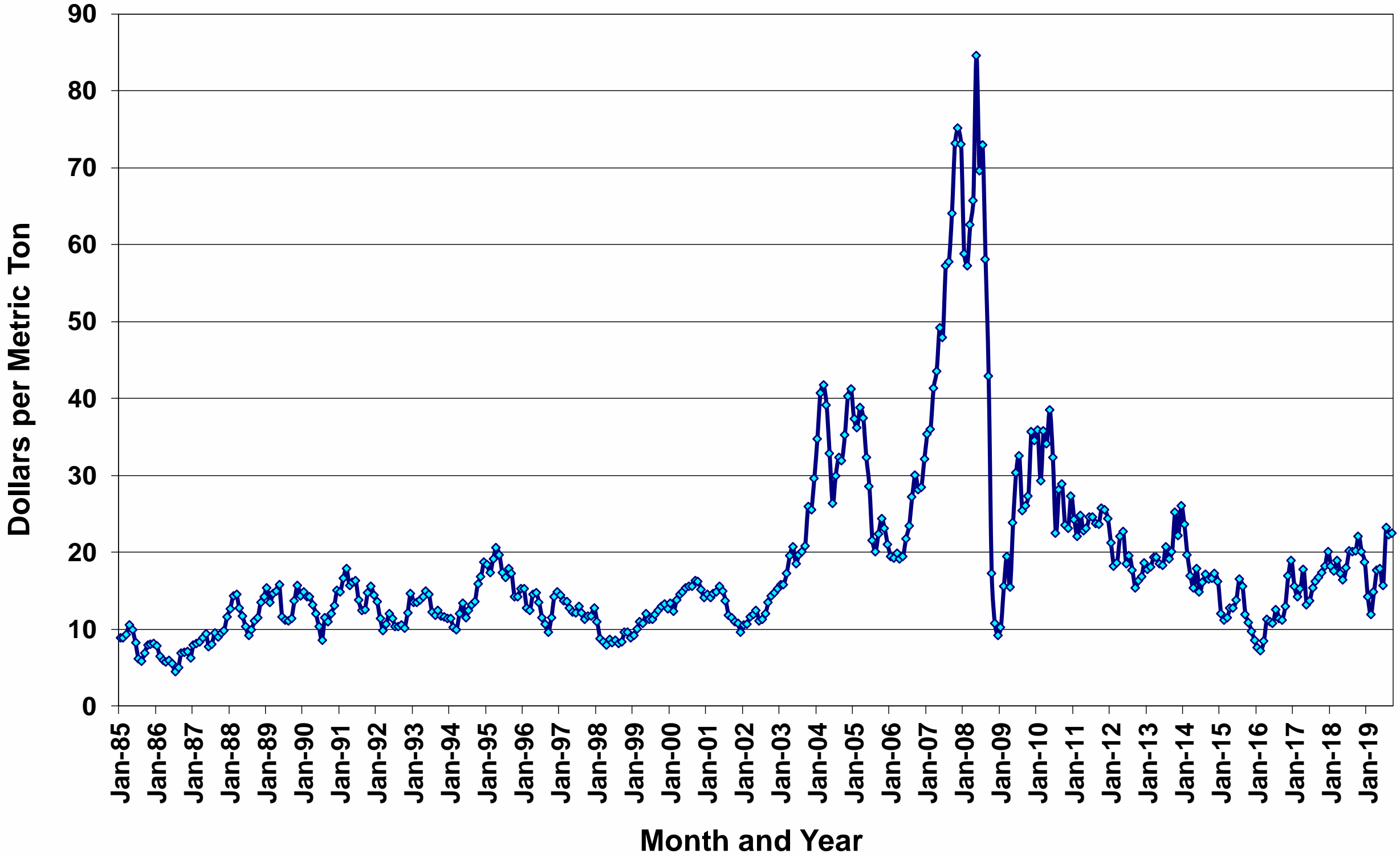
## Monthly Average Ocean Freight to Japan





# Dry Bulk Ocean Freight Rates to Europe Riding Gulf Strength

## Monthly Average Ocean Freight Gulf to Europe



# International Maritime Organization (IMO) 2020

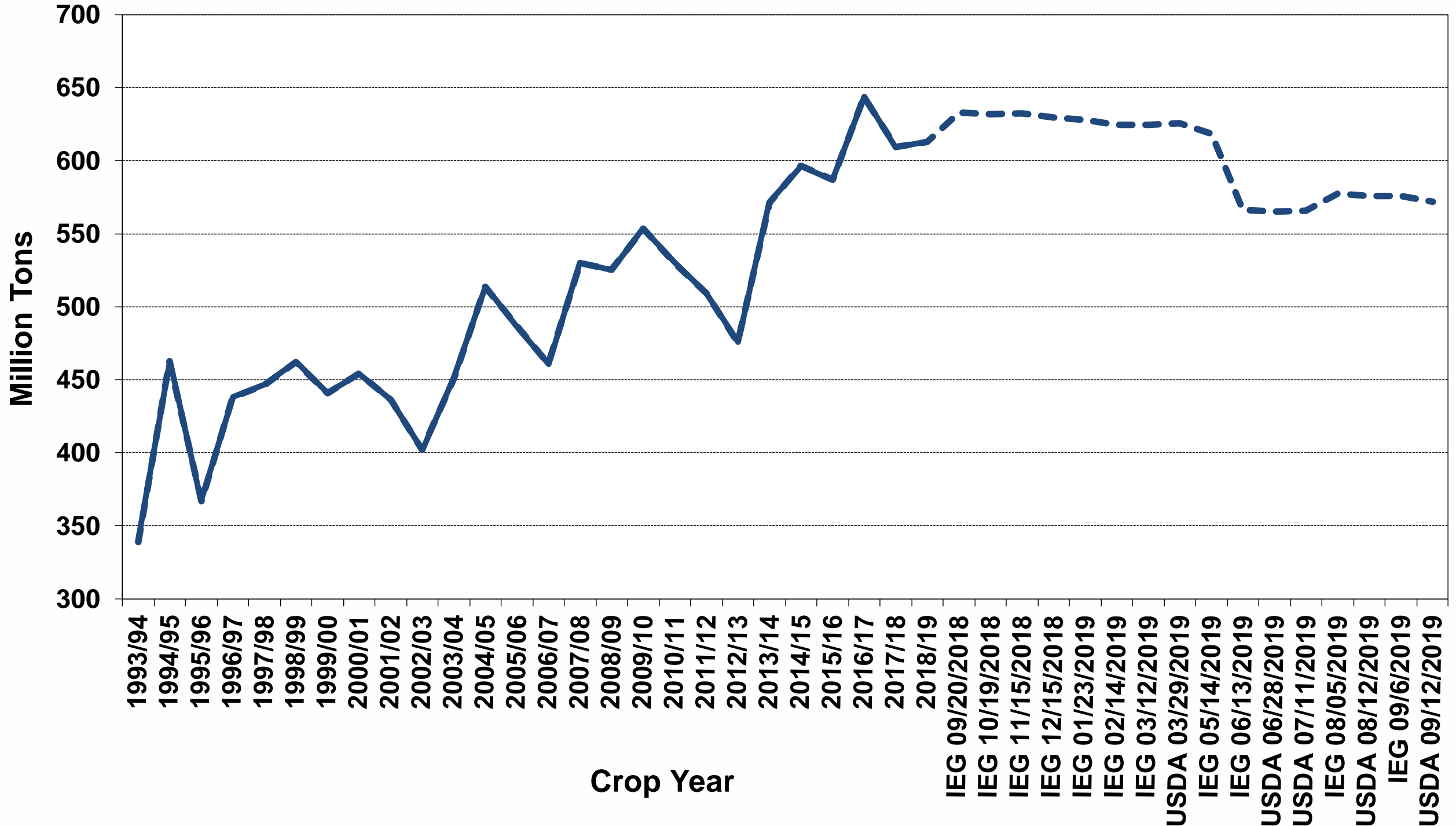
- In 2016, IMO announced the effective date for reduction of marine fuel sulphur is January 1, 2020. Under the global cap, ships required to use marine fuels with sulphur content of no more than 0.5% against current limit of 3.5% to reduce greenhouse gas emissions. The Emission Control Areas (ECAs) will remain at the 2015 standard of 0.1% content.
- Ship owners deciding 1) continue using high sulphur fuel oil with scrubbers or exhaust gas cleaning systems; 2) switch to low sulphur fuel options; or 3) LNG fuel.
- Impact represents approximately 75% of global marine fuel demand compared to demand of ECA.
- In total, 3 million barrels per day of High Sulphur Fuel Oil bunkers will need to switch to 0.5% fuel through blending with gasoil, plus improved logistics segregation.
- Refineries adjusting late this year will create supply chain issues.

0.1/0.5% S Fuel Oil	MGO/DMA	Scrubber New/Retrofit	LNG New Build/Retrofit
			
<ul style="list-style-type: none"> <li>▪ Minimise operational difficulty and cost</li> <li>▪ Variability of quality of blends per supplier</li> <li>▪ Only a few suppliers can offer reliable supply</li> </ul>	<ul style="list-style-type: none"> <li>▪ Convenient and widely available</li> <li>▪ Operational experience in industry</li> <li>▪ Higher cost</li> <li>▪ Thermal shock and lubricity issues</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cheaper fuel and quick payback</li> <li>▪ Limited operating experience</li> <li>▪ Ship stability and space</li> <li>▪ Safe sludge handling and disposal necessary</li> </ul>	<ul style="list-style-type: none"> <li>▪ Proven technology and reduction SOx, NOx and PM</li> <li>▪ Lower GHG emissions</li> <li>▪ Growing availability</li> <li>▪ Cost advantage to MGO/DMA</li> </ul>



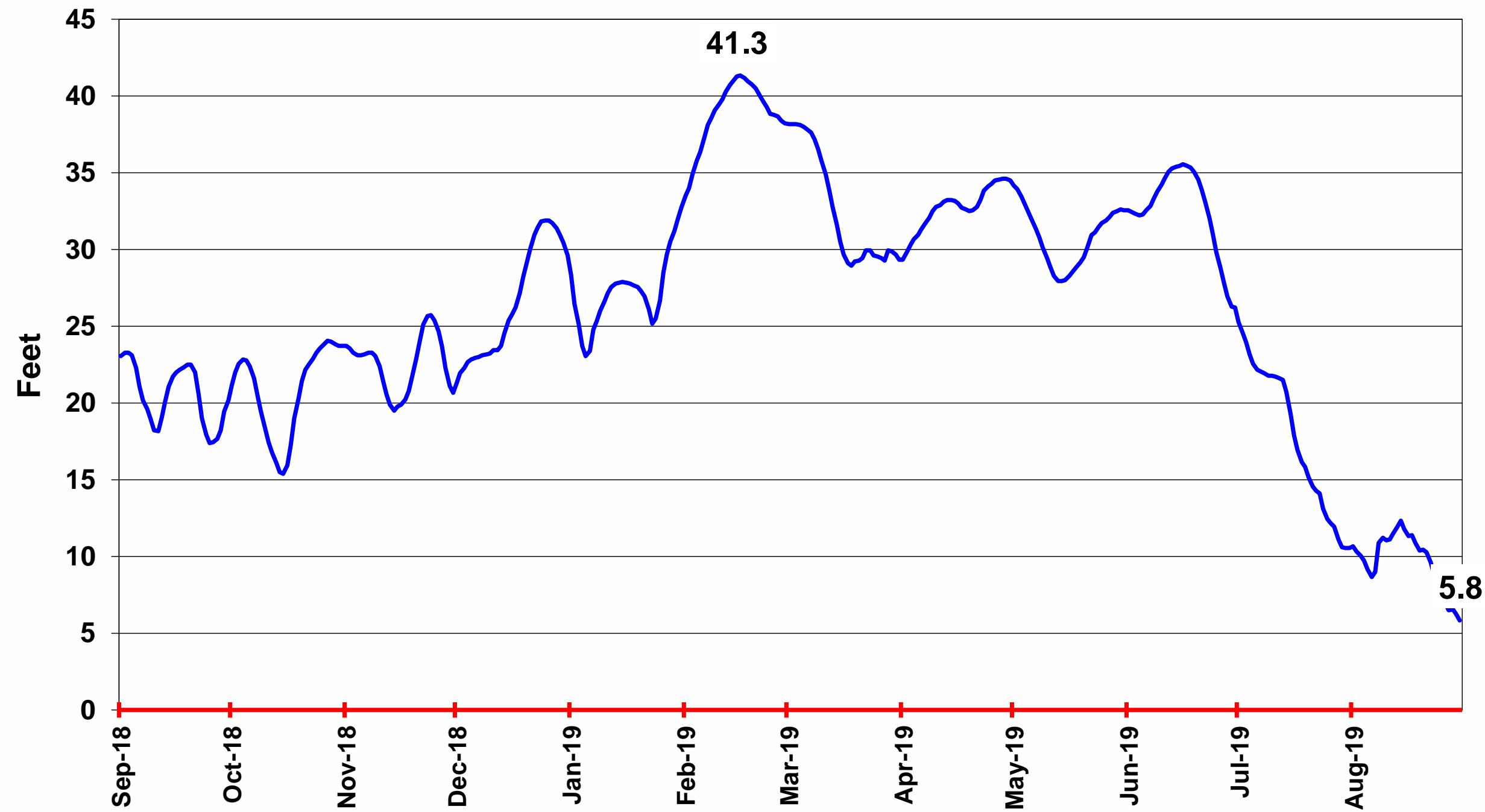
# U.S. Crops Off to Late Start; Still Uncertainty Around Yield Potential

