

# **An Economic Analysis of Snake River Barging and the Benefits of Dredging**

Presented to

**Pacific Northwest Waterways Association  
Annual Convention**

**October 4, 2013**

Eric Fruits, Ph.D.

Nathan Associates Inc.

503-928-6635

[efruits@nathaninc.com](mailto:efruits@nathaninc.com)

# Benefits of dredging exceed costs by at least \$5.4 million

Using the same methodology as American Rivers et al.

Adjusting for inflation and using correct cost of dredging and correct traffic volume

|                                     | <b>High Cost<br/>Low Benefit</b> | <b>Low Cost<br/>High Benefit</b> |
|-------------------------------------|----------------------------------|----------------------------------|
| Annual benefits of dredging         |                                  |                                  |
| Grain shippers                      | \$4,200,000                      | \$10,300,000                     |
| Container shippers                  | 800,000                          | 1,000,000                        |
| Cruise ships and associated tourism | 2,600,000                        | 5,300,000                        |
| Less: Costs of dredging, annualized | \$2,200,000                      | \$800,000                        |
| Net benefit of dredging             | <u>\$5,400,000</u>               | <u>\$15,800,000</u>              |

# Benefits of dredging exceed costs by at least \$5.4 million

Using the same methodology as American Rivers et al.

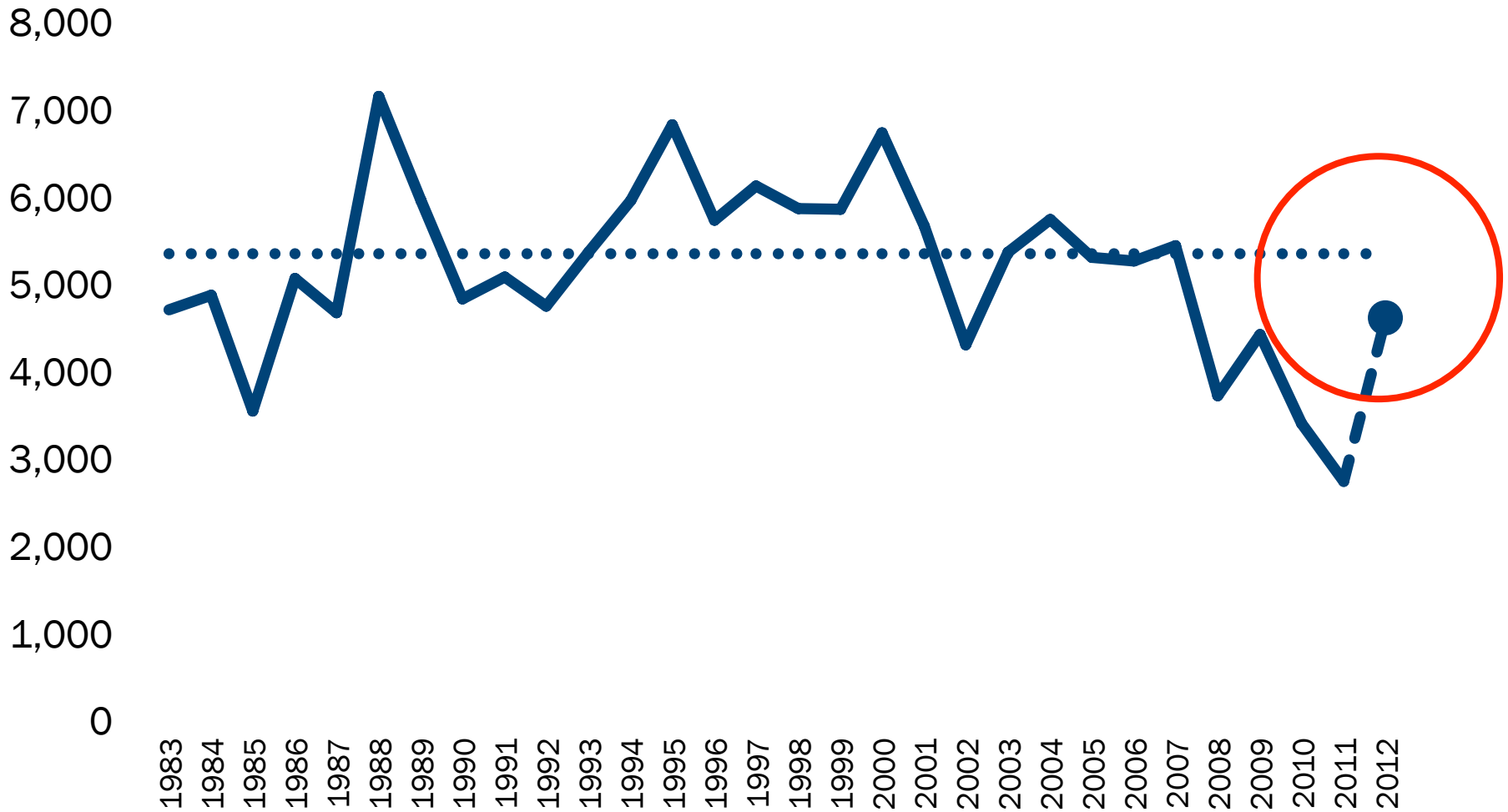
Adjusting for inflation and using correct cost of dredging and correct traffic volume

