Columbia Snake River System

Projects & Partnerships



Columbia Snake River System

PNWA overview

River system overview

Project roundup

Snake River highlights



Pacific Northwest Waterways Association (PNWA) is:

- Non-profit trade association that advocates for federal policies & funding in support of regional economic development
- **Over 130 members in WA, OR, ID, and CA, including:**
 - Public ports and municipalities
 - Agriculture and forest products producers
 - Utilities
 - Towboaters, steamship operators, river pilots and bar pilots





PNWA's Northwest federal navigation projects



Deep draft navigation:

- Puget Sound
- Grays Harbor
- Lower Columbia River
- Oregon coast



Inland navigation:

Columbia Snake River System



Small ports:

- Puget Sound
- Lower Columbia River
- Oregon coast



Advocating for federal navigation and hydropower infrastructure



- **U.S. Army Corps of Engineers:**
 - Portland, Walla Walla, Seattle Districts
 - Northwestern Division
 - **USACE HQ**
 - ASA-CW in Pentagon



- Congress:
 - Northwest House & Senate delegations (local and DC)
 - House & Senate Energy & Water Appropriations Subcommittees
 - House Transportation & Infrastructure Committee (T&I); Senate Environment & Public Works Committee (EPW)



- White House:
 - Office of Management & Budget (OMB)
 - 🛋 CEQ



- Bonneville Power Administration (regional and DC)
- NOAA Fisheries, EPA, USFWS, USCG





Columbia Snake River System

PNWA overview

River system overview

Project roundup

Snake River highlights



Columbia Snake River System - The Vision



Our future was built ...





Protect from flooding



Vanport Flood – June 15, 1948



Get goods to market







Cost of electric generation









CO2 emissions from generation



While other regions struggle to replace polluting power plants...

Clean Northwest air



...We have the nation's cleanest energy, with less than half the carbon emissions of the rest of the country



Lower Columbia River Channel

- 43' channel extends 105 miles inland
- 46 million tons of international trade in 2012
- \$24 billion in cargo value
- 40,000 jobs depend on the channel









Inland Columbia/Snake River Channel



- 14' channel depth
- Extends 365 miles inland
- Eight locks













SOYBEANS







Columbia River tonnage - 2012



WOOD EXPORTS - #1 on West Coast



MINERAL BULKS - #1 on West Coast



AUTO IMPORTS - #2 on West Coast



Columbia Snake River System

PNWA overview

River system overview

Project roundup

Snake River highlights



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



Over \$3B in new or proposed investment



Lower Columbia River infrastructure planning

Working group meeting every two months to identify current and future needs:

- Maintenance dredging
- Anchorages
- Stern buoys
- More!





Stern buoy, Vancouver WA



Corps dredge *Essayons*

Jetties at the Mouth of the Columbia River

- Help maintain depth & orientation of the navigation channel
- Provide protection for ships entering and leaving the estuary
- Jetty breach would lead to a silted-in bar
- Jetties receive new start approval in FY2014, and \$11M in FY2016 budget (more possible...)







Columbia Snake River Locks Major Repairs – 2010/11 COMPLETED

- Significant federal investment
- New gates at 3 locks, major repairs at 3 others in one closure
- Ensures long term viability of the river system



ERWAYS

More investments coming this winter



Next extended closure:

- Approximately 14 weeks
- Mid-December 2016 to mid-March 2017



Little Goose lock

Columbia Snake River System

PNWA overview

River system overview

Project roundup

Snake River highlights



Snake River dams ... The Dredging

- Channel was dredged in 1999, 2006
- History of litigation ... navigation intervenes
- *DONE*! Dredging completed in late February 2015



Snake River dams ... The Claims

- Patagonia and others targeting Snake River dams
- Ads and "documentary" lump Snake River projects with dams which had no fish passage, no navigation, and almost no hydropower production
- Continue to cite flawed study to support their case





Snake River dams ... The Movie







Snake River dams ... The Flotilla



Snake River dams ... The Press

Judging river dredging plan by the numbers - The Lewiston Tribune: Opinion: editorial

Judging river dredging plan by the numbers

There are an awful lot of numbers in the Army Corps of Engineers plan to dredge the ports of

\$16 million - What the Army Corps spent preparing its response to the siltation filtering from the

10 years - How long environmental groups, including Idaho Rivers United, have been battling the

Lewiston and Clarkston and the shipping channel of the lower Snake and Clearwater rivers.

