



Sharon Bosley  
Executive Director

# BEIPC

## Basin Environmental Improvement

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February 21<sup>st</sup>, 2024

**To:** BEIPC Commissioners, Alternates, Staff, TLG and CCC Chairs

**From:** BEIPC Executive Director

**Subject:** BEIPC March 6<sup>th</sup>, 2024, Quarterly Meeting

Enclosed is the meeting packet for the upcoming March 6<sup>th</sup>, 2024, BEIPC Meeting. The meeting will be held at the Marimn Health Wellness Center in Plummer and will begin at 9:00 AM. We plan to cover the 2023 Annual Accomplishment report, as well as several other informative presentations-see attached agenda. Lunch will be provided for Commissioners, Alternates, TLG and CCC Chairs and BEIPC Staff.

If you have any questions call me at 208-659-1715 or e-mail [sharon.bosley@deq.idaho.gov](mailto:sharon.bosley@deq.idaho.gov).

Warmest Regards,  
Sharon Bosley

Executive Director

Enclosure

## **March 6, 2024 BEIPC Meeting Packet Items**

- Meeting Guidelines
- Draft March 6, 2024 Meeting Agenda
- Abbreviations and Acronyms
- Draft November 29, 2023 meeting minutes
- Draft 2023 Annual Accomplishment Report

# Basin Environmental Improvement Project Commission

## Meeting Agenda

March 6<sup>th</sup>, 2024, 9:00 AM – 3:00 PM

Marimn Health Wellness Center

1100 A St, Plummer, ID 83851

Join Online: [Click here to join the meeting](#)

Meeting ID: 236 506 807 55

Passcode: yzNssQ

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|-----------|---|
| 9:00 AM   | Call to Order   |
| 9:05 AM   | CDA Tribal prayer followed by a performance by the Rose Creek Drummers  |
| 9:25 AM   | Review and Approve Draft November 29, 2023, Meeting Notes – Sharon Bosley<br><b>(Action Item)</b>   |
| 9:30 AM   | Climate Assessment and Adaptation Planning – Laura Laumatia & Aiyana James  |
| 10:15 AM  | Review and Approve Annual Accomplishment Report – Sharon Bosley <b>(Action Item)</b>  |
| 11:00 AM  | Annual Blood Lead results from 2023 (Annual August screening) – Mary Rehnborg   |
| 11:30 AM  | CCC Updates – Jerry Boyd  |
| 12 – 1 PM | Meeting will be adjourned for lunch. <i>Attendees can bring their own lunch or leave for lunch. Local options include <a href="#">the Gateway</a>, Zips and deli at the Benewah Market.</i> |
| 12:00 PM  | <b>Lunch and Executive Session under Idaho Code 74-206 (1) a to Discuss Performance of Executive Director.</b> <i>Separate lunch for BEIPC Staff, TLG and CCC chairs.</i>                   |
| 1:00 PM   | CDA Trust fund presentation – Dan Silver  |
| 1:45 PM   | 2024 Construction Objectives - EPA  |
| 2:00 PM   | EPA New Lead guidance – EPA   |
| 2:05 PM   | Waterfowl updates - EPA   |
| 2:15 PM   | Public Comments & Discussion. <i>Individual speakers will be allowed three minutes to address the board on each agenda or non-agenda item.</i>  |
| 3:00 PM   | Adjourn   |

**Note:** Times indicated for presentations and discussions are tentative and may be adjusted to accommodate over and under runs of time used to accommodate presenters and Board and public discussions.

## BEIPC MEETING GUIDELINES

- The Executive Director is directed to manage these guidelines.
- The agendas for BEIPC meetings are draft agendas and may be modified by the Commissioners by motion and majority vote at the beginning of the meeting to accommodate unanticipated program and scheduling changes.
- Parties requesting a scheduled time slot on BEIPC meeting agendas to present technical or other information shall discuss the request with the Executive Director a minimum of four (4) weeks prior to the meeting date. If the draft agenda can accommodate the subject matter and time needed for its presentation and at the request of the Executive Director, the requesting party shall forward an electronic copy of the proposal for the item to the Executive Director a minimum of three (3) weeks prior to the meeting date. If the item is of a technical nature, the Executive Director will present the technical proposal and or presentation to the TLG for information and review prior to the BEIPC meeting. TLG consideration of the proposal shall not prevent its presentation to the BEIPC.
- Parties making presentations needing overhead equipment, utilizing Power Point or other projection presentations shall furnish their own equipment or make arrangements with the Executive Director. Projection screens shall be provided by the BEIPC at meeting locations.
- At each BEIPC meeting, an open public comment and presentation period shall be set aside for any member of the public to make comments and presentations concerning the Basin or issues being discussed by the BEIPC and presenters on the meeting agenda. The Executive Director is responsible for adjusting the public comment periods on the agenda to ensure that the public is afforded the opportunity to comment concerning an issue of discussion at BEIPC meetings. Each presenter shall have a maximum of three (3) minutes to comment or make a presentation. These presentation times will be monitored by the Executive Director. Presenters shall be recognized by the Chair of the BEIPC meeting prior to speaking. If a presenter needs more time, they shall make arrangements with the Executive Director for a scheduled time slot on the agenda.
- Issues requiring BEIPC discussion and voting such as programs of work, five year work plans, annual work plans, and budget and funding issues shall be presented prior to the final vote on each such issue. The public comment time slot will be managed as outlined above.

