



Emerging Issues in Grain Transportation and Logistics

Presented by:

*Aaron Appel
Trading and Logistics, CGB - OVR Region*

About Us

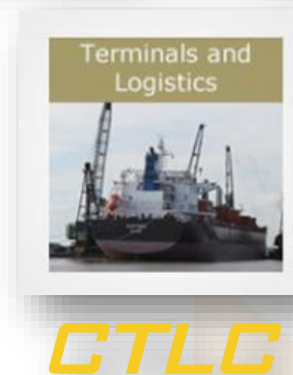
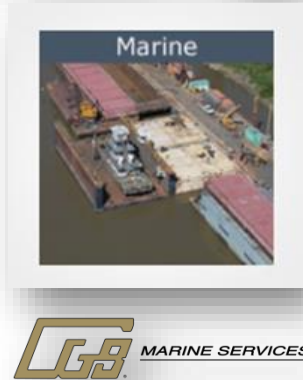
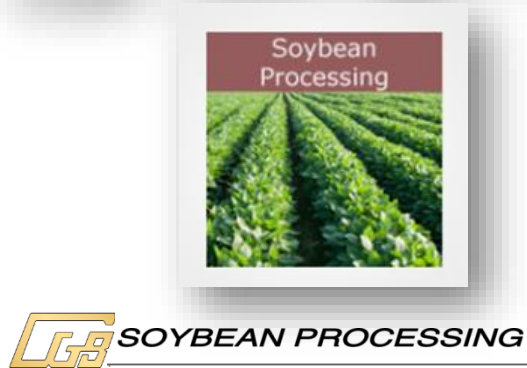
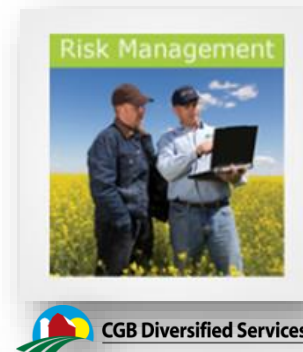
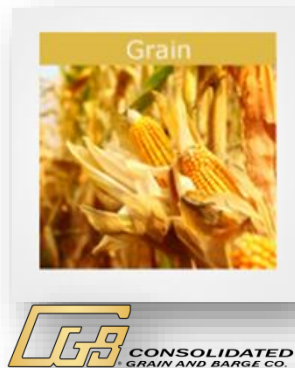
- Established 1970 in St. Louis, MO
- Primary business is grain origination, transportation, and logistics
- Privately held by global companies
- 2,500 employees
- Array of services for grain farmers and beyond including everything from financing and risk management, to buying, storing, selling and shipping of crops and more



www.cgbgrain.com



Our Structure



www.cgbgrain.com



Ownership

ZEN-NOH

- One of the world's largest cooperative organizations
- Owned by millions of Japanese farmers



ITOCHU

- Japanese trading company
- Over 150 year history
- Publicly traded corporation



www.cgbgrain.com



Grain Division

- Originate and market grain and oilseeds for the export and domestic channels.
- Over 100 facilities - 38 river terminals, and 12 shuttle sites.
- 200 million bushels of grain storage
- Providing innovative, customized solutions for producers
- We differentiate through our commitment to service which provides value to our customers.
- Employees dedicated to exceeding customer expectations



www.cgbgrain.com

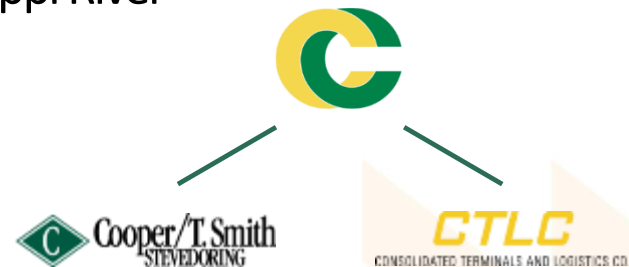


Consolidated Terminals and Logistics Co.