|                                     | <b>High Cost<br/>Low Benefit</b> | <b>Low Cost<br/>High Benefit</b> |
|-------------------------------------|----------------------------------|----------------------------------|
| Annual benefits of dredging         |                                  |                                  |
| Grain shippers                      | \$4,200,000                      | \$10,300,000                     |
| Container shippers                  | 800,000                          | 1,000,000                        |
| Cruise ships and associated tourism | 2,600,000                        | 5,300,000                        |
| Less: Costs of dredging, annualized | \$2,200,000                      | \$800,000                        |
| Net benefit of dredging             | \$5,400,000                      | \$15,800,000                     |

# Snake River traffic volume increased 50% in 2012

## Volume is approaching pre-recession levels

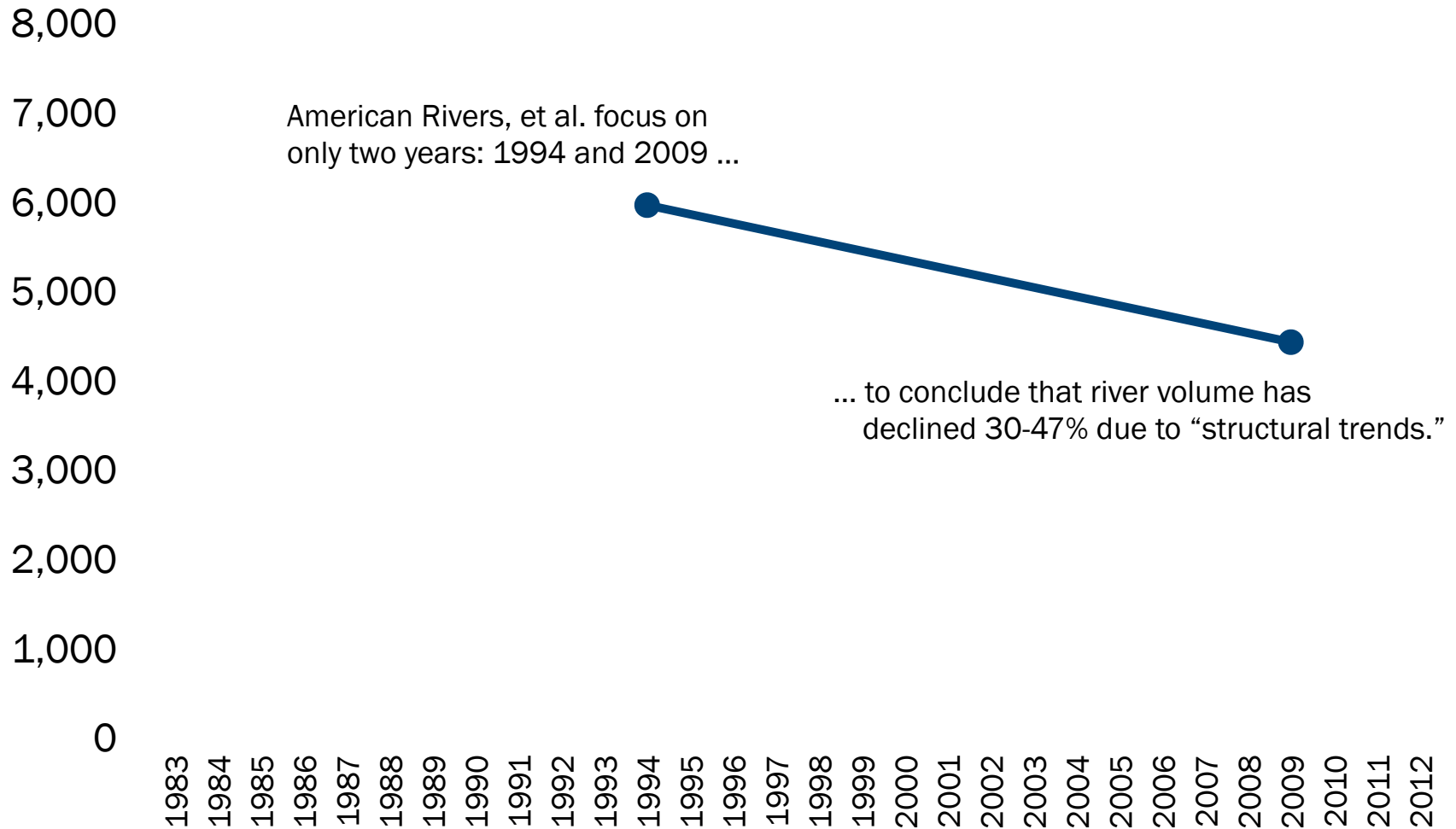
