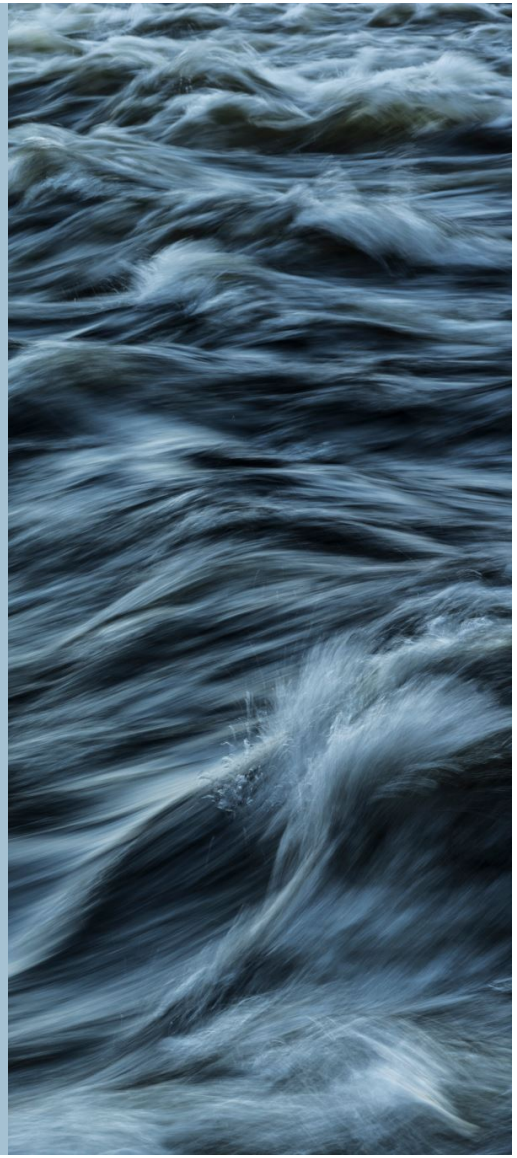
Uncommon Dialogue on Hydropower, River Restoration, and Public Safety

