

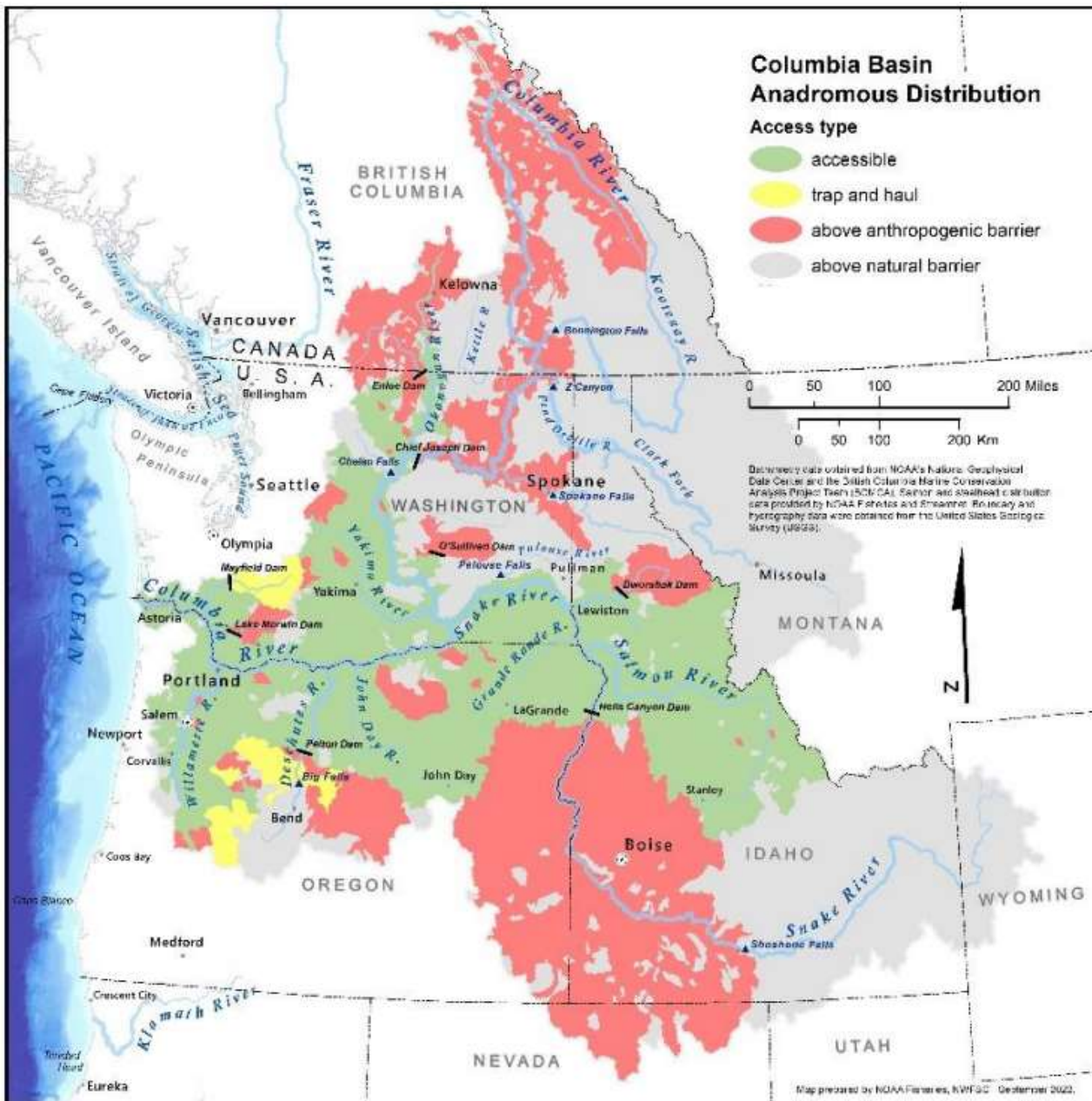
# What If?

## Mitigation-Funded Dam Removal in the Columbia River Basin

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Columbia River Estuary  
Conference (CREC)

May 18, 2023



# Ranked Limiting Factors - Interior Salmon & Steelhead

Ranking of 1 indicates highest magnitude of impact. Shading indicates stocks from the same geographic area.<sup>14</sup>

Stock	Tributary Habitat	Estuary Habitat	Hydrosystem (Direct & Indirect)	Blocked	Predation	Fisheries	Hatcheries
Snake River Spring/Summer Chinook	2	5	1	3	4	7	6
Snake River Steelhead	2	5	1	4	3	6	7
Upper Columbia River Fall Chinook	4	3	1	7	5	2	6
Upper Columbia River Spring Chinook	3	6	1	2	5	7	4
Upper Columbia River Steelhead	4	4	2	1	3	7	6
Upper Columbia River Summer Chinook	3	5	1	3	7	2	5
Mid-Columbia River Spring Chinook	1	6	2	3	3	7	5
Mid-Columbia River Steelhead	1	3	4	5	2	7	6
Upper Columbia River Sockeye	3	5	2	1	4	6	7
Snake River Fall Chinook	5	4	1	2	6	3	NA
Snake River Sockeye	5	4	1	2	3	6	NA
Mid-Columbia River Summer/Fall Chinook	4	2	3	6	5	1	7
Mid-Columbia River Coho	6	4	1	5	3	2	NA
Mid-Columbia River Sockeye	6	3	2	1	4	5	NA
Upper Columbia River Coho <sup>15</sup>	3	6	1	2	5	7	4
Snake River Coho <sup>16</sup>	2	5	1	3	4	7	6
<b>Average</b>	<b>3.4</b>	<b>4.4</b>	<b>1.6</b>	<b>3.1</b>	<b>4.1</b>	<b>5.1</b>	<b>5.8</b>

# Innovative funding source for dam removal

- Opportunity to restore anadromy to former extent
- Committed and consistent funding
- Regulatory requirements and performance standards
- Complex projects require large capital + large risks
- “Aggressive actions are needed.” – NMFS 2022
- “Consistent and strategic funding is needed.”  
– NMFS 2022

**A dam blocking 348 miles of salmon streams hasn't generated electricity since 1958. But who will take it down?**



# California Case Study: Central Valley Project and State Water Project

2008 and 2009 Jeopardy Biological Opinions

Reasonable and Prudent Alternatives (RPAs):

- Number of constructed and planned projects: 8,731 acres
- Total direct project cost to date: \$193,456,047



Deer Creek Fish Passage Improvement  
Photo Credit: NW Hydraulic Consultants 2020

# Possible Next Steps to Advance Mitigation-funded Dam Removal

- NMFS to leverage litigation in Willamette and Columbia
- NOAA to champion and pilot Dam Removal Benefit Calculator
- Adapt existing Habitat Equivalency Analysis (HEA) frameworks:
  - Oregon:
    - North Coast Fish Passage Mitigation Banking Pilot
    - Stream Function Assessment Method
    - Oregon Wetland Assessment Protocol
  - Washington:
    - NOAA Puget Sound Conservation Calculators
    - Project Benefit Units – Columbia Estuary Ecosystem Restoration Program
    - Puget Sound Naval Base Pilot