New Perspectives

Freight Transportation on the Lower Snake River

By Linwood Laughy

March 2019

50+ Years of Contention

Pacific Northwesterners have contentiously debated the issue of the four lower Snake River dams since before their construction in the 1960s and 70s.

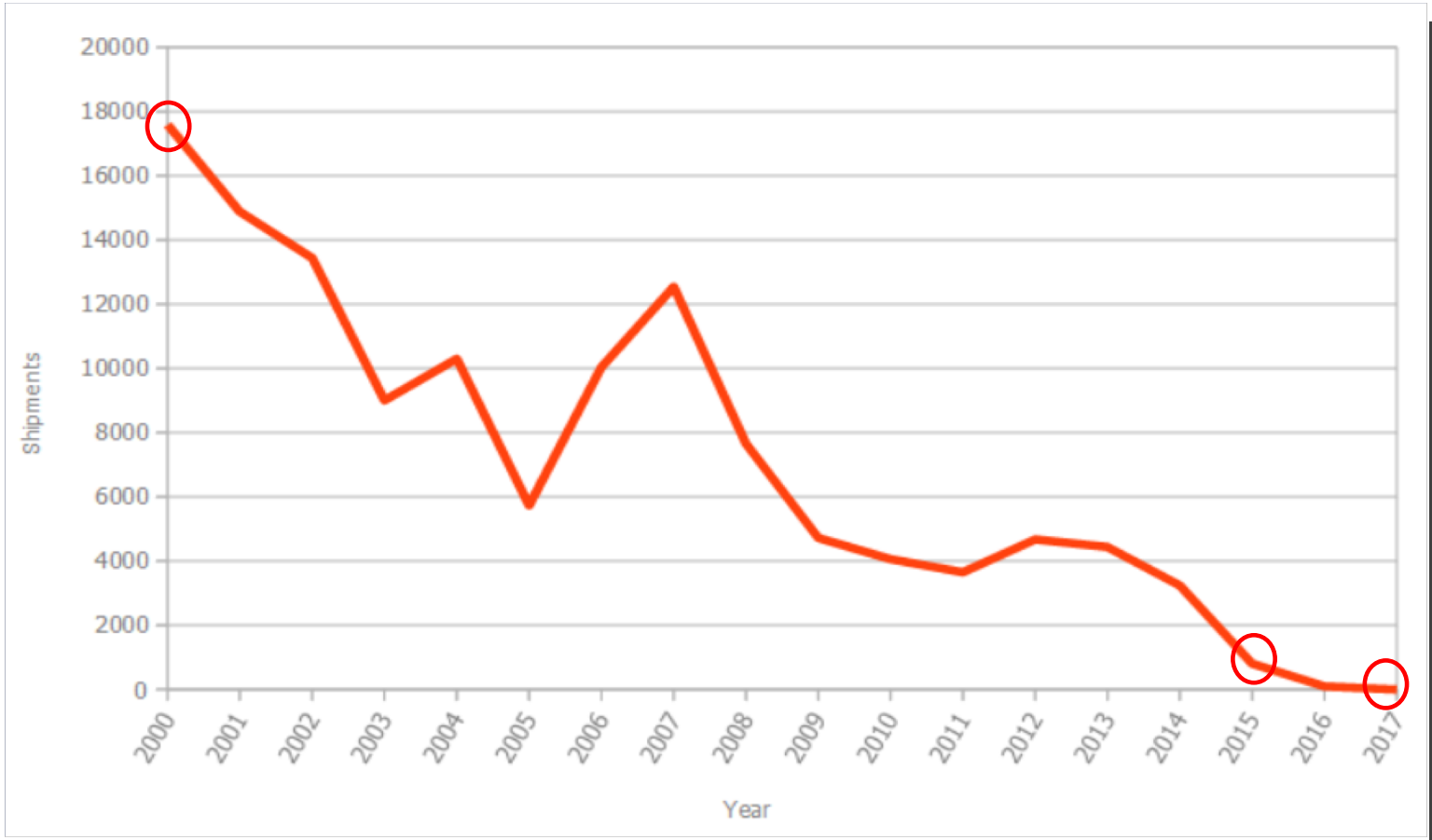
The looming extinction of Southern Resident Killer Whales and collapsing Snake River salmon and steelhead runs have recently brought this simmering issue to a boil.