## US Crop Production



# Memphis River Gage Readings varied 35.5 feet February to September; Not Historic as Compared 2011 to 2012, but Significant Nonetheless; Meanwhile Epic Year

## Daily Mississippi River Gage: Memphis



Source: Army Corps of Engineers

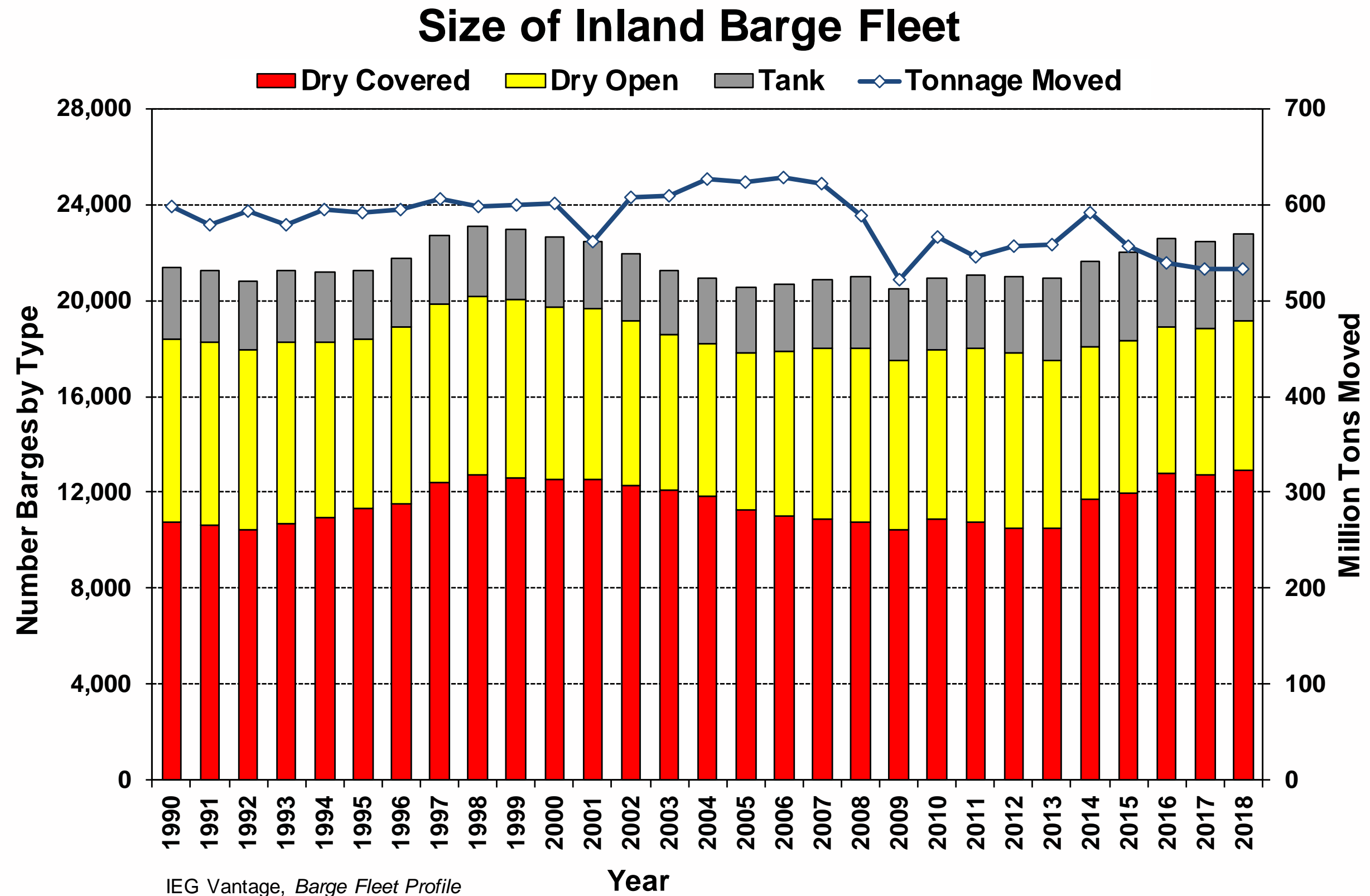
Daily



# Barge Fleet Situation and Outlook

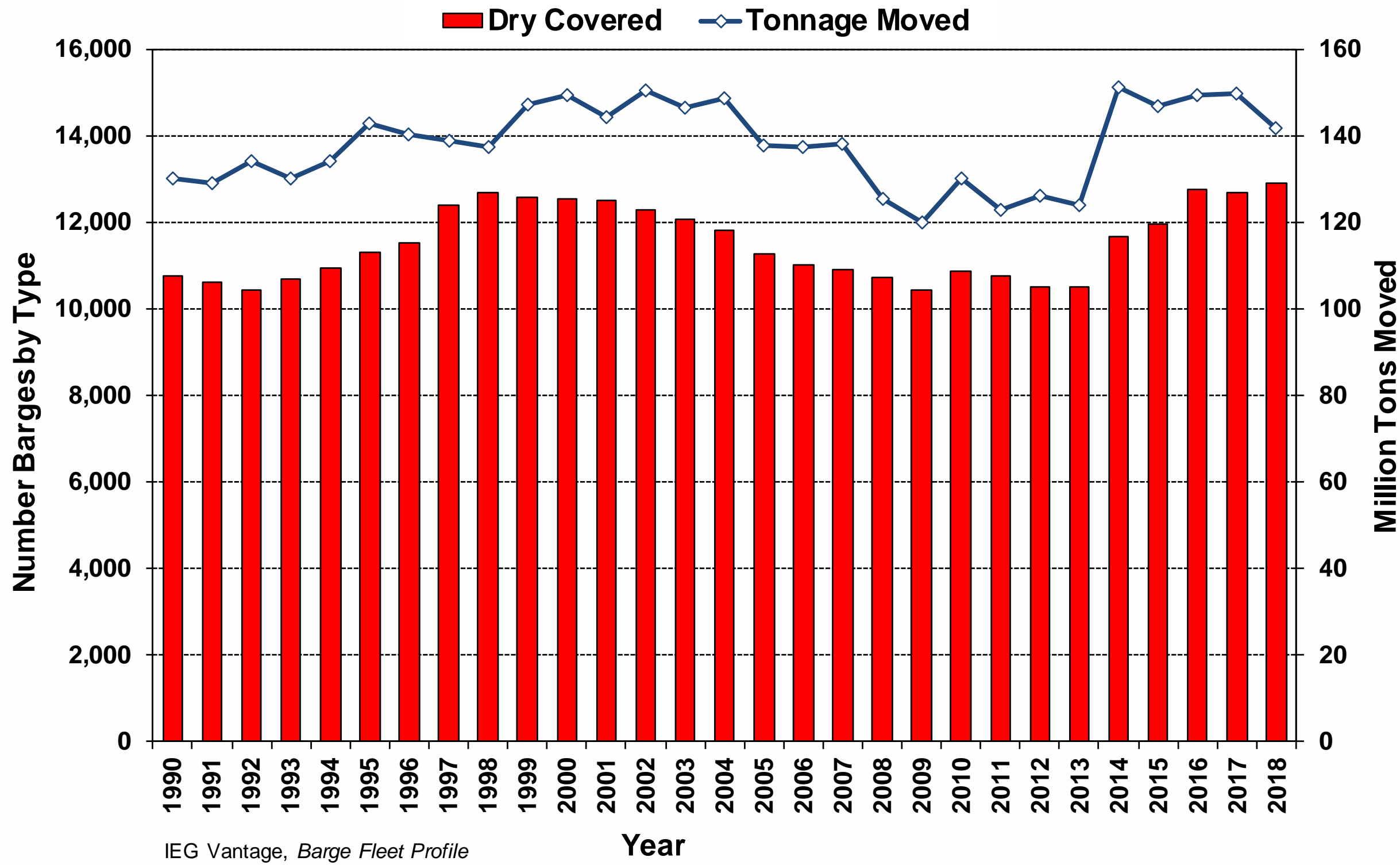