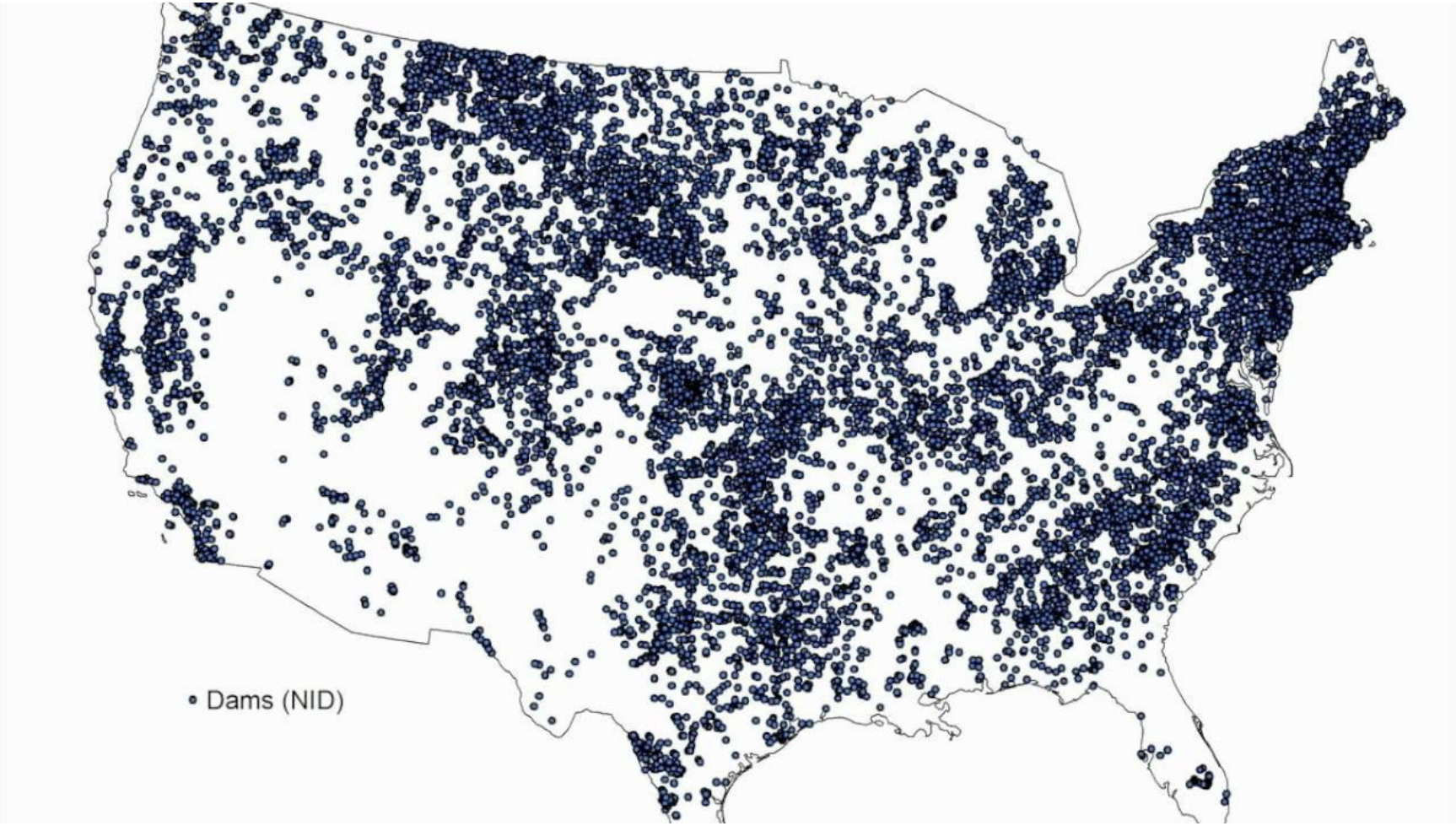
Overview Presentation

February 2022

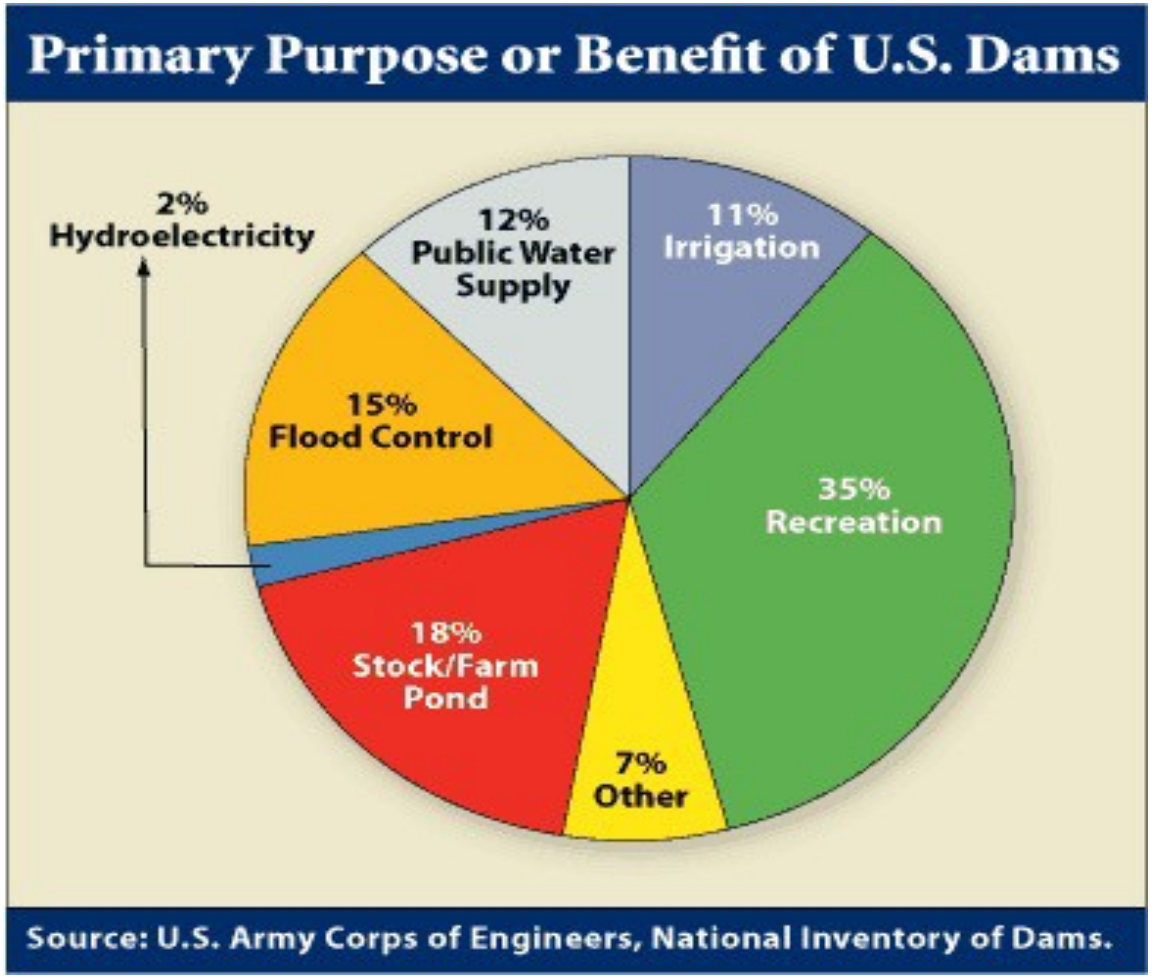


Stanford Woods Institute for the Environment

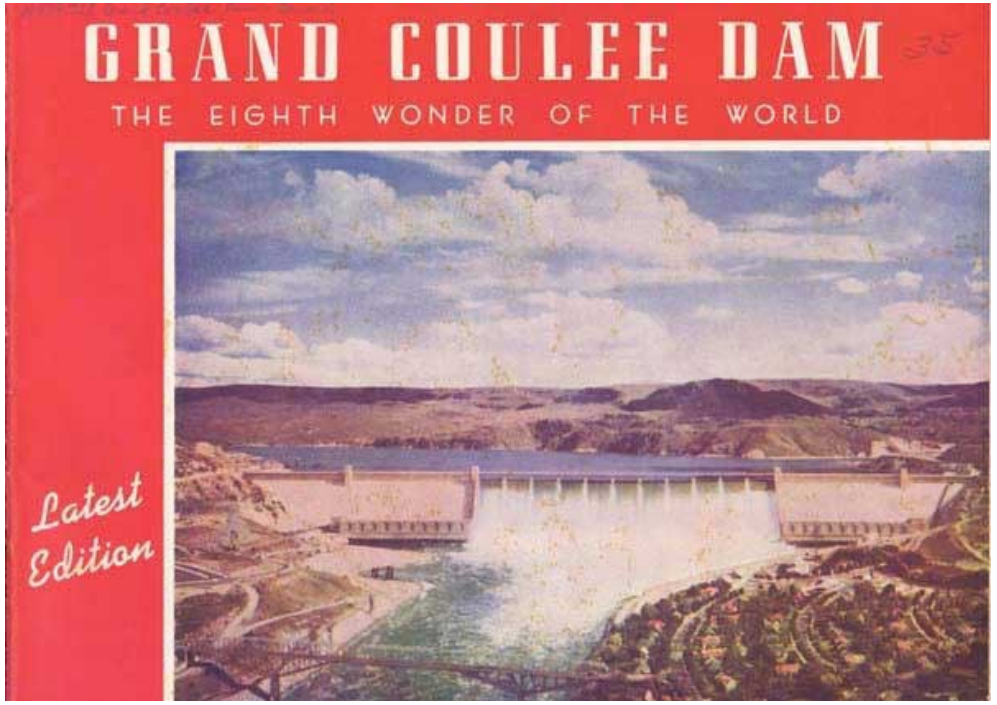
90,000+ U.S. Dams



Many Uses of U.S. Dams



Two Very Different Views



Hydropower and U.S. Grid Imperatives

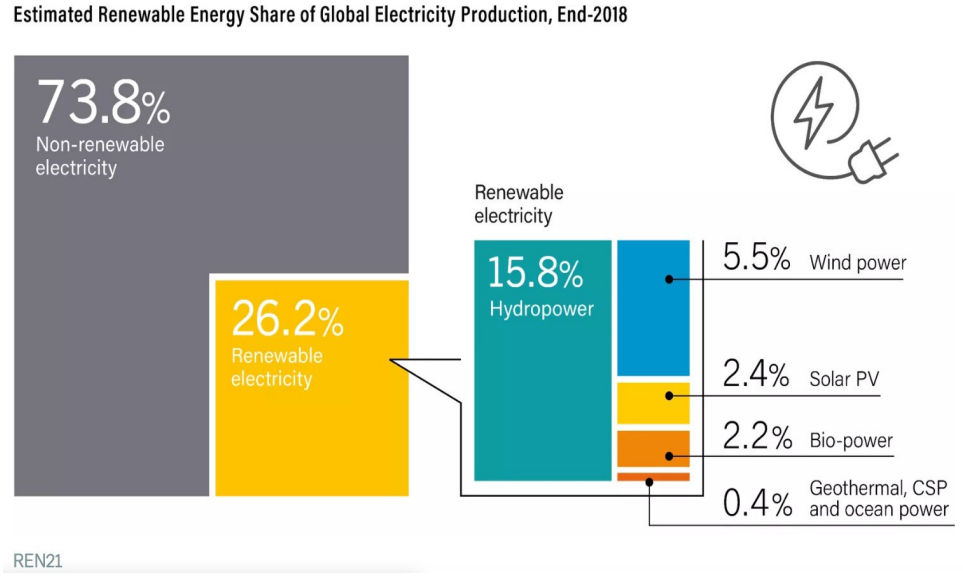
- Power System Reliability and Flexibility
- Low-Carbon Electricity