- Transportation and handling services for bulk and break bulk commodities using both CGB assets and outside vendors
- Transportation via Ocean, Barge, Truck, Rail
- Handling via Stevedoring, Terminaling, Warehousing, Heavy lift cargo
- Largest independent buyer of barge freight
- Operating, sales and marketing agreement with Cooper/T. Smith Stevedoring
 - » Cooper/Consolidated, the joint operating ,sales, and marketing division of Cooper T. Smith Stevedoring Co, Inc. and CTLC, is the largest operating asset-backed stevedoring and logistics company in the Port of New Orleans / lower Mississippi River

CTLC

CONSOLIDATED TERMINALS AND LOGISTICS CO.



www.cgbgrain.com



ZGC - Convent, LA



Convent, LA
ZGC Export Elevator



www.cgbgrain.com



Inland Marine Transportation System

U.S. Inland & Intracoastal Waterways



www.cgbgrain.com



Economic Importance

- Mississippi River barge port system represents 500 Million tons of shipped goods per year
- 60% of all grain exported from the U.S. is shipped on the MS River through the Port of New Orleans and Port of South Louisiana
- Safest and most efficient mode of surface transportation



www.cgbgrain.com



Economic Importance



www.cgbgrain.com



Economic Importance to Ohio

ESSENTIAL COMMODITIES ARE SHIPPED TO AND FROM OHIO THROUGH WATERWAYS AND PORTS:



\$39.9 Billion

of manufactured goods including computers and electronic products, appliances, machinery, electrical equipment and clothing



\$11.5 Billion

of basic chemicals used in hundreds of consumer products from appliances to toys, from soap to cosmetics



\$7.6 Billion

of non-metallic minerals including construction materials and coal used to power our homes, businesses and factories

COMMODITIES TRAVEL TO AND FROM OHIO ON MANY VITAL TRANSPORTATION LINKS, INCLUDING:



WATERWAYS:

Ohio River, Mississippi River, Great Lakes, Tennessee River



PORTS:

Port of New Orleans, Port of Los Angeles, Port of Tampa, Port of New York/New Jersey

WATERWAYS AND PORTS CONTRIBUTE DIRECTLY TO OHIO'S ECONOMY:

Total Revenue Impact:

\$3.1 Billion

=

Direct Business Revenue:

\$1.3 Billion

+

Personal Income:

\$1.4 Billion

+

Local Purchases:

\$471 Million

TOGETHER, WATERWAYS AND PORTS SUPPORT

21,000 Ohio Jobs

Sources: Waterways Council, Inc.



www.cgbgrain.com



Logistical Challenges 2019

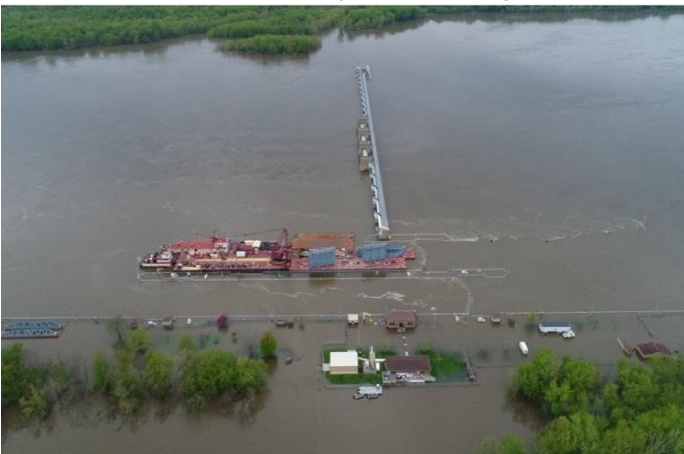
Peoria Lake (IR 170)



JT Myers Lock (OR 846)



Lock 18 (UM 410)



Lock 20 (UM 343)



