

Coeur d'Alene Lake Action Update

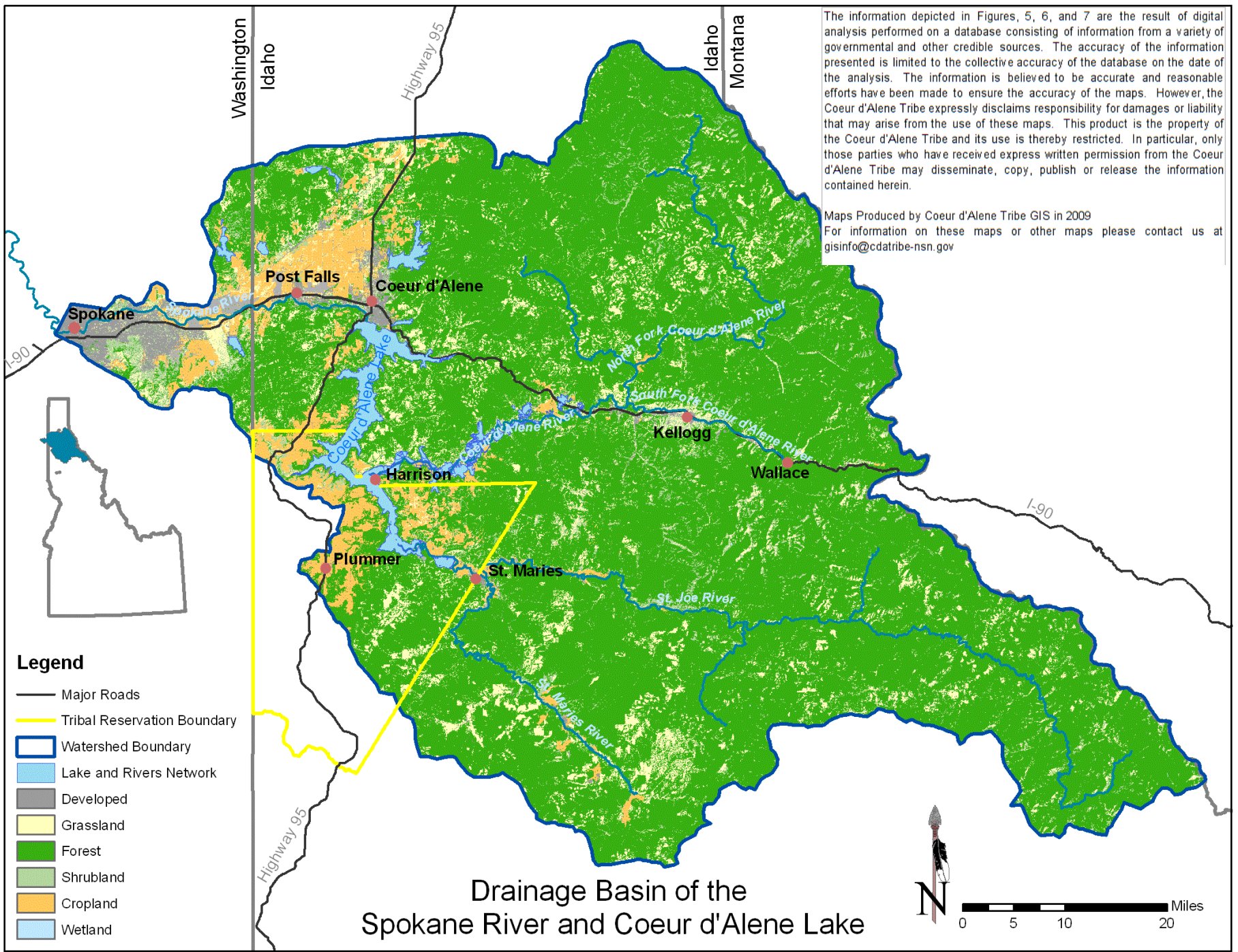
Presented at the Spokane River Forum's
Expo 50 H2O Symposium
Jamie Brunner, Idaho Department of Environmental Quality