# Larger Barge Fleet Despite Slightly Lower Volumes Moved



# Covered Fleet Record Large as Volumes Fall on Dropping Soybean Movements

## Size of Inland Barge Dry Covered Fleet

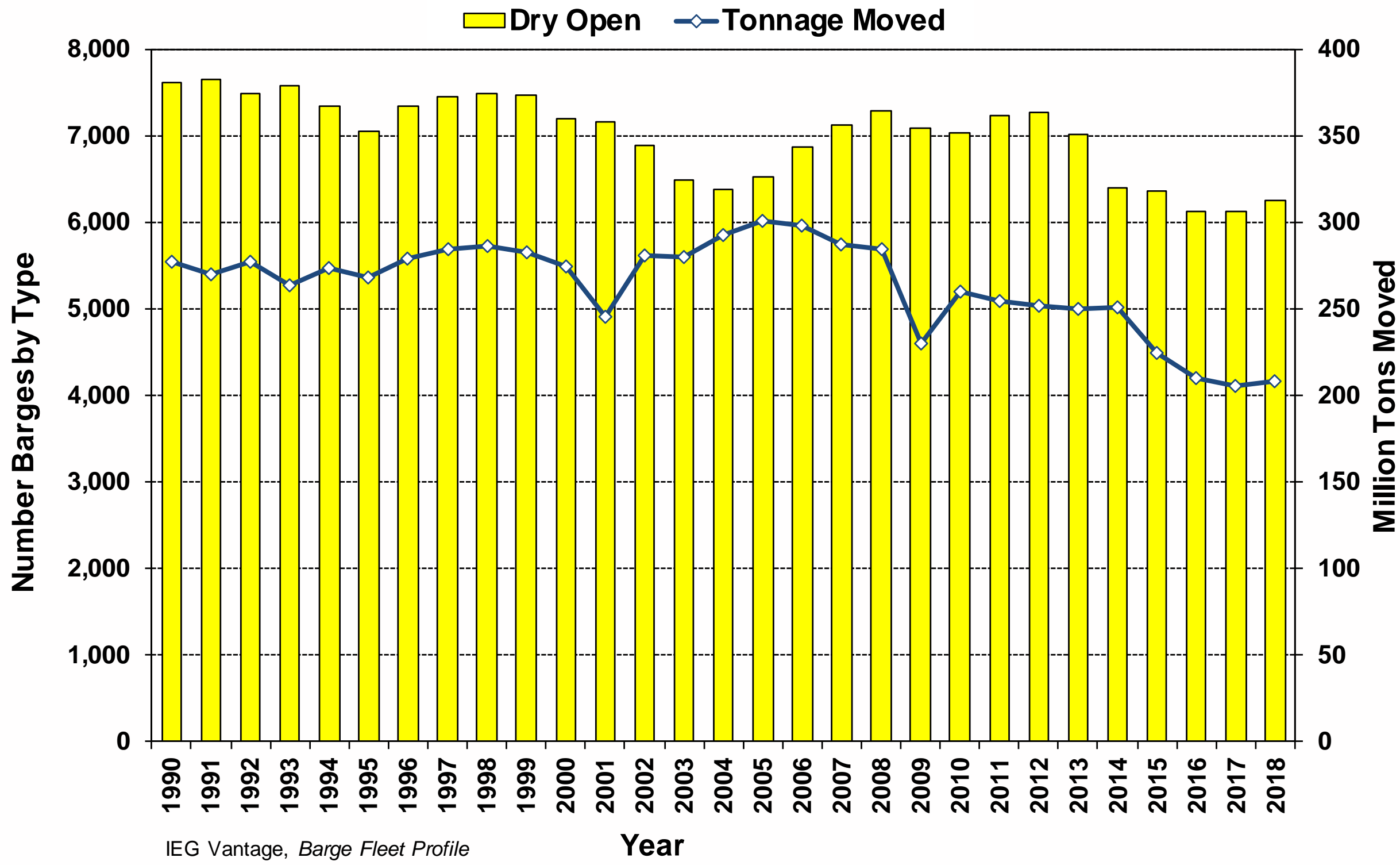


IEG Vantage, Barge Fleet Profile



# Open Fleet Expands on Find Back while Volumes Bottom

## Size of Inland Barge Dry Open Fleet

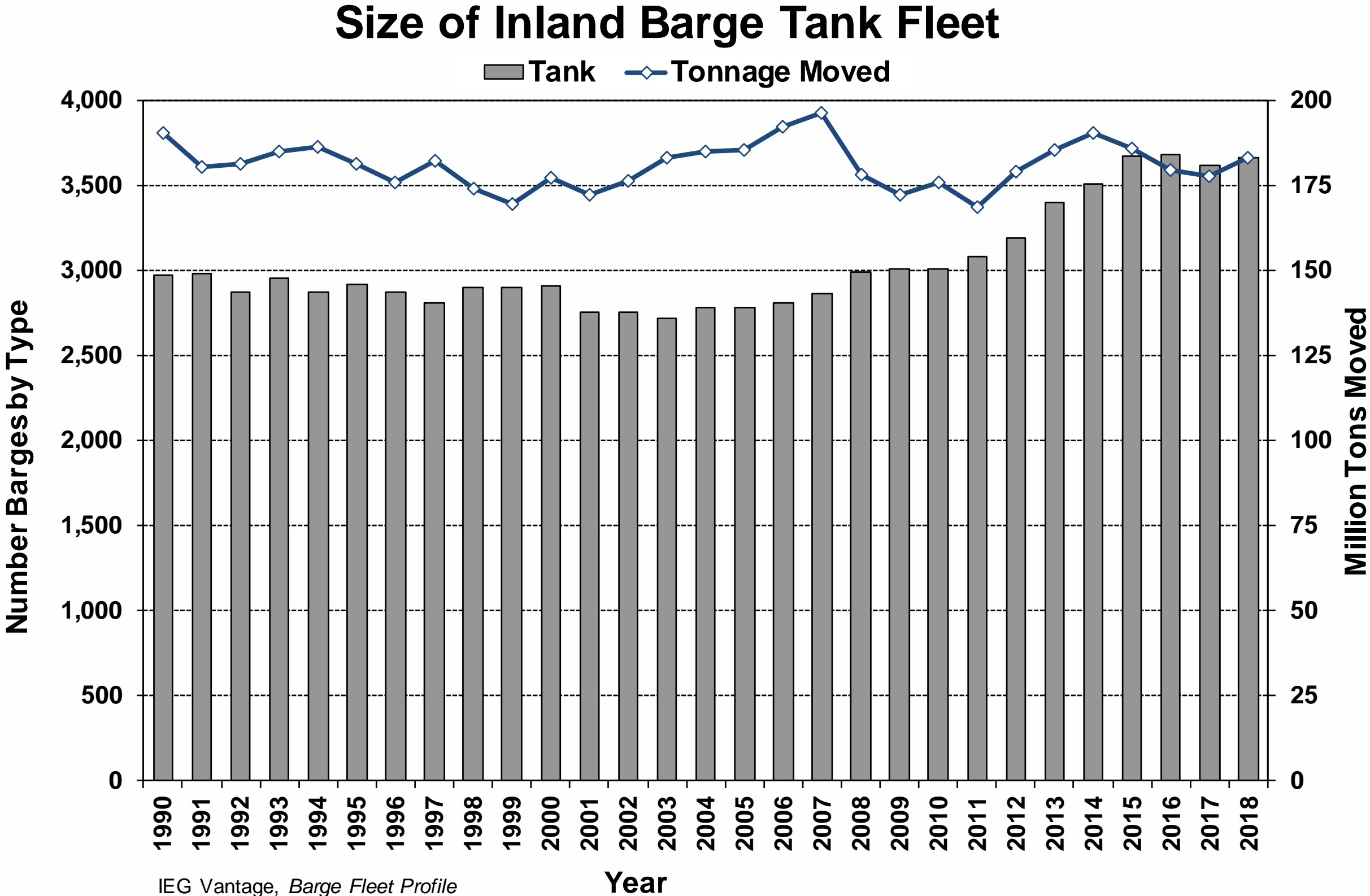


IEG Vantage, Barge Fleet Profile





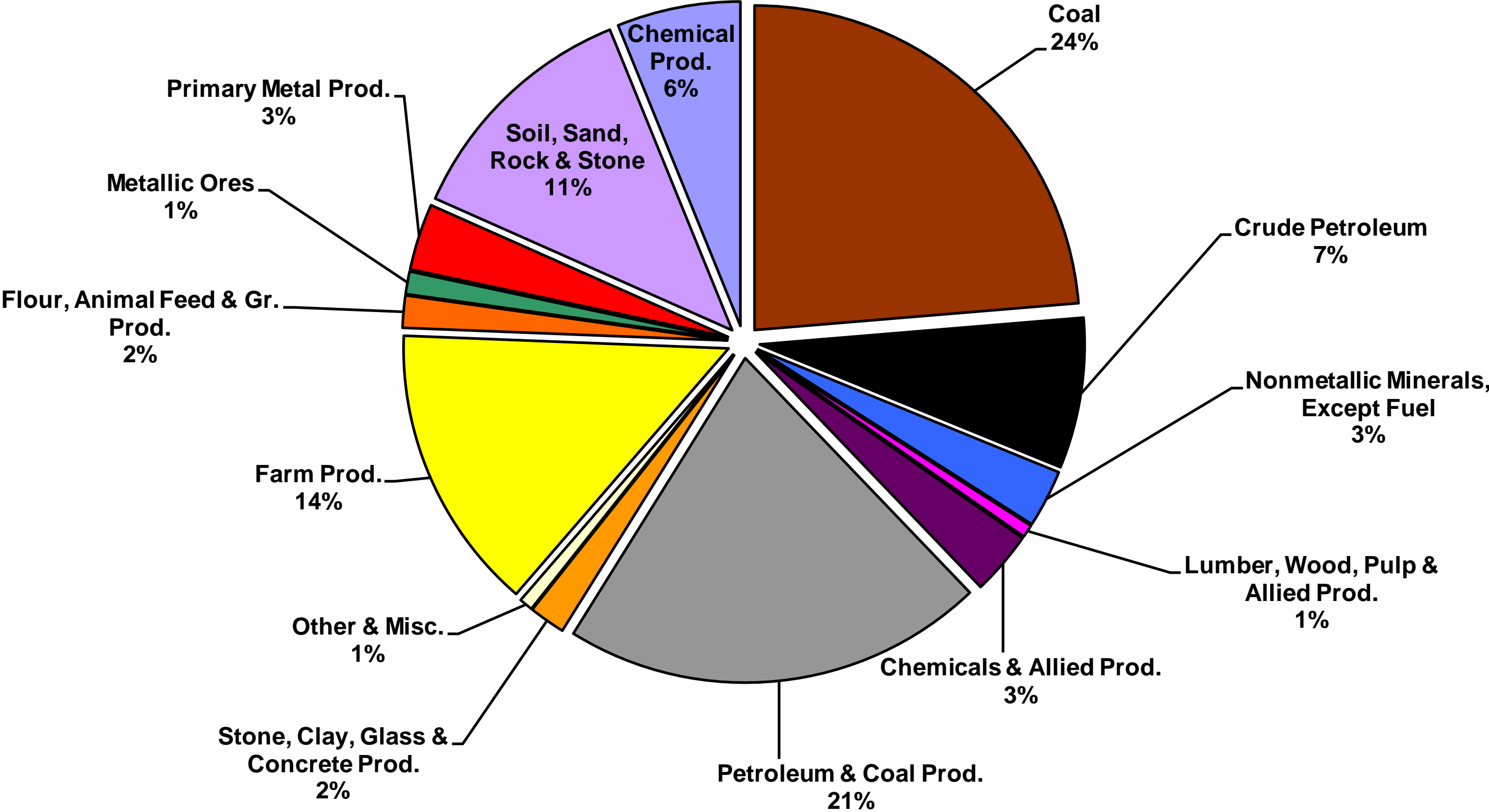