Three major elements define the debate:

- Freight transportation
- Hydropower
- Snake River ESA-listed *threatened* and *endangered* salmon and steelhead.

This presentation focuses on **freight transportation**.

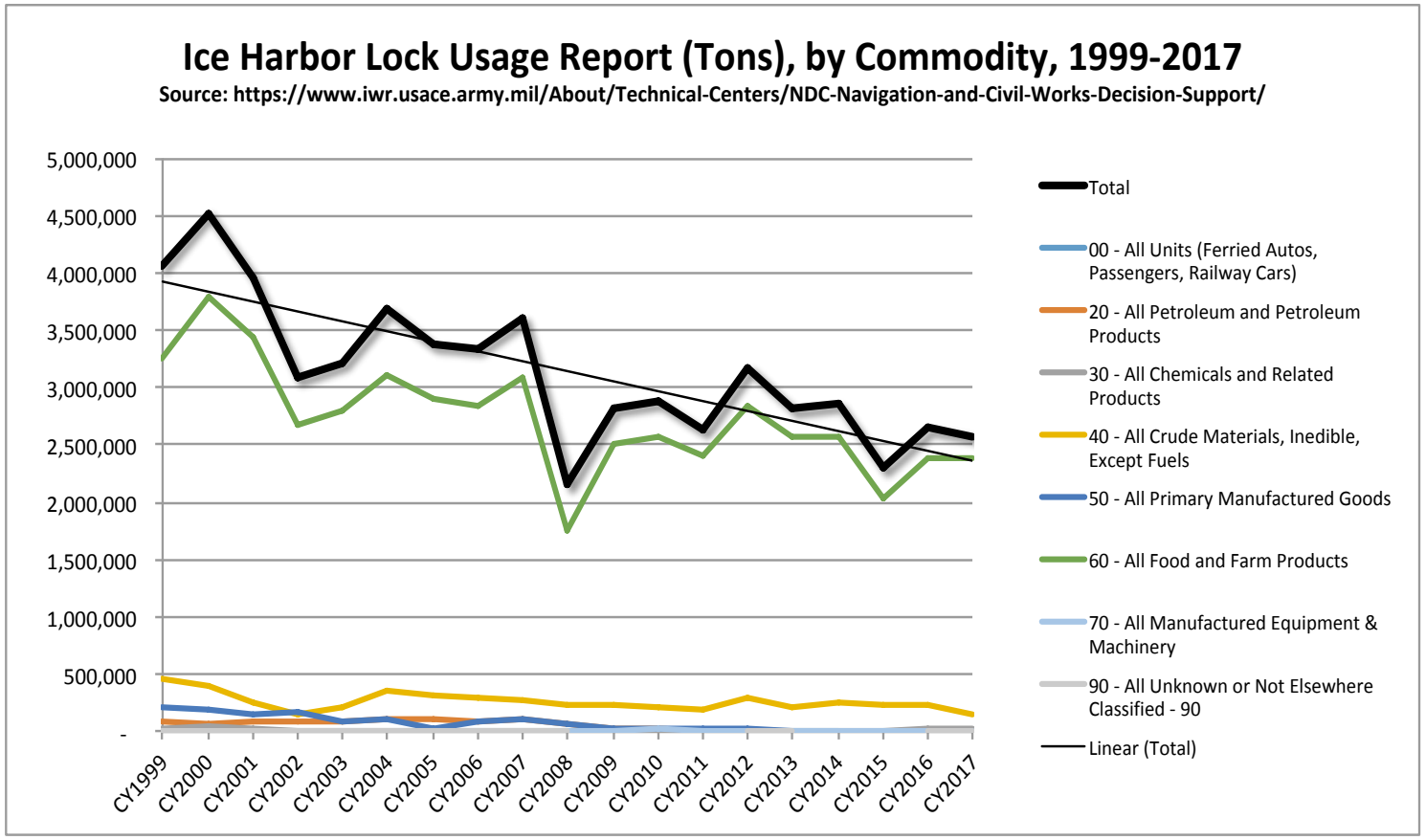
Beginning in 2000, freight volume transported on the Lower Snake River has declined dramatically as demonstrated in the following four graphs.



