Columbia Snake River System

Kristin Meira, Executive Director
Pacific Northwest Waterways Association (PNWA)
Pacific Northwest Waterways Association

- Non-profit trade association that advocates for federal policies & funding in support of regional economic development
- Over 145 members in WA, OR, and ID:
  - Public ports
  - Agriculture & forest products producers
  - Utilities
  - Towboaters & steamship operators
  - Pilots
  - Union labor

The image contains various logos and emblems representing various ports and organizations associated with the Pacific Northwest Waterways Association.
Columbia Snake River System

River System Overview
What Moves on the River?
Infrastructure Projects
Our Fish
Columbia River Treaty
Lower Columbia River

- 43’ channel extends 105 miles inland
- Over 56 million tons of cargo in 2018
- $21 billion in cargo value
- 40,000 jobs depend on the channel
Inland Columbia-Snake River System

- 14’ channel depth
- Extends 365 miles inland
- Eight locks
Virtual Tour: The Dalles navigation lock
Virtual Tour: The Dalles navigation lock
The Dalles navigation lock
- downstream gate -

The locks on the Columbia Snake River System have the highest lift in the United States.
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"There has to be a cultural reorientation of what this region is and wants to be. And that is part of the Pacific Rim. That's hard to sell to people who have spent their lives seeing themselves as the resource providers and breadbasket for the rest of the United States. But we've got to realize that our future lies more in Tokyo than it does in Atlanta or New York."

Denny Pease, Columbia/Snake River Marketing Group
February 1, 1987
Inc. Magazine
Third largest grain export gateway in the world

The West Coast destination for grain
Grain on the River

Seven major grain export facilities
MINERAL BULKS
#1 on West Coast

AUTO IMPORTS & EXPORTS
Major West Coast gateway

WOOD EXPORTS
#1 on West Coast
Other Columbia/Snake Cargo

INTRARIVER COMMODITIES

Petroleum products
  Containerized municipal solid waste
Oversized project cargo
  Wood chips
  Sand/gravel
Barging on the Columbia Snake River System

<table>
<thead>
<tr>
<th>Barge</th>
<th>4-Barge Tow</th>
<th>Jumbo Hopper Car</th>
<th>100 Car Unit Train</th>
<th>Large Semi-Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,500 tons</td>
<td>14,400 tons</td>
<td>100 ton</td>
<td>10,000 ton</td>
<td>26 ton</td>
</tr>
<tr>
<td>122,500 bushels</td>
<td>490,000 bushels</td>
<td>3,500 bushels</td>
<td>350,000 bushels</td>
<td>810 bushels</td>
</tr>
<tr>
<td>875,000 gallons</td>
<td>26,246 gallons</td>
<td>3,024,000 gallons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Barge = 35 Jumbo Hoppers = 134 Trucks

1 Tow = 1.4 100-Unit Trains = 538 Trucks

8,675,000 tons of cargo moved by barge in 2018

Equals

602 4-barge tows
- or -
86,750 rail cars
- or -
333,653 semi-trucks

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Columbia River Jetties
MAJOR REHAB – ON SCHEDULE

- Help maintain depth & orientation of the navigation channel
- Provide protection for ships entering and leaving the river
- Jetty breach could lead to a shoaled-in bar
Columbia River Channel Deepening COMPLETED

- 20 year project
- Completed November 2010
- 110 mile channel deepened to 43’
- 6K tons added capacity per ship
- $1-2M worth of cargo added per ship call

RESULT: Over $1B in new investment
Columbia Snake River Locks Major Repairs – 2010/11 COMPLETED

- New gates at 3 locks, major repairs at 3 others in one closure
- Ensures safe operation
Columbia Snake River Locks Major Repairs – 2016/17
COMPLETED

- Components and systems to be installed at six of the eight locks
- 14 weeks
- December 2016 – March 2017
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Sharing Our Rivers with Anadramous Fish
Fish Survival at the Dams

- Juvenile survival at the dams now averages **97%**
- NOAA: survival rates through the hydro system are approaching levels in rivers without dams
Regional Effort to Improve Habitat

Tributary and estuary habitat projects benefit salmon and steelhead

The Columbia River Basin habitat program is among the largest and most comprehensive programs in the nation. The B10p identifies specific habitat quality improvement targets for 56 populations of salmon and steelhead focused on alleviating key limiting factors and improving abundance. Habitat projects are implemented in the estuary and tributaries throughout the Columbia Basin. B10p and non-B10p habitat projects depicted here are underway in areas where ESA-listed fish covered by the B10p originate.

Click here for more
CRSO EIS – New Plan for Basin Dams

- Columbia River Systems Operations (CRSO) Environmental Impact Statement (EIS)
- Final EIS released July 31st
- ROD on track for September 30th
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COLUMBIA RIVER TREATY

- US-Canada Treaty ratified in 1964 for:
  - Coordinate flood control
  - Optimize hydroelectric generation

- Constructed four dams
  - Duncan – 1967 – Canada
  - Arrow/Keenleyside – 1968 – Canada
  - Mica – 1973 – Canada
  - Libby – 1975 – U.S.

- Cost sharing
- Shared energy benefits
- Framework for cooperation
- Some flexibility, with “notes” exchanged
COLUMBIA RIVER TREATY

Current drivers:
▪ Costs – Canadian Entitlement
▪ Predictability & costs – flood control agreement
▪ Ecosystem health / cross-border fish passage

Wild card:
▪ 10 year “notice” to terminate
▪ Opened September 2014, for 2024
▪ Neither country has issued termination notice yet

Wild card:
▪ 2024 “Called Upon” operations
▪ Lack of certainty with flood control agreement
COLUMBIA RIVER TREATY AND NAVIGATION

- Changes in flow volume, timing and duration could impact:
  - Sedimentation and shoaling
  - Safe movement of barge tows and deep draft vessels
  - Further degradation of pile dikes
  - Impacts to levees which protect port assets
NEGOTIATIONS ARE UNDERWAY …

- Formal negotiations began in May 2018
- Ten rounds of talks have been held
- Navigation & port interests continue to engage with U.S. State Dept. and Corps of Engineers