# Tank Fleet Expands as Volumes Expand



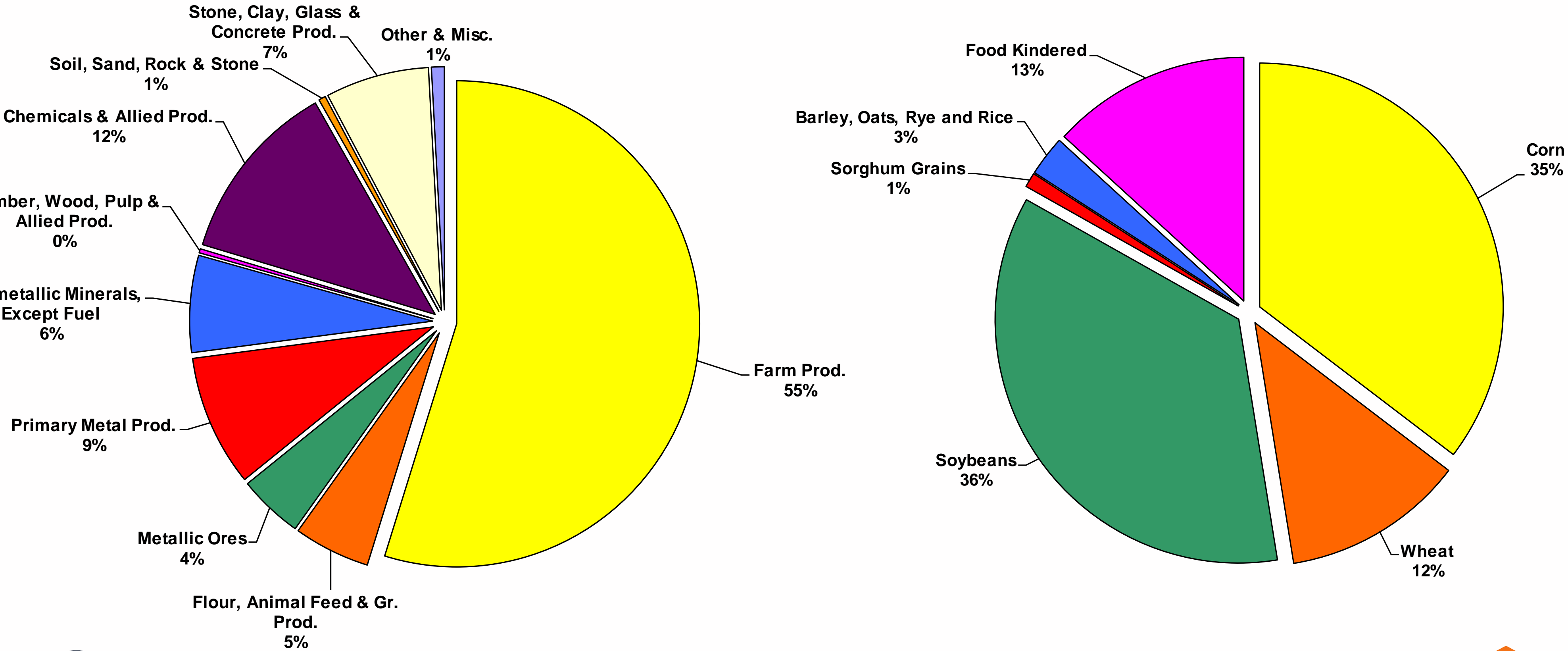
# Barge Commodity Situation and Outlook



# Commodities moved by Barge on the Inland Navigation System (tons)

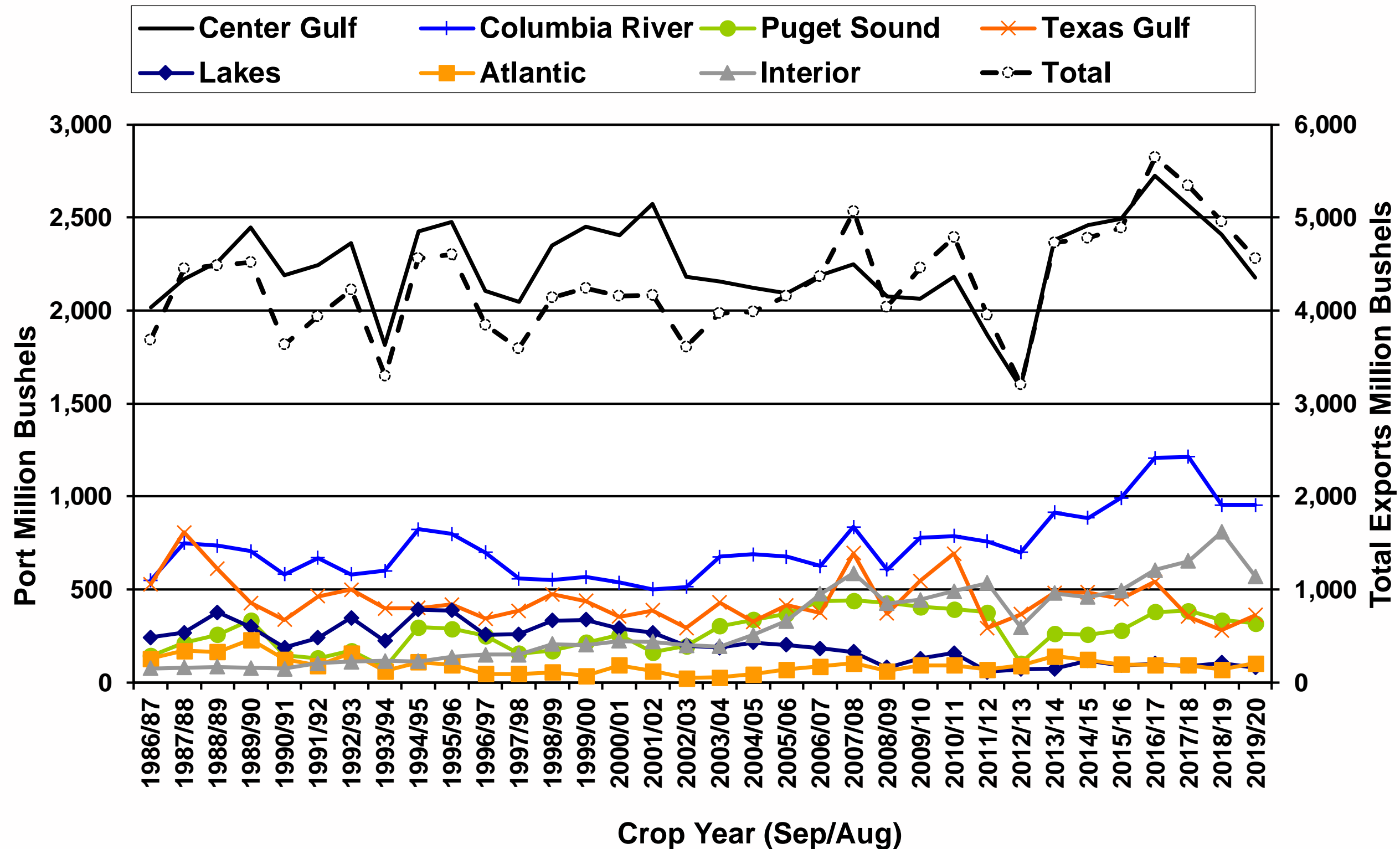


# Covered Barge Commodities on the Inland Navigation System (tons)



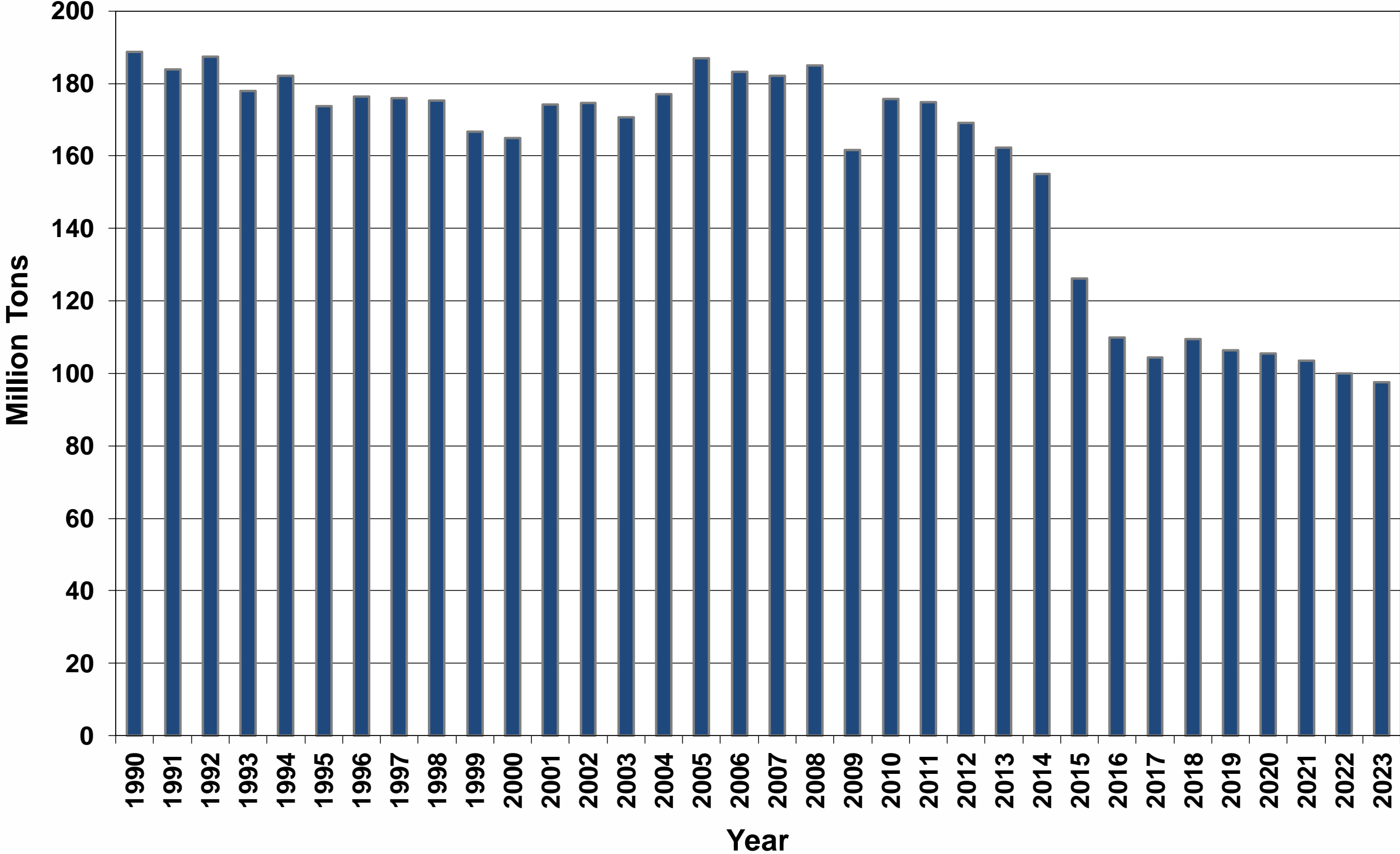
# Total Crop Exports Plagued by Trade Tensions and Competition; Center Gulf Suffered by Navigation, PNW by Market Access

