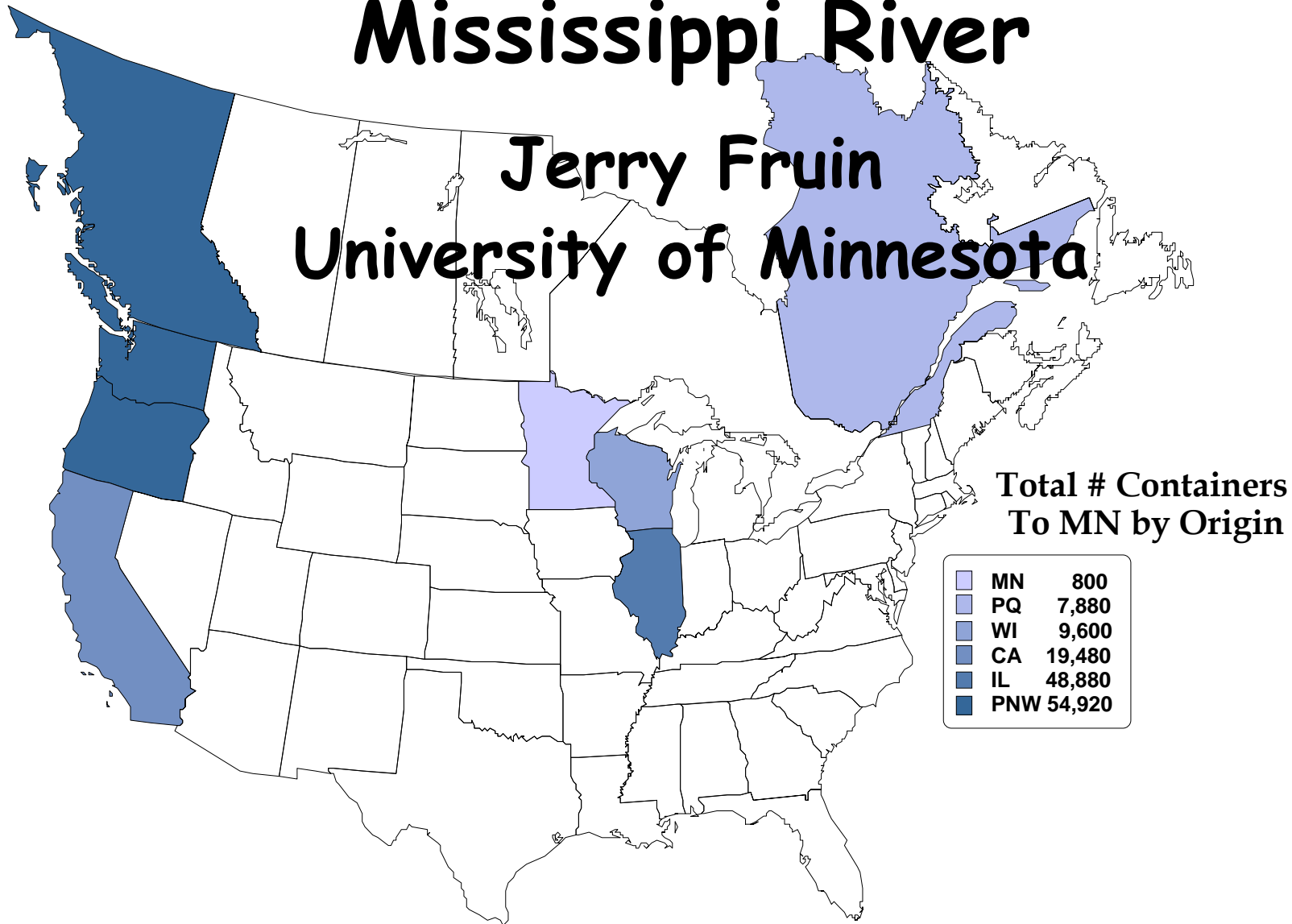


# Moving Containers on the Mississippi River

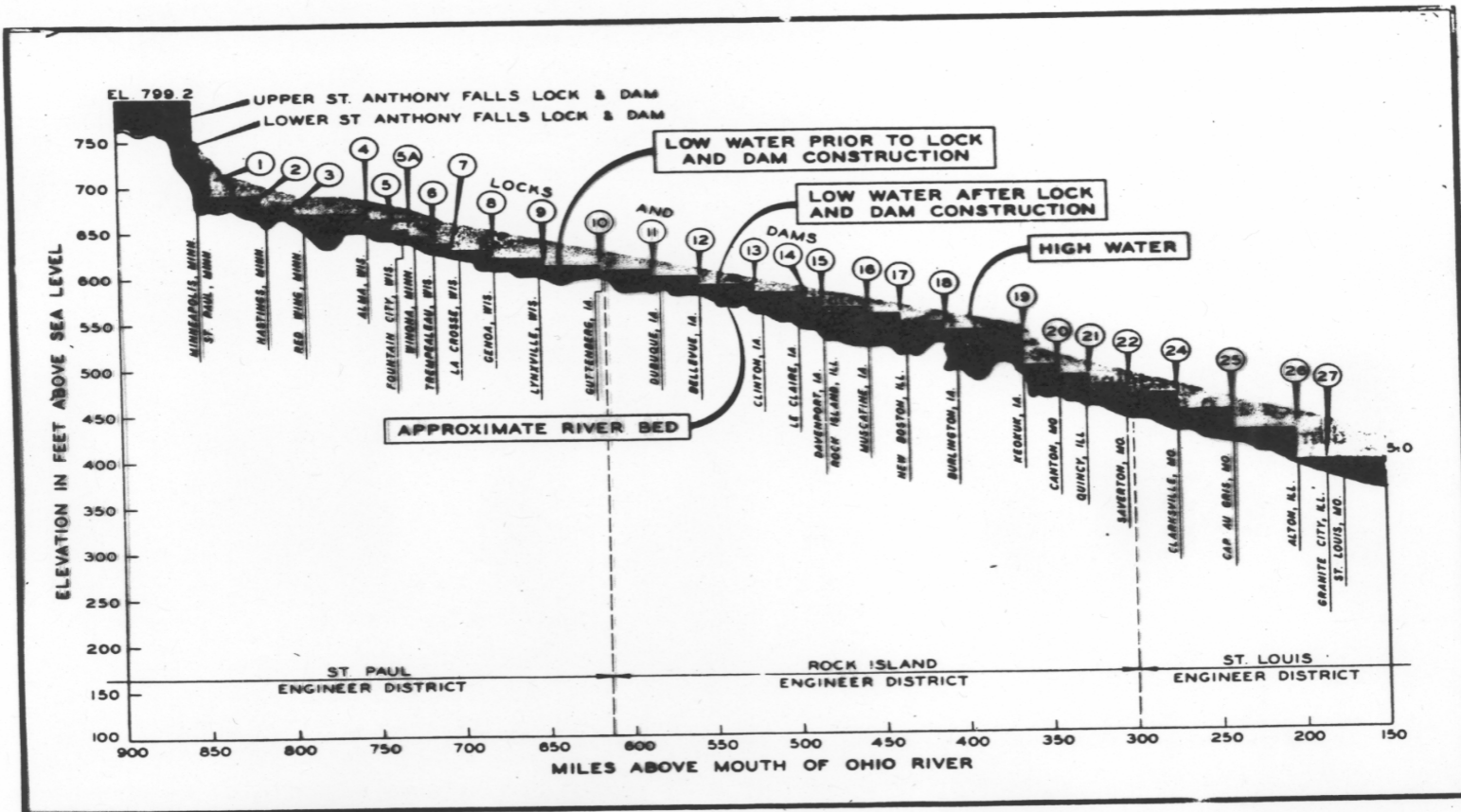
Jerry Fruin  
University of Minnesota



334 Milage Between Cities  
3 Number of Locks



# MISSISSIPPI - STAIRWAY OF WATER



**Source:** U.S. Army Corps of Engineers



# Advantages of Water Transport

- Safest Mode
- Energy Efficient
- Clean
- Lowest cost if volume is high enough
- More than 90% of world freight traffic moves by water

# Why Barges?

- Reduce storage dwell times in Ocean Ports  
improve total *port capacity* without expansion
- Reduce truck moves on roadways,  
make roads *safer, cleaner, more efficient*
- Reduce truck emissions  
improve *quality of life* for neighbors
- Reduce rail traffic in the Port area and long hauls,  
*reduce conflicts* at grade crossings with other  
users

# Why Barges on The Mississippi System?

- Congestion at West Coast Ports
- Shortage of Rail Capacity
- Unused Capacity on Mississippi River
- Coverage from Houston to Pittsburg and Minneapolis to New Orleans

# Perceived Disadvantages of Barge Traffic on the Mississippi

- Winter Closure
- Dominant Traffic Flow is East –West
- Travel Time Variance
- Existing Practices ie Very Large Tows and Specialized Terminals



# Container Ports

- Houston
- New Orleans
- Gulfport

# Osprey Line Started Service in 2003

- Baton Rouge
- Houston
- New Orleans
- Memphis

# Baton Rouge's Custom made Barge Stacker



- Cost \$750,000
- 30-ton lift capacity
- Capacity 20-22 containers per hour
- Negative reach 9 foot
- Outward reach 31 foot
- Can stack 3 rows in a barge