## ABBREVIATIONS AND ACRONYMS

AMD: Acid Mine Drainage  
ARAR: Applicable or relevant and appropriate requirement  
ARRA: American Recovery and Reinvestment Act  
ATV: All Terrain Vehicle  
AWQA: Ambient water quality criterion/criteria  
BCR: Big Creek Repository  
BEIPC: Basin Environmental Improvement Project Commission  
BEMP: Basin Environmental Monitoring Plan  
BLM: Bureau of Land Management (US Department of the Interior)  
BPRP: Basin Property Remediation Program  
CCC: Citizens Coordinating Council  
CDA: Coeur d'Alene  
CDC: Center for Disease Control  
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act  
CIA: Central Impoundment Area  
CICs: Community Involvement Coordinators  
COC: Chemical of concern  
CSM: Conceptual Site Model  
CTP: Central Treatment Plant  
CWA: Clean Water Act  
DCIP: Drainage Control Infrastructure Revitalization Plan  
ECSM: Enhanced Conceptual Site Model  
EFN: East Fork Ninemile  
EMFR: East Mission Flats Repository  
EMP: Environmental Monitoring Program  
EPA: Environmental Protection Agency  
ERA: Ecological Risk Assessment  
ESD: Explanation of Significant Differences  
FFS: Focused Feasibility Study  
FS: Feasibility Study  
GPM: Gallons per Minute  
HH PFT: Human Health Project Focus Team  
I-90: Interstate 90  
I-C: Interstate-Callahan  
I & I: Inflow and Infiltration  
ICP: Institutional Controls Program  
IDAPA: Idaho Administrative Procedures Act  
IDEQ: Idaho Department of Environmental Quality  
IDFG: Idaho Department of Fish and Game  
IDPR: Idaho Department of Parks and Recreation  
ITD: Idaho Transportation Department  
LLC: Limited Liability Company  
IP: Implementation Plan  
LBC: Lower Basin (Citizen's) Collaborative  
LBCR: Lower Burke Canyon Repository  
LMP: Lake Management Plan  
MAU: Multi-attribute utility

*(Updated 5/01/14)*

MOA: Memorandum of Agreement  
NCP: National Contingency Plan  
NPL: National Priorities List  
NRDA: Natural Resource Damage Assessment  
NRRT: Natural Restoration Resources Trustees  
OSWER: Office of Solid Waste and Emergency Response (EPA)  
OTI: Osburn Tailings Impoundment  
OU: Operable Unit  
PFT: Project Focus Team  
PHD: Panhandle Health District  
PM: Project Managers  
PRP: Potentially Responsible Parties  
PRRACA: Paved Road Remedial Action Cooperative Agreement  
QA/QC: Quality Assurance / Quality Control  
RA: Remedial Action  
RACA: Remedial Action Cooperative Agreement  
RAO: Remedial Action Objectives  
RD: Remedial Design  
RI: Remedial Investigation  
RI/FS: Remedial Investigation/Feasibility Study  
RPM: Remedial Project Manager  
RP: Remedy Protection  
ROD: Record of Decision  
RODA: Record of Decision Amendment  
ROW: Right-of-Way  
SARA: Superfund Amendments and Reauthorization Act  
SCIP: Superfund Cleanup Implementation Plan  
SFCDR: South Fork Coeur d'Alene River  
SJTI: Superfund Job Training Initiative  
SOP: Standard Operating Procedure  
SSC: State Superfund Contract  
SST: Superfund Straight Talk  
STI: Star Tailings Impoundment  
SVNRT: Silver Valley Natural Resource Trust  
TCD: Typical Conceptual Design  
TLG: Technical Leadership Group  
Trust: Successor Coeur d'Alene Custodial and Work Trust  
UMG: Upstream Mining Group  
UPRR: United Pacific Railroad  
USDA: United States Department of Agriculture  
USFWS: United States Fish and Wildlife Service  
USGS: United States Geological Survey  
WAC: Waste Acceptance Criteria  
WCA: Waste Consolidation Area  
WMS: Waste Management Strategy  
WENI: West End Natural Infiltration Area  
WCX: Waste Quality Exchange  
WY: Water Year

**DRAFT**

**BASIN COMMISSION (BEIPC)**

**November 29, 2023**

**MEETING MINUTES**

# Basin Environmental Improvement Project Commission

## Draft Meeting Summary Minutes

November 29, 2023, 10:00 AM – 2:00 PM

Coeur d'Alene Public Library

702 E Front Ave, Coeur d'Alene, ID 83814

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*These minutes are summary notes of the reports and presentations and are intended to capture key topics and issues, conclusions, and next steps and not every detail of discussion or individual quotes.*

### **Attendees included the following:**

Sharon Bosley (BEIPC Executive Director)

### **Commissioners and Alternates present:**

Jess Byrne (IDEQ), Michael McCurdy (IDEQ), Leslie Duncan (Kootenai County), Calvin Terada (EPA), Scott Fields (CDA Tribe), Dave Dose (Shoshone County), Karl Rains (Washington State), Phil Lampert (Benewah County)

### **Staff present:**

Gail Yost (BEIPC, Assistant to E.D., Note taker), Tamara Langton (EPA), Andy Helkey (IDEQ), Sandra Treccani (Washington State), Rebecca Stevens (CDA Tribe), Jerry Boyd (CCC)

### **Call to Order**

Leslie called the meeting to order 10:06 am. Due to EPA representatives' late flight arrival and attendance at the meeting, the agenda will be arranged so that they may be there for the Work Plan review and approvals.