Snake River Container Shipments by TEU* 2000-2017

**TEU refers to a twenty-foot equivalent unit. Most containers are 40 ft. long, or 2 TEUs. The Port of Lewiston was the only container shipper on the lower Snake River.*

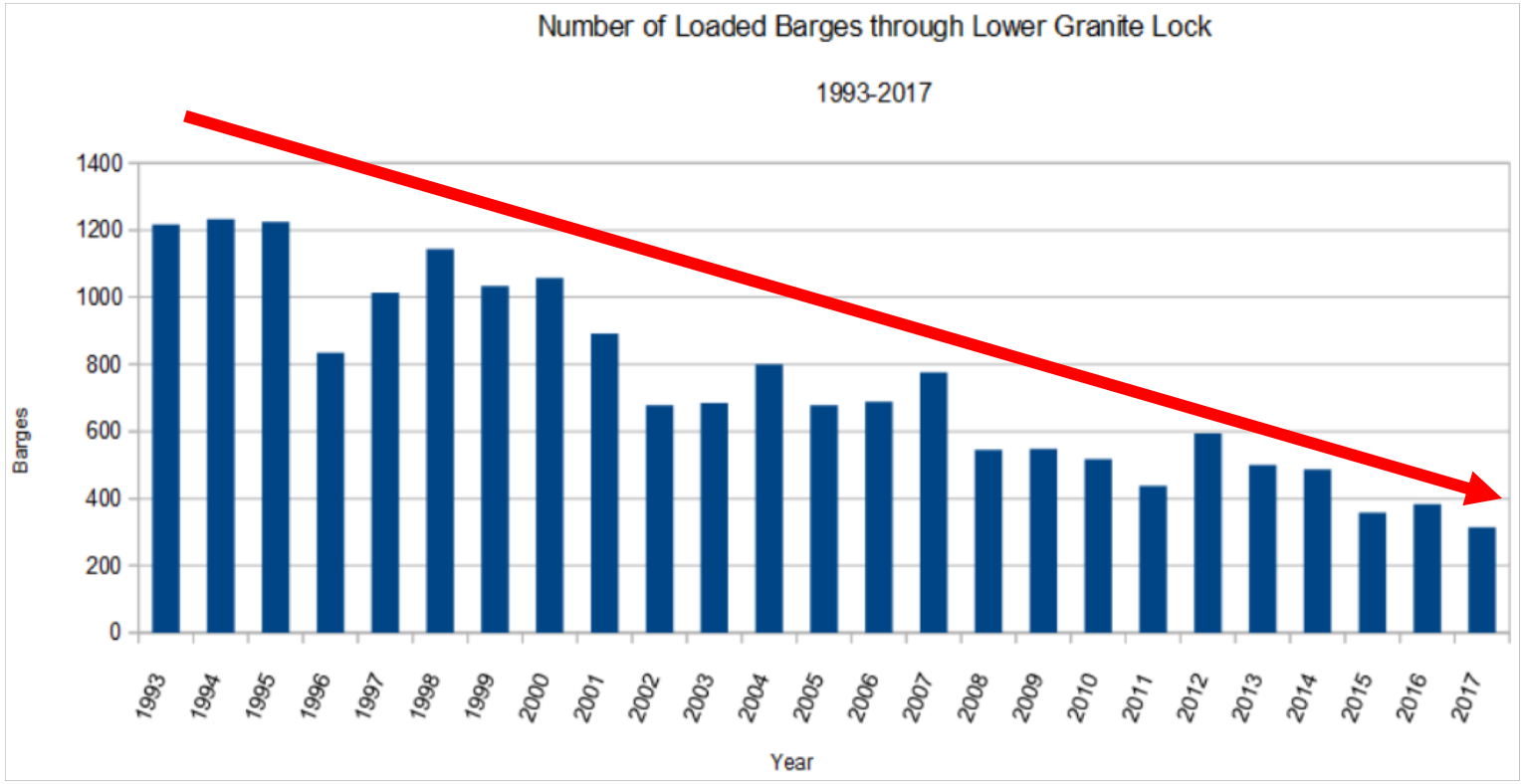
- In 2000, the Port of Lewiston shipped 17,590 TEUs of containerized freight.
- In 2017, container on barge shipping hit zero.
- This decline began long before the Port of Portland closed its container operations in 2015.
- The probability of container shipping returning to the Lower Snake River is very low.