Source: Port of Greater Baton Rouge



Source: Port of Greater Baton Rouge





Source: Port of Greater Baton Rouge



Source: Port of Greater Baton Rouge





# Rhine River

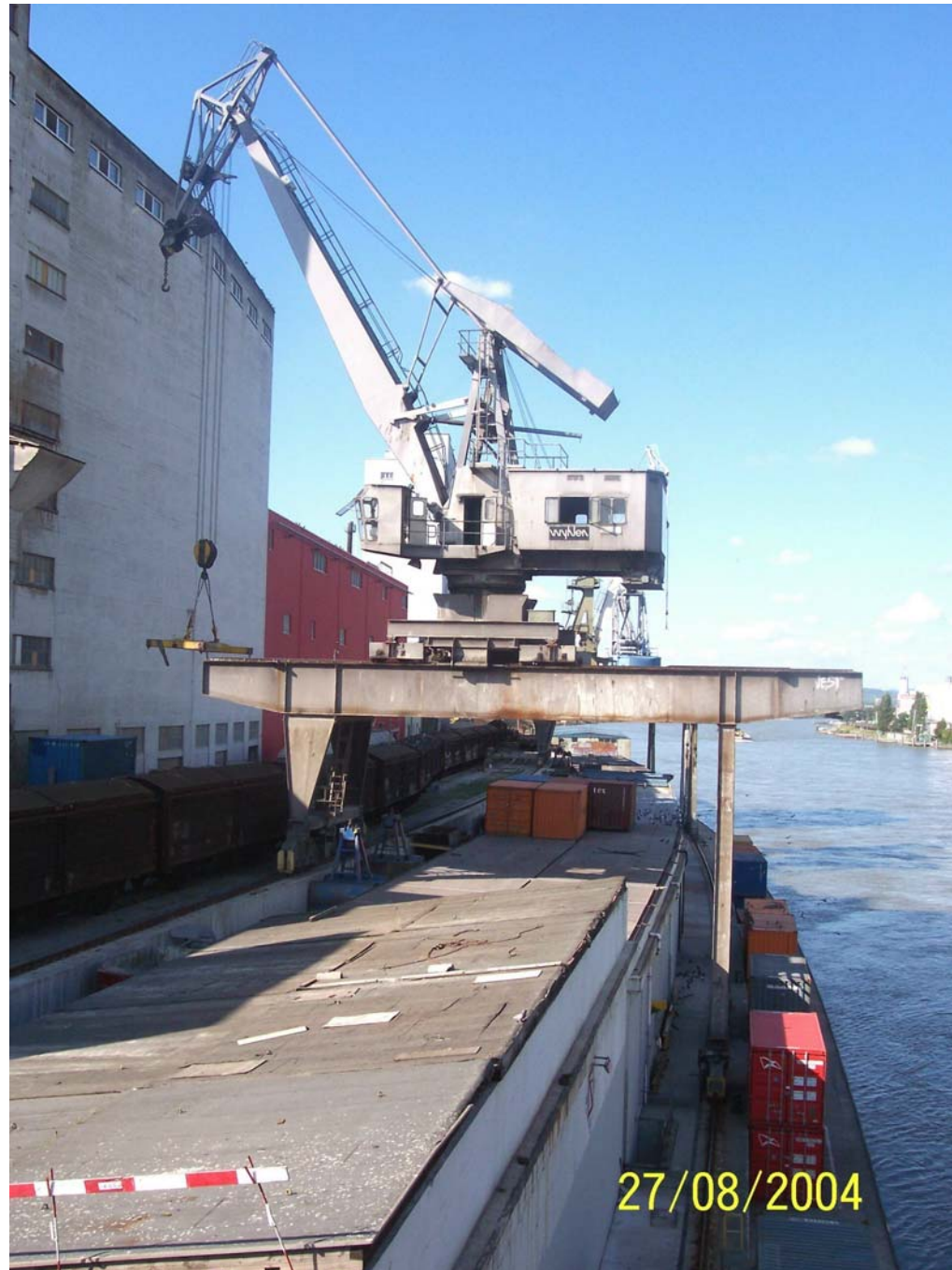


Rhine River, Germany



# Types of Container Vessels on the Rhine and European System

- Container Vessel-campine barge class (63m long by 6.6m wide with draft of 2.5m) or 208ft long by 22ft wide with draft of 8.3 ft. Capacity is 24 TEU or 650 tons .
- Container Vessel (110m long by 11.4m wide with draft 3.0m) or 363ft long by 37.6 ft wide with draft of 10ft. Capacity is 200 TEU.
- Container Vessel (135m long by 17m wide with draft 3.0m) or 445ft long by 56ft wide with a 10 ft draft. Capacity 470 TEU or 4600 tons
- Push Train with 4 barges (2x2) (193m long by 22.8m wide with draft 2.5-3.7m) or 637ft long by 75 ft wide with 8 to 12 ft drafts