### **Introduction of New Executive Director** – Leslie Duncan, Chair

Leslie introduced Sharon Bosley as the new Executive Director of the BEIPC.

### **Executive Director Vision of BEIPC Involvement in the Basin Community** – Sharon Bosley, Executive Director

Sharon is honored to be here today and to be selected as the new Executive Director of the BEIPC. She is excited to guide this commission and to protect and promote the health, safety, and general welfare of the people of Idaho and Washington in a manner consistent with local, State, Federal and Tribal participation and resources. Her background – she came from the State of Michigan and attended school at Michigan Technological University where she earned her degree in Mechanical Engineering. The upper peninsula of Michigan is very rural, which helped foster her love for the outdoors. This prompted her and her husband to move to Idaho, first starting work in the Boise area at Micron Technologies. After starting their family and deciding to be at home, they moved to Coeur d'Alene. She loves the area with all the beauty and activities of the outdoors, and where they continued to live and expand their family. Sharon again stayed home until the kids were of school age which allowed her to become active in community events and local environmental advocacy boards. She began part-time then full-time jobs working in roles such as development director, communications associate, and executive director. When the pandemic came, she was able to work remotely for an Analytical firm that quantified energy efficiency programs for utilities. Her most recent employment was working for the University of Idaho in the Community Water Resource Center as their water outreach specialist. This allowed her to work with citizen scientists monitoring the water quality of CDA Lake, high school students on the year-long confluence project, and teaching Stormwater & Erosion Education Programs (SEEP) to contractors and agencies. Since starting with the BEIPC in September,



she has met with so many people and learned not only the history of the Basin, but also what is planned for the future. It is amazing to see the progress that has been made, so much has been done but still so much to do not only for the health of humans but for the wildlife that reside here. Sharon is surprised as she speaks to others how many are not aware of the work going on and the work that will still be ongoing. One of her goals is to help people in this area understand what is currently going on through outreach, meeting directly and engaging with people, making presentations at different work groups, writing articles, and utilizing our Citizens Coordinating Council (CCC). Sharon hopes to improve the entire Basins understanding of what is happening going forward. The most important thing for her is to advocate for the seven governments comprising the BEIPC and their stakeholders. She will listen and learn what their needs and concerns are and work to address them if possible. She has met with each of the BEIPC Commissioner's and talked about work completed and future projects, and how to create a culture of continuous improvement. Sharon would like to see more citizen involvement within the Basin and its activities and plans to utilize the CCC which is the main liaison between the public and the BEIPC. An on-line survey has been created that will help gauge people's interests, needs, and concerns about activities in the Basin. You can find the link to this form in the November EPA Basin Bulletin that was available at today's meeting. The results will help her and Jerry Boud, CCC Chair, understand which direction they need going forward for the CCC. Sharon would also love to engage with citizen science work which would allow citizens to become more aware of the ecological benefits of what has taken place, get them more directly involved in what's going on, and provide valuable information on research that is taking place. Citizen science can bring the community together, strengthen social bonds, and make the community resilient. As she listens to citizens' needs and concerns, Sharon would like to find funding to address these needs as she realizes there will not be enough settlement funds to cover everything. If she can connect funding sources to stakeholders, we can continue to make improvements beyond current remediation efforts. She would also like to see the BEIPC more involved in community groups and activities. With the Board's support, Sharon will continue to participate in the Confluence Project with high school students, Our Gem Collaborative for CDA Lake, attend local economic and natural resource meetings, and attend Watershed Advisory group meetings. Communication and collaboration are key in achieving all these goals. When we work together, we can be more innovative, increase success, and improve our communication. By listening and learning from stakeholders, she hopes to create a sense of unity to make the Basin a healthier place for generations to come.

**Review and Approve Draft August 8, 2023, Meeting Notes** – Sharon Bosley (Action Item)

Leslie asked if everyone had a chance to review the minutes from August 8<sup>th</sup>, Scott Fields from the CDA Tribe had a spelling correction on page 2, 4<sup>th</sup> paragraph. There were no more edits – Phil Lampert motioned to approve with the correction, Jess seconded – all approved **M/S/C**

**Restoration Partnership project funding update** – Rebecca Stevens, CDA Tribe

Rebecca will split her presentation into two parts today – Fiscal 2023 accomplishments and then Restoration Partnership (RP) update. The RP is a collaboration of the US Department of the Interior represented by BLM and US Fish & Wildlife Service, US Department of Agriculture represented by US Forest Service, State of Idaho represented by IDEQ and Idaho Fish & Game, and the CDA Tribe. The Trustees were set up under federal government direction back when CERCLA (Comprehensive Environmental Response Compensation Liability Act) came into play in 1980. The Trustees are responsible for ensuring that natural resources are protected for the benefit of the public. Over the course of 30 years, many lawsuits ensued filing claims against the mining companies for the release of hazardous substances (lead, cadmium, arsenic, and zinc) into the environment and the injury to the natural resources. When the last claim was settled against Hecla in 2011, they branded themselves as the RP. Restoration is different from remediation – Natural Resource restoration protects, restores, replaces, and/or acquires the equivalent of natural resources or associated services that they provide such as – cultural services, human services, recreation, and economic benefits.