May 30, 2024

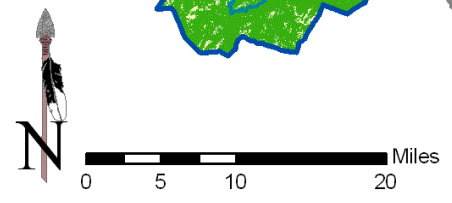


The information depicted in Figures 5, 6, and 7 are the result of digital analysis performed on a database consisting of information from a variety of governmental and other credible sources. The accuracy of the information presented is limited to the collective accuracy of the database on the date of the analysis. The information is believed to be accurate and reasonable efforts have been made to ensure the accuracy of the maps. However, the Coeur d'Alene Tribe expressly disclaims responsibility for damages or liability that may arise from the use of these maps. This product is the property of the Coeur d'Alene Tribe and its use is thereby restricted. In particular, only those parties who have received express written permission from the Coeur d'Alene Tribe may disseminate, copy, publish or release the information contained herein.

Maps Produced by Coeur d'Alene Tribe GIS in 2009
 For information on these maps or other maps please contact us at gisinfo@cdatebe-nsn.gov



Drainage Basin of the
 Spokane River and Coeur d'Alene Lake



- Legend**
- Major Roads
 - Tribal Reservation Boundary
 - ▭ Watershed Boundary
 - ▭ Lake and Rivers Network
 - ▭ Developed
 - ▭ Grassland
 - ▭ Forest
 - ▭ Shrubland
 - ▭ Cropland
 - ▭ Wetland



Historical Land Uses

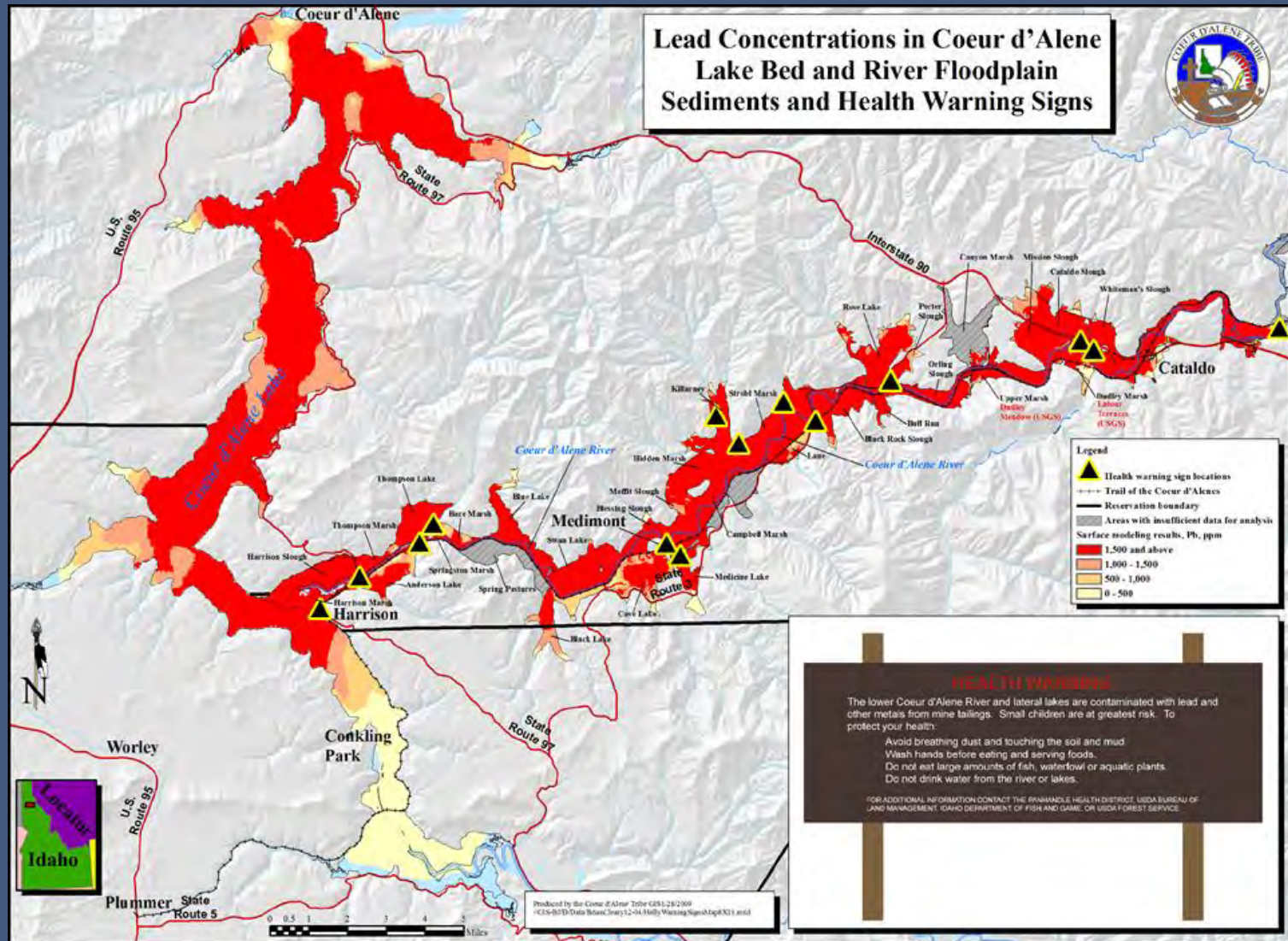
- 1880's Silver and Gold discovered near Prichard, ID
- Logging surrounding hill sides for mines and railroads
- 1886-1992 ore hauled down river by rail, across the Lake and along lakeshore; tailings used in rail bed
- Mine tailings discharged directly into floodplains