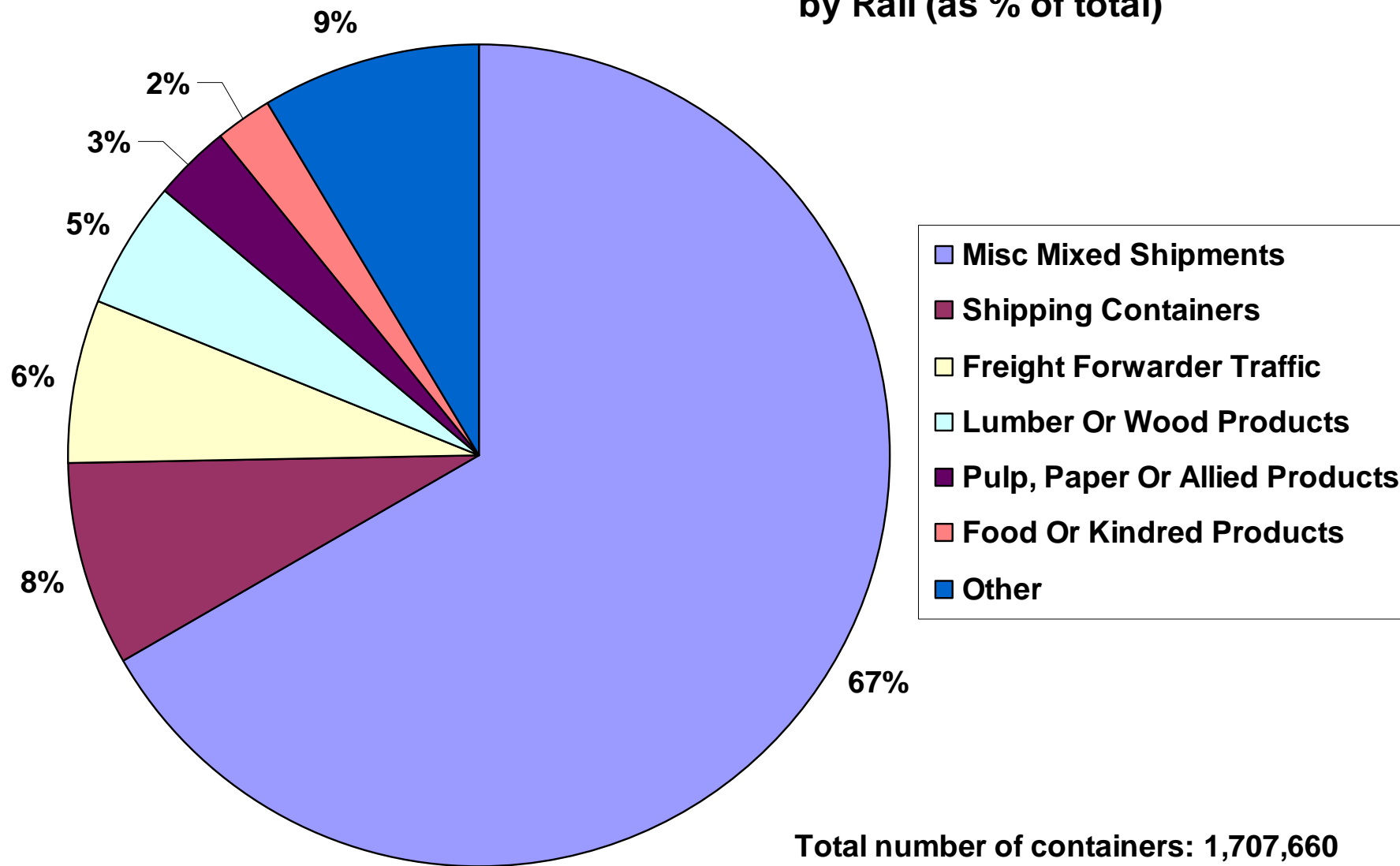


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