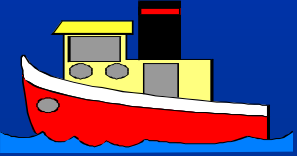



Domestic Water Carriers

Chapter 6


Road Map to Success

Chapter Objectives:

- What are the advantages and disadvantages of each mode?
- What are the cost and business structures of the industry?
- What has happened since Deregulation and Gov't roll today?
- What is the level of competition, equipment usage, and is it intermodal?
- What is unique to this mode?




Motor


Railroads


Air


Water


Pipeline



Modes




A Brief History of Domestic Water Carriage


- with earliest origins
 - natural infrastructure
 - natural motive power
- has provided broad support

▪ Federal support of harbors	1789
▪ Army Corp of Engineers	1812
▪ Erie Canal	1825
▪ Merchant Marine Act	1920
▪ St. Lawrence Seaway	1959
▪ Tennessee Tombigbee Waterway	1986





Industry Overview

- Key statistics for domestic carriers
 - \$28 billion in total revenues (2001)
 - \$21.3 billion for international freight
 - \$6.2 billion for domestic freight
 - 606 billion domestic ton-miles (2003)
 - Over 1 billion tons
 - carriers employ 145,000 people (2003)
 - 61 fatalities (2002)
 - 703 in recreational boating






Source: BTS, 2005

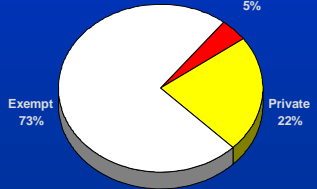


Key Industry Participants



- carriers
- customers
- stevedore companies
- freight forwarders
- govt. agencies
 - Army Corp of Engineers
 - Federal Maritime Administration
 - port authorities
 - U.S. Coast Guard

Types of Carriers



- Ownership
 - private
 - for-hire
- Frequency of Service
 - scheduled
 - charter
- Nature of Service
 - common carriage
 - contract carriage
 - exempt carriers
 - private






Number and Types of Carriers

- Classified by operating area
 - internal, coastal, Great Lakes
- Exempt dominates the ton-miles
- Total number of firms is small

Carriers	Num.	%
Great Lakes		
Regulated	7	1%
Exempt	80	8%
Private	33	3%
Sub-total	120	11%
Mississippi River and Gulf Intracoastal		
Regulated	33	3%
Exempt	662	63%
Private	241	23%
Sub-total	936	89%
Total	1,056	100%