The restoration plan was adopted in 2018 and falls within the RP Planning area which is a little different than the Superfund boundary as it includes the North Fork of the CDA River and the St. Joe River watershed. You might wonder what was injured in the St. Joe, nothing but part of restoration and the natural resource damage assessment program is that we can replace or compensate for injury in areas that are still injured by mine waste contamination in other parts of the watershed. We keep a close eye on what EPA is doing and work hand in hand with their remedy implementation. Some of the 2023 accomplishments are as follows:

**Cougar Bay Stream & Wetland Restoration** – very visible along I95 just south of CDA, 800 native riparian plantings installed and culvert replacement. This will bring Cougar Creek back to its sinuosity and restore the wetlands and help retain some of those nutrients before entering CDA Lake.

**Hangman Watershed Cultural Significant Plant Restoration** – Tribal staff and tribal youth have installed plant protectors, beaver surveys, and ring of fire kiln for future biochar use to boost camas size after harvest, retain soil moisture, and promote mycorrhizal communities.

**Monitoring and Modeling CDA Lake** – over 13 sampling events took place in the lake and lower CDA River. Data analysis and writing synthesis reports are still underway. They also worked with EPA staff to upload data from this project through the EPA Scribe platform, following the Bunker Hill Superfund Site Data Management Plan – for years the data was not being uploaded, so this is a big deal.

**Native Willow Nursery** for support of restoration actions – monitored growth and harvest of 7 native willow species for poll and whip availability for all of their RP projects. They also finalized a Standard Operating Procedure (SOP) document to identify suitable willow conditions and growing habitats. A copy was provided to IDEQ and Pioneer Technical Services.

**Hepton Lake Wetland Restoration Project** – breach located along the St. Joe River. Work is underway on some lessons learned with the infiltration of ground water and surface water interactions. RFP with construction contractor for wintertime levee breach plug repair during the low water.

**Lake Creek Watershed Restoration** – this is a cut-throat trout tributary that flows into Windy Bay on CDA Lake. They are working with landowners and completed final design and more plantings for channel restoration to return the creek's sinuosity.

**Prichard Creek Planning, Phase 1 Implementation** – located way up in the North Fork CDA River watershed. There are multiple partners with Idaho Forest Group as the landowner of the Conservation Easement. They have installed some riparian plantings and log jams have been placed for good water flow. The interesting thing is the stream disappears, but it is a cold water refugia and major tributary to the North Fork. This will be a long-standing project - you will see some of the willows from the Tribal willow farm plantings there.

**Gene Day Pond** – this project has been going on for a while, but it looks like we will be wrapping it up this year. It is a clean water fishery along the South Fork located near Osburn. The finishing projects include graveling the parking area, traffic control boulders, a restroom and info kiosk.

**North Fork CDA River Conservation Easement (CE)** – another cold water refugia on a significant piece of land located along the river that the landowners want to protect. There will be more and more CEs as landowners in this Basin, the whole Panhandle of Idaho and in Washington protect their land against development pressures.

Gray's Meadow Wetland Conversion/Restoration – continue to work with EPA and the CDA Trust on remedial activities and construction to prepare for restoration. Baseline monitoring data has been underway along with water control structures, dike reinforcements, bird nesting habitat/island building and dust control. They would like to see this project wrapped up in 2025.

Red Ives Creek Restoration – the dam was removed over a year ago and the Forest Service has been utilizing locally supplied large debris and placing it back into the stream to enhance floodplain connectivity. They will continue to monitor the success of this project as this is a bull trout stream which is one of their focus areas and hopes to re-populate the trout habitat.

Canyon Marsh AG to Wetland project – located in the Lower Basin and is in the Pacific flyway for the tundra swans. They continued to work with the landowners there to secure the CEs which have been done. The conceptual wetland restoration design is underway and working closely with EPA as Canyon Marsh has been identified as the next AG to wetland conversion project post remedy – they will do the remedy we'll do the restoration.

Gleason's Marsh will be the other AG to Wetland project – they are monitoring baseline data for CEs and future remedial and restoration plans.

There was a comment in the room about the amazing work that is being done by the RP, she asked for clarification on the breach and where that is located. Rebecca answered at Hepton Lake, which used to be a wetland years ago- it was diked along the St. Joe River just to the west of St. Maries and the Reservation boundary. It breached in 1996 and NRCS went in and fixed it, then it breached again. There are several stories about how it was breached a second time – ice jams, a lot of bank beavers along the levee– it is a huge area and clean wetland. They know there are tundra swans that land there as they are tracking one now that was tagged last year. Unfortunately, it is also becoming a northern pike nursery area and they are trying to stop the invasive intrusion of pike on adfluvial cut-throat trout, provide clean habitat for birds and waterfowl, and cultural resources.