www.cgbgrain.com



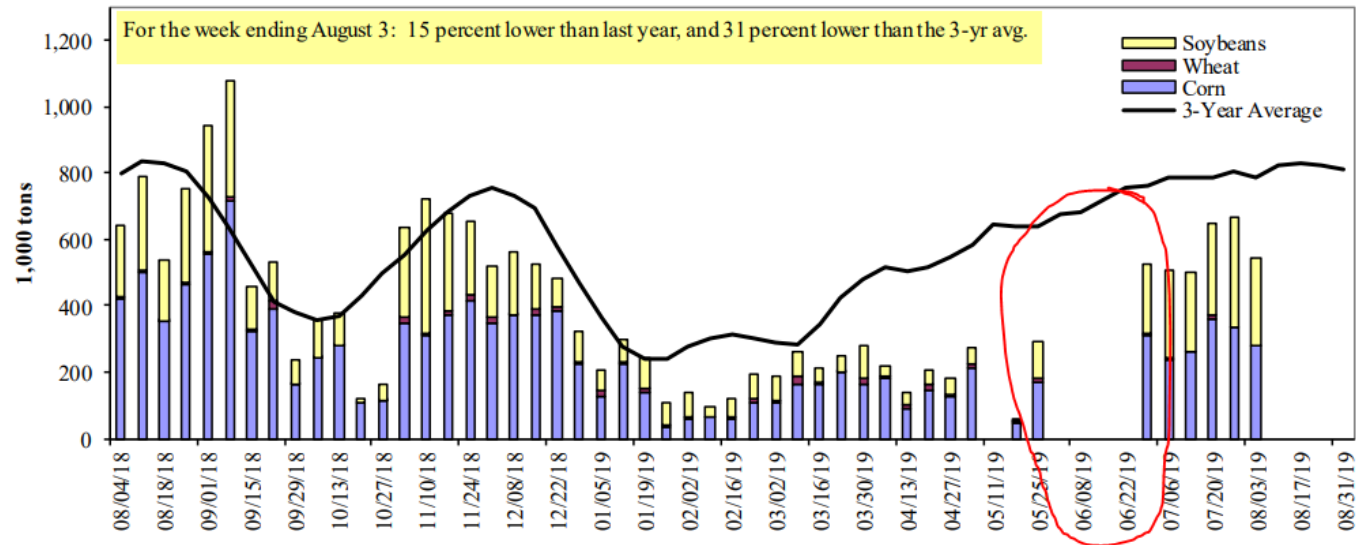
Flood of 2019

- Notable 2019 River closures
 - Ohio River Flooding - closed 2/21/2019 to 3/9/2019
 - Mid Miss Flooding closed 3/16/2019 to 5/16/2019
 - Periodic openings
 - St. Louis Harbor closed 5/24/2019 to 6/25/2019



St. Louis Harbor Closure

Barge Movements on the Mississippi River¹ (Locks 27 - Granite City, IL)



¹ The 3-year average is a 4-week moving average.

Source: U.S. Army Corps of Engineers



www.cgbgrain.com



Flood of 2019

STL Historic Crests

- (1) 49.58 ft on 08/01/1993
- (2) 45.93 ft on 06/08/2019 (P)**
- (3) 43.23 ft on 04/28/1973
- (4) 42.52 ft on 01/01/2016
- (5) 42.00 ft on 04/01/1785
- (6) 41.89 ft on 05/22/1995
- (7) 41.70 ft on 05/06/2017
- (8) 41.32 ft on 06/27/1844
- (9) 40.52 ft on 06/04/2013
- (10) 40.30 ft on 07/02/1947

Smithland Lock & Dam (OR 919) - Historic Crests

- (1) 54.89 ft on 05/06/2011
- (2) 51.83 ft on 02/25/2019**
- (3) 51.44 ft on 03/12/1997
- (4) 50.14 ft on 03/02/2018
- (5) 49.80 ft on 01/08/1991

Lock 20 (UM 343)- Historic Crests

- (1) 27.88 ft on 07/09/1993
- (2) 27.73 ft on 06/18/2008
- (3) 27.11 ft on 06/02/2019**
- (4) 24.50 ft on 04/24/1973
- (5) 23.43 ft on 07/07/2014
- (6) 23.20 ft on 05/15/2001
- (7) 23.19 ft on 04/21/2013
- (8) 21.42 ft on 05/01/1965
- (9) 21.21 ft on 10/12/2018
- (10) 20.92 ft on 10/04/1986



Impacts of Spring Floods

- Barge lines still playing catch-up
 - Filling current contracts and working backwards to fill old obligations
- Southbound barge values remain firm

Weekly Barge Freight Rates: Southbound Only

		Twin Cities	Mid- Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo- Memphis
Rate¹	8/6/2019	543	601	538	470	293	293	397
	7/30/2019	507	610	516	469	278	278	400
\$/ton	8/6/2019	33.61	31.97	24.96	18.75	13.74	11.84	12.47
	7/30/2019	31.38	32.45	23.94	18.71	13.04	11.23	12.56
Current week % change from the same week:								
	Last year	-16	1	-10	18	-34	-34	13
	3-year avg. ²	17	47	36	65	-9	-9	60
Rate¹	September	433	427	423	380	356	356	365
	Oct/Nov	440	418	396	304	339	339	281