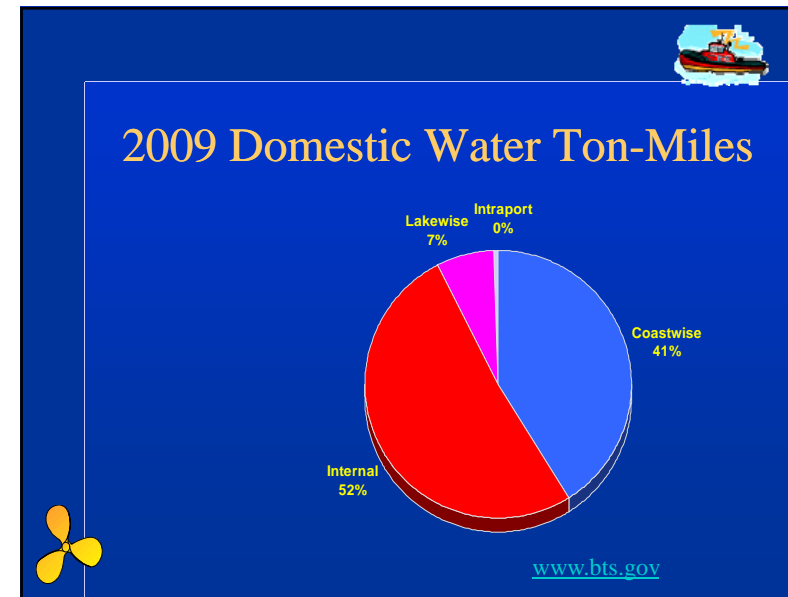
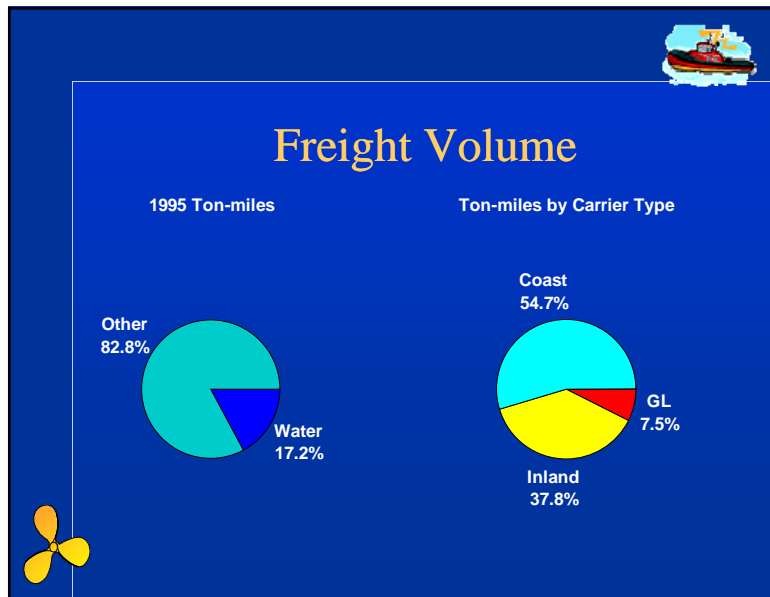
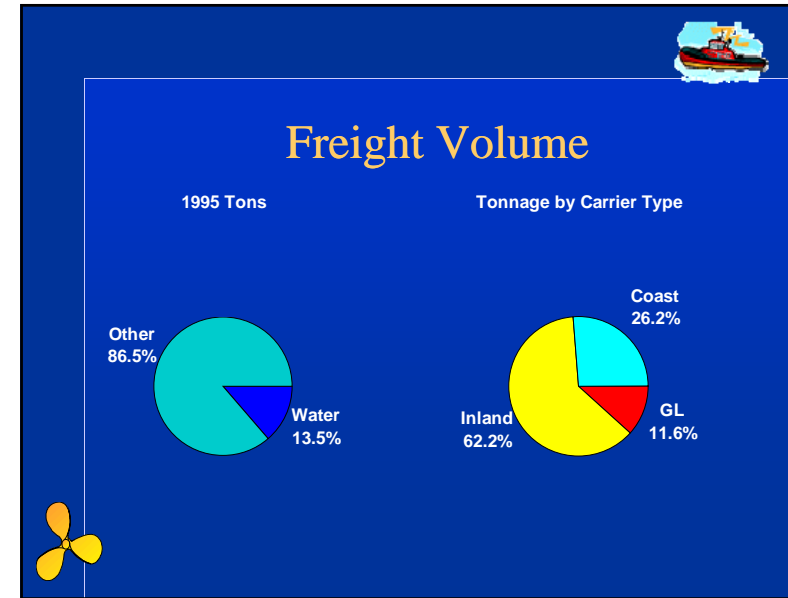
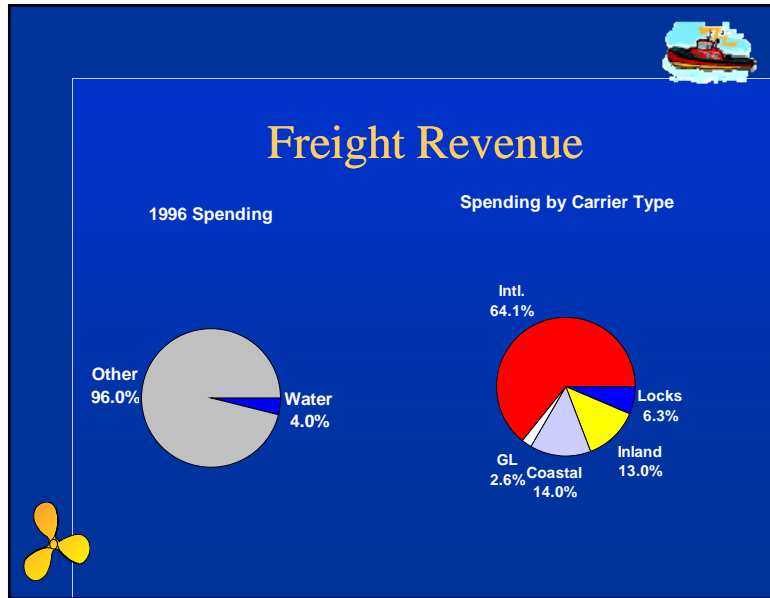
Source: U.S. Army Corps of Engineers