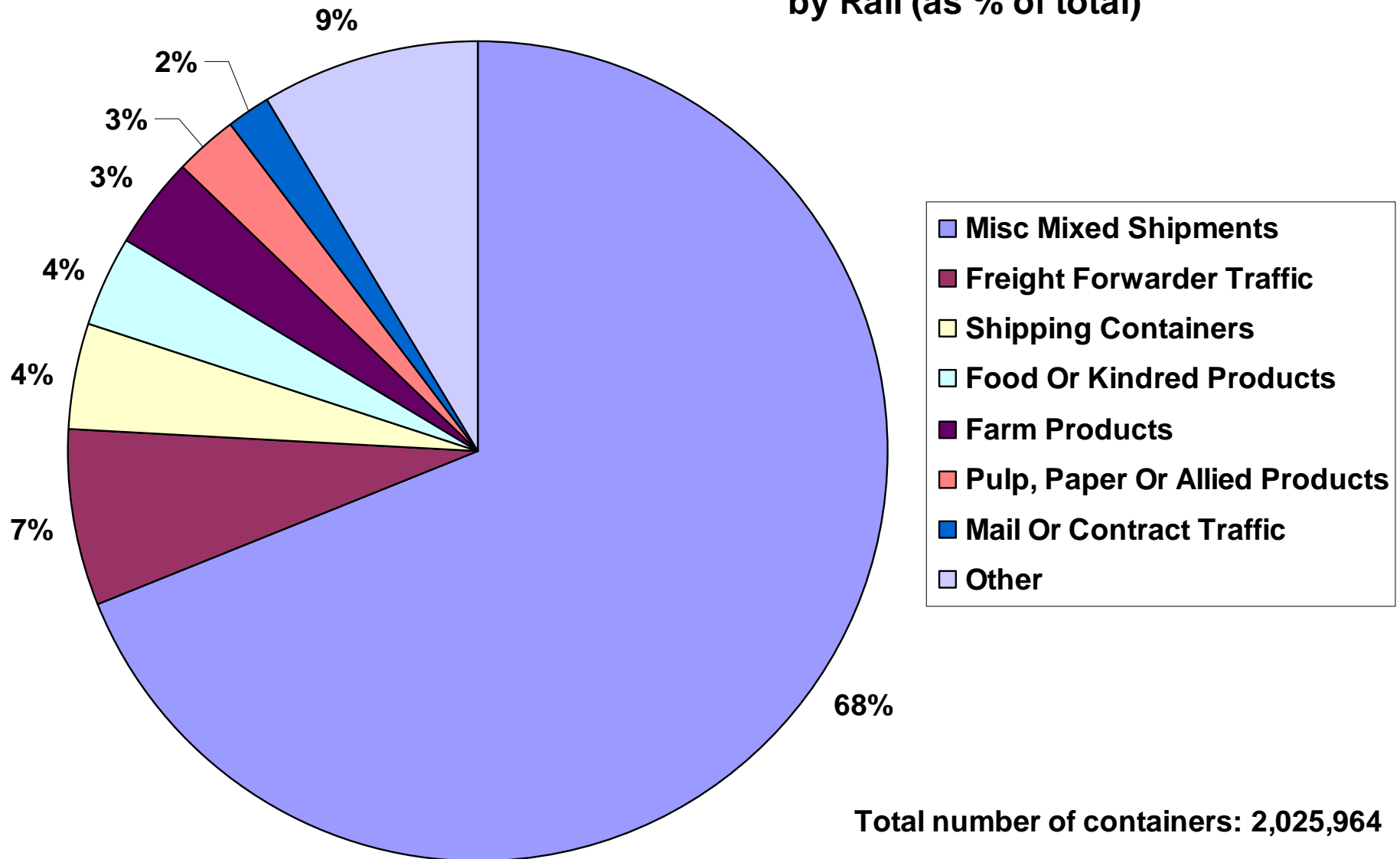