Marty Trillhaase | Posted: Thursday, January 24, 2013 12:00 am

Those numbers are coming at you at a fast clip. Can you keep up?

More than 1,000 pages - the length of the Army Corps' plan.

Five years - How long it took to prepare the plan.

salmon, steelhead and bull trout in the river.

Clearwater and collecting in the slackwater created by the four dams.

1/24/42

Dredaing costs rise to top of meeting - The Lewiston Tribune: Northwest: dredaing, spake river

Dredging costs rise to top of meeting

By ERIC BARKER of the Tribune | Posted: Friday, January 25, 2013 12:00 am

Concerns about the high cost of maintaining the shipping channel of the lower Snake River dominated an information meeting on a sediment management plan hosted by the U.S. Army Corps of Engineers Thursday in Lewiston.

Many in the audic continually keep Does it make se

dollars when bars

1/31/13 Barging is all in the numbers - The Lewiston Tribune: Northwest: u.s. armycorps of engineers, port of lewiston, snake river,

Barging is all in the numbers

Because of their capacity to carry huge volumes of comme

than both trucks and rail, according to industry representati

systems, a typical barge can carry the equivalent of 134 tru

"Any way you slice it barging comes out on top," said Krist

By ERIC BARKER of the Tribune | Posted: Saturday, January 26, 2013 12:00 am

facing multi-trill Proponents of barging say river transportation affords efficiencies that provide benefits to shippers tens of millions (and the general public, but they are sometimes reluctant to provide detailed data to support their claims

1/25/13

The public debate the best way to sa River and its trib higher levees as a breaching. But th appear intent on l from people con

Northwest Waterways Association in Portland, Ore. "You c especially bulk goods that would require numerous units tr But supporters of However, the release of a draft U.S. Army Corps of Engine Lewiston-Clarks for dredging next winter has some people asking if the ben-"We need the dre maintaining the lower Snake River's shipping channel. Chie just need to get it who would like the dams that make barging possible to be t migrate to and from the ocean. When normal riv drops out of the ! Linwood Laughy, a citizen activist from Kooskia who battle recreation sites. recently put pen to paper and figured dredging will cost as :

or about \$18,000 for each barge that leaves the Port of Lev The corps recent projections on past dredging costs and recent shipping figu manage sediment discussion of costs or benefits. and a width of 25 if future sedimer

has annual maintenance."

Meira said Laughy's analysis failed to account for several b 'There are avoided surface transportation maintenance cost other kinds of producers in the region who have access to 1

The plan does no barge transportat Kamiah resident

sites or increases

Intribuce convocitivest/artic

Laughy didn't include the Port of Clarkston in his analysis 1 wasn't shipping commodities. But the Lewis-Clark Termina Wanda Keefer said 42,857 tons of grain, or a little more th port in 2012. She didn't know if that was in addition to the ! the Port of Lewiston.

in foreign markets that would not exist," she said. "The bens

infrastructure project and I will say any federal infrastructu

Keefer also said the terminal set a record for grain shipme

Intribune.com/horthwest/article_c90cae32-f6ef-5204-89be-1051d1966297.html?mode=print

Don't take Linwood Laughy's word for it - The Lewiston Tribune: Opinion: editorial

Don't take Linwood Laughy's word for it

Marty Trillhaase | Posted: Thursday, January 31, 2013 12:00 am

Dredging the Ports of Lewiston and Clarkston as well as the shipping channel of the lower Snake River may not be worth the money.