Osbourne tailings dam, 1920



Coeur d'Alene Lake Legacy Impacts



Metals Are Still Moving into the Lake



Coeur d'Alene Lake

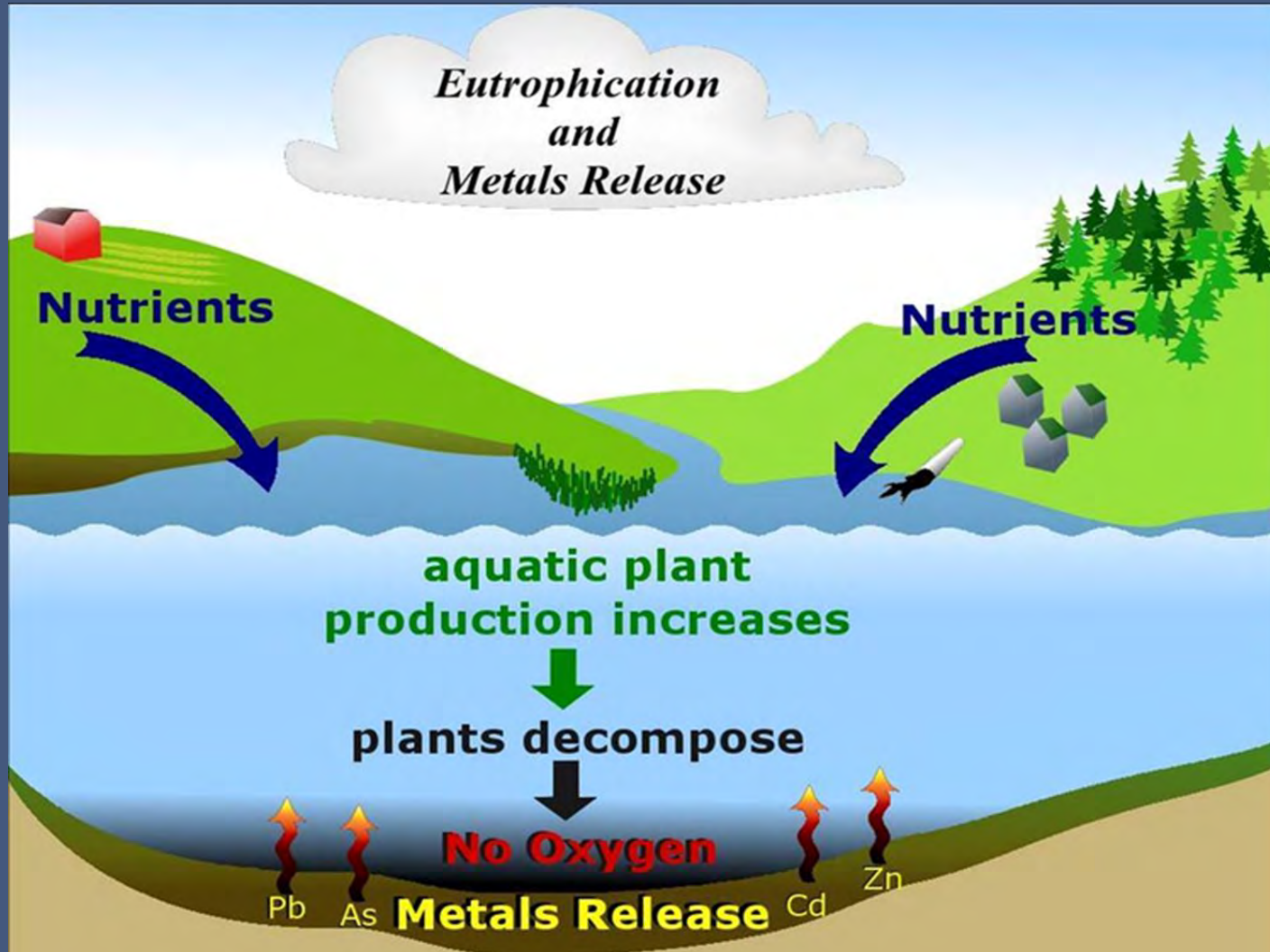
Under CERCLA (Superfund), contaminated areas have “remedies” identified to address contaminants.