# Commodities in Containers by STCC shipped To MN by Rail (as % of total)

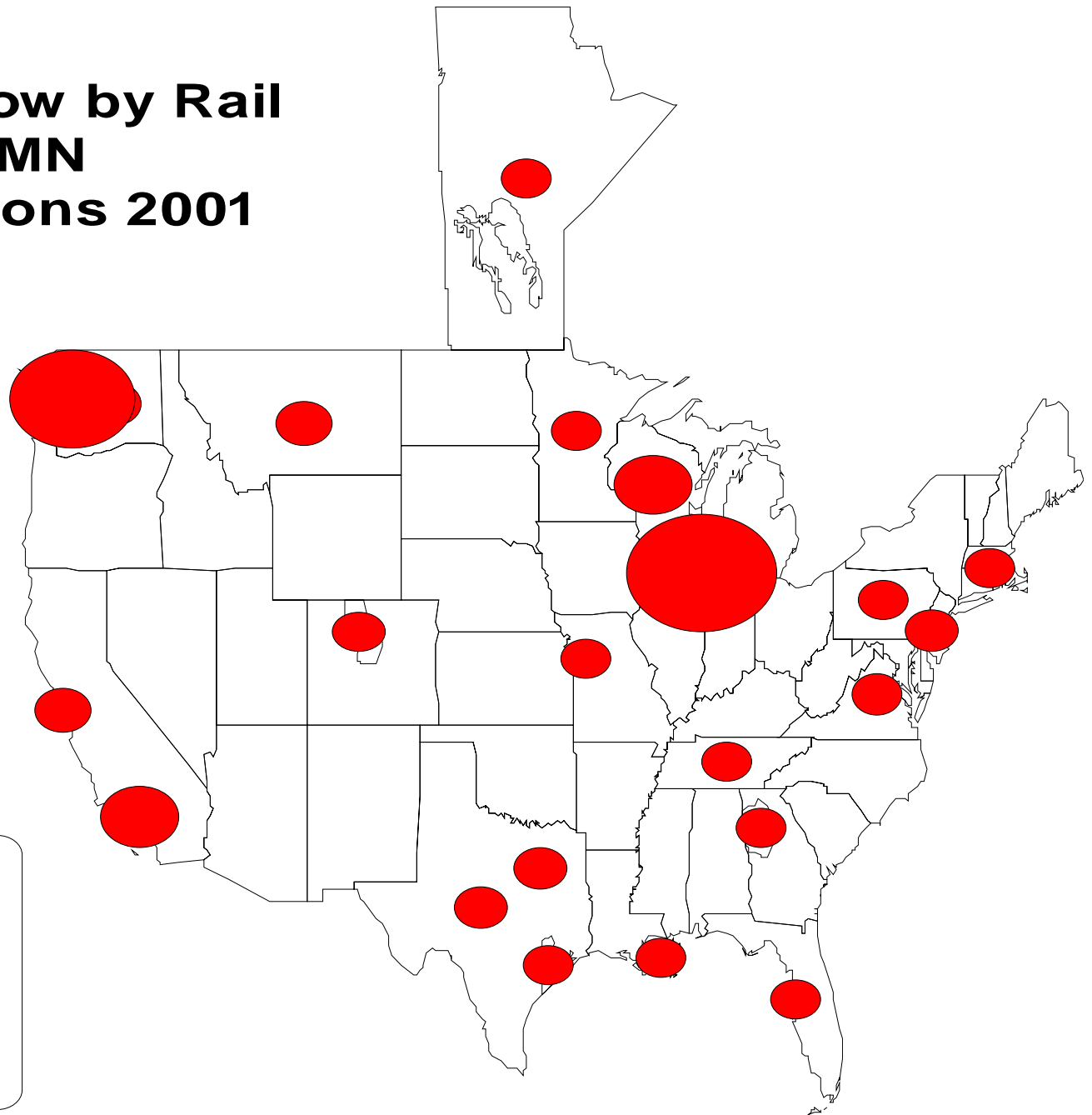
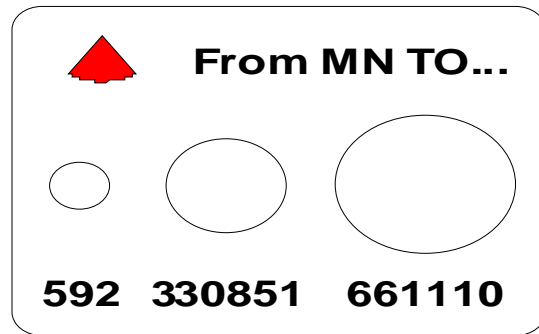