- Wind and Solar Integration
- Electricity Storage
- Energy and Climate Mandates

U.S. Dams: Many Impacts

- Habitat alteration
- Fish mortality
- Altered flow regimes
- Water quality
- Reservoir GHG emissions
- Indigenous rights

Hydropower: Climate Solution and Conservation Challenge

- Among climate advocates, hydropower and pumped storage are seen as critical to meeting domestic and international carbon reduction goals.
- Conservationists, in contrast, point to the damage caused by U.S. dams to water quality, aquatic habitat, and a range of species, plus dam safety problems.



The impoundment of the Bloede Dam on Maryland's Patapsco River blocks a rocky cascade.

Sections

The Washington Post
Democracy Dies in Darkness

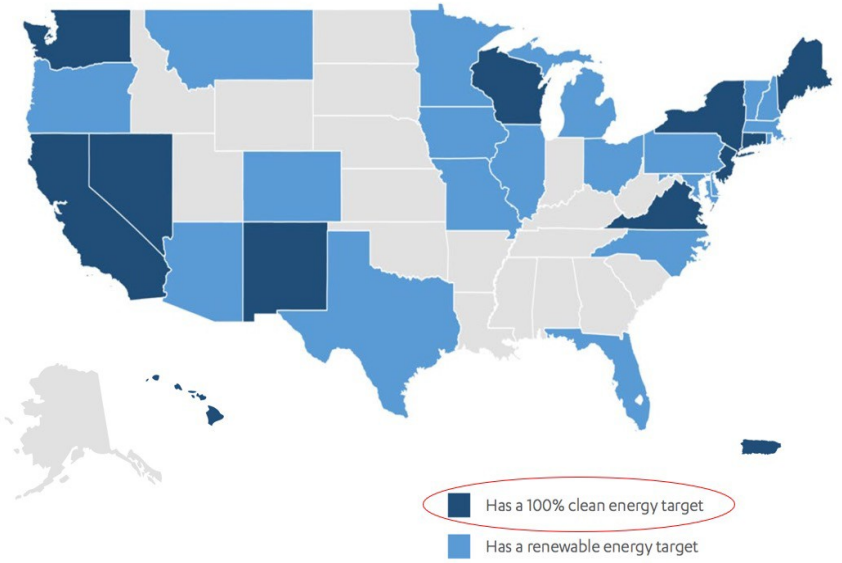
TruBlu22

Climate & Environment

Biden calls for 100 percent clean electricity by 2035. Here's how far we have to go.