EPA deferred a remedy for the Lake under CERCLA.

The Tribe and State of Idaho jointly manage water quality monitoring and outreach efforts under their respective Clean Water Act authorities.

Lake Management Plan 2009

Manage contaminated lakebed sediments in place by managing lake productivity (via phosphorus inputs)



Plan Objectives

1. Improve Scientific Understanding of Lake Conditions
2. Establish and Strengthen Partnerships to Maximize Benefits of Actions under Existing Regulatory Frameworks
3. Develop a Nutrient Reduction Action Plan
4. Increase Public Awareness of Lake Conditions and Influences on Water Quality
5. Establish Funding Mechanisms to Support the LMP goal

Lake Management Plan 2009



Coeur d'Alene Lake Management Plan 2009

Water quality “triggers”
identified to serve as early
warnings:

Phosphorus and nitrogen
Dissolved Oxygen
Chlorophyll *a*
Heavy metals
pH

Fast forward 10 years:

- Triggers exceedances and undesirable trends
(dissolved oxygen, phosphorus and lead)
- Tribe Asserts LMP not sufficient for lake protection
- State of Idaho calls for third-party review of lake data (2019 Our Gem CdA Lake Symposium)

“In the event that monitoring data reveals trends that approach a trigger level for one or more constituents, this will prompt a comprehensive review to identify the causes of the trend and guide development of a corrective management response.”

Where we are today

- National Academy of Science 3rd party review of Coeur d'Alene Lake data (2020)
- Leading Idaho Initiative & Coeur d'Alene Lake Advisory Committee (2021)



National Academies of Science, Engineering, and Medicine (NAS)

- 3rd party review of Coeur d'Alene Lake data
- Sponsors: Idaho DEQ, Kootenai County, EPA
- Scope
 - Current water quality
 - Future implications
 - Relevance of metals release



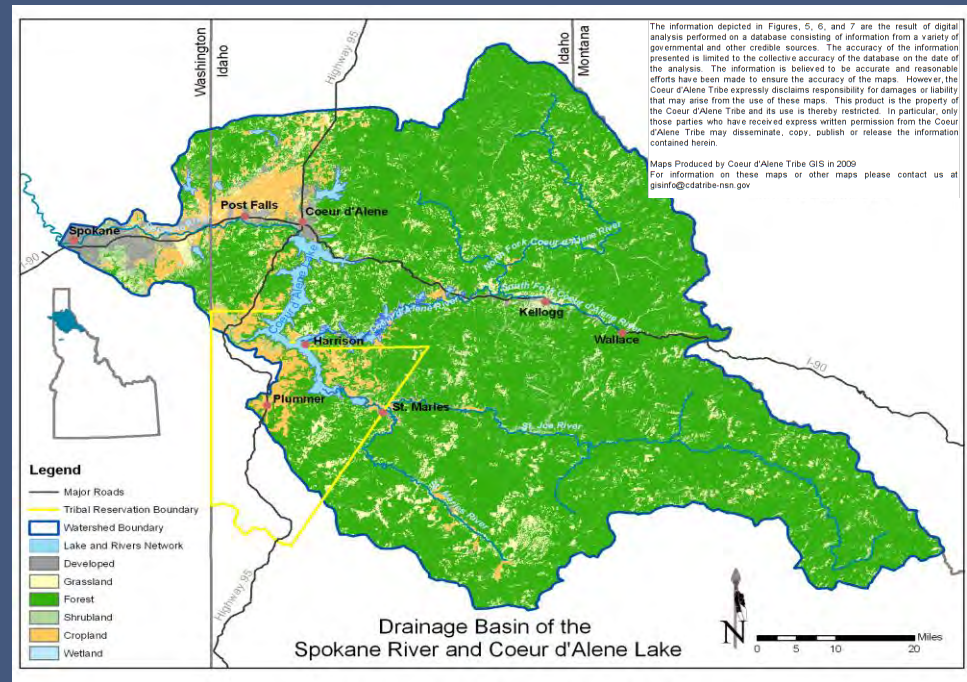
National Academies of Science, Engineering, and Medicine (NAS)