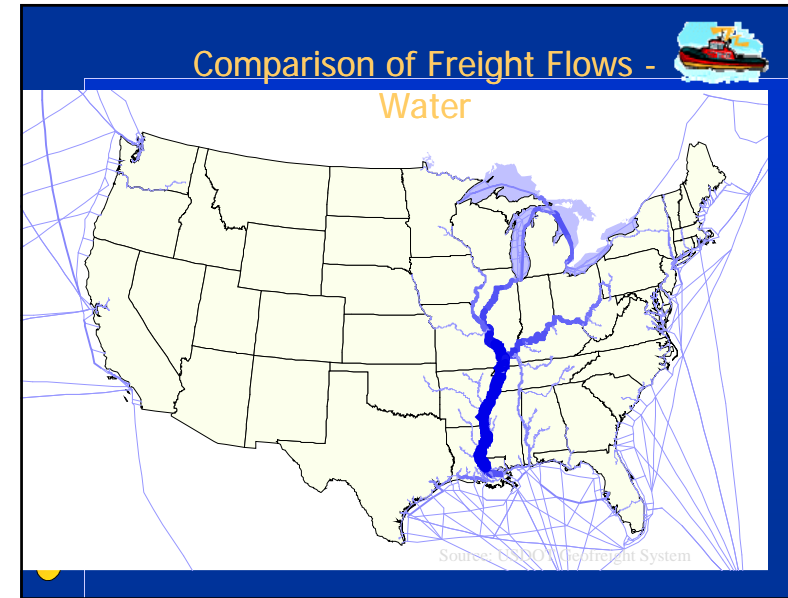
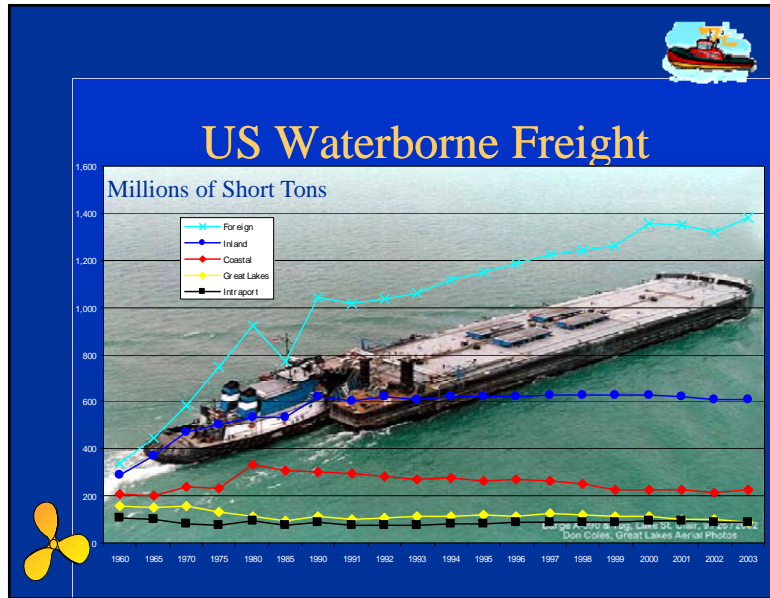