So says Linwood Laughy of Kooskia. The megaload opponent worked his way through the U.S. Army Corps of Engineers 20 was plan to maintain shinning lange to I aviston and Clarkston and produced a "bridge to nowher 1/25/13 Analysis questions economics of barging - The Lewiston Tribune: Northwest

Analysis questions economics of barging

By ERIC BARKER of the Tribune | Posted: Monday, January 21, 2013 12:00 am

That works out to A critic of the Port of Lewiston says U.S. taxpayers are shelling out \$13,000 to \$18,000 for every Not so, complain barge that leaves the port and collectively subsidizing farmers who use the river transportation system about \$2 million per year.

Including the \$16

Linwood says.

ghy, a Kooskia-area resident who was one of the leading opponents of megaload traffic vay 12, said the cost of keeping the river's shipping channel clear of sand and other

uge compared to the amount of goods transported to downriver destinations like the Port

layman when it comes to economic analysis, Laughy nonetheless said his numbers are 1 shocking.

nit I was shocked when I first ran the data." he said. "I thought, 'Nah, there is a decimal t I kept coming up with the same answer and I thought, 'Oh my God, this is pretty damn

pting or rejecting his analysis, which neither has seen, Port of Lewiston manager David and U.S. Army Corps of Engineers spokesman Bruce Henrickson defended the river 1 system.

rges each loaded with 100,000 bushels of wheat or barley leave the Lewis Clark te Port of Lewiston each year, Doeringsfeld said. Based on the current price of wheat o just shy of \$1 million per barge, he said.

20 million just in agriculture exports leaving the Port of Lewiston. The cost of barging aybe one-third of the cost of rail so that is a significant saving to the area ag community he Columbia-Snake system and that is just simple math."

aid one barge is equal to about 35 railroad cars and 134 tractor-trailers, saving both wear e road and reducing the number of fossil fuels burned and the amount of pollution the atmosphere.

to serve the public and help goods move up and down the river, and the river 1 system does have its efficiencies," Henrickson said.

this analysis by looking at the recent release of the corps' draft Programmatic Sediment Plan, a 20-year outline for dealing with sediment accumulation in lower Snake River he plan calls for long-term actions and for short-term measures such as dredging more cubic yards of sediment from the channel as soon as next winter.

Intribune.com/northwest/article_d3a86e10-7ac8-58/4-a975-58ec3b3d87bd.html?mode=prin

1/3

Army Corps about the dredging issue. Churning up a plume of silt from the riverbed can choke 20 years - How long the Army Corps plans to dredge the river under this new plan. 14 feet - The depth required for barge traffic to easily navigate the river channel.

12 feet - The depth at some parts of the shipping lane. 3 feet - How much higher Lewiston's levee system might be raised as an alternative to dredging. 3,000 cubic yards - The amount of sediment the corps will dredge from the Port of Lewiston. 10,000 cubic yards - The amount of sediment the corps wants to dredge from the Port of Clarkston. 407,000 cubic yards - The amount of sediment the corps expects to dredge from the shipping channel. \$2.3 million - The amount Lewiston port critic Linwood Laughy figures dredging will cost every year.

\$3.2 million - Laughy's yearly cost estimate once the report's \$16 million price tag is amortized. \$38 million - What Laughy says taxpayers will spend keeping the shipping lane open for the next 10 vears.

587,177 tons - The amount of grain and other freight the Port of Lewiston shipped downriver in 2011. \$5.40 - The amount Laughy says taxpayer-supported dredging subsidizes each ton shipped out of the Port of Lewiston downriver.

A lot of numbers and most of them are huge.

Nowhere are two smaller figures:

Snake River dams ... and the Orcas?

- Environmentalist Tweets and Change.org petitions attempting to link Snake River dams and Orca populations
- Claim breaching the Snake River dams will help the Southern Resident Killer Whale pods
- NMFS confirmed that salmon numbers are high enough to support Orca populations
- Historic orca declines were due to now-outlawed live capture for aquariums in the 1960's and 1970's

change.org 15 Start o petitori 11 Browse D Search

1 Login

Petitioning President Banack Obama and 4 others

Stand with us and support removing the four lower Snake River dams to save the Southern Resident Killer Whales from being dammed to extinction.