20 Years of Freight Decline*

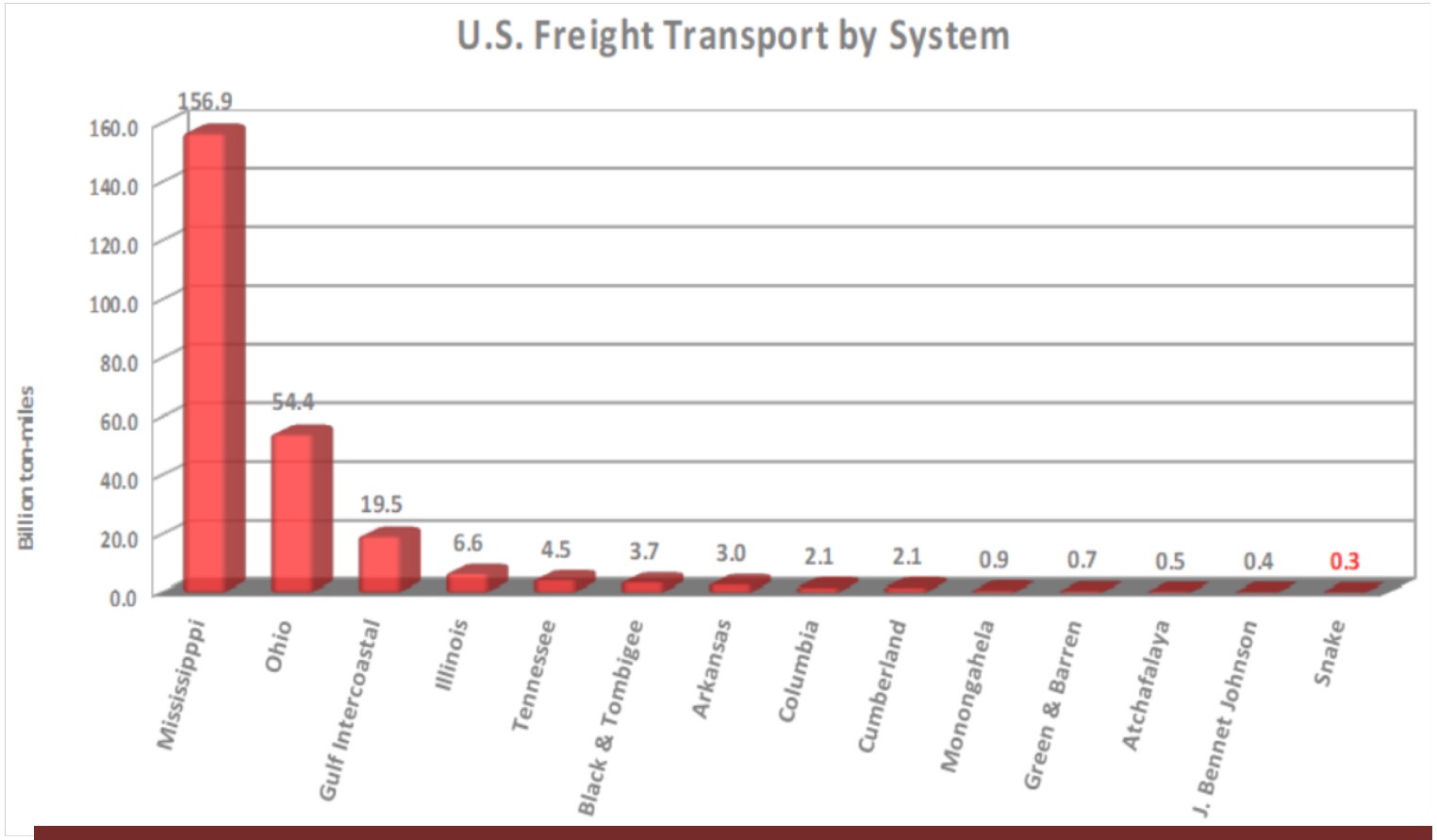
*Freight locked through Ice Harbor Dam provides the most accurate measure of freight volume on the Lower Snake River Project (the 4 dams and their respective reservoirs). Freight shipped to the Port of Pasco, notably petroleum, travels approximately two miles on the Snake River on the pool behind McNary Dam.