Market Structure*

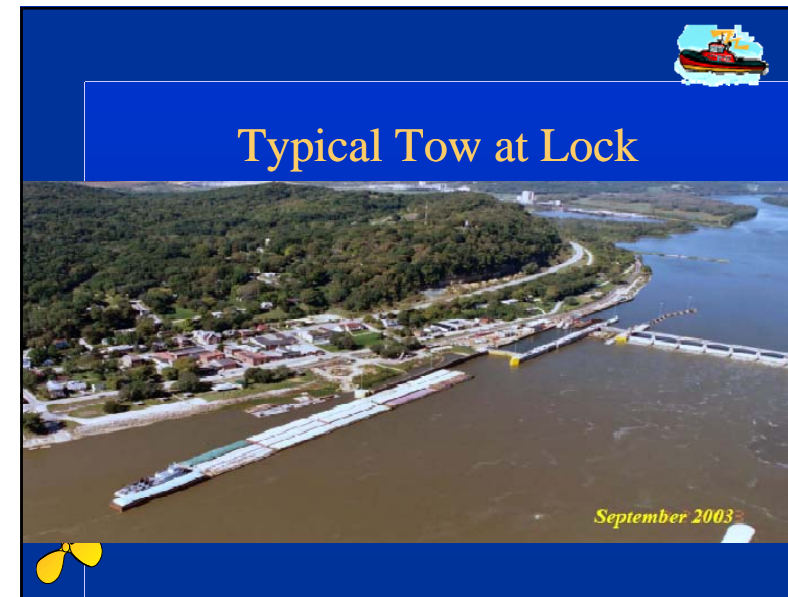
- 360 barge operators
 - 30,500 barges
 - 5,200 towboats/tugs
- 6 coastal maritime carriers
 - 325 ocean going ships
- declining number of GL carriers
 - 67 laker vessels





- ### Equipment Types
- Barges
 - used on inland waterways
 - open hoppers
 - covered hoppers
 - tanks
 - Towboats/tugboats
 - provide propulsion for barges
 - Great Lakes vessels
 - ore carriers
- 





Equipment Types

- LASH / Seabee vessels
 - carry floating barges aboard ocean going "mother" ships
- Ocean going bulk vessels
 - tankers and dry-bulk ships
- Ocean going general cargo vessels
 - container ships
 - Roll-on Roll-off ships

