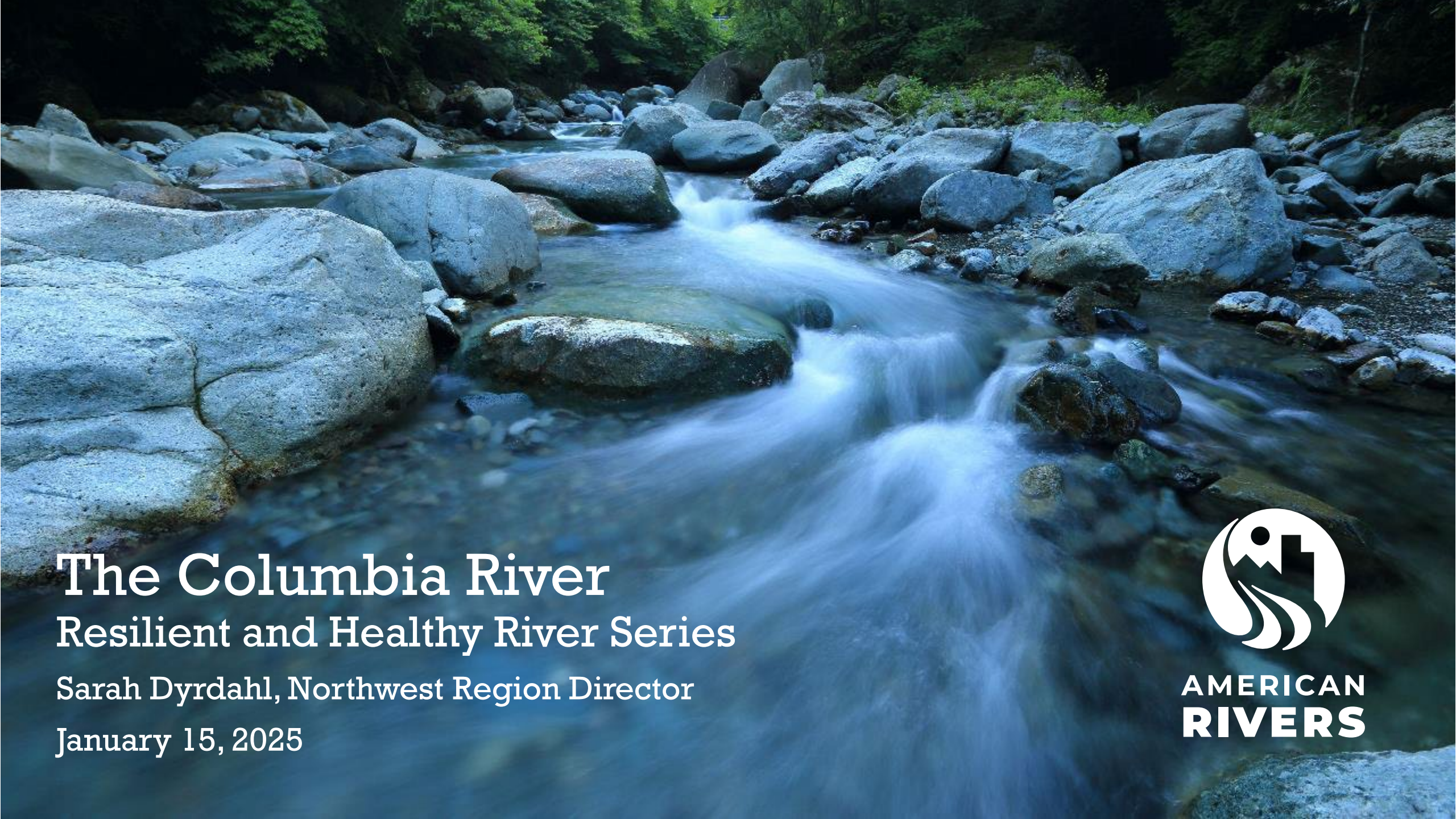


The Columbia River

Resilient and Healthy River Series

Sarah Dyrdahl, Northwest Region Director

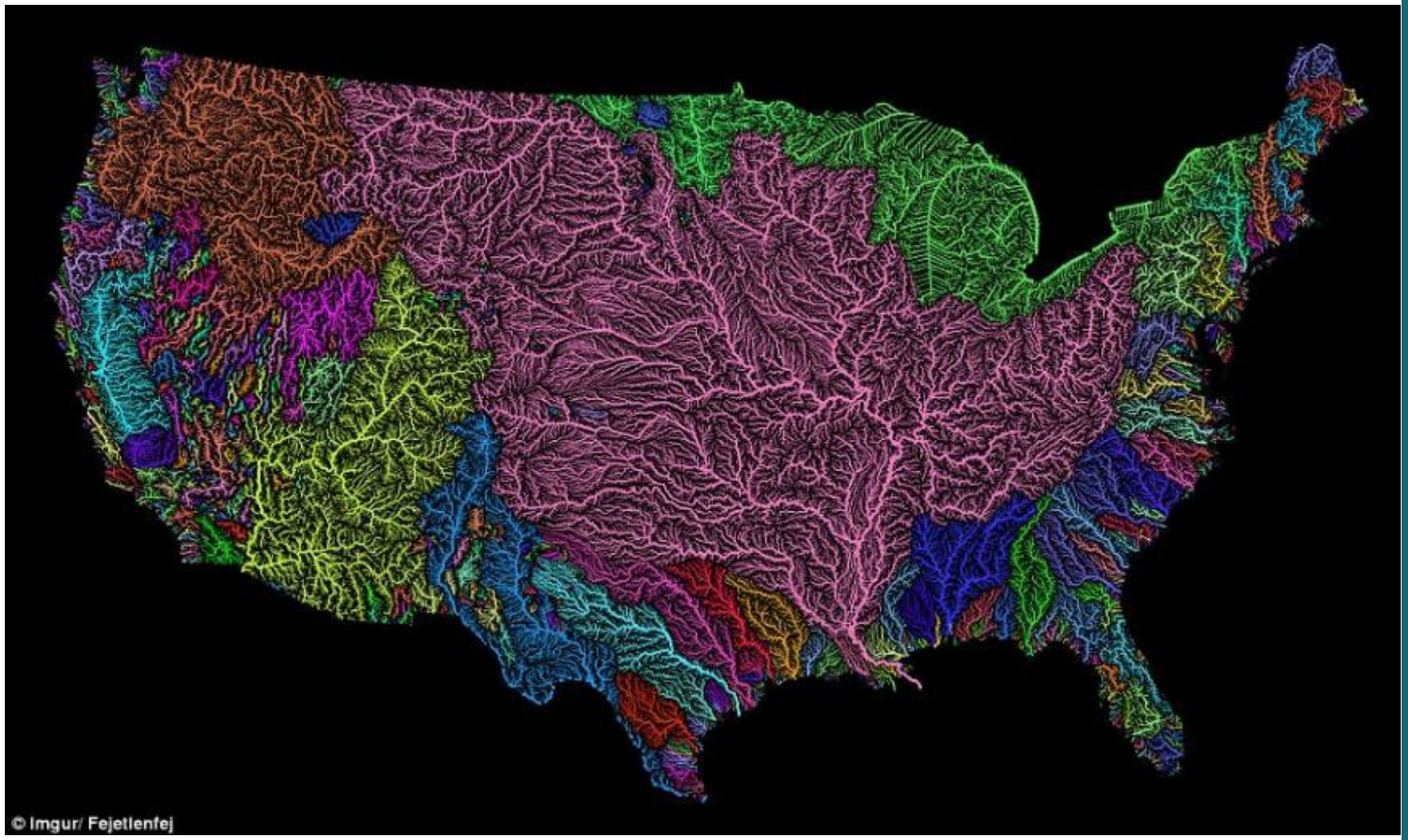
January 15, 2025

AMERICAN RIVERS

“The Pacific Northwest is simply this: wherever the salmon can get to. Rivers without salmon have lost the life source of the area.” *--Timothy Egan / The Good Rain*