**Commodities in Containers by STCC shipped From MN  
by Rail (as % of total)**

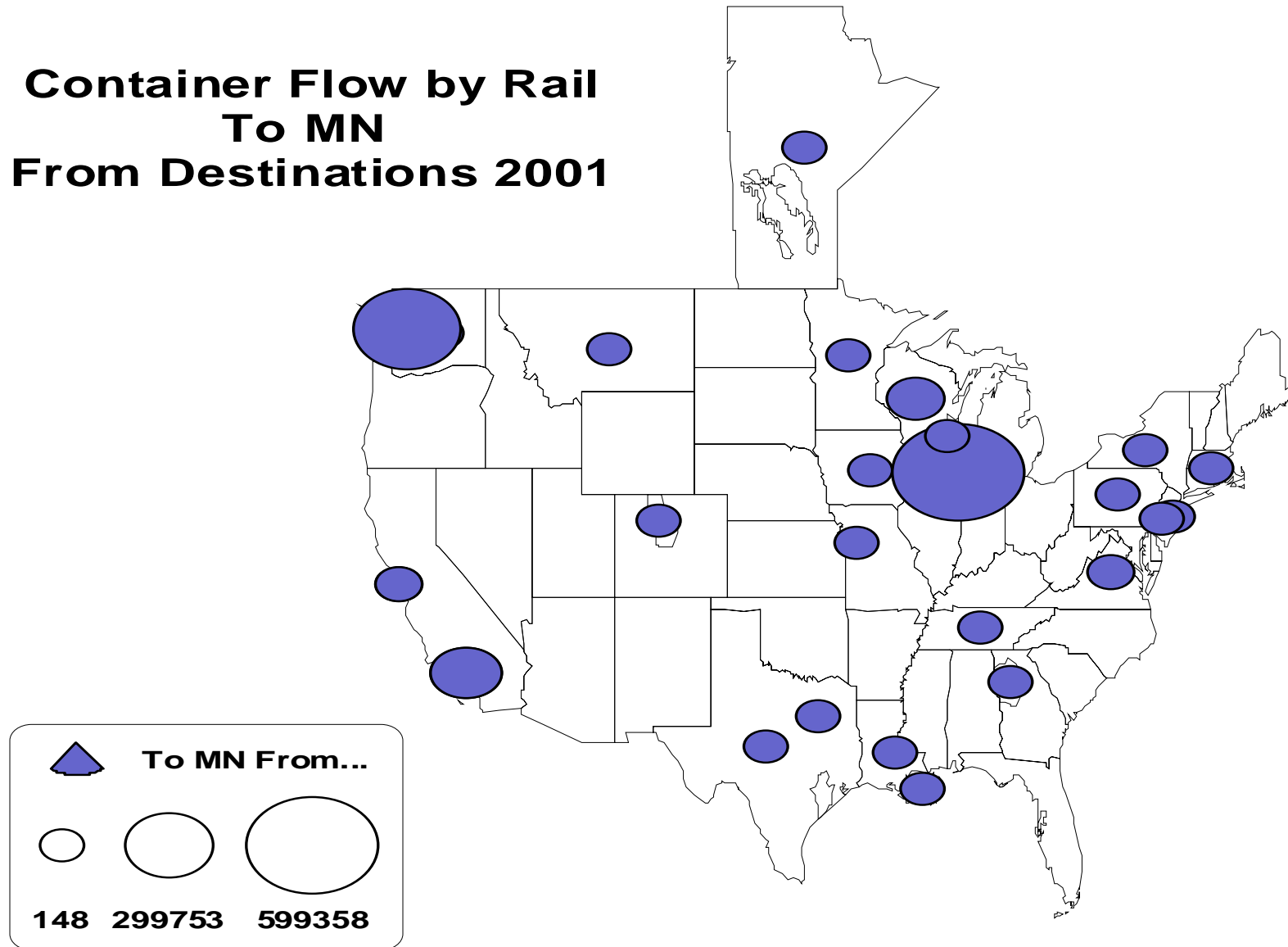




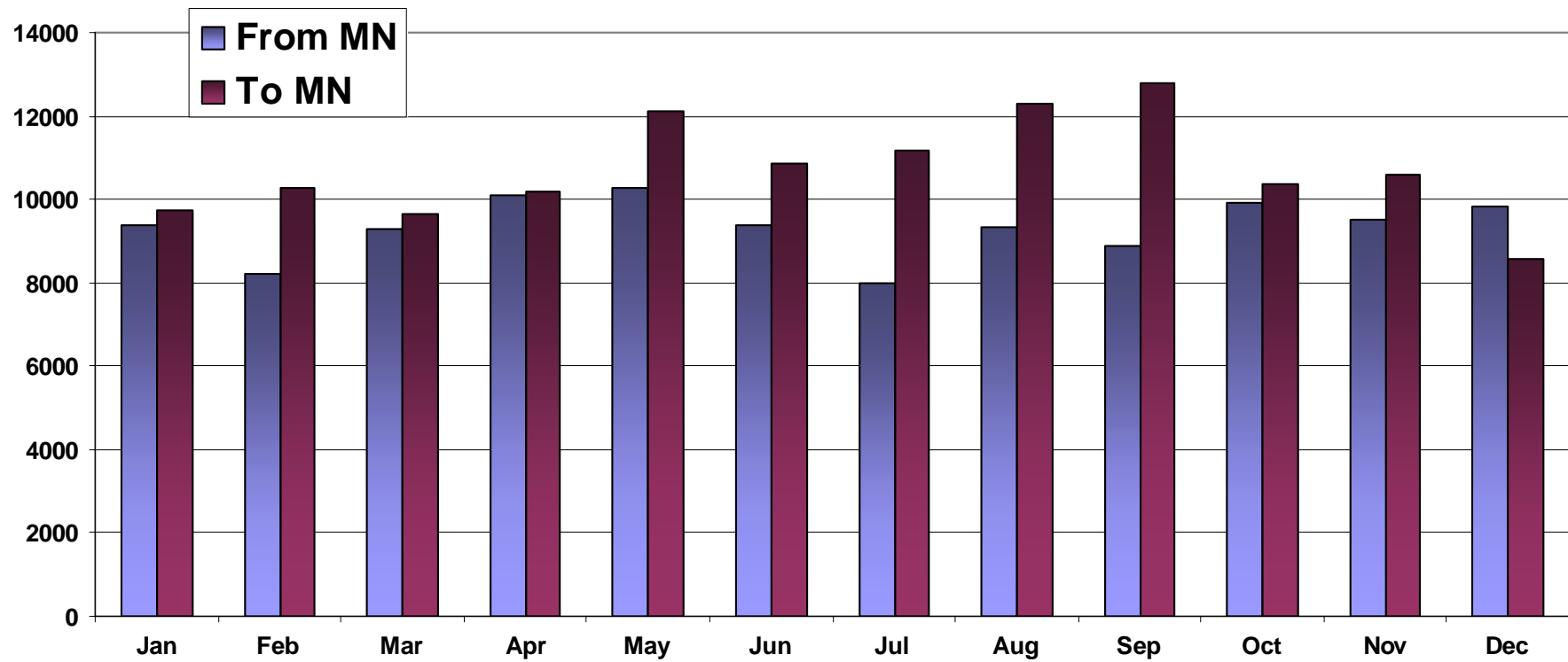
# Container Flow by Rail From MN to Destinations 2001