LASH Ships

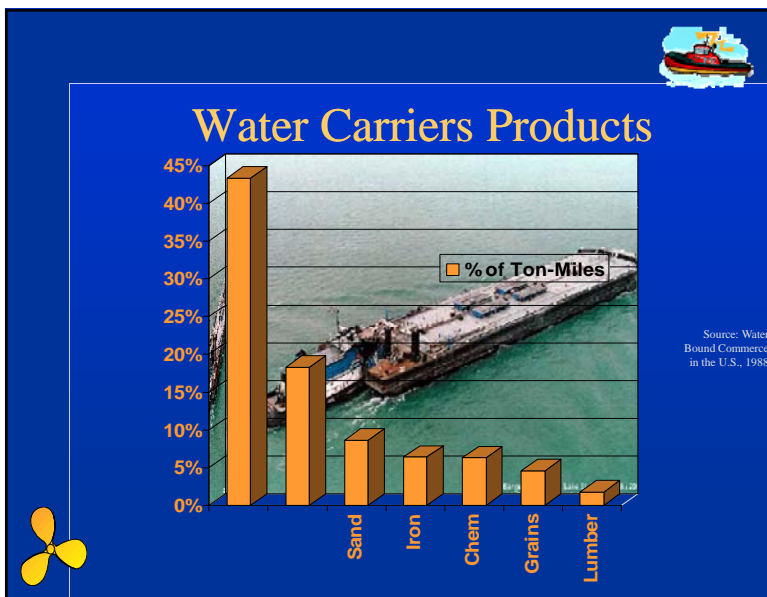
- Lighter-**aboard** ship

Bulk




Industry Characteristics

- Small number of U.S. carriers
- Average shipment size is very large
 - bulk shipments
- Average length of haul varies
 - 481 miles for inland waterways
 - 509 miles for Great Lakes
 - 1,653 miles for coastal
- Value of freight is low
 - petroleum & other raw materials



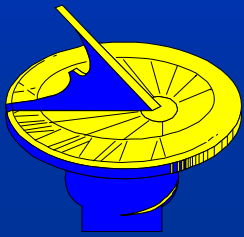

Industry Characteristics

- Major accessibility disadvantage
 - most customers not located on water
- Moderate player in U.S. transport
- Industry revenues are stagnant
 - no growth in revenues per ton-mile
- Infrastructure growth is limited
 - 25,777 miles of waterways
 - equipment fleet is decreasing




Industry Capabilities

- Service is very
 - low cost makes up for lack of speed
 - limited ancillary customer services
- Speed is very
 - slowest for nonliquid freight
 - subject to delays
 - weather
 - port congestion








Industry Capabilities




- Cargo safety is
 - freight susceptible to damage
 - poor weather / rough water
 - corrosion (salt water)
 - poor freight handling
 - Carrying capacity is very
 - 1,500 tons per barge
 - equal to 15 train hopper cars
 - equal to 58 trucks





Capacity Comparison

1 Barge	– 15 Jumbo Hoppers	– 60 Trucks
		
Barge 1500T 52,500 bushels 453,600 gallons	Jumbo Hopper Car 100T 3,500 bushels 30,240 gallons	Large Semi 25T 875 bushels 7,560 gallons