- Total freight volume over the past four years averages 2.5 million tons, a decline of 45% since 2000.
- The LSR no longer transports paper, pulp, petroleum, pulse (lentils, peas and soy beans), logs or lumber.
- Grain accounts for over 90% of all freight shipped on the Lower Snake River (green line).
- Grain shipping has experienced a similar rate of decline as **more grain growers shift to rail.**



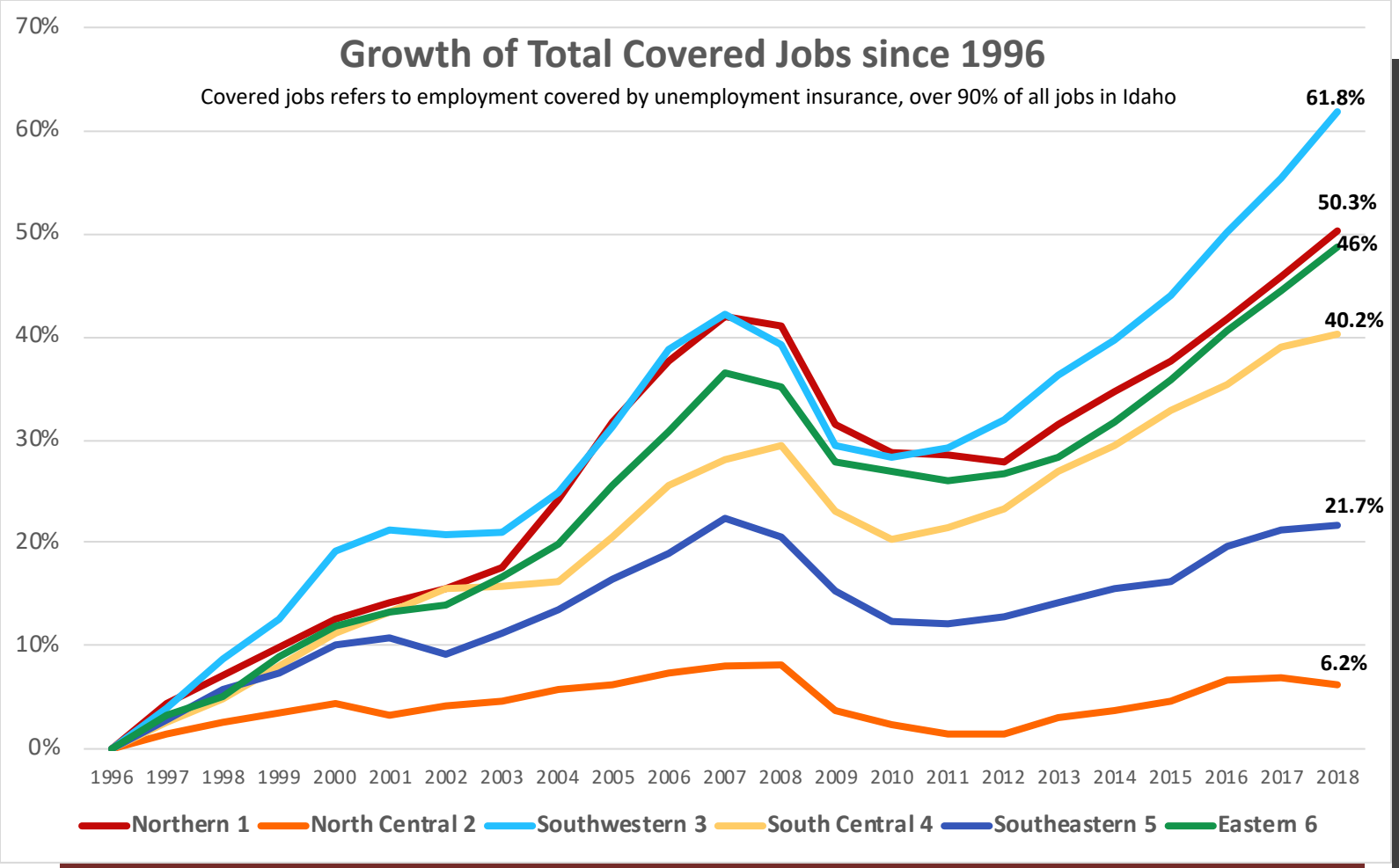
Number of Loaded Barges through Lower Granite Lock (1993-2017)

- All freight traffic to and from the Ports of Lewiston ID, Clarkston WA, and the Port of Wilma (Whitman County, WA) passes through the lock at Lower Granite Dam.
- In 1994, 1,233 loaded barges locked through Lower Granite.
- The number of loaded barges in 2017 was 314, a decline of 75%!
- The number of loaded barges through lower Granite has declined from an average of 3.4 barges per day to less than 1 barge per day.



Relative Importance of Rivers on U.S. Inland Waterways

- The Corps of Engineers classifies rivers by the number of ton-miles of freight a river carries each year. A ton-mile is defined as one ton of freight traveling one mile.
  - *High use* rivers transport 3+ billion ton-miles annually
  - *Moderate use* rivers transport 1-3 billion ton-miles
  - *Low use* rivers transport less than one billion ton-miles
- The Snake River transports the lowest volume of freight among 14 waterways in the Inland Waterways System.
- In the years 2014-2016, the annual average freight volume on the Lower Snake River totaled 0.28 billion ton-miles.
- If the volume of freight on the lower Snake River tripled, the river would still be classified as a *low use* river.



Region 2: The Poorest Economy in Idaho

Lewiston is the principal city in Region 2, north-central Idaho, represented by the **bottom orange line**.

Lewiston is Idaho's only port.

- In the 1950s and 60s, dam supporters claimed waterborne freight transportation would bring economic prosperity to north central Idaho.
- In its vision and mission statements the Port of Lewiston identifies job creation in Nez Perce County and beyond as a principal purpose.
- From 1996-2018 the State of Idaho experienced job growth of 47.1%. **Region 2 job growth was 6.2%.**
- During the same period four of Idaho's six regions experienced job growth from 6 to 10 times greater than Region 2.

LSR Commercial Navigation Costs include: operation and maintenance (O&M) of locks and dams, sediment management, fish and wildlife (F&W) mitigation, and major rehabilitation of an aging system.