Thousand short tons, 1983-2012



Source: U.S. Army Corps of Engineers, Waterborne Commerce of the United States

# Snake River traffic according to American Rivers et al.

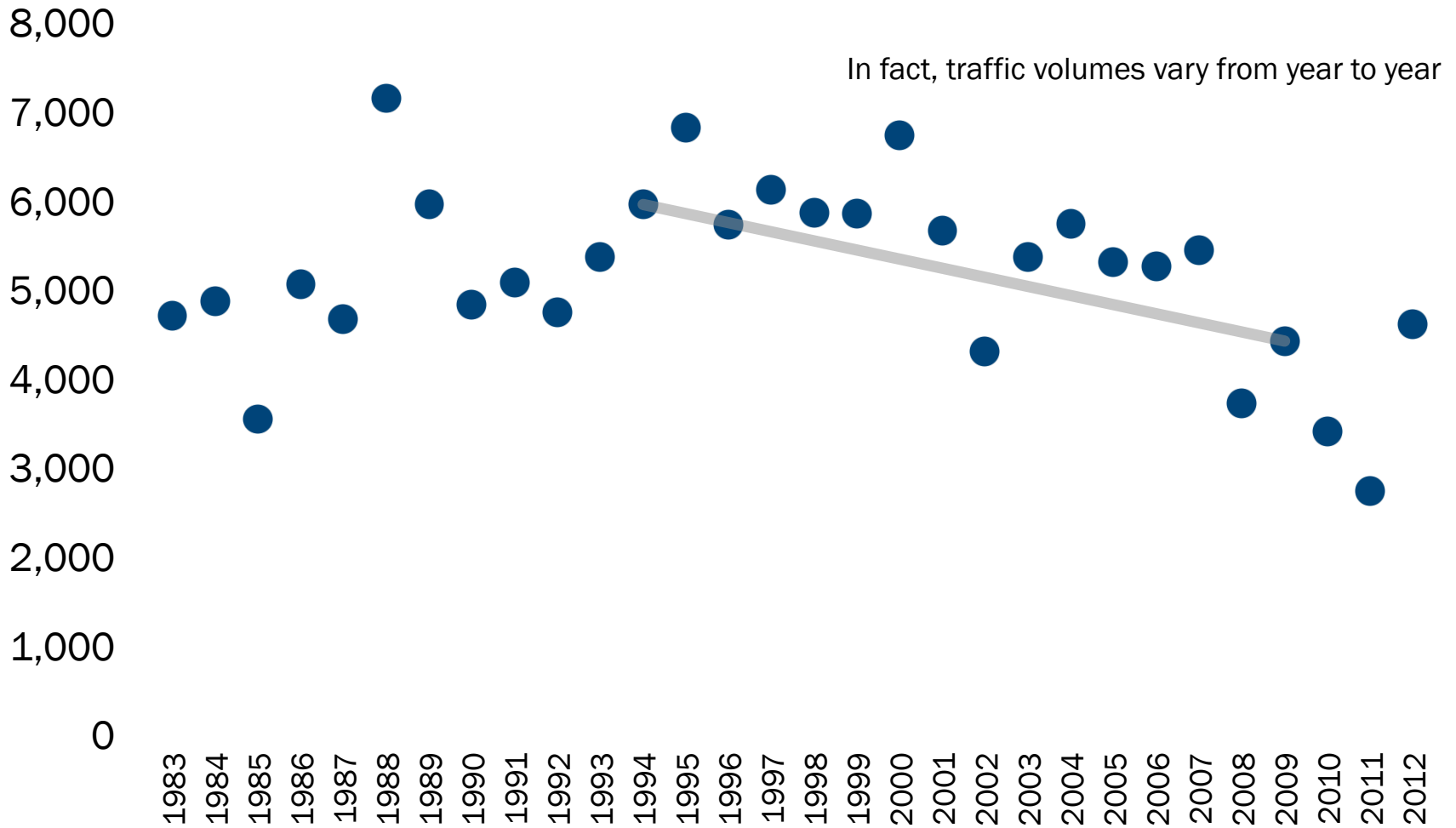
Thousand short tons, 1983–2012



Source: U.S. Army Corps of Engineers, Waterborne Commerce of the United States

# Actual Snake River freight traffic

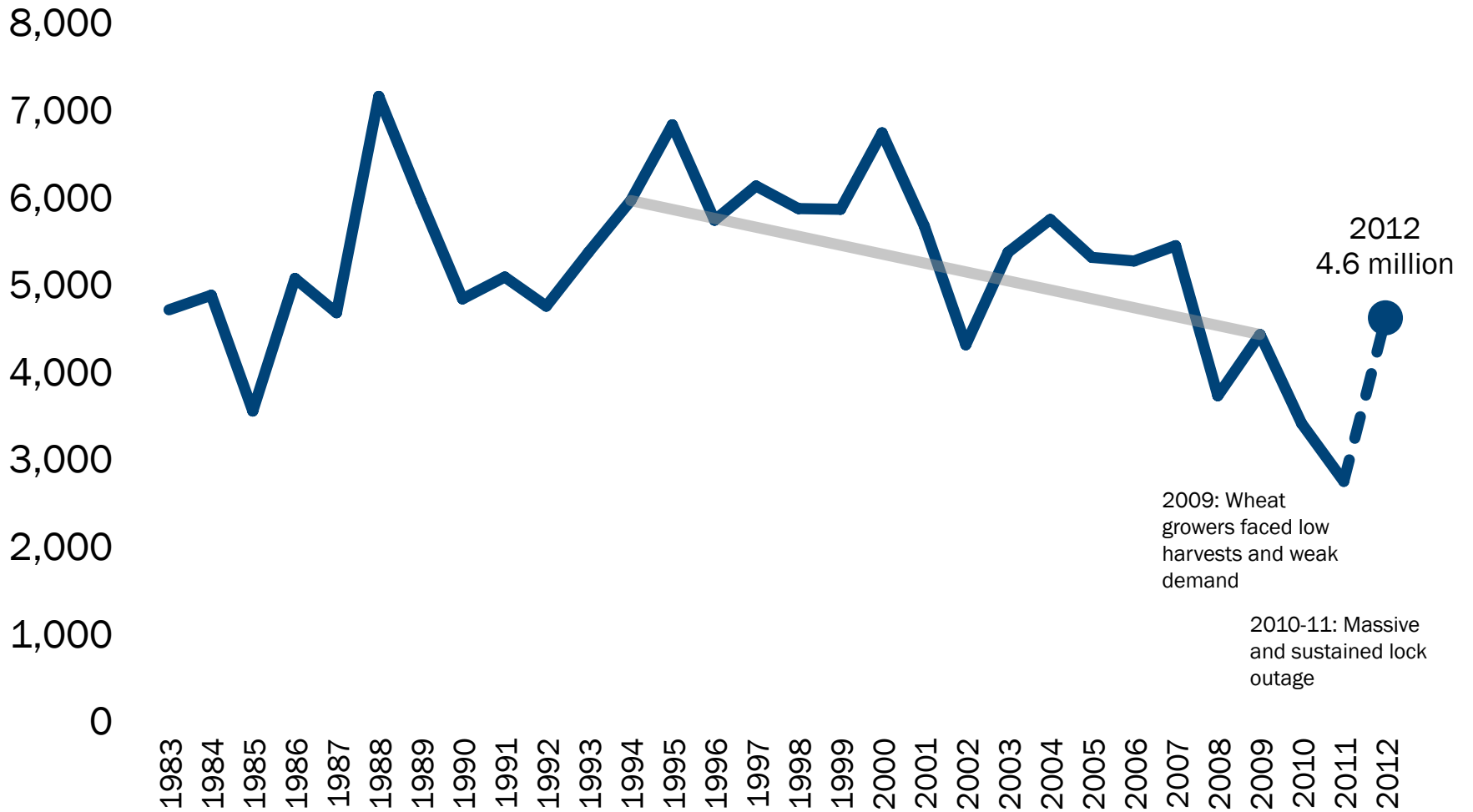
Thousand short tons, 1983-2012