## Total Grain and Soybean Exports by Port



# Coal's Slow Death Marches On; Half of its Peak Years

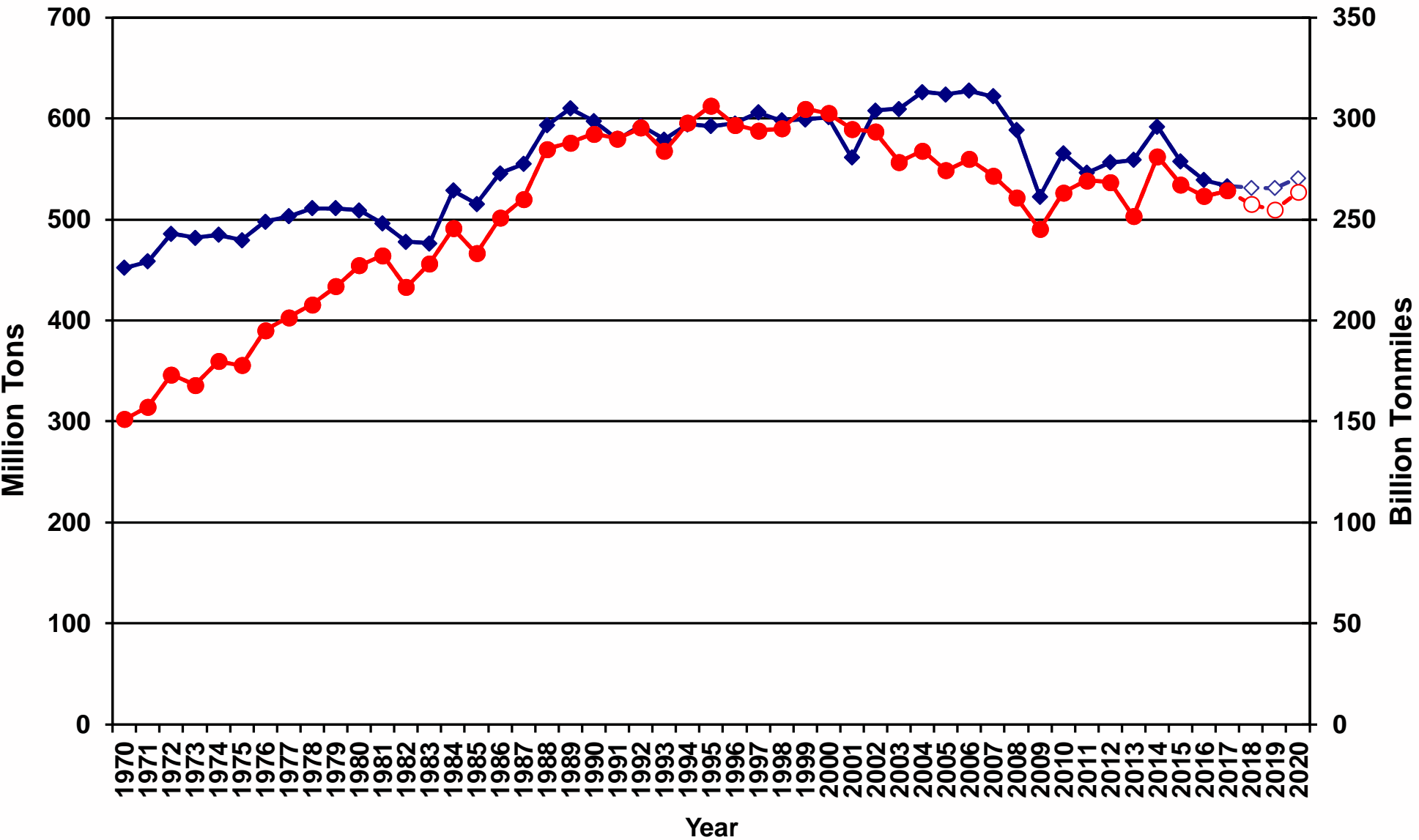
## Open Barge Coal Volumes



# Commodity Tons and Tonmiles on the Inland Navigation System in Total and for Liquid Tank Market

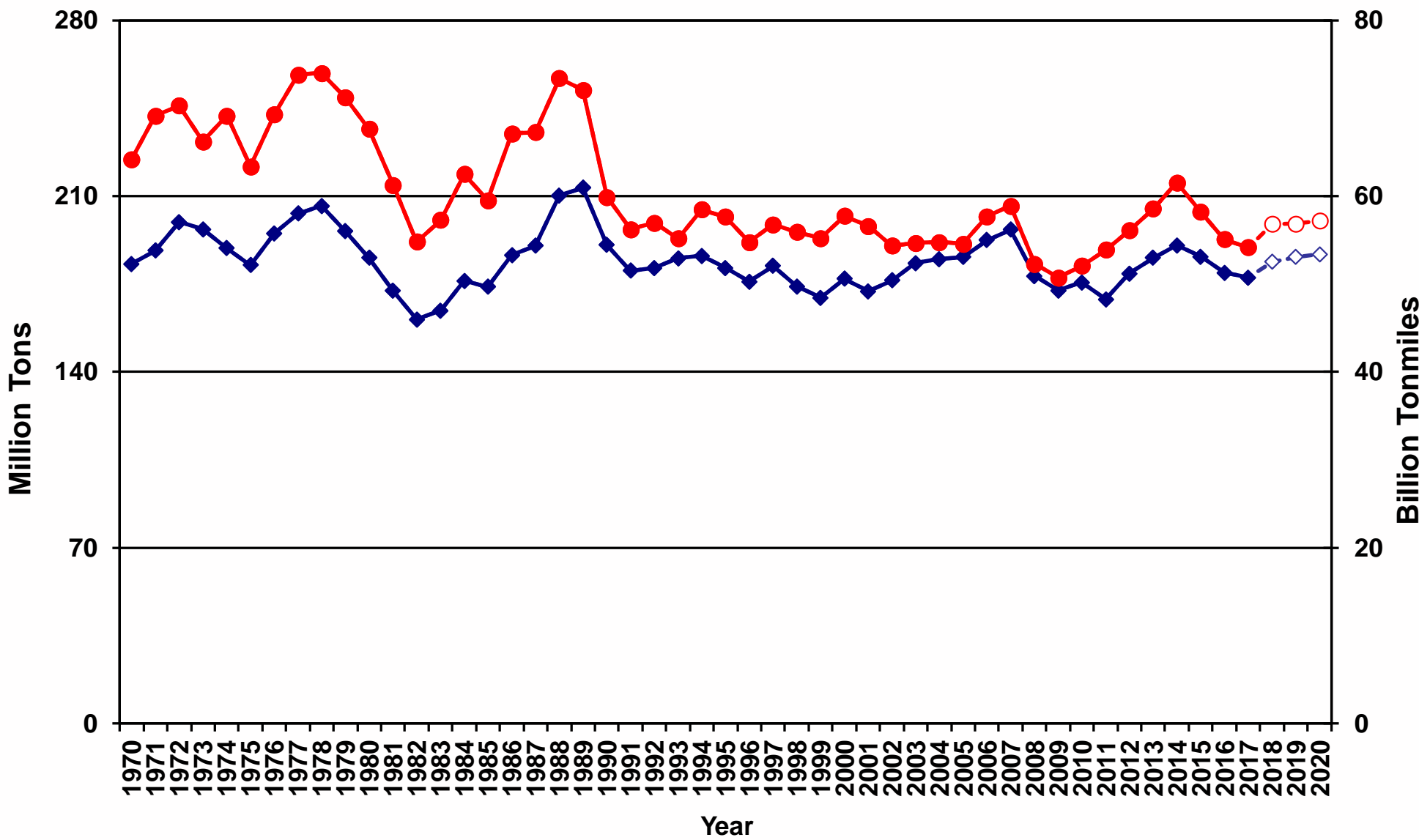
Domestic Barge Traffic

◆ Tons ● Tonmiles



Domestic Liquid Barge Traffic

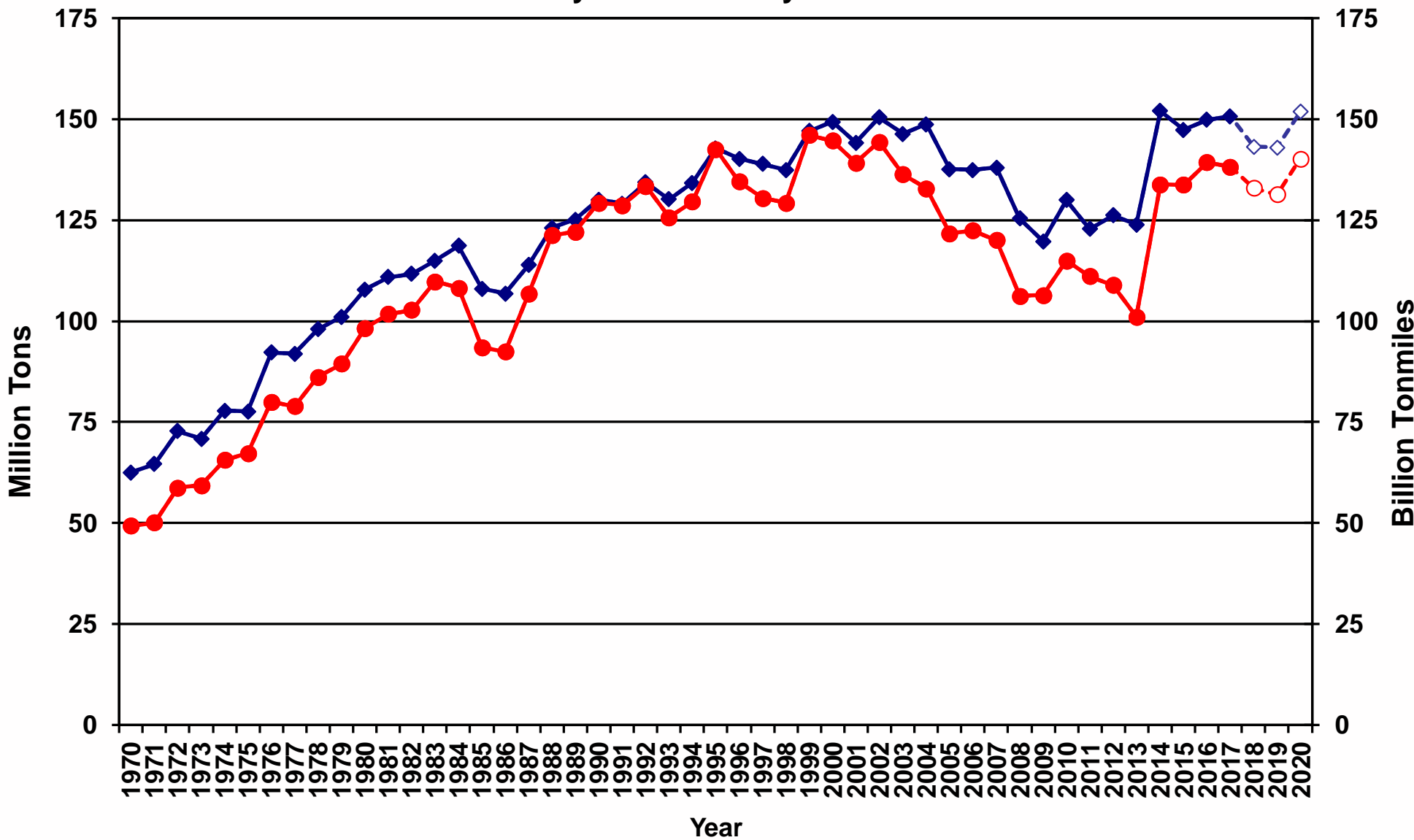
◆ Tank Tons ● Tank Tonmiles