States such as New York, California and Maine already have ambitious goals, while Ohio and West Virginia have weakened theirs

By John Muyskens and Juliet Eilperin July 30



The Mercury News

WEATHER
TODAY'S E EDITION
MANAGE SUBSCRIPTION
SIGN UP FOR NEWSLETTERS
SUBSCRIBE NOW

NEWS | LOCAL | OPINION | SPORTS | ENTERTAINMENT | OBITUARIES | SUBSCRIBE NOW | Search

News > Environment & Science

California mandates 100 percent clean energy by 2045

117

FEATURES INTERVIEWS

The magnificent seven: US states with energy storage mandates, targets and goals

By Andy Colthorpe

June 23, 2020

Americas US & Canada | Grid Scale | Market Watch Policy

So What If We Could …

- Better value the grid-related benefits of low-carbon electricity from existing U.S. dams/pumped storage - and generate more?
- Increase the grid integration and storage of variable wind and solar?
- Improve the safety and environmental performance of the nation's 90,000 dams?
- Expand free-flowing miles of U.S. rivers for climate resilience and fish?

Uncommon Dialogue on Hydropower, River Restoration, and Public Safety

- **Broad Goal:** To better address climate change – and protect rivers – through a smarter approach to U.S. hydropower.
- **Specific Objective:** A 2020 Joint Statement between the U.S. hydropower industry and river conservation/environmental NGOs to improve the value of hydropower – and protect rivers.
- **Key Tools:** Rehabilitation, retrofits and removals ("3Rs") of U.S. dams – both powered and non-powered – driven by improved policy, technology, and investment – on a basin scale.
- **Forum:** Stanford Woods Institute Uncommon Dialogue.

The “Three Rs”

- **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.

Areas of Joint Collaboration

1. Accelerate Development of Hydropower Technologies and Practices to Improve Generation Efficiency, Environmental Performance, and Solar and Wind Integration
2. Advocate for Improved U.S. Dam Safety
3. Increase Basin-Scale Decision-Making and Access to River-Related Data
4. Improve the Measurement, Valuation of and Compensation for Hydropower Flexibility and Reliability Services and Support for Enhanced Environmental Performance
5. Advance Effective River Restoration through Improved Off-Site Mitigation Strategies
6. Improve Federal Hydropower Licensing, Relicensing, and License Surrender Processes
7. Advocate for Increased Funding for U.S. Dam Rehabilitation, Retrofits and Removals