Source: U.S. Army Corps of Engineers, Waterborne Commerce of the United States

# Actual Snake River freight traffic

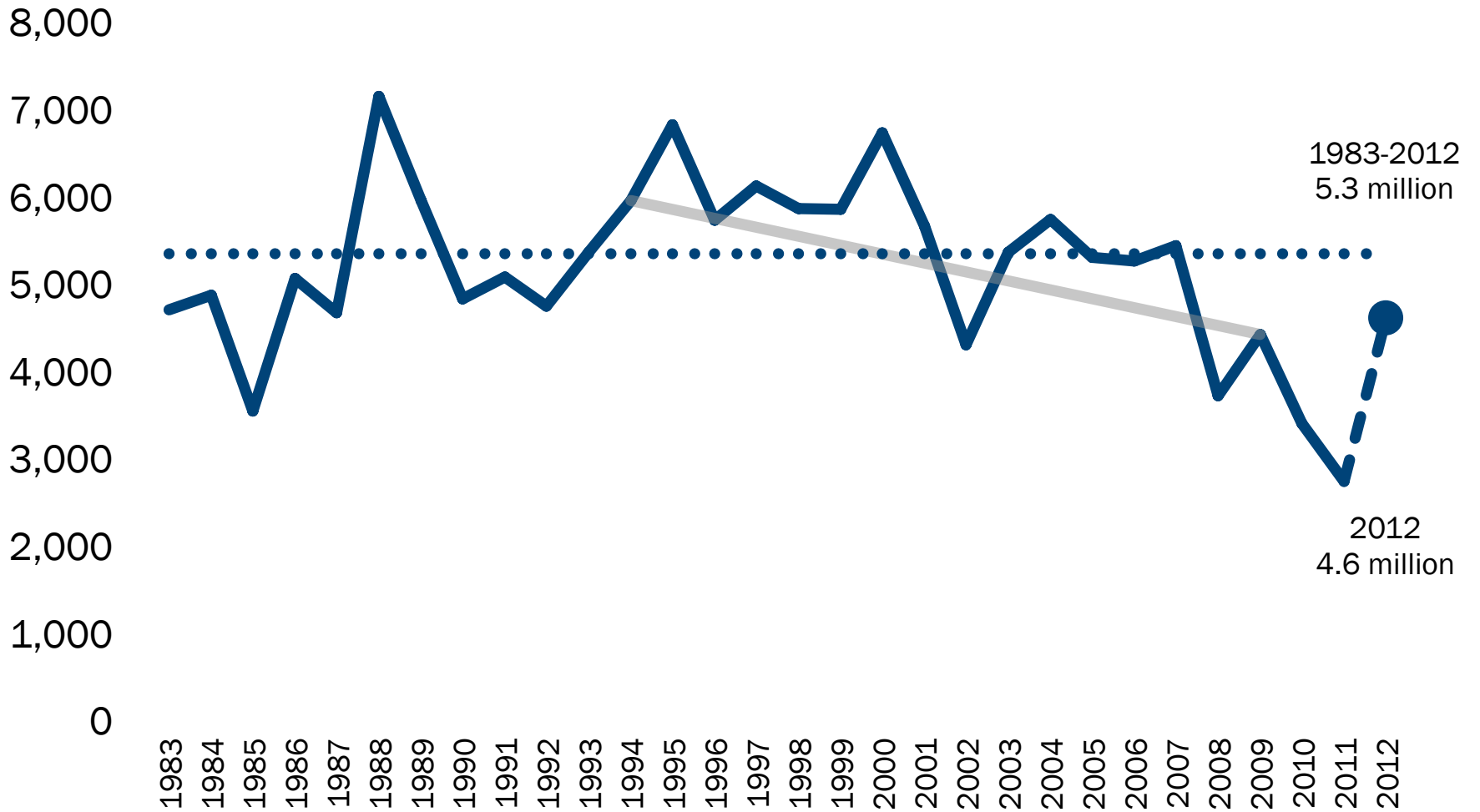
Thousand short tons, 1983-2012



Source: U.S. Army Corps of Engineers, Waterborne Commerce of the United States

# Actual Snake River freight traffic

Thousand short tons, 1983-2012



Source: U.S. Army Corps of Engineers, Waterborne Commerce of the United States



*The Journal of*  
**LAW &  
ECONOMICS**