Dave Fortier asked where the willow nursery was located, and Rebecca answered right next to Hepton Lake upstream.

Jerry Boyd wanted to know if Prichard Creek was used for gold and placer mining, and that's why it disappears. Rebecca explained it was flipped up over many times and the gold discovered there helped to build the Empire State Building in New York City. There is a lot of rich history – something that Idaho Forest Group and the RP wanted to still embrace is the community connectivity to that area. Terms in the CE will allow for community members to go sift, sieve, and pan for gold. Jerry also asked when they get the easement do they pay money and Rebecca said correct – they can either have it donated or pay for it. Does the money come out of the funds being used as part of the cleanup efforts – and Rebecca answered the funds they are using are coming out of the Restoration settlement dollars. They are always looking for cost-sharing and they work closely with several land trust companies.

Rebecca gave her RP update – in 2023 they solicited for project ideas. The first solicitation happened in 2019 in which they are now implementing 22 restoration projects. This current solicitation is asking for more focused project ideas based on the following criteria:

1. Critical habitat for bull trout
2. Stream connectivity

3. Lake water quality improvement
4. Wetland enhancement
5. Compliment other Natural Resource Restoration projects

They have limited dollars; the total settlement amount was about \$140 million of which about \$110 million is left. The RP wants to be strategic on how the dollars are spent because they cannot invest them like the CDA Trust can. Rebecca explained the timeline that they followed from April 2023 up until November when the projects were selected. Sixteen ideas were submitted, three did not meet the eligibility criteria and two withdrew. The eligibility criteria consist of:

1. The project occurs within the planning area.
2. The project does not expend funds on physical structures.
3. No additional injury to natural resources or services.
4. The project avoids or mitigates human health risk.
5. The project is consistent with applicable laws.
6. No infrastructure projects.
7. Services: human use, culturally significant, community support, etc.
8. Will not replicate cleanup and not cause negative effects to cleanup already completed or underway.
9. Will not replace other obligated funds.

After the trustee ranking process, these are the 11 projects that were approved for funding:

1. Restore fish passage and ecosystem function in Miesen Creek which is a tributary on the St. Joe
2. Benewah Creek 'eltumish Project - Stream/Wetland Restoration – their focus will be mitigating drought as they do not want to be doing restoration work in areas with no water.
3. Lake Creek CE – the landowner is donating a portion of their land to a CE which is a \$2 million donation and will secure all the restoration work that has been in place in that drainage over the years.
4. Lane Marsh Acquisition or CE – Lower Basin private landowner adjacent to the F&G parcel where EPA is conducting the thin layer cap project, the landowner is having discussions about potentially selling or putting it into a CE.
5. Big Creek Fish Passage Barrier Removal – up Big Creek above the Sunshine Mine where an old dam has been for years, this project will remove that fish barrier as we know there are fish upstream – this will connect the fish down to the South Fork.
6. Upper St. Joe River Bull Trout Habitat – five-to-ten-year project working with the Forest Service. All the NEPA (National Environmental Policy Act) work has been done. Very exciting because of all the work the FS has been doing up to this point, partnering with them and other funding sources they have secured.
7. Little North Fork Watershed Enhancement – another Forest Service project, NEPA also conducted. It is exciting to partner with our project and leverage our funds and their dedicated funds.
8. Beaver Creek Phased Watershed Enhancement – same as Little Nork Fork work, Forest Service owned.
9. Assessing Fish Passage at Stream Crossings in the CDA Basin – working with the State of Idaho to centralize data throughout the Basin.
10. CDA Lake Monitoring and Modeling – continue monitoring and modeling work as identified by the National Academy of Science (NAS) report.



11. The paleolimnology of Coeur d'Alene Lake from pre-disturbance to mining impacts and present day – also identified by the NAS, they will be partnering with other funding sources as we move into fiscal 2024.

Jess Byrne asked about project #11, he wanted to know if there was a total estimated cost – Rebecca answered about \$1.1 million altogether, but not all the funds will come out right now – some of it will be phased out over the next few years.

Jerry asked if any funds were being used for monitoring or controlling some of the introduced species of fish in CDA Lake. Rebecca stated if you look at the 1,000 ft level on some of these projects, they do include some of that because of the base-line monitoring and monitoring of success. The Hepton Lake levee breach project is probably the clearest example as we try to control the pike. She thinks with all the work they do collectively, they are always looking at the invasive species and how we can manage them.

#### **CLAC and Recreation Survey Update** – Jamie Brunner, IDEQ

Jamie presented an update on Leading Idaho for CDA Lake. Back in November 2019, Governor Little announced, because of CDA Lake water quality trends, a plan to initiate a third-party review of lake water quality data using the National Academy of Science (NAS). In 2020, the contract with NAS and work began on this study. In the meantime, the Governor initiated Leading Idaho for CDA Lake, which was the action steps taken while they were waiting for the NAS third-party review. In 2021, the Governor directed \$2million of state tax-payer dollars towards Leading Idaho, for the purpose of implementing projects that would reduce phosphorus loading to CDA Lake and throughout the Basin. The next year, he directed another \$31million towards the same efforts through ARPA (American Rescue Plan Act) funding – for a total of \$33million. In the beginning, the focus was on reducing phosphorus loads to the lake, and then after the NAS review came out and the two programs combined, the \$33 million ending up going towards projects that both reduced phosphorus and addressed follow-up recommendations from the NAS. The Coeur d'Alene Lake Advisory Committee (CLAC) was established in 2021 to oversee the rankings of projects to determine where this money would best be spent. The CLAC final rankings in March of 2023 included: nonpoint source improvements; stormwater treatment projects; wastewater treatment upgrades; and other NAS recommendations. Jamie showed the overall summary of the projects selected. There is a deadline to get them committed by a certain timeframe. They are mostly obligated for the \$33 million, but there is still some funding unallocated. We have about a year to allocate all the funding through the ARPA requirements, but there are a couple of projects they are working out the details on and expect to be fully allocated.