# Commodity Tons and Tonmiles on the Inland Navigation System by for the Dry Barge Sectors

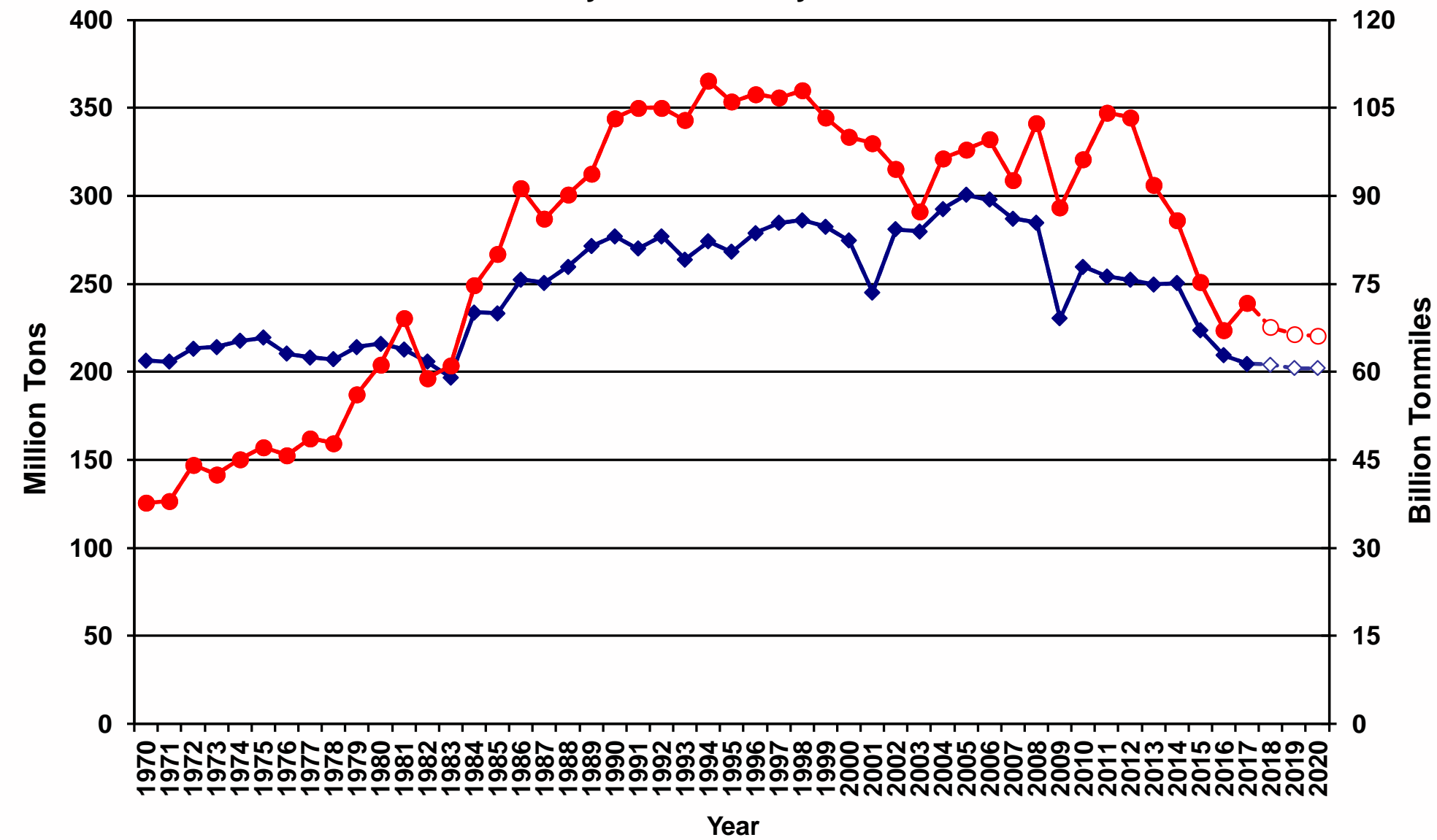
## Domestic Covered Barge Traffic

◆ Dry Tons ● Dry Tonmiles



## Domestic Open Barge Traffic

◆ Dry Tons ● Dry Tonmiles

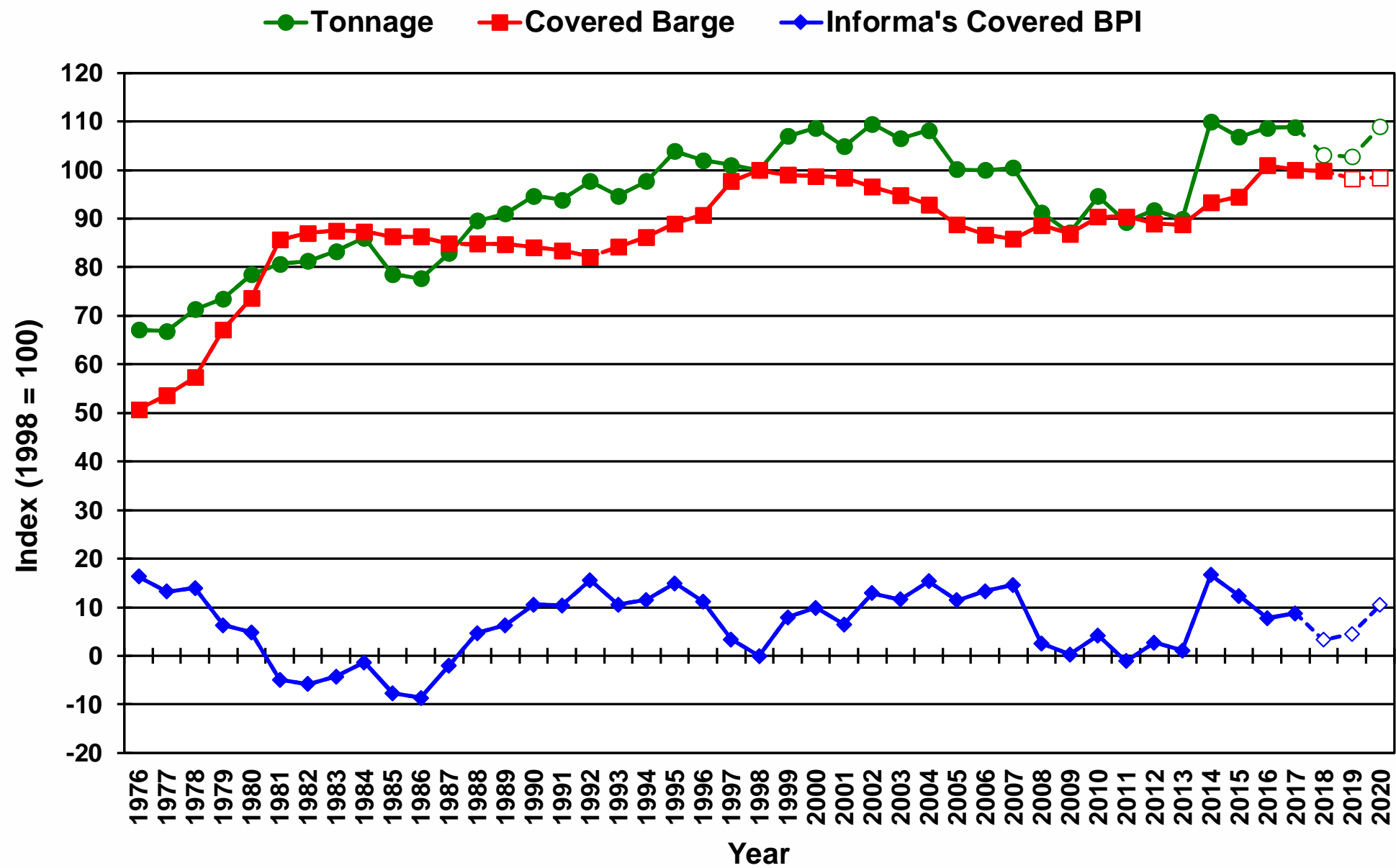




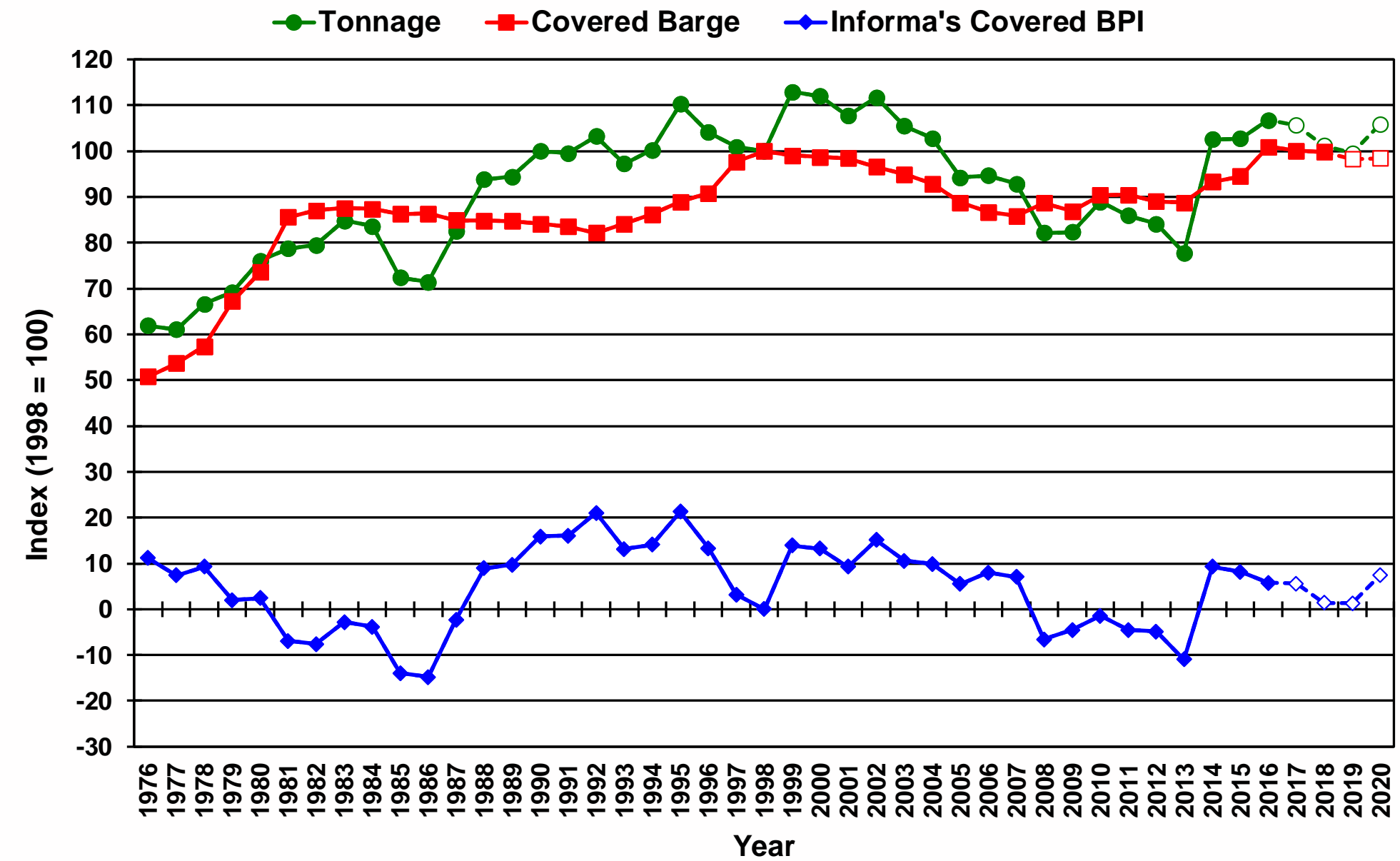
# Barge Pressure Index

## Covered Barge

### Covered Barge Utilization



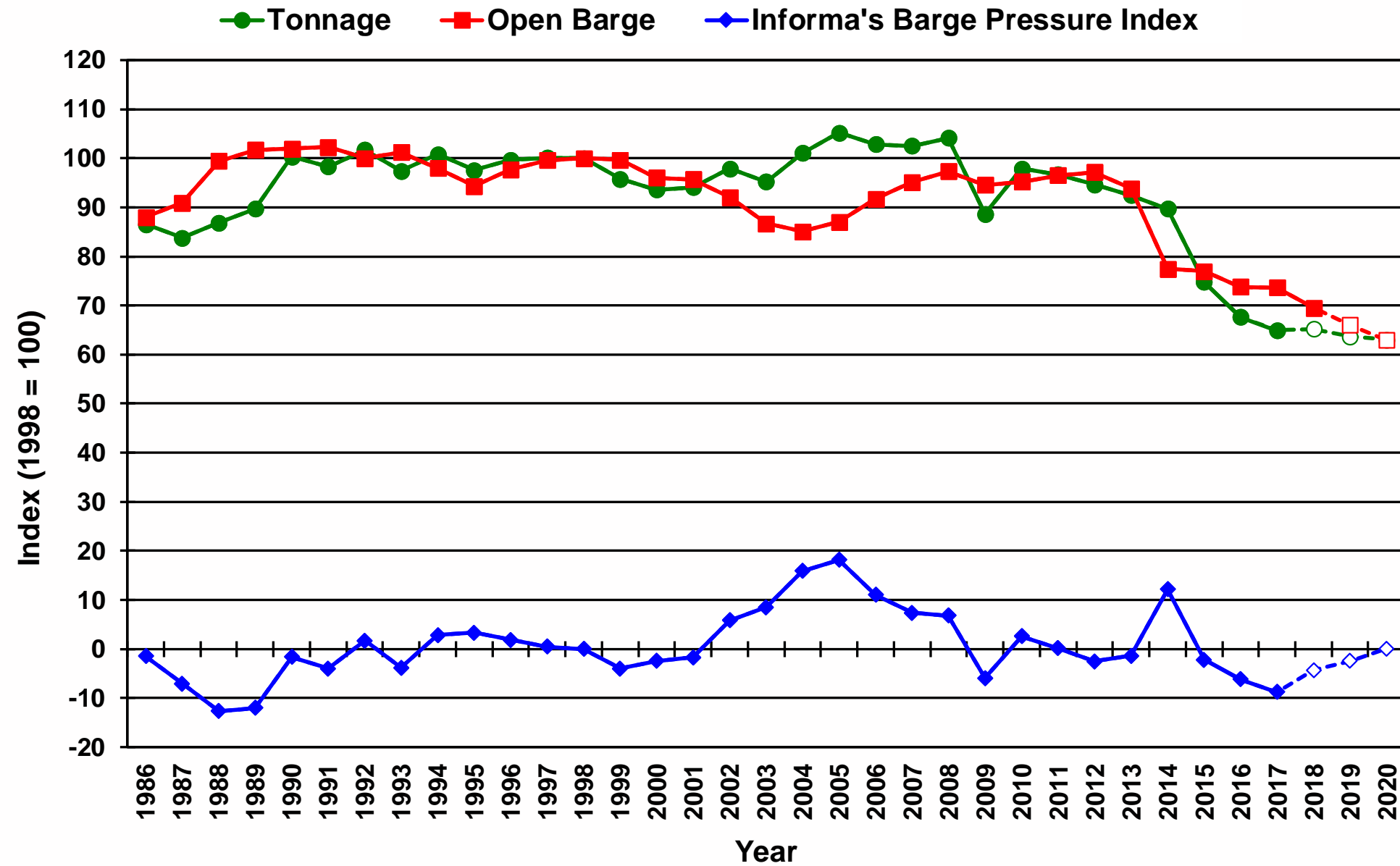
### Covered Barge Utilization on Ton-mile Basis