- Final report issued September 30, 2022
- Our Gem Collaborative hosted NAS:
Hagadone Event Center, November 15, 2022



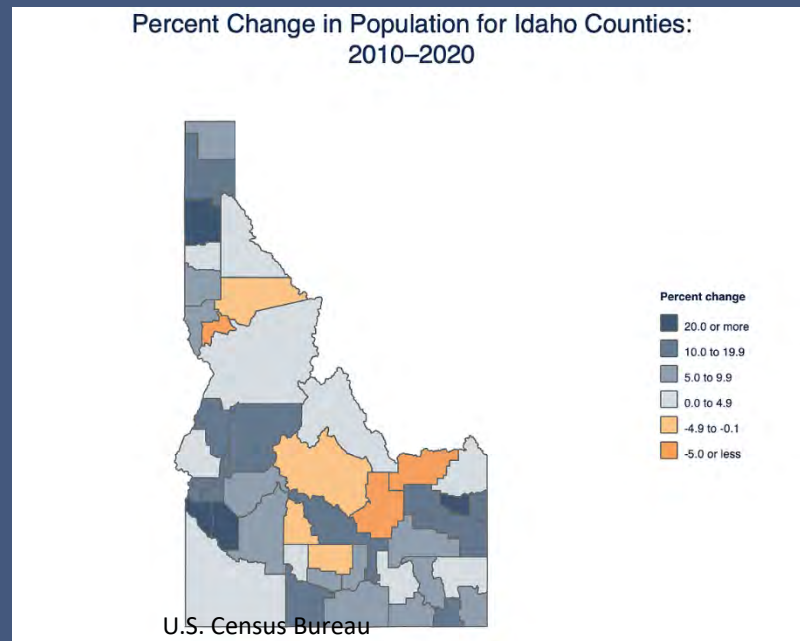
National Academy of Science Report

- Metals & nutrients concentrations from major rivers declined over last decade
- Lower CdA Basin still contains large amounts of contaminated sediments
- In their review of 10 years worth of data, In-lake metals are declining



NAS Report

- Total in lake phosphorus in the last 10 years shifted from a long-term increase to no trend; **still approximately double the level from the 1990's**
- **Future water quality considerations: climate change, population influx may slow or reverse desirable trends**
- **Monitoring improvements needed**



NAS Recommendations

- Science coordination team
- Watershed monitoring (incoming rivers and streams)
- Bays and shallower areas
- Human health risks
- Wastewater treatment upgrades

Publications



2022

The Future of Water Quality in Coeur d'Alene Lake

Coeur d'Alene Lake in northern Idaho is an invaluable natural, recreational, and economic resource for communities in Idaho and eastern Washington. Starting in the late 1880s, mining in the Lake's watershed sent heavy metals and other mining wastes into the Lake, resulting in contamination of lake sediments with lead, cadmium, arsenic, and zinc that persists today. The watershed was designated a Superfund site and cleanup has been ongoing for 30 years. However, the Lake's environmental quality and cleanup is overseen by a Lake Management Plan, originally implemented by the Coeur d'Alene Tribe and the state of Idaho. A major focus of that plan is whether lakeshore development might promote low-oxygen (anoxic) conditions that could release toxic metals from lake sediments back into the water column.