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average; ton = 2,000 pounds; "-" n/a due to closure

* - Current weekly rate is a nominal value, reflecting the anticipation of improved navigation conditions

Source: Transportation & Marketing Programs/AMS/USDA



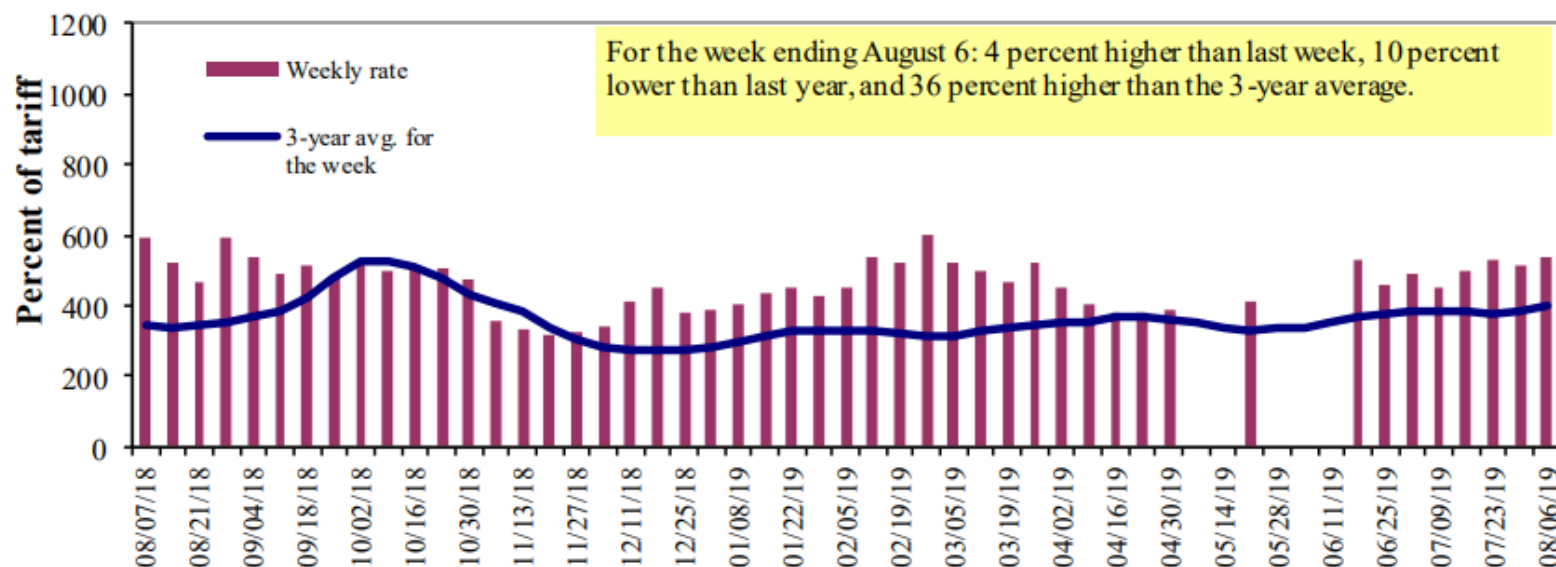
www.cgbgrain.com



Impacts of Spring Floods

Figure 8

Illinois River Barge Freight Rate^{1,2}



¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average of the 3-year average.

Source: Transportation & Marketing Program/AMS/USDA



www.cgbgrain.com



Longer Term Impacts

- Increased towing rates
- Northbound barge prices have increased
 - 2019-2020 prices are up about 25% for annual contracts
 - Spot NB rates are about 60% higher
- Shoaling
- Lock Repairs



www.cgbgrain.com



Aging River Locks

- 78% of locks will exceed their projected lifespan by 2020
- Average age of locks: 59.1 years
- 700% increase in unscheduled work stoppages for repairs over the last decade