(Permit Number 27038 / Center for Whale Research)

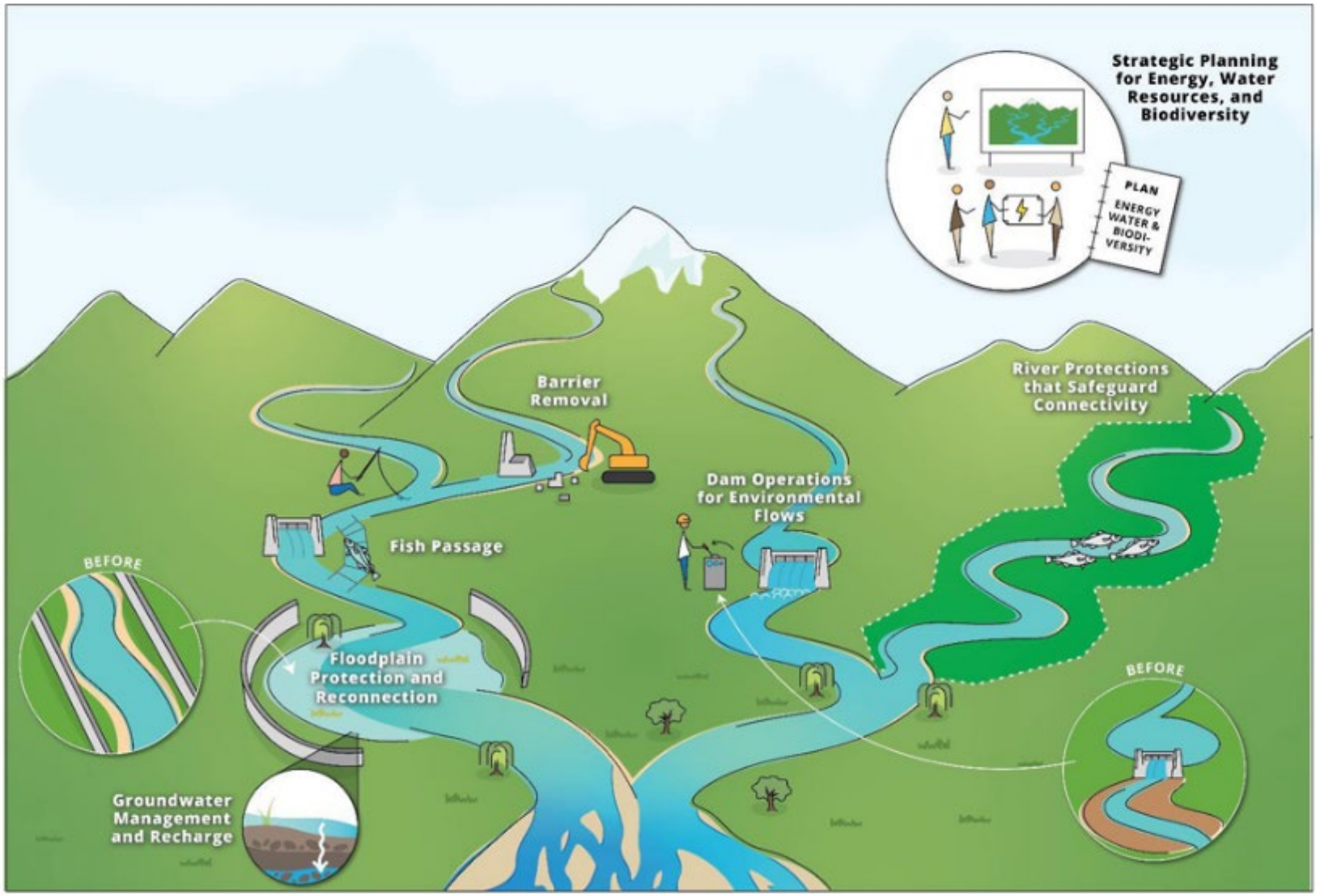
AMERICAN RIVERS



Our Rivers:

- 70% of drinking water
- 80% of species homes
- Greatest # of T&E

Fig. 1. Illustration of measures that can support maintaining and restoring river connectivity.



https://doi.org/10.1139/er-2023-0019

Protect the best, restore the rest!

Focus on connectivity

Removing a dam is the fastest way to heal a river

How do we protect and restore rivers?

Collaboration is key!

https://ssir.org/advancing_the_art_of_collaboration

Kellogg Creek Restoration & Community Enhancement Project

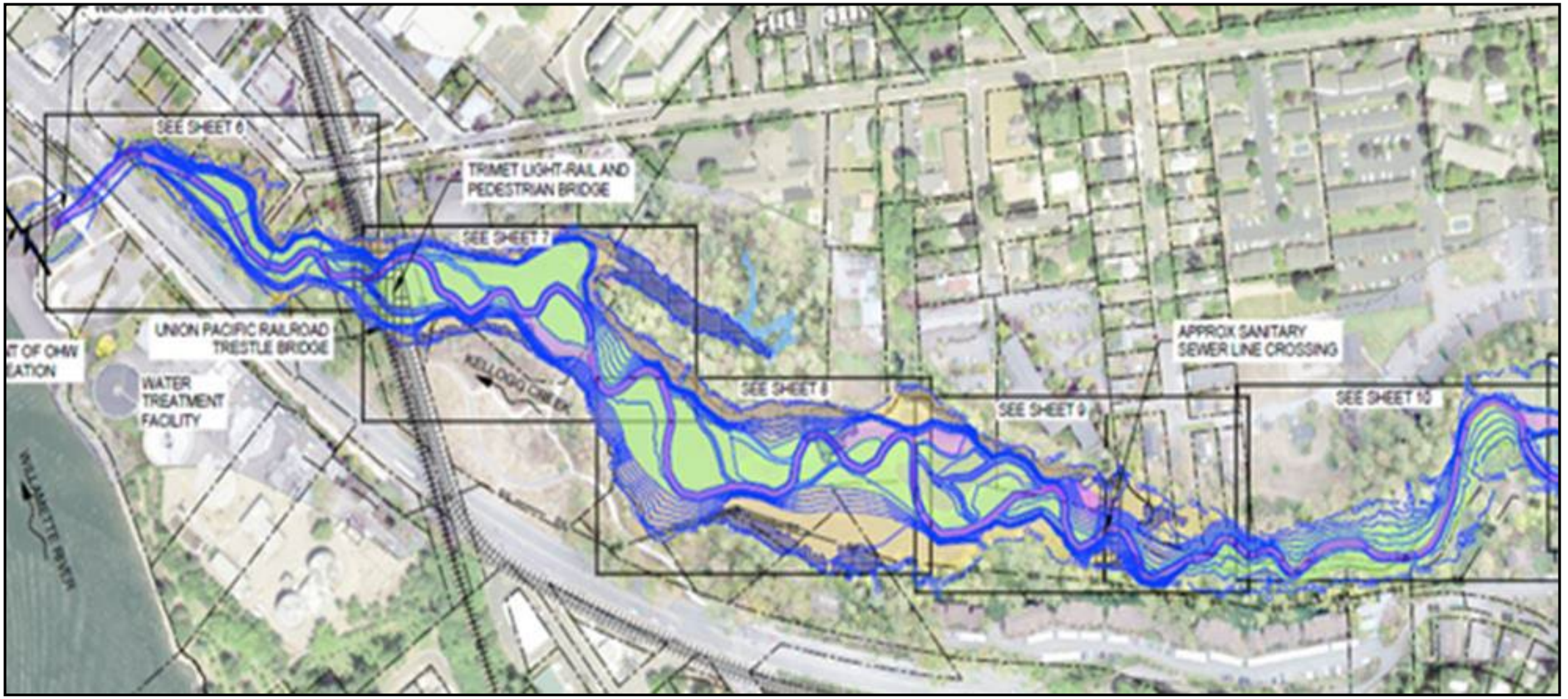
Kellogg Dam/99E Bridge History

(Above) Steamer "Lot Whitcomb", launched Christmas Day, 1850.
(Below) Standard Mill, built 1858, collapsed 1901.

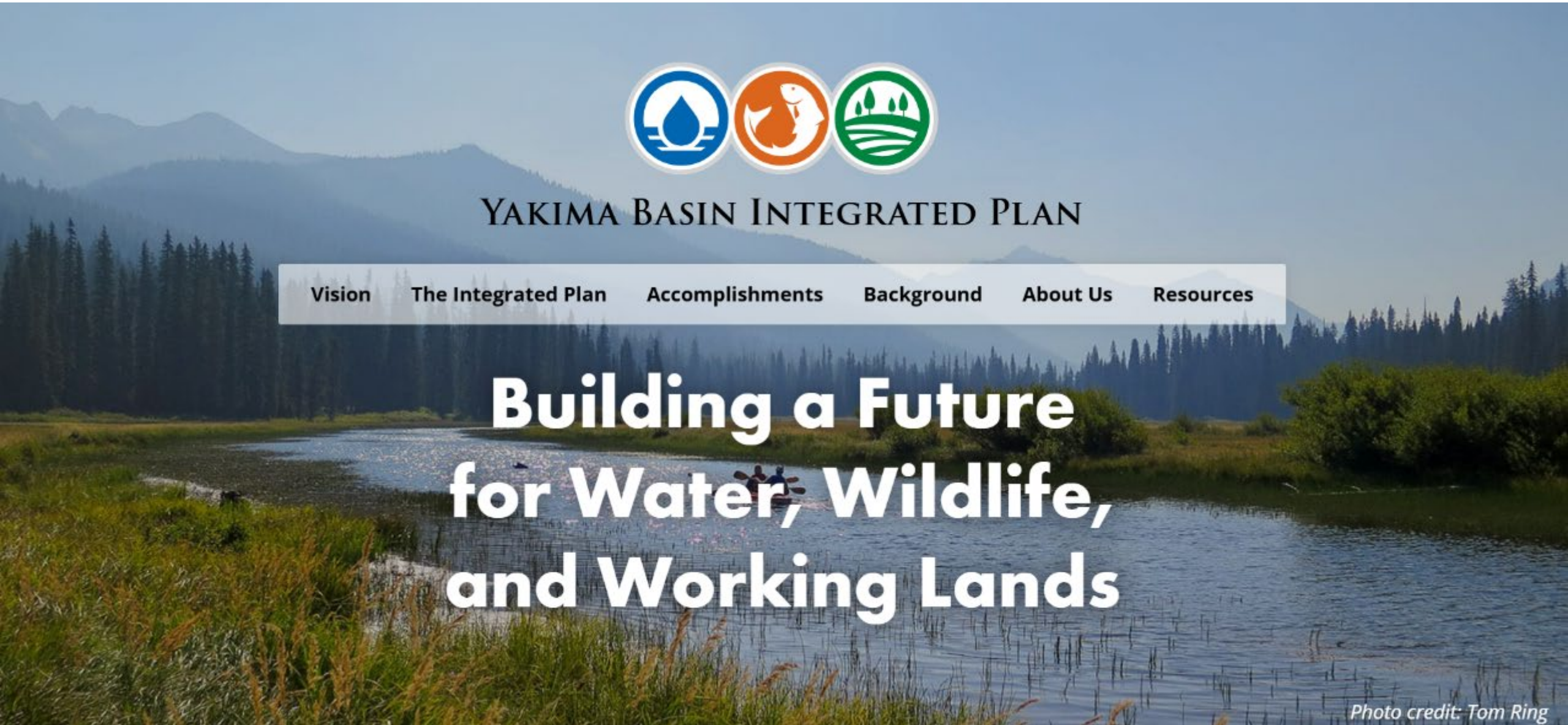
Dam/Lake – built 1848
Standard Mill – collapsed 1901
99E bridge – 1934
Fish ladder modified - 2003