Southern Resident Killer Whale Salmon Initiative



The endangered Southern Resident Killer Whales support a multivillion doilar tourist economy in Pugel Sound. They are perifously close to becoming too small a population to survive and reproduce, primatily due to tack of food. They are slowly starving. There are only 77 Southern Resident orcas remulning today. For more than two years, no call has survived. In 2014 alone, the Southern Resident population has declined by 5%, with the recent death of J32, Rhapsody, and her call. At 16 years oid, J32 was just conting into her own and was among the most likely females to contribute to the killer whales: recovery for years to come. With her death, another J Pol matriline, the J10's, will die out. Rhapsody's death embodies the plight of the Southern Resident Killer Whates.

Chinook salmon are the killer whales' primary food. Chinook salmon runs originating in the Columbia/Scake River watershed are the singular most important food source for the killer whales' survival. Chinook salmon are endancered species themselves. There are not enough

	7.33	I resided	pa latera y	10
First objects				
Liebnumi				
Error				
United State	6			
Sheet addres	10			
Zip Lüde				
(thingoing t	ecilie	0.000	inii0)	
u f Starra	Ith Face	book files	101	
	Sit			
	2.4	11 A		

Sign this petition

In signing, visis anotest Change orgis <u>territo pri sensor</u> mit grindrog pologi, and appentite receive doctorional made advant campages and change orgi "riso cammoducates at any time.

Snake River dams ... The Facts



Glines Canyon Dam

WATERWAYS ASSOCIATION






Lower Monumental Dam – adult fish ladder











3,253,000 tons of cargo moved on the Snake River in 2012 by barge

226 4-barge tows - or -32,530 rail cars - or -112,000 semi-trucks



The total potential energy output of the Snake River dams provides enough clean, renewable, carbon free energy to power 1.87 million homes



Federal Columbia River Power System (FCRPS) Biological Opinion ("The BiOp")

- 13 fish runs listed under ESA
- BiOps in 1995, 2000, 2005 all remanded
- May 2008 new collaborative BiOp released
- May 2010 Supplemental BiOp w/AMIP released supported by Obama administration, three states, six Tribes, many stakeholders
- August 2011 Judge Redden orders "partial" remand
- Jan. 2014 Supplemental BiOp released
- 2015 filings and oral arguments before Judge Simon
- PNWA's "Inland Ports & Navigation Group" (IPNG) intervener status



- Growing emphasis on collaboration to help salmon, rather than litigation
- Current plan for salmon:
 - Supported by three states Washington, Idaho, Montana
 - Supported by seven tribal partners
 - Supported by navigation, utility, and irrigation stakeholders







Tributary habitat efforts – 2005-2015

Protected over 352,000 acre feet of water

Opened access to over 2,847 miles of habitat

Restored 308 miles of stream habitat complexity

Bonneville Power Administration



Estuary habitat efforts - 2007-2015

Protected or restored over 6,440 acres of estuary floodplain by purchase or lease, including 1,182 acres in 2014

Restored or enhanced over 40 miles of estuarine tidal channels



- Juvenile survival at the dams now averages <u>97</u>%
- NOAA Fisheries responsible for protection of listed salmon says that survival rates through the hydro system are approaching levels in rivers without dams





Bonneville Power Administration

- Today, there are more fish in the Columbia River than at any time since the first dam was built at Bonneville in 1938
- In 2014, over 2.5 million adult salmon and steelhead passed Bonneville Dam, setting new overall record levels since counts began in 1938. Of the fish returning in 2014, the sockeye, fall chinook, and coho were record or near-record runs, including the Snake River stocks.