www.cgbgrain.com



Ohio River Locks and Dams



www.cgbgrain.com



Olmsted Lock and Dam

- Started Construction in December of 1995
- Completed in October of 2018
- Cost: just over \$3 billion
- Largest & most expensive inland waterway project ever done in the United States
- Located at Ohio River mile 964.4
 - Replaced Lock 52 & Lock 53
- The Corps estimates \$640 million economic benefits per year



www.cgbgrain.com



2019 Restrictions/Closures



- Starved Rock Lock & Marseilles Lock and Dam
 - Upper bulkhead recess installation at both sites
 - Navigation restriction period: June 1 2019 to ~~August 31, 2019~~ extended through October 5.
 - Partial Closure (barge traffic at night – 6:00pm to 6:00am), with 70-foot width restriction & no ability to pull unpowered barges on upper end of locks
 - Full Closure from 1:00am September 21, 2019 to midnight October 5, 2019.

12-24 Hour Delay			
24+ Hour Delay			
Lock	Milepoint	Queue	Avg. Delay Past 24 Hours
Willow Island	OR 162	5	14.93
Starved Rock	IR 231	18	124.92
Marseilles	IR 245	25	62.14
Algiers	LM 88	18	52.74
Industrial	LM 92	32	48.36

Sources: U.S. Army Corps of Engineers, Waterways Council, Inc.



www.cgbgrain.com



2020 Planned Closures



- Starved Rock Lock and Dam – Upper & Lower Miter Gate Installation
 - 120 day full closure expected July 1 – October
- Marseilles Lock and Dam – Upper Miter Gate Installation
 - 90+ day full closure expected July 1 – September 30
- Dresden Island Lock and Dam – Upper Bulkhead Recess Installation
 - 90+ day restriction period with 14 day full closure
- Brandon Rd Lock and Dam – Upper Bulkhead Recess Installation
 - 90+ day restriction period with 14 day full closure

Sources: U.S. Army Corps of Engineers, Waterways Council, Inc.



www.cgbgrain.com



Map of the Closures



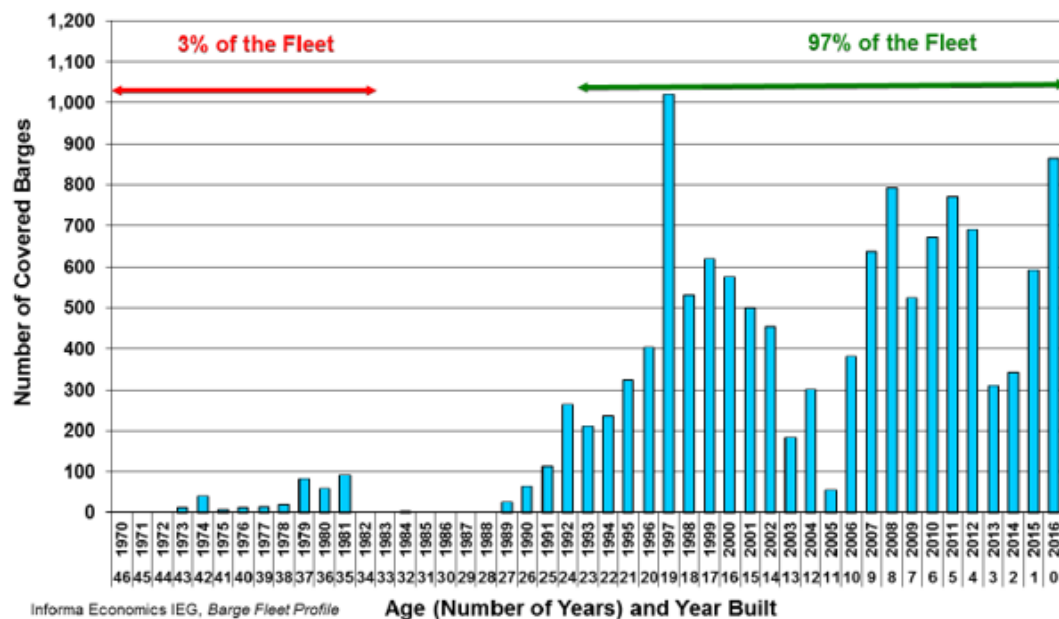
www.cgbgrain.com



Covered Hopper Fleet

- 30 years: average covered barge life
- Mid to late 1990s saw a surge in covered hopper builds

Covered Barge Fleet by Age



Creating Partnerships in Agriculture®