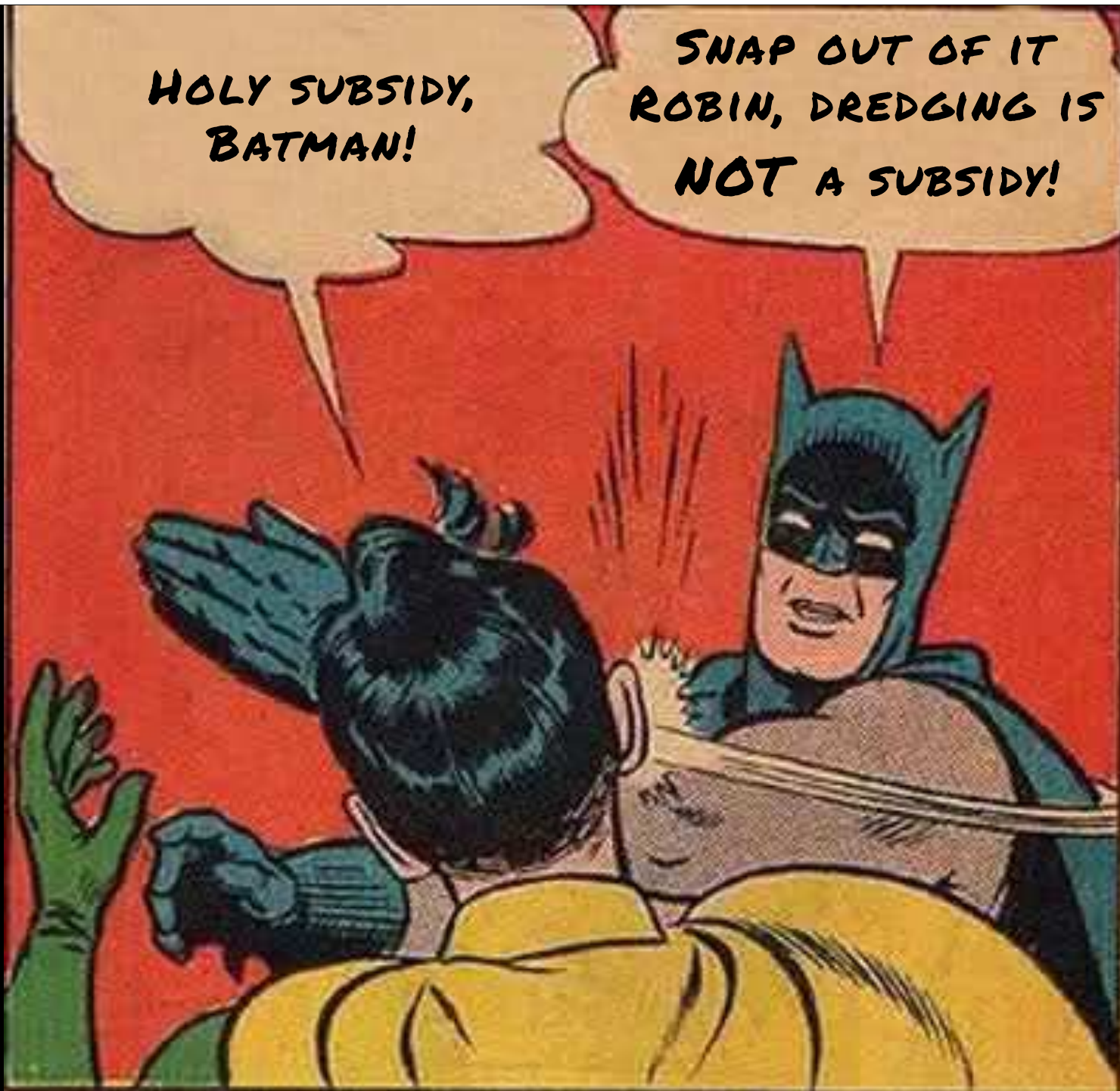
20%

*Reduction in rail prices*

The remaining coefficients in the supply equation indicate that intermodal competition supplied by truck-barge transportation reduces rail prices by some 20 percent, reflecting the benefits of additional sources of competition in grain transportation markets. They also indicate that shippers with larger elevator capacities at their origins are able to exert greater bargaining power to obtain lower rates.