Bonneville Power Administration

Snake River dams ... Resources

- PNWA working to provide accurate information to decision makers and the public
- I earn more at: www.snakeriverdams.com https://www.facebook.com/snakeriverdams



Snake River Dams A multi-purpose system benefiting the Northwest hade like dash productions spektor becalled to our open. They keep our local scoring thing and fells reads take by providing landsening with of believe, pricely transportation to more provident International markets. The speec size help present our controlment. Despise has the transmoster entertime of all managements modes and dama provine clean, sevenitie hydrogoner to beg fundament former and banksman nave soid intaks

Clean, consumitive hypotheses and

Sale, all'alors conquitton

Section a first with a point of

in 102 marks, the party metaness

phase delation, lengo

transmission emilia mananili

ington the shirt of all halos.

the state of the last and

Defices know that SPA of factories spectrally is provided In manufacture 7 (https://www.able. any and the site of the Hairs are label. Card of Alle \$4.5

Decaid runds on of South States station was showing to find an Los will'd, we say he begind editri area santaja was bila 1991, Dalkhati Grape cani Many Rora Brown Addresses duri na mandali a

Finderstand and address



the Series How Davis process has being the set for Technical and the number. Step out table for desir you toget by the dools

On the Horizon ... Columbia River Treaty

- US-Canada Treaty ratified in 1964 for:
 - Flood control
 - Firm energy
- Ten year "notice" commenced in Sept. 2014
- New concerns since 1964:
 - Fish operations
 - Ecosystem health
 - Climate change
 - Cost
- PNWA engaging with U.S. State Dept. and Corps
- Navigation highlighted in December 2013 regional recommendation







Opportunities to Stay Informed

Website: www.pnwa.net



Pacific Northwest Waterways Association

Provided in TROL Philits has speed over 75 years successfully envirolating for holess footing of our segment resequences and public protects in reprove the assessment influence; and elementerized in the statement of the element of the contrast to contain the U.S. Encourses. Indexes against and regiment matters on publics instantiation to transportation strengt, these and eccoursemental interes an index of contrast, public utilities, recording the two publics instantiation.

Het Topics

PIMA Annual Meeting Registration is non-open for our 2011 scient. For more information, slightness, 1s REVP for Greek Variation's references calendation, pinkes click core.

And an all the Mewith of the Columbia River PROFA is the load argumention privating for the Columbia River jetters. We sharely support funding to continued jette report in PC2011

P12012 Every & Water Appropriations

On Patryany 14, 2011 the Orkana hammerikalian rescand that Pr2012 balgat. Plotship owe of footboald carrigation bandring results may be accessed from the observation.

Cleans Administration aphrates the estimate D/Ce

On Way 20, 2013 the Administration subwitted a Sugarmental BiOg for the FCRPS. Read P1000's field sheet, at log at the source understanding on to very all of the Sourcestia.

Colonia River Charrel Despring - Project is now complete

Columbia Rise: channel despected provided an additional 520.6 million in Sanding to complete the project in timester 2013. Prive usars are already climits the database meaned. View out grade related to data have been when the more information

2011 Estended has a chance information

The Calumbia State New Epidem officially respond to March 28 of Figer, after a planned stream beginning December 10, 2010. Read Perform processions at place between the source official stream of the source of th

Section 204 PHDIs successfully worked with Deepens Is altion a toy you Antennas for Section 214 and conflicten to physicale for permanence in 2019. For these altimation, likes for factors 214 for short or tog to to an 2020 contange.

Connect Us: Netpelal Links Decores in Member

Kristin Meira Executive Director <u>kristin.meira@pnwa.net</u>

Nor'wester newsletter



industrised projects in the General leveragebine (stocket, Construction, and Operations 6. Hartensone: (SAR) accounts, This is the same approach use sum in the (stocket MR, Saragh them are some differences in the arressing properties) and same additional guarding to the Senare bill Following are the additional functing amounts proposed by the Senare

Additional locatigations: \$36,535,582 Additional conduction: \$193,000 (00) Additional CMAP, \$143,000,000