	Volitional Fish Passage	Modernize 99E Bridge	Habitat restoration	Community Enhancement Features (CEF)	Community Resiliency
Project Objectives	**17mi**	**Sustainable, safe**	**15 ac**		
Project Elements	Remove Kellogg Dam Restore Stream Channel through new bridge crossing and Lake	Wildlife migration corridor Multi-use pedestrian underpass Envision Sustainability Verification	Riparian Habitat, Wetlands, Floodplain in Kellogg Lake footprint Lower Willamette hydrologic connectivity	Pedestrian Underpass Access to Greenspace Nature-based recreation	Community input in CEF design Interactive learning and research opps Workforce development

https://www.milwaukieoregon.gov/kellogg



Conceptual Restoration Design



https://yakimabasinintegratedplan.org/

The Seven Elements

The Yakima Basin Integrated Plan identifies seven elements needed to achieve a balanced and comprehensive approach to water resource management and ecosystem restoration in the Yakima River Basin.

Reservoir Fish Passage

Upstream and downstream passage for anadromous and resident fish will be established at all U.S. Bureau of Reclamation reservoirs, allowing access to a high-quality, cold-water habitat essential for restoring depleted runs of fish.

Structural and Operational Changes

Much of the Yakima River Basin's federal and non-federal infrastructure is more than a century old. Modernization measures, such as improving canal efficiency, balancing reservoir levels, and making operational changes, benefit both the fish habitat and the agricultural water supply.

Surface Water Storage

The Integrated Plan will provide 450,000 acre-feet of new storage over thirty years. Water projects in the first ten-year Initial Development Phase include accessing 200,000 acre-feet of water already stored at Kachess Reservoir via a new pumping plan facility, and 14,600 acre-feet from raising the level of Cle Elum Reservoir. Building new reservoirs and expanding an existing reservoir are proposed for later in the Integrated Plan phases.

Groundwater Storage

Additional water supplies will be gained by intentionally storing water in aquifers, and then either pumping it or allowing it to return to the river to improve flows, meet demands, and reduce water temperatures.

Habitat/Watershed Protection

Fish and wildlife habitat enhancement in the basin includes floodplain restoration, flow improvement, removing fish passage barriers, screening diversions, and land and river corridor protection.

Enhanced Water Conservation

Conserving up to 170,000 acre-feet of water per year is the goal of the agricultural side of this program, allowing better instream flows for fish and more precise delivery and use of water. Local governments actively encourage improvements in water conservation from individual homeowners for indoor and outdoor use.