Leslie had a question on the ARPA funds to clarify that \$500,000 out of the \$31 million is for administrative and Jamie answered yes. Leslie asked if they could get a copy of this summary and Jamie will provide that. The presentation will also be provided to Gail to post to the Basin webpage. Jamie can be contacted with any questions on the projects.

Some of the NAS recommended projects consist of: Risk-Based Evaluation of Selected Recreational Areas in Coeur d'Alene Lake and Spokane River; convening a Science Coordination Team; and St. Joe Watershed Assessment.

*Risk-based Evaluation of Selected Recreational Areas* – they are looking at recreational areas around CDA Lake and the Spokane River to assess potential metals exposure and respond accordingly. They are working with Alta Science and Engineering and Norka Paden from IDEQ, and when they get further along, they will update everyone. This year they started the planning with stakeholder involvement activities, and a public survey on the internet questioning where and how people were recreating and the frequency of their

activities. They are developing the work plan for the field sampling that will occur in the summer of 2024 with a final report expected by 2026.

*The Science Coordination Team* – Craig Cooper from IDEQ provided an update. This team is addressing the recommendations from the NAS. The conditions in the lake are so cross cutting both technically and geographically that it takes a team to succeed. If we want to protect the lake and keep moving to the future, we need to be coordinated and cost-effective. This team will bring together people in our agencies with the skills we need to help coordinate, facilitate, and provide actionable information to the decision makers for management purposes. The team consists of IDEQ, University of Idaho, USGS, EPA, and CDA Tribe. We are currently working on two things – setting all the priorities of everything the NAS said need to be done and the actions the NAS didn't need to be done but still require our attention, for example the St. Joe Watershed Assessment. We are about halfway through this process and hope to have a document out by next spring that assesses these priorities both short-term and long-term so we can rank our projects and work on funding them. The CDA Tribe brought forth a paleolimnology proposal which will take cores from the lake and use the analysis to look back in time. It tells us what the lake was like before it was impacted which gives us a target to hit. It also allows us to look at what's happened in the basin over time and see how that has impacted the lake because the sediment contains a history. This proposal has been partially funded, so the science team has put together a project team to build a work plan, get the rest of it funded so it becomes a powerful tool for us moving forward.

*St. Joe Watershed Nutrient Assessment (monitoring)* – they have a project with the CDA Tribe in place to fill some of the data gaps in their basin-wide nutrient inventory in the St. Joe Watershed and southern lake tributaries. They are currently working on staffing this project. It will be a two-year study with a final report expected in 2025.

The complete list of projects and information is available on the Leading Idaho and CDA Lake website at: [www.deq.idaho.gov/leading-idaho-and-the-coeur-dalene-lake](http://www.deq.idaho.gov/leading-idaho-and-the-coeur-dalene-lake). If there are any questions, you may contact Jamie. She showed a picture of one of their Leading Idaho projects for stormwater at Sanders Beach. The stormwater used to get piped out into the lake, but the City of CDA has now captured the water through a series of treatment vaults. Phil Lampert asked what the treatment vault does, and Jamie answered they are essentially a dry well surrounded with filter fabric that has sand and compost in it, the stormwater filters through and picks up some of the contaminants before it continues down into the ground.

Rebecca stated we are always highlighting the importance of the ongoing State and Tribal water quality monitoring in the lake, would she say that the monitoring that we continue to do will help keep track of how these nutrient reduction projects are working, are we seeing a reduction. Jamie answered the hope is yes, although as far as scale goes, she doesn't think the lake monitoring we've been performing would capture individual projects, but collectively she hopes it will pick up the overall load to the lake and how that is being impacted. Craig added we should see this in a couple of years as we get more data, it may take this long to see any real change. There have been some improvements already. We may see results earlier in the USGS analysis of data for these projects.

Lunch and Executive Session under Idaho Code 74-206 (1)(b) to Discuss Performance of Executive Director. Separate lunch for BEIPC Staff, TLG and CCC chairs. Phil made the motion to go into Executive Session and Jess seconded – all approved **M/S/C**.