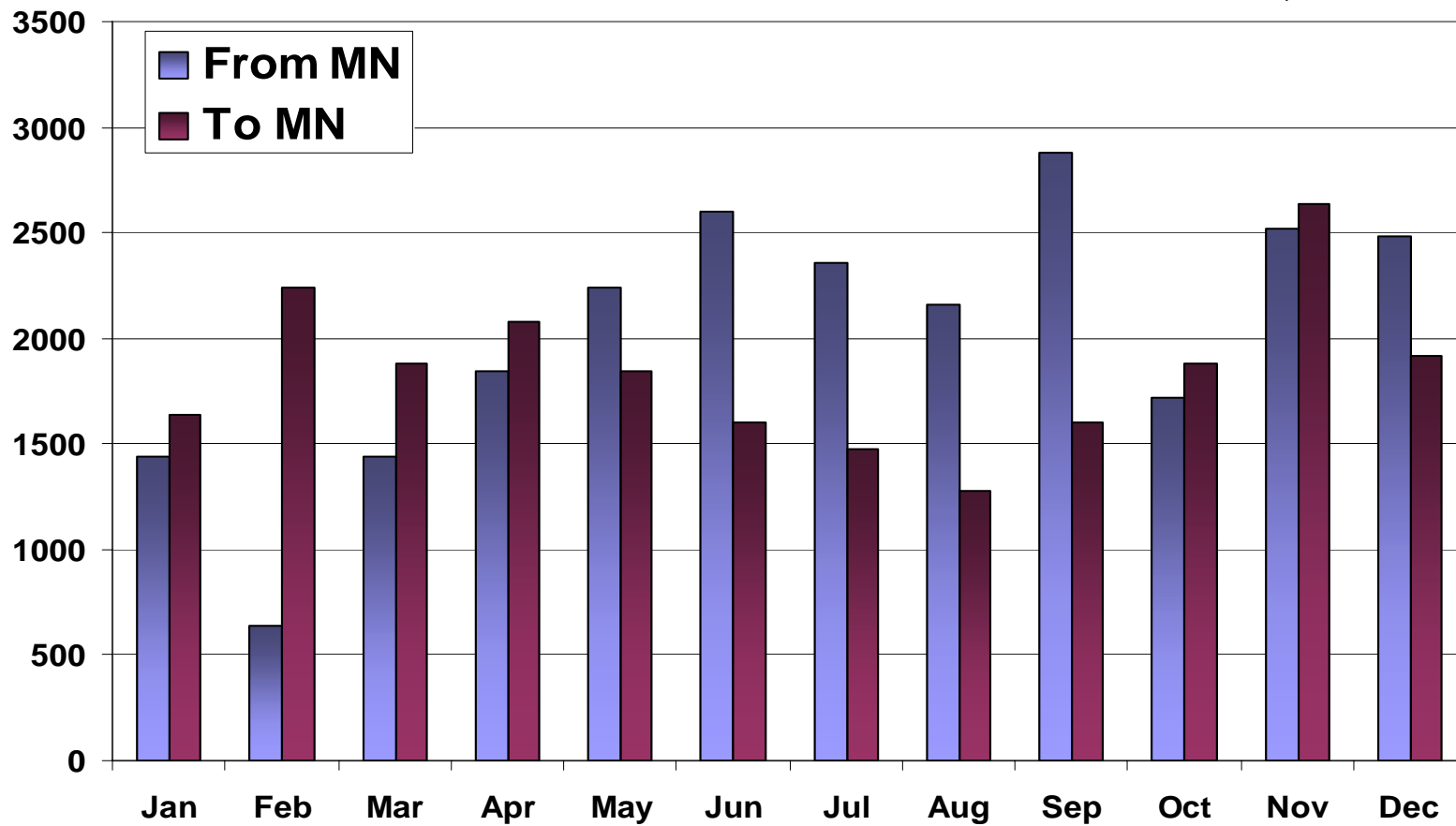
# Container Flow by Rail To MN From Destinations 2001



## Seasonal variability of Filled containers -all but STCC 42- To and From MN, 2002



## Seasonal variability in movement of empty containers -STCC 42- To and From MN, 2002



# Conclusion

Moving Containers on the Mississippi  
River System would be cost effective  
and is overdue

# Questions

# Thank-you

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