1 Barge Tow = 2 1/4 Unit Trains = 900 Trucks

		
---	---	---



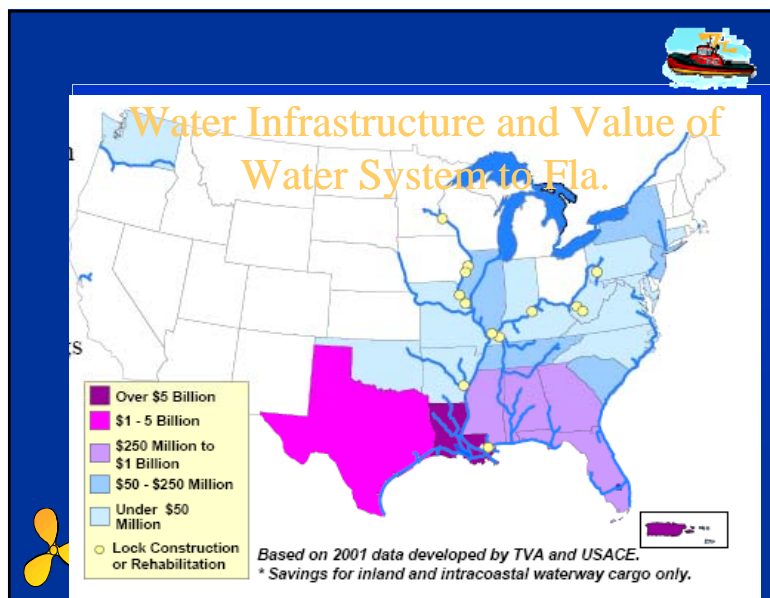
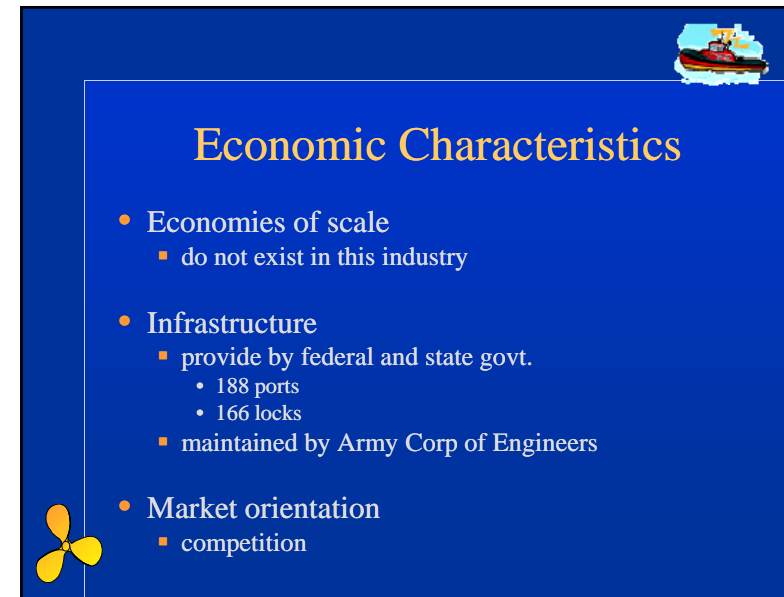
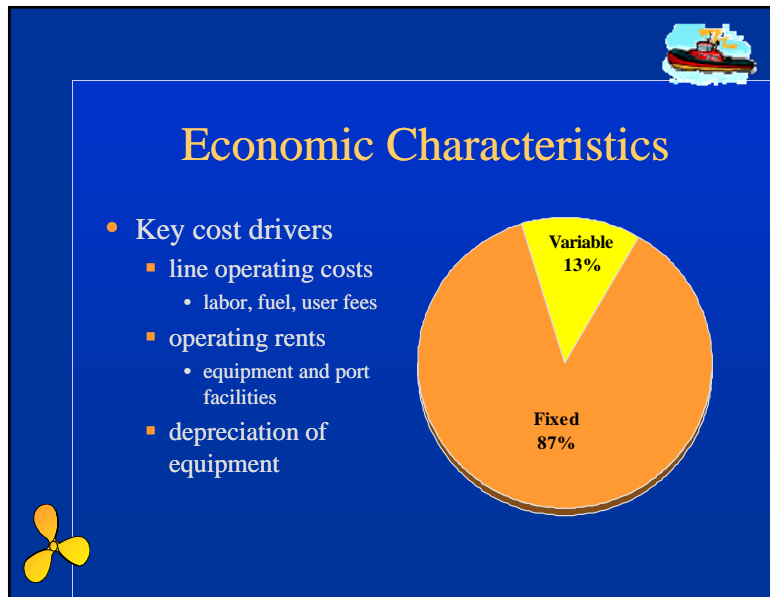

St. Lawrence Seaway

- Links Great Lakes
- 920 Transits in '99

Commodity	1999 (000 tonnes)
Grain	3,526
Iron Ore	3,507
Coal	66
Other Bulk	2,071
General Cargo	1,310
TOTAL CARGO	10,482







Where Does Georgia Rank?

- 25th Overall in Tons
 - 2008, US Army CoE

2008		Tons (000s)
Shipping	Domestic	596
	Int'l	15,230
Receiving	Domestic	650
	Int'l	20,671
Intrastate		692
Total		37,838

2008 Waterborne Commerce of the United States (WCUS) Waterways and Harbors:
 Part 5 - National Summaries of Domestic and Foreign Waterborne Commerce
<http://www.ndc.iwr.usace.army.mil/wesc/wesc.htm>

Road Map to Success

Chapter Objectives:

- What are the advantages and disadvantages of each mode?
- What are the cost and business structures of the industry?
- What has happened since Deregulation and Gov't roll today?
- What is the level of competition, equipment usage, and is it intermodal?
- What is unique to this mode?