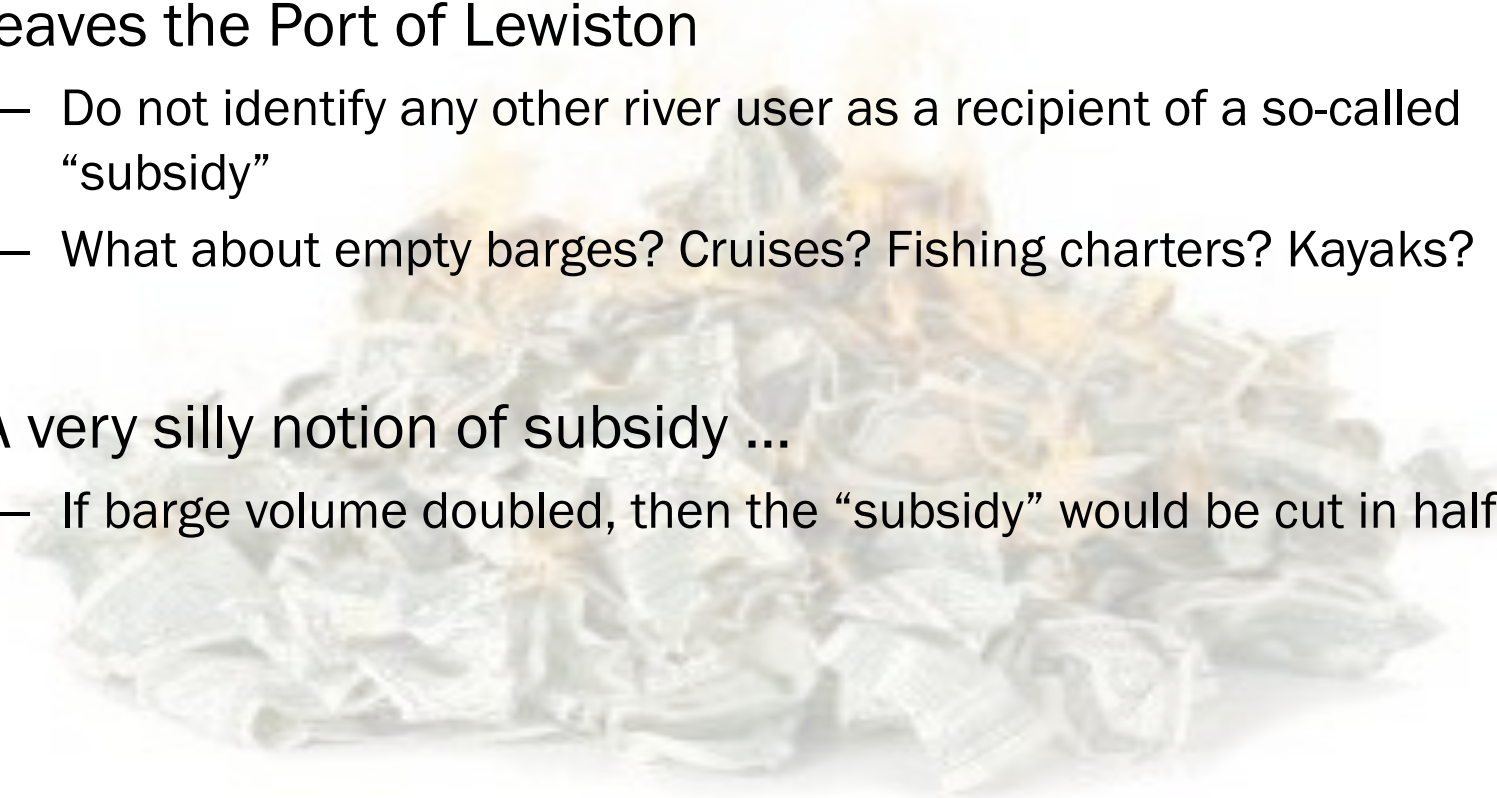
HOLY SUBSIDY,  
BATMAN!

SNAP OUT OF IT  
ROBIN, DREDGING IS  
NOT A SUBSIDY!



# The dredging-as-subsidy myth

- American Rivers et al. assert that costs of dredging amounts to a “subsidy” of \$11,000 for every full barge that leaves the Port of Lewiston
  - Do not identify any other river user as a recipient of a so-called “subsidy”
  - What about empty barges? Cruises? Fishing charters? Kayaks?
- A very silly notion of subsidy ...
  - If barge volume doubled, then the “subsidy” would be cut in half



# The dredging-as-subsidy myth

- In reality, barges, cruise ships, and recreational users all share a common benefit from dredging (as well as infrastructure maintenance and improvements)
- These benefits are transmitted throughout the economy:
  - Lower transportation costs for shippers
  - Increased revenues to growers
  - Lower prices for consumers
  - Increased employment opportunities at ports and surrounding communities

# Wrap-Up

“What did I just miss?”

- Benefits of dredging exceed costs by at least \$5.4 million
  - Benefits to grain shippers alone justify costs of dredging
  - Regional benefits associated with cruise business alone justify costs of dredging
- River volume is returning to pre-recession levels
  - Record low volumes in 2009–11 reflected unique circumstances
- Dredging provides a common benefit to a multitude of river users
  - Assigning all the benefit to one class of users is an economically unnatural act
  - Barge competition keeps rail rates in check