During FY 2017-2019 the combined Corps of Engineers O&M budget for the dams and locks on the LSR totaled **$47.6 M**.

Since 2005 the cost of sediment management in the Lower Granite pool has exceeded **$31 M**.

The cost of the most recent dredging project (2014) exceeded **$10 M**, principally to benefit a single private corporation.

BPA's cost for F&W in the Columbia Basin, including the Snake River and its tributaries, averaged **$727 M** per year 2008-2018. Total F & W costs have surpassed **$15 billion**.

The LSR navigation channel is paved with taxpayer dollars.

- An economic analysis pegs the annual cost for the LSR freight transportation at a conservative estimate of $18 Million.
- Total freight volume on the LSR over the past three years averages 2.5 Million tons; a barge carries 3,500 tons.
- On top of each barge of grain traveling the Lower Snake River sits a taxpayer subsidy of at least $25,000.

* *Lower Snake River Navigation Study*, Rocky Mountain Econometrics September, 2015

Sources

Slide 1: Granite Point on the Snake River before Granite Dam was constructed, Kyle Laughlin Collection, The Spokesman Review
Salmon Dams, Jesse Tinsley, The Spokesman Review

Slide 2: Four Lower Snake River Dams, Molly Quinn, The Spokesman Review

Slide 3: Betsey Thoennes (Salmon and Orca)

Slide 4: Betsey Thoennes (Salmon)
Barge, Port of Lewiston, Idaho Rivers United
Dam, U.S. Army Corps of Engineers

Slide 5: Dam, U.S. Army Corps of Engineers

Slide 6: *Historical Reports – Container Shipments by TEUS*, Shipping Reports, Port of Lewiston
POL Container Shipment Volumes: Explanation, Shipping Reports, Port of Lewiston

Slide 7: *Public Lock Commodity Report Calendar Years 1999-2017*, US Army Corps of Engineers
POL Container Shipment Volumes: Explanation, Shipping Reports, Port of Lewiston
Historical Reports – Container Shipments by TEUS, Shipping Reports, Port of Lewiston

Slide 8: *Public Lock Usage Report Files, Calendar Years 1993-2017*, US Army Corps of Engineers

Slide 9: *Domestic Traffic for Selected U.S. Inland Waterways in 2017*, The U.S. Waterway System 2017 Transportation Facts & Information, U.S. Army Corps of Engineers
Inland Marine Transportation System Levels of Service Update, U.S. Army Corps of Engineers

Sources

Slide 10: *Covered Employment by Region*, Idaho Department of Labor
Mission Statement, Port of Lewiston
Workforce Trends, North Central Idaho, Idaho Department of Labor

Slide 11: A Crane on the Heidi Renee, Elizabeth L. Lovelady, U.S. Army Corps of Engineers
Letter from Elliot E. Mainzer, Administrator and Chief Executive Officer of Bonneville Power Administration
PNWA Supported Corps Projects – FY2017/FY2018/FY2019 At A Glance, Pacific Northwest Waterways Association
Grain Transportation after Partial Removal of the Four Lower Snake River Dams: An Affordable and Efficient Transition Plan, Dr. G Edward Dickey, Dams & Economics (Sept. 1999)
Bonneville Funding Cuts Hit Fish and Wildlife Program Projects, John Harrison, Northwest Power and Conservation Council
Lower Snake River Programmatic Management Plan, U.S. Army Corps of Engineers Walla Walla District
High Cost for Dredging Snake, Eric Barker, Lewiston Tribune (Dec. 10, 2015)

Slide 12: Snake River Tugboat and Barge, Nan Vance, Inland360
Lower Snake River Dam Navigation Study, Anthony Jones, Rocky Mountain Econometrics, pgs. 28-29
Barge Transportation, Agricultural Marketing Service, U.S. Department of Agriculture, pg. 395