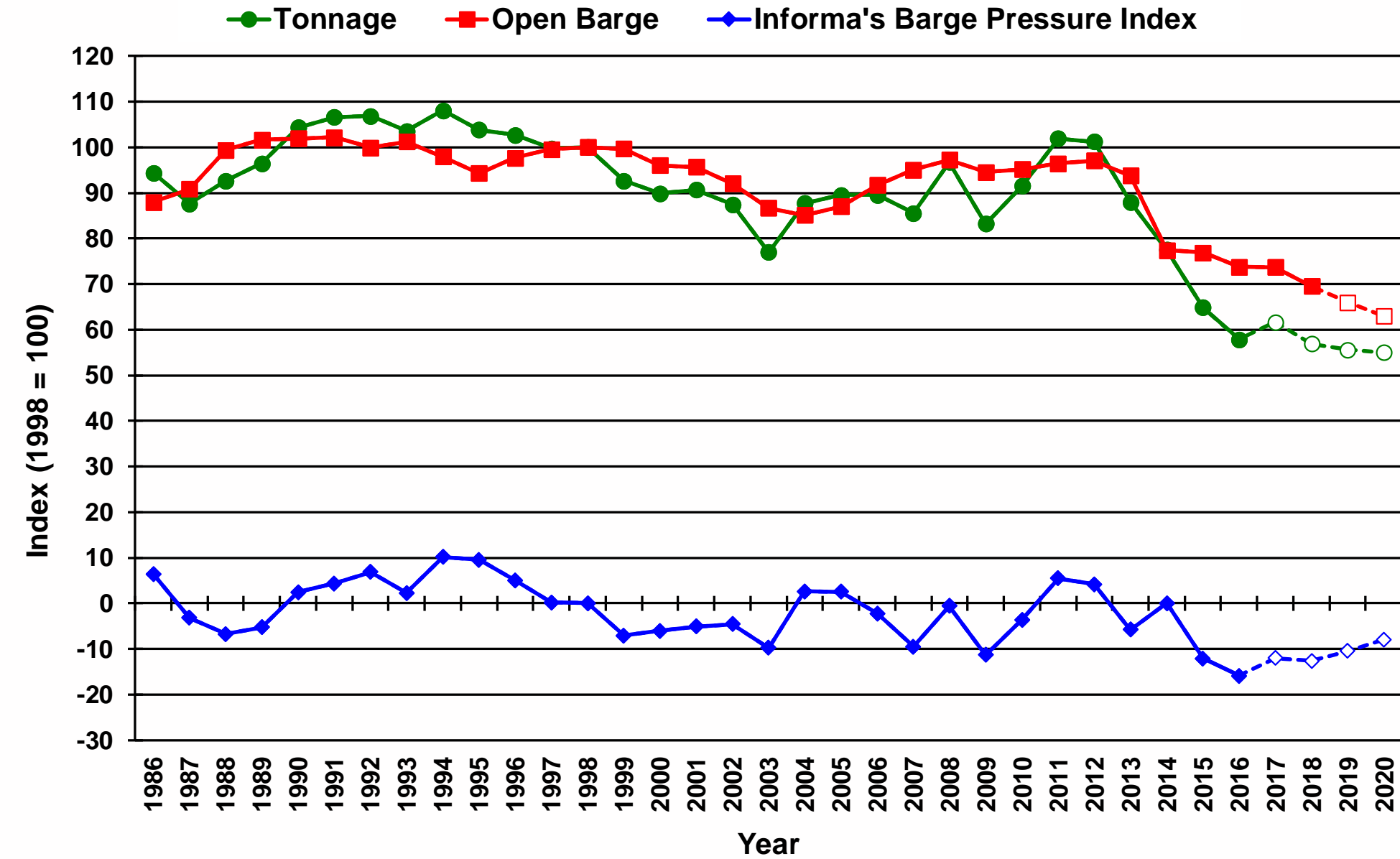
# Barge Pressure Index

## Open Barge

### Open Barge Utilization



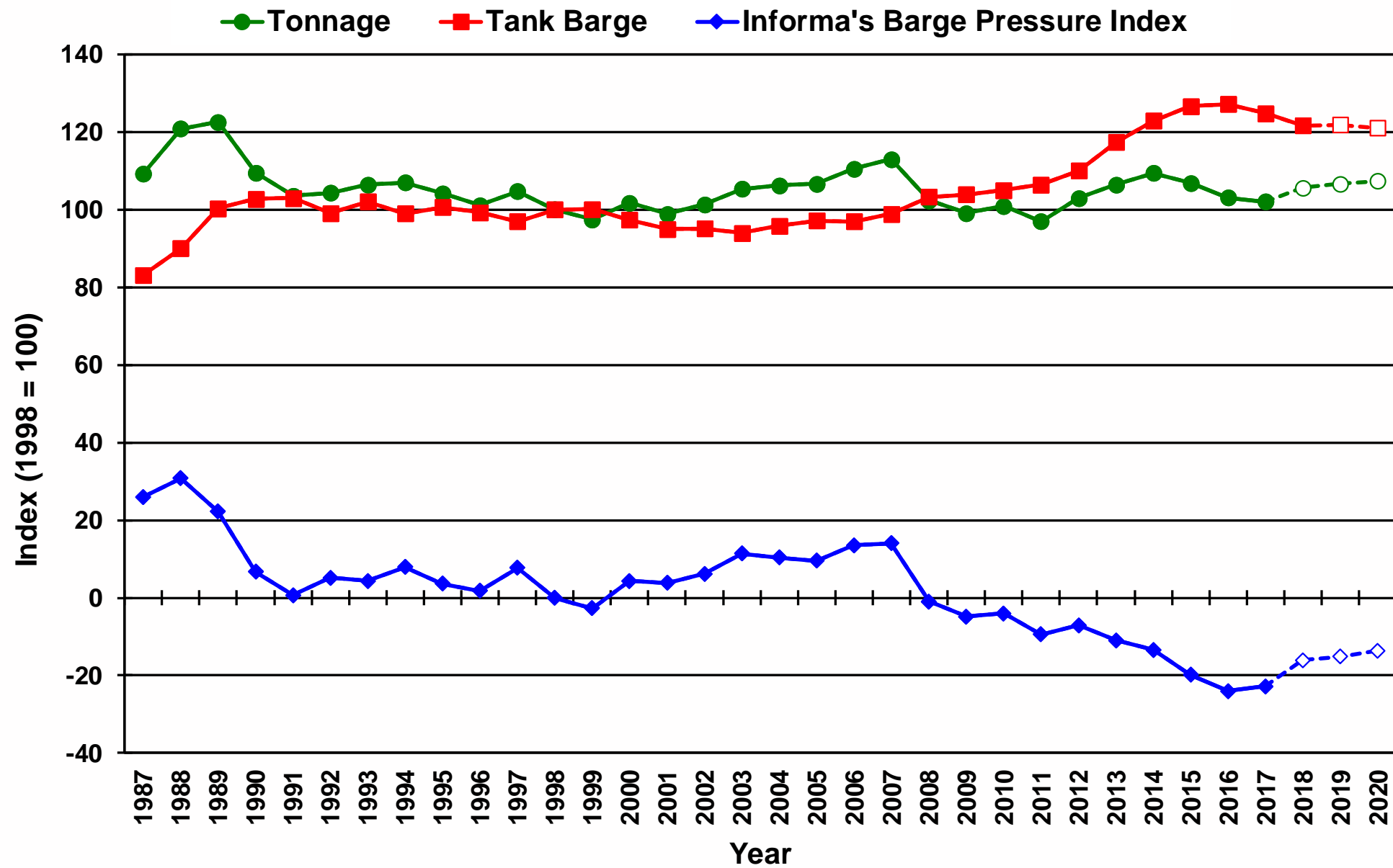
### Open Barge Utilization on Ton-mile Basis



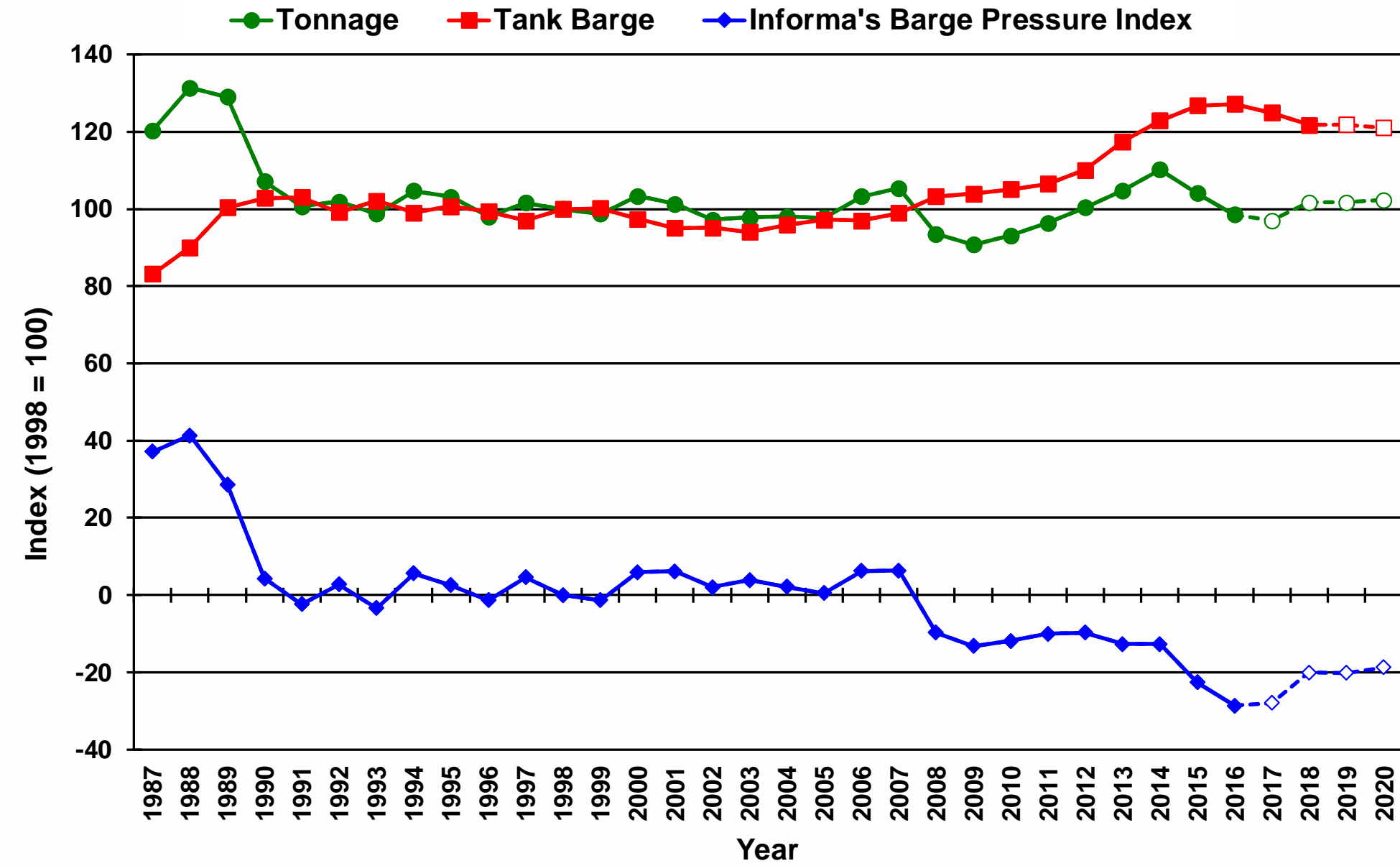
# Barge Pressure Index

## Tank Barge

### Tank Barge Utilization



### Tank Barge Utilization on Ton-mile Basis

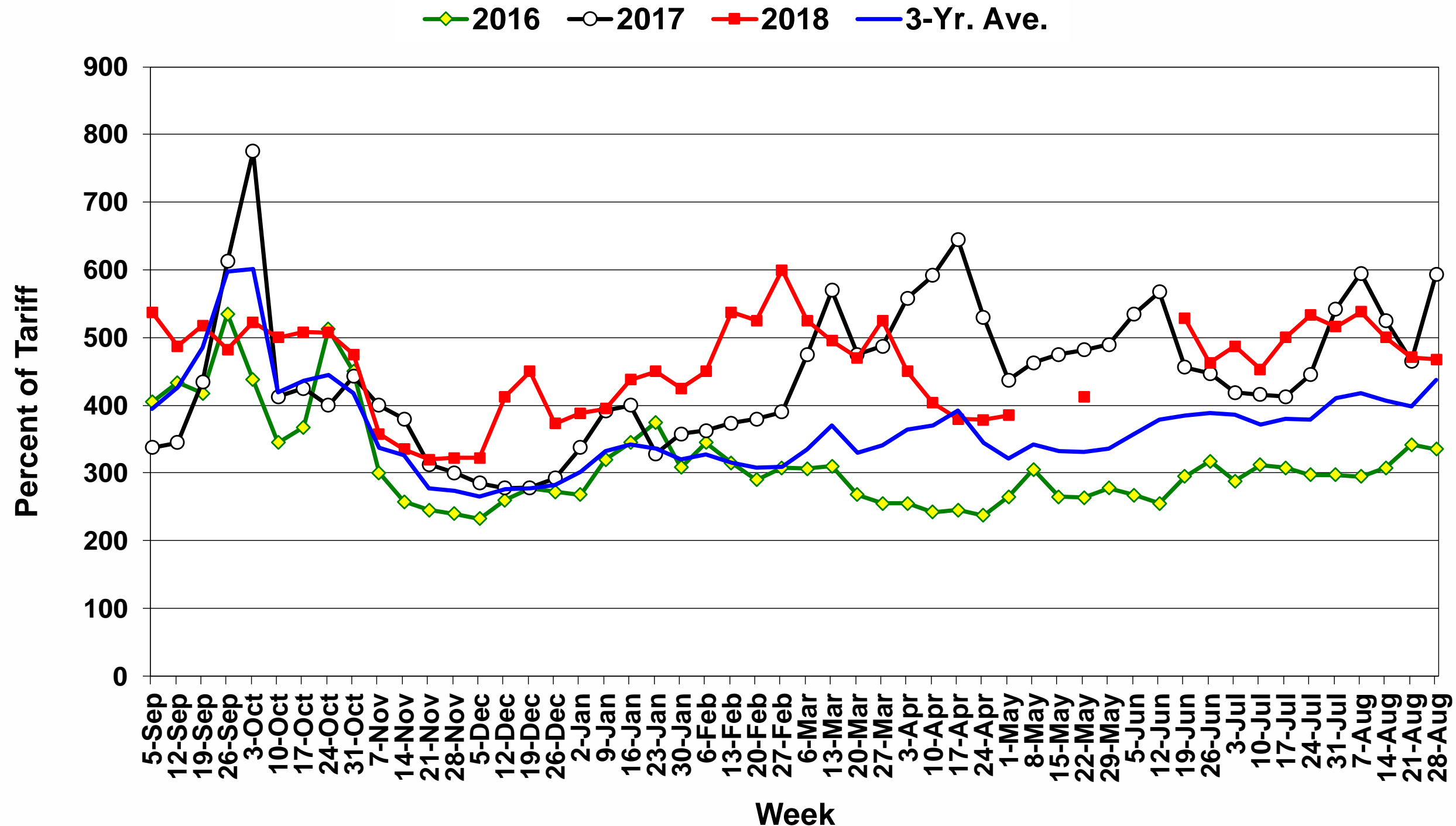


# Barge Freight Rates



# Barge Freight Rates a Mixed Bag Navigation Challenged Since October 2018, and Long Way to Go

Illinois River Barge Freight Rate (percent of tariff)  
by Crop Year (Sep/Aug)