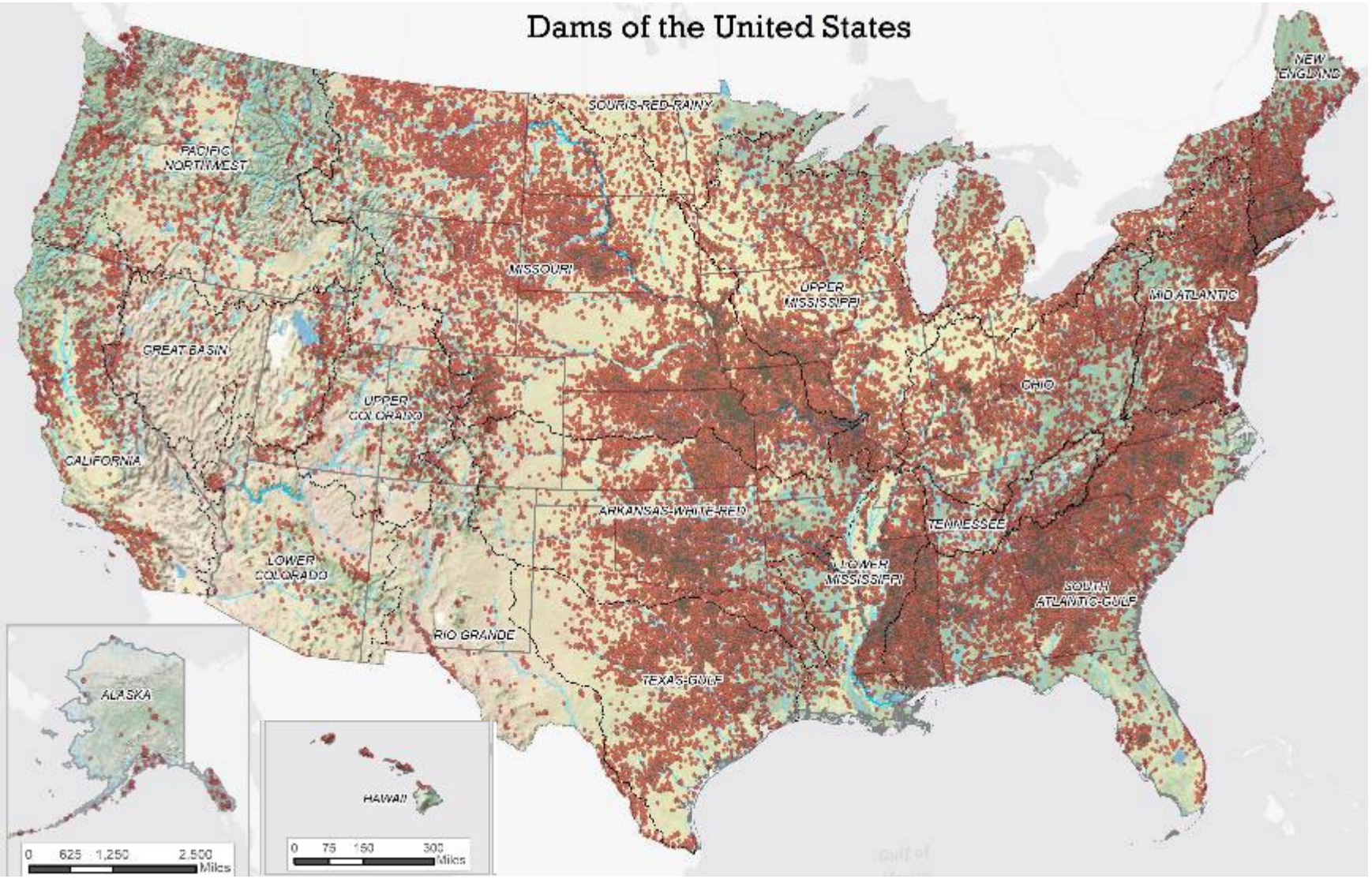
Market Reallocation

The Integrated Plan proponents are developing short- and long-term strategies to increase market reallocation of water during droughts while minimizing adverse effects on other water users and the environment.

Uncommon Dialogue

- **Rehabilitate** dams for improved safety and environmental performance.
- **Retrofit** powered and non-powered dams for increased electricity generation and storage; develop closed-loop pumped storage.
- **Remove** obsolete dams that are harming ecosystems, causing safety risks, and impeding recreation.

https://woods.stanford.edu/research/hydropower-home



The National Inventory of Dams includes 91,843 dams

Current inventory by SARP and USFWS includes 533,429 dams (and counting)

Nearly 6,000 high or significant hazard dams are in poor or unsatisfactory condition

Columbia Basin Restoration Initiative

https://critfc.org/cbri/

Life Depends on Rivers℠