[Read Full Description](#)

RESOURCES

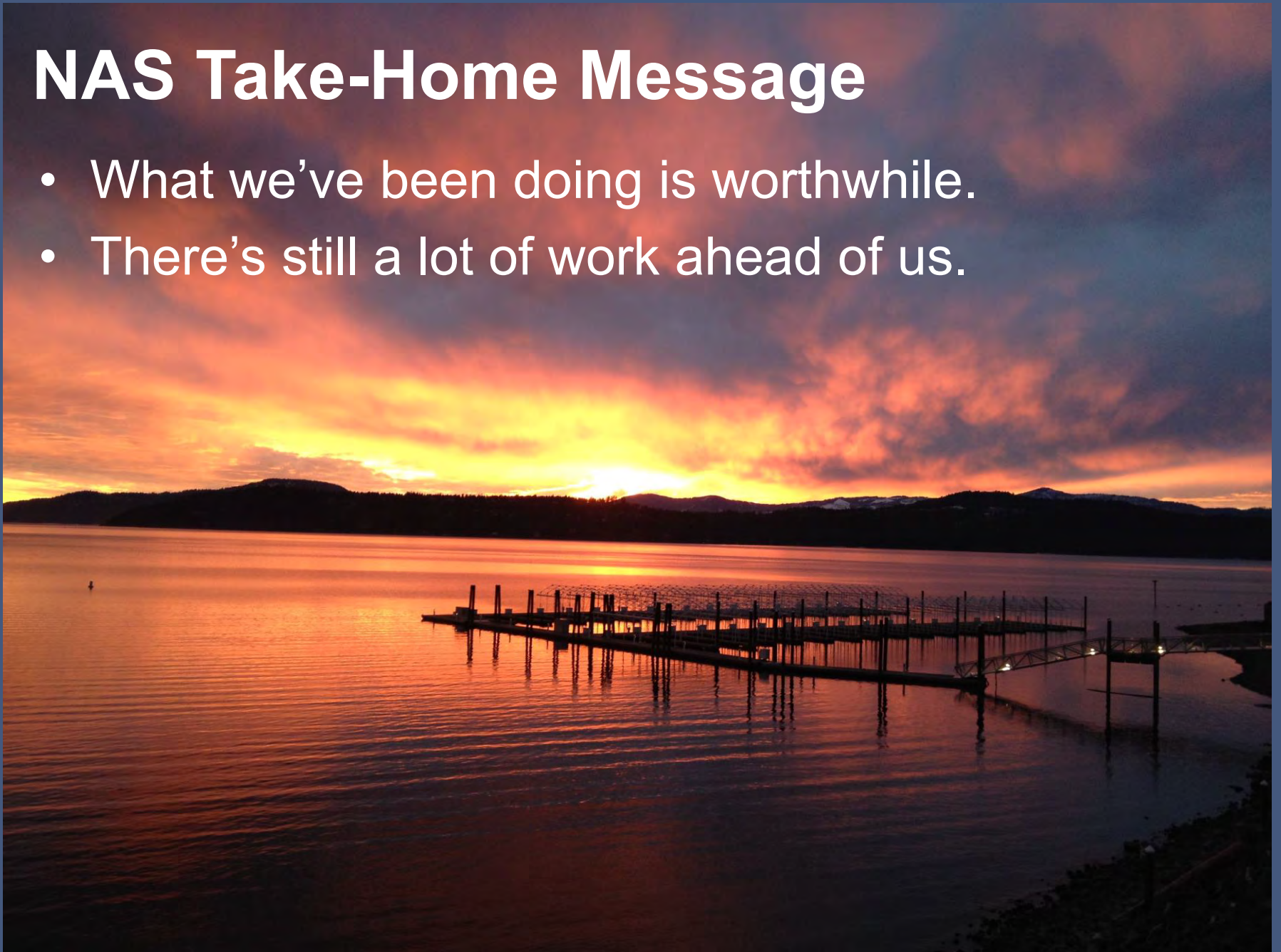
- [Report Highlights](#)
- [Press Release](#)

[View Report](#)

[www.nationalacademies.org/
our-work/
the-future-of-water-quality-in-
coeur-dalene-lake](https://www.nationalacademies.org/our-work/the-future-of-water-quality-in-coeur-dalene-lake)

NAS Take-Home Message

- What we've been doing is worthwhile.
- There's still a lot of work ahead of us.



Leading Idaho for Coeur d'Alene Lake

- Coeur d'Alene Lake Advisory Committee appointed

Member	Interest Represented
Chris Fillios (Chair)	Public at Large
Jack Riggs (Vice Chair)	Public at Large
Gene H. James	Secretary/Treasurer of the Coeur d'Alene Tribe
Jim Hammond	Mayor of Coeur d'Alene
Shelley Austin	Executive Director of Kootenai Environmental Alliance
Bruce Cyr	Lakeshore Property Owner
Craig Brosenne	Hagadone Marine Group
Jordan Hall	Business Owner and Harrison City Councilor
David Callahan	Community Development Director, Kootenai County

<https://www.deq.idaho.gov/leading-idaho-and-the-coeur-dalene-lake/>

- \$2 million State Fiscal Year 2021
- \$31 million ARPA* Leading Idaho 2022 (complete 2026)

*American Rescue Plan Act



Leading Idaho

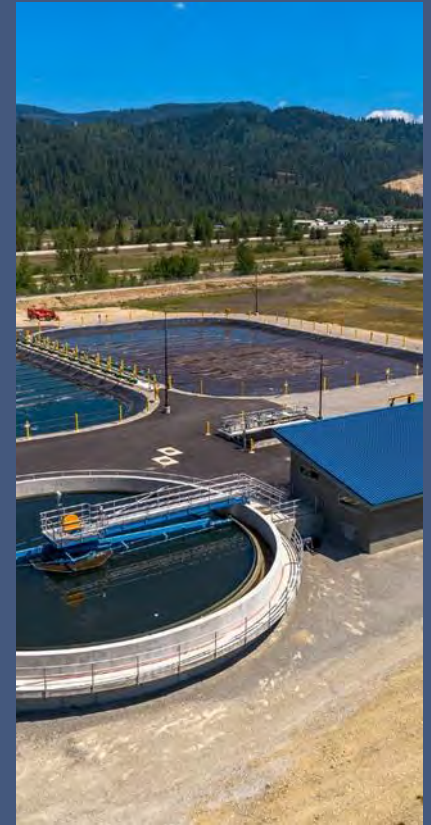


- Stormwater
 - City of Coeur d'Alene – 4 outfall projects
 - City of Kellogg – 5 outfall projects +
 - East Side Hwy District – 2 road drainage/surfacing projects



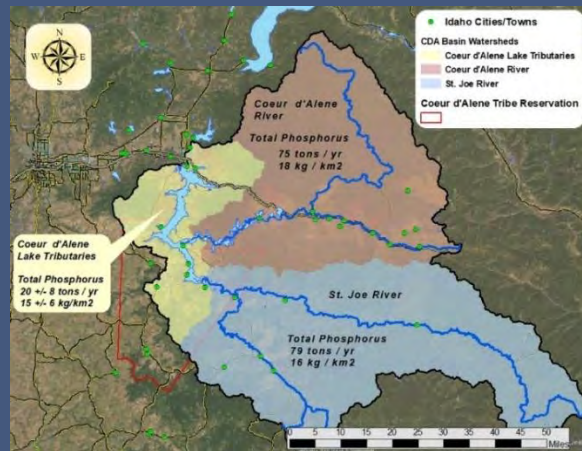
Leading Idaho

- Wastewater
 - South Fork Sewer District - Page wastewater treatment plant
 - Santa-Fernwood wastewater treatment upgrades
- Nonpoint Source
 - NF Coeur d'Alene River
 - Schlagel Draw (Cataldo area)
 - Mica Creek
 - Wolf Lodge Creek



Leading Idaho

- NAS Recommendations
 - Science coordination team
 - Risk-based evaluation of CdA Lake & Spokane River recreational areas (in Idaho)
 - St. Joe River watershed assessment



<https://www.deq.idaho.gov/leading-idaho-and-the-coeur-dalene-lake/>



Coeur d'Alene Lake Information

Idaho DEQ's CdA Lake Management Page:

<https://www.deq.idaho.gov/water-quality/surface-water/coeur-dalene-lake-management/>

Coeur d'Alene Lake Collaborative

(Idaho DEQ, Coeur d'Alene Tribe, University of Idaho CdA, Basin Environmental Improvement Project Commission, Coeur d'Alene Regional Chamber of Commerce, Kootenai County, Kootenai Environmental Alliance)

uidaho.edu/OurGem

Thank you

Jamie Brunner
jamie.brunner@deq.idaho.gov
(208) 666-4623