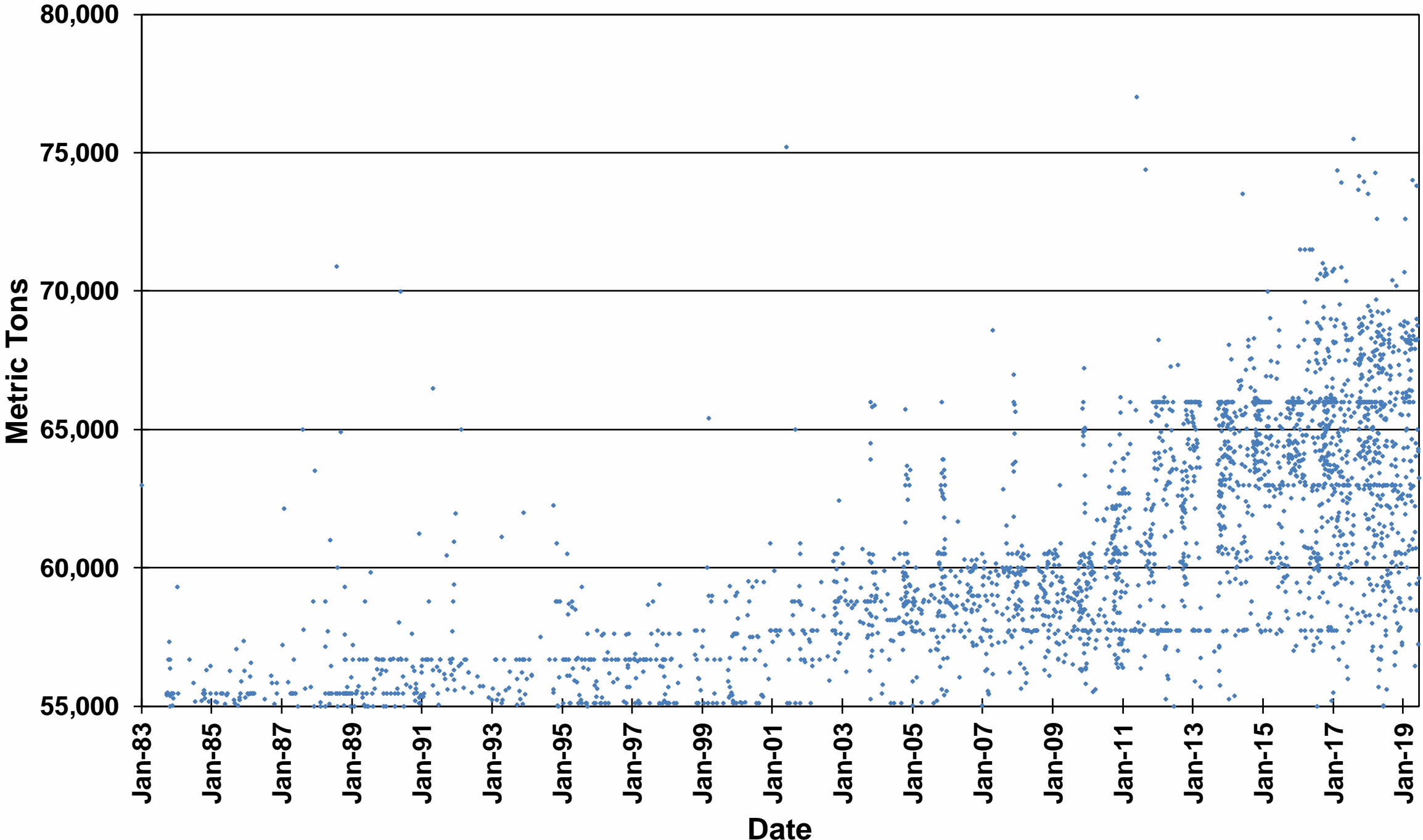


# Infrastructure Investment



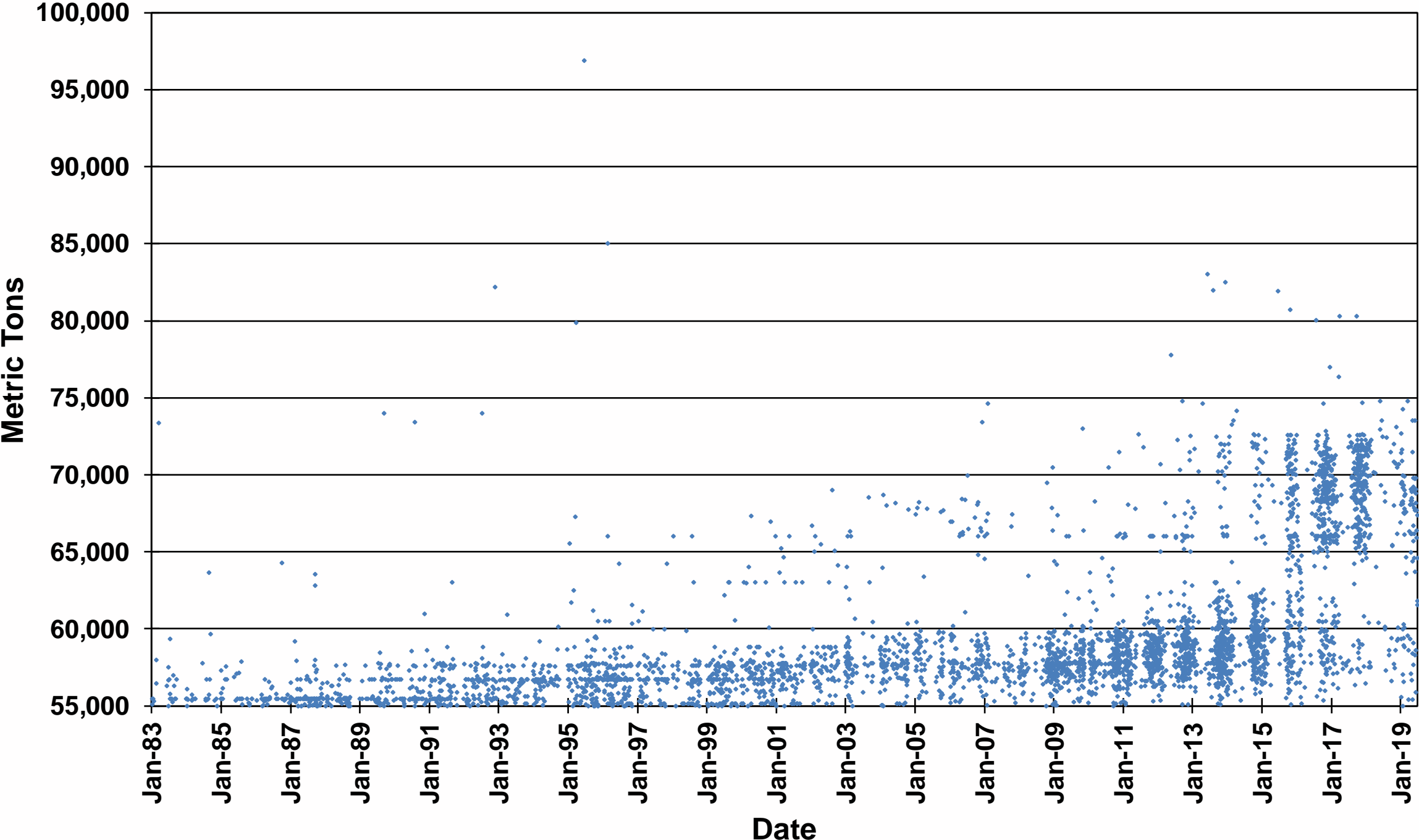
# Infrastructure Investment Leads to Opportunity: Columbia River

## Loadings of Greater than 55,000 Metric Tons of Grain and Soybean Export Inspections through Columbia River Elevators to Asia



# Infrastructure Investment Leads to Opportunity: Mississippi River

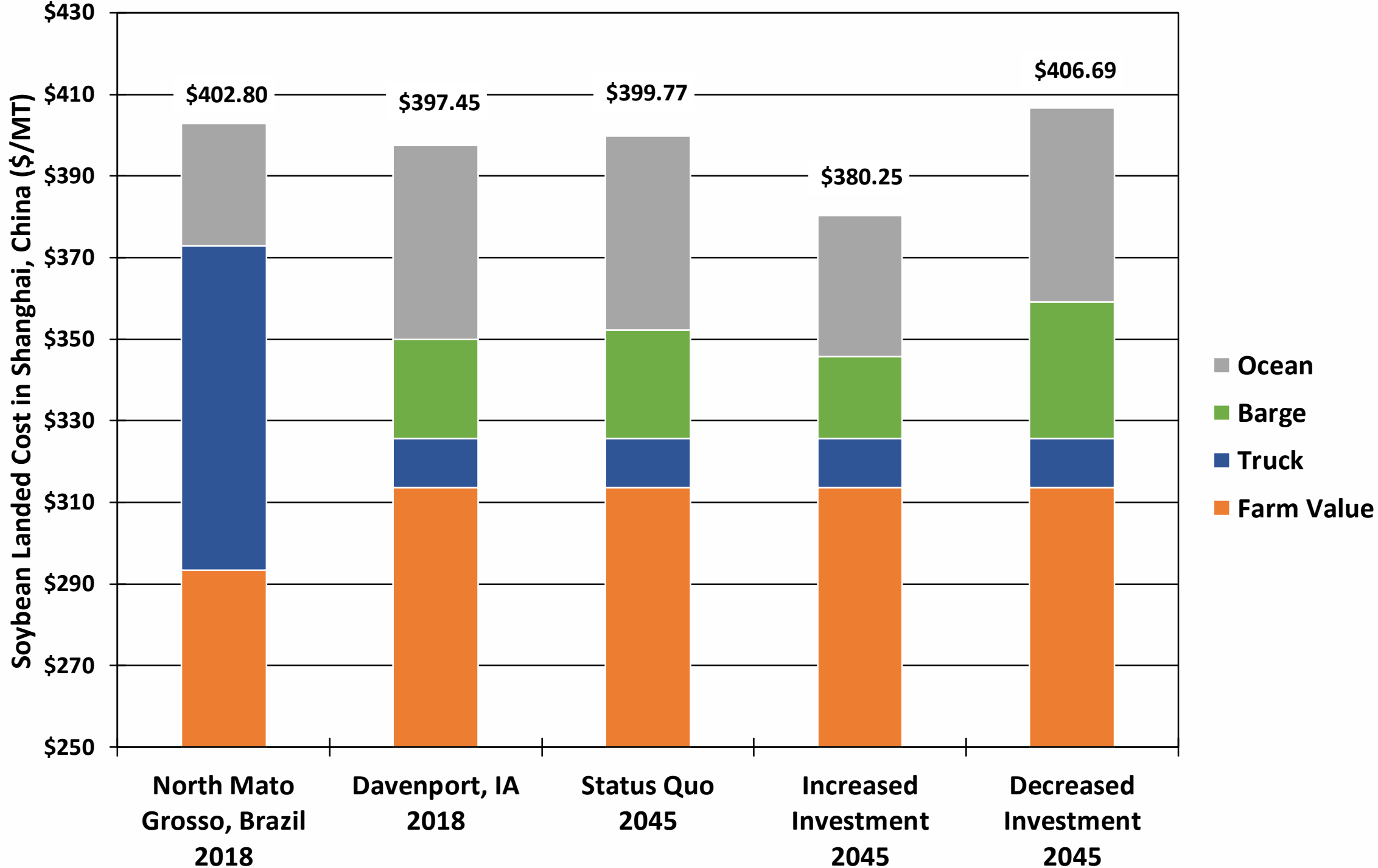
## Loadings of Greater than 55,000 Metric Tons of Grain and Soybean Export Inspections through Mississippi River Elevators to Asia





# Infrastructure Investment Leads to Opportunity: Study Results of Investing in Infrastructure, it Matters

Soybean Landed Cost Analysis to China of Various U.S. Infrastructure Alternatives Compared to Brazil



# Barge Product Opportunities



# Barge Fleet Profile Report

- ▶ Thirty-Second Annual Report
- ▶ Survey of Inland Barge Operators
- ▶ Results reflect fleet dynamics as of December 31, 2018
- ▶ Number barges by operator, by year built
- ▶ Covered, Open and Tank Barges
- ▶ 10-Year Asset Value
- ▶ New Builds and Retirements
- ▶ Turns per year
- ▶ Subscriber Webinar
- ▶ [www.bargefleet.com](http://www.bargefleet.com)



# Barge Commodity Profile Report

- ▶ **Fifteenth Annual Report**
- ▶ **Army Corps of Engineers  
Waterborne Commerce Data**
- ▶ **Internal Domestic Commodity  
Movements**
- ▶ **Current through Calendar Year  
2017**
- ▶ **Commodities Assigned to  
Barge Type**
- ▶ **IEG Vantage Fundamental  
Analytics**
- ▶ **[www.bargefleet.com](http://www.bargefleet.com)**



# Inland Barge Fact Book

- ▶ **Semi-Annual Report**
- ▶ **Evaluation and Outlook of the Market Opportunities for the Barge and Towboat Markets of the Mississippi River Navigation System**
- ▶ **5-year supply and demand outlook**
- ▶ **Covered and open, and tank fleets**
- ▶ **Towboat analysis**
- ▶ **Discussion on drivers impacting supply and demand**
- ▶ **IEG Vantage fundamental analytics**
- ▶ **[www.bargefleet.com](http://www.bargefleet.com)**





Questions?



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