AUGUST 30, 2021

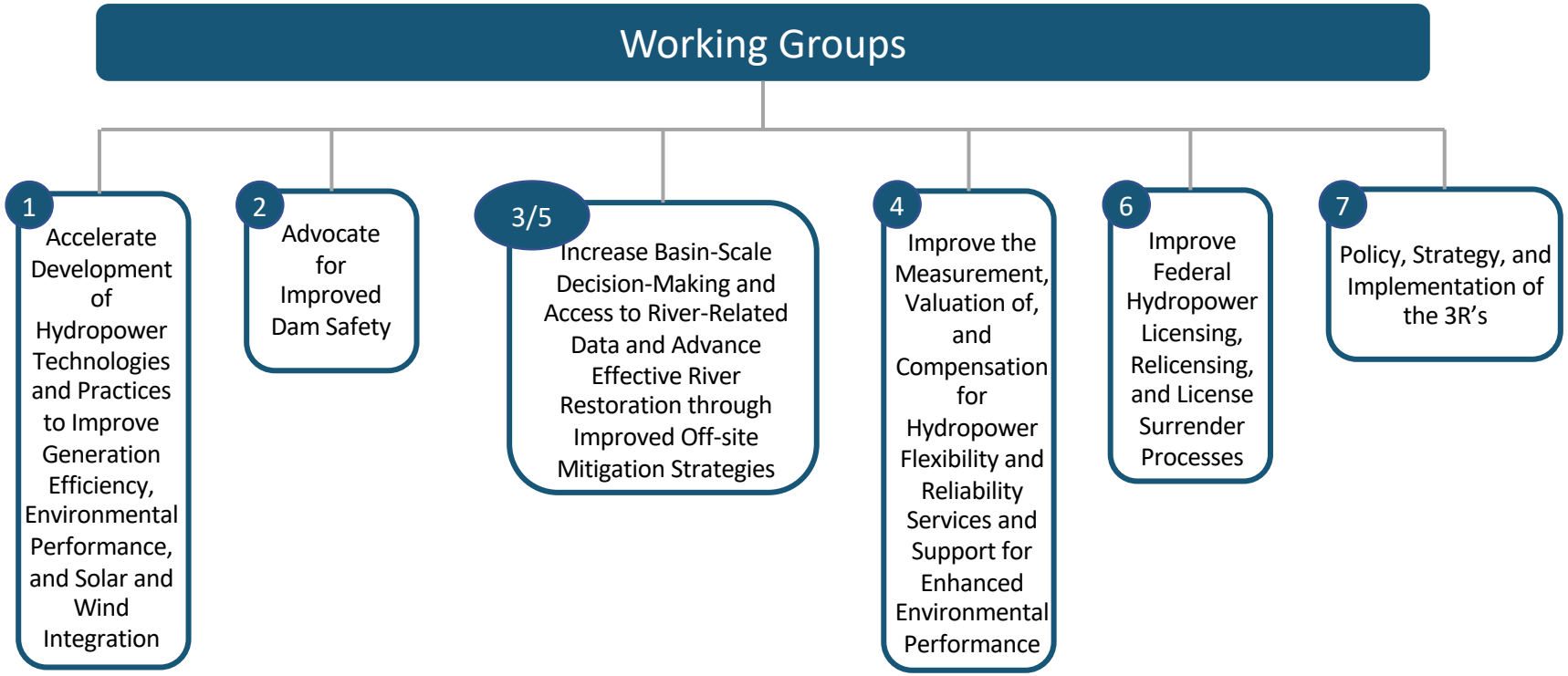
$2.3 billion to improve or remove U.S. dams included in new federal infrastructure bill in wake of a Stanford Uncommon Dialogue agreement

Key ideas and proposals from an agreement between the hydropower industry and environmental community, facilitated through a Stanford Woods Institute for the Environment Uncommon Dialogue, have been included in the $1 trillion infrastructure package adopted by the U.S. Senate.

BY DEVON RYAN

In the fall of 2020, amidst a global pandemic and one of the most divisive periods in American history, the hydropower and river conservation communities, traditionally at odds, reached an agreement to work together to address the nation's more than 90,000 dams.

Uncommon Dialogue for Hydropower, River Restoration, and Public Safety



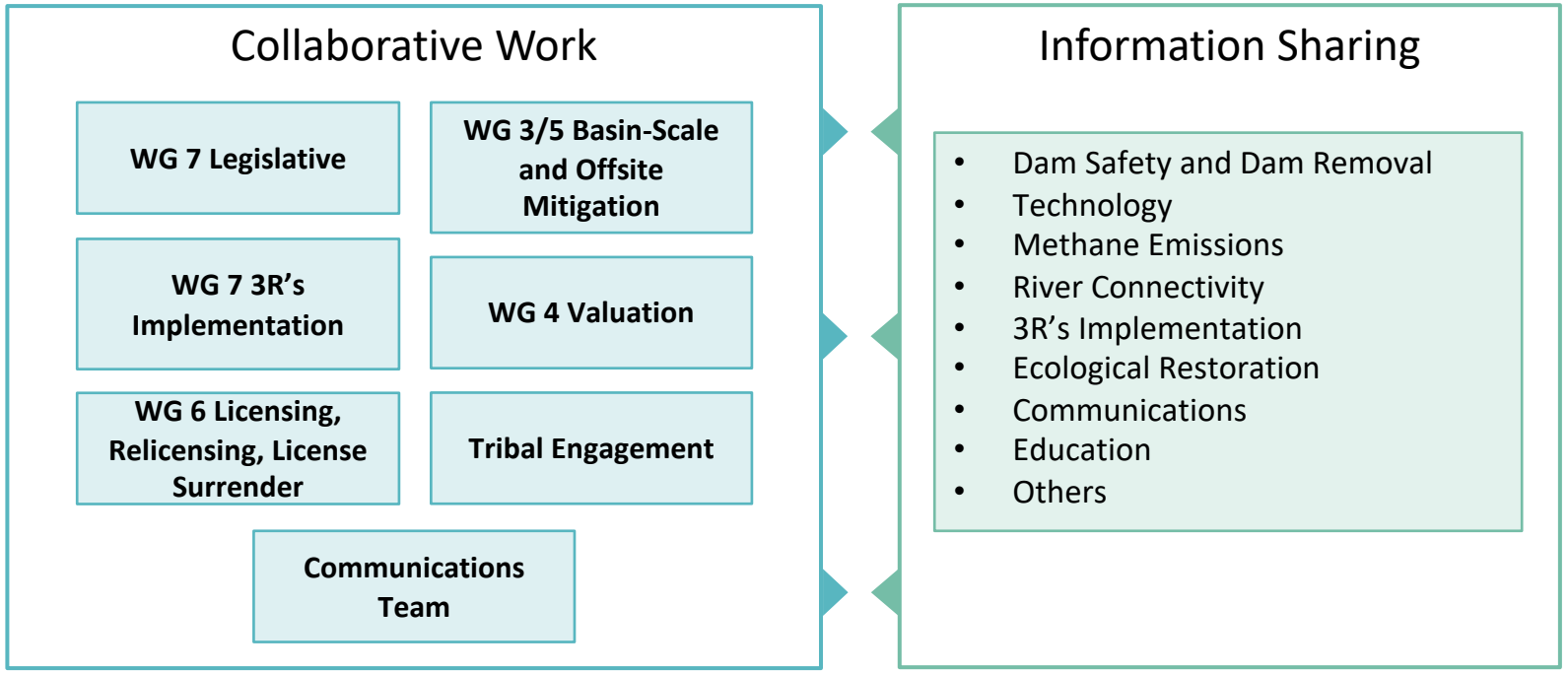
UCD Participants

- Since 2018, we've connected with over 300 people representing a cross-section of hydropower interests:
  - State Resource Agencies
  - Federal Resource Agencies
  - Tribes
  - Environmental NGOs
  - Industry
  - Academia
  - DOE/National Labs

Accomplishments to Date

- October 2020 Agreement
- Working Group 7 - Policy, Strategy, and Implementation
  - April 2021 Infrastructure Proposal with sign-on from 13 organizations
  - November 2021 Bipartisan Infrastructure Leg. with >$2.3B 3Rs funding
  - Potential 3Rs tax credit in pending Reconciliation Bill
  - Water Resources Development Act – potential longer-term 3Rs funding
- Working Group 6 - Licensing, Relicensing, and License Surrender
  - Potential package to amend Federal Power Act and FERC rulemakings
- Working Group 1 - Technology and Innovation
  - White paper summarizing opportunities for technology innovation and advancement across the 3Rs
- Communications
  - NY Times, LA Times, other press/media

Plans for 2022



Building on December Stanford Workshop

- On December 8, 2021, Stanford University's Woods Institute for the Environment convened a workshop on prioritization, decision-making, and related data needs regarding federal spending on the "3Rs" of the nation's 90,000+ dams.
- Presenters from DOE, ASDSO, NHA, and American Rivers, among others, shared updates on the infrastructure bill, dam safety, retrofitting dams, and dam removal.
- Next Workshop: Spring 2022 focused on initial federal infrastructure spending

Points of Contact

Dan Reicher, dreicher@stanford.edu

Kelsey Rugani, krugani@kearnswest.com