### **Review and Approve Draft 2024 BEIPC Work Plan – Sharon Bosley (Action Item)**

Sharon presented the 2024 Work Plan in a PowerPoint presentation. This year's work plan has a different introduction which is essentially the site background and may be helpful to members who are new to this group. The Bunker Hill Superfund Site (BHSS) was listed on the National Priorities List (NSL) in 1983 and is divided into three study and cleanup areas or Operable Units (OU's). The Record of Decision (ROD) for OU-1 was issued in 1991 and includes the populated areas of the Bunker Hill Box. In 1992, a ROD was issued for OU-2 and included the non-populated areas of the Bunker Hill Box. Ten years later another ROD was issued for OU-3 for all areas of the CDA Basin outside of the Box, from the Montana border and into the State of Washington and coincides with the formation of the BEIPC. An amendment to the ROD (RODA) came about in 2012 focusing on the Upper Basin. This site is divided into two geographic areas with common sources of contamination: The Upper Basin and the Lower Basin. The Box is included as part of the Upper Basin when referring to remedies that improve water quality and lessen migration of contaminated sediment to the Lower Basin. The 2024 Work Plan is separated into two parts – 1) Environmental cleanup work and 2) Other activities and responsibilities.

#### **PART 1 - ENVIRONMENTAL CLEANUP WORK**

*Human Health Remedies* – remediation in areas where human health exposures exist and includes maintaining the Institutional Controls Program (ICP) and the Basin Property Remediation Program (BPRP). At the conclusion of 2023, 3,236 properties in the Box and 3,935 properties in the Basin have been remediated. Sampling and remediation will continue if results are above action levels which stands now at 1,000 parts per million (ppm). Nine properties in the Box remain to be remediated, and 36 properties in the Basin based on previous sampling results; 202 properties in the Basin still require sampling.

*The Lead Health Intervention Program (LHIP)* which is managed by Panhandle Health District (PHD) will continue to offer free blood lead screening for residents living within the BHSS boundaries, individuals recreating in the CDA Basin, and workers in occupational settings. In addition, the LHIP will conduct its annual summer screening with a \$50 incentive for children between the ages of 6 months and 6 years.

*Recreation Use Activities* - the Recreation Sites Program was created to address and manage human health risks that can occur during recreation activities throughout the CDA Basin. A Basin strategy document was developed to lay out goals, inventory recreation areas, manage risk to people, and outreach activities. They will now use the same approach for the Box to develop a similar strategy document. The CDA Trust will continue to monitor completed remediation projects in the Basin and to update and install new signage at identified sites. In the Box, IDEQ and PHD will continue to update signage and evaluate access controls at mine and recreation sites as identified. Planning for future remediation recreation sites will be prioritized. Some challenges remain as many places are re-contaminated during high water or flood events, or are remote, hard to access areas difficult to clean up.

#### ***Waste Management – Repository and Waste Consolidation Area (WCA) Development and Management***

Waste disposal area development and management is an ongoing process that must meet the demand for disposal of contaminated waste from cleanup activities. The repositories and WCA's are engineered waste storage options that are being constructed, capped, and closed to ensure wastes remain in place to prevent contaminants from being released to surface water, groundwater, or air in concentrations above state and/or federal standards.

*Repositories* – are large, centrally located waste disposal areas that take a variety of wastes from a variety of projects, and typically remain open for longer periods of time. There are five operating repositories located within the site:

1. Page – operated by IDEQ and currently expanding to provide additional capacity.
2. Big Creek – operated by CDA Trust, 85,400 cy remaining capacity.
3. Big Creek Annex – operated by CDA Trust, 168,250 cy remaining capacity.
4. Lower Burke Canyon – operated by CDA Trust, 1,025,000 cy remaining capacity.
5. East Mission Flats – operated by CDA Trust, 156,100 cy remaining capacity.

*Waste Consolidation Areas (WCA's)* – are located near, and accept waste from, specifically identified sources such as mine and mill site remedial actions and are constructed to be open for a shorter period. There are two WCA's located in the Basin:

1. East Fork Ninemile – receives waste from Tamarack and Dayrock Complexes – final cover expected to be completed in 2026.
2. Canyon Complex Repository/WCA – Silver Valley Natural Resource Trustee (SVNRT) cleanup already placed and consolidated, accepting waste material from nearby Canyon Creek remedial actions and will receive waste from Hecla Star Complex starting in 2024.

Siting of the Lower Basin WCA – in 2020, EPA began seeking public opinion for a WCA in the Lower Basin to accommodate nearby planned remedial actions. A Lower Basin Project Focus Team (PFT) was formed in 2022 to verify the analysis of potential WCA locations. Final site selections are currently under EPA consideration and pending a decision, design activities will commence in 2024.

#### *Remedial Actions*

*Upper Basin/Box Remedies* – the 2012 Upper Basin RODA identified \$635 million of work to reduce human and wildlife risks to heavy metal exposures and improve water quality. Clean up in the Box will continue to improve water quality in the South Fork CDA River (SFCDR) and lessen migration of contaminated sediment to the Lower Basin. 2024 goals will include treating additional contaminated water, focus on source control actions to address particulate lead, and protect remedies from further flooding.

Ninemile Creek Basin – in the Dayrock Complex and Lower East Fork Ninemile Creek Riparian Area 32 acres of cleanup for these two areas began in 2022 with completion of construction to happen in 2024. The Tamarack Complex covers approximately 20 acres of multiple mine waste sites and portions of the East Fork Ninemile (EFNM) Creek riparian area. 2024 marks the 3<sup>rd</sup> and last year of construction of this cleanup.

Canyon Creek Basin – Canyon Creek Investigation/Design, several investigations and designs are planned in 2024 within Lower Canyon Creek Riparian Area, Canyon Silver (Formosa) Mine, and the Standard-Mammoth Millsite, with the cleanup at this location to be initiated in 2024.

Hecla Star Mine Complex – is approximately 22 acres in size and consists of numerous mine and mills, mine adits, waste rock dumps, as well as mining-impacted riparian area. The cleanup was initiated in 2023 and will continue in 2024 to include removal of mine wastes, placement of clean backfill materials, reconstruction of Burke Road and Canyon Creek following removal of mine wastes, and installation of a concrete box culvert to convey Canyon Creek through a portion of the Complex.

Canyon Creek Quarry – is a 23-acre parcel and source of uncontaminated rock and gravel for use as clean backfill at cleanups within the Canyon Creek Basin, first at the Hecla Star Complex and then future Upper Basin remediation work.



Central Treatment Plant (CTP)/Central Impoundment Area (CIA) – The CTP was recently upgraded to treat mine water, primarily from the Bunker Hill Mine, and groundwater from below the CIA. The upgrades allow for treatment and reduction of the amount of solids called “high-density sludge” (HDS) that are produced by the plant. Sludge storage has been transferred to the new sludge impoundment cells on the CIA. System optimization is ongoing at the plant to run as efficiently as possible while still meeting effluent discharge limits. The Groundwater Collection System (GCS) project includes an 8,000 linear feet cutoff wall between the CIA and I-90, a series of extraction wells, and a conveyance pipeline to the CTP. Groundwater monitoring is completed during high and low flows to build a database to determine remedial action effectiveness of the system. The removal efficacy from the CTP shows over 99% removal for zinc and lead, and 98% removal for phosphorus.

*Lower Basin Remedies* – work described in the 2002 OU-3 ROD for the Lower Basin can be separated into Lower Basin Riverbeds and Banks, Lower Basin Floodplains, and cleanup at identified recreational areas along the CDA River. Goals of remediation focus on reducing human exposure to lead-contaminated soils and sediments, improving water quality, and reducing particulate lead and other heavy metals in the CDA Basin ecosystem. The Draft Final Riverbed Management Plan (RMP) was completed in June 2021 to guide the interim remedy and target areas within the river for active remediation and divide the riverbed into sediment management areas (SMAs), evaluate the effects of remedial technologies, and identify areas for natural recovery. The RMP will feed into a broader Lower Basin Prioritization Plan (LBPP) that is anticipated to be completed in 2024. The purpose of the LBPP is to provide an initial approach toward remedial action, to aid in pilot project selection, and guide pilot projects and remedial actions in the Lower Basin.

#### Lower Basin Riverbeds and Banks Projects

Dudley Reach Scour Hole Pilot Project - Dudley Reach is considered the most significant lead loading segment in the river system. The technologies to be constructed are a cap/dredge hybrid and unarmored riverbanks adjacent to the pilot segment will be addressed. The 30% design was completed in 2023 with the full design anticipated to be completed in 2026. The Lower Basin WCA needs to be sited and ready to take sediment prior to project initialization.

Cataldo Reach Riverbank Investigation – characterization activities will continue in 2024 and the information obtained will be used to inform prioritization of potential pilot projects to address contaminated sediment transport in this reach of the river.

#### Lower Basin Floodplain Projects

Gray’s Meadow Remediation and Restoration – is 695 acres of former agriculture land to be converted to productive wetlands and waterfowl habitat and is anticipated to be complete in 2024. They will construct 8 more water control structures, complete all embankments, access roads, and habitat features, seeding and hydro mulch.

Wetland Restoration through Conservation Easement – remedial design characterization of a privately-owned 250-acre conservation easement property located near East Killarney Lake Road. Characterization activities included installing monitoring wells, monitoring water levels, and collecting samples of groundwater, surface water, and soil. It is a potential agriculture-to-wetland project to be remediated and restored to provide clean habitat for water birds and other wildlife.

*Basin Environmental Monitoring Program (BEMP)* – objectives of the BEMP are:

- Assess long-term trends of surface water, sediment, groundwater, and biological resource conditions.
- Evaluate progress toward meeting Remedial Action Objectives (RAOs), Applicable or Relevant and Appropriate Requirements (ARARs), and Preliminary Remediation Goals (PRGs).
- Improve the understanding of Basin environmental processes and variability to improve the effectiveness and efficiency of remedial actions.
- Provide data for CERCLA five-year review of remedy performance.

In the Spring of 2024, the BEMP workgroup will continue annual meetings during the spring field planning season to effectively coordinate and communicate BEMP activities across all agencies and organizations.

Ninemile Creek Basin – the Area-wide Remedial Action Effectiveness Monitoring Plan was finalized in 2021, but baseline conditions were established in 2012 to help prioritize work and assess the effect of source area cleanups. Surface sampling is collected and analyzed four times per year during winter storms, peak spring runoff, late summer base flow, and late fall conditions. Results are summarized in the annual monitoring report.

Canyon Creek Basin – the monitoring plan for Canyon Creek was not finalized until 2023, but baseline conditions were established in 2015. Surface sampling is collected and analyzed four times per year the same as Ninemile Creek and summarized in the annual monitoring report.

The Box – in the SFCDA, surface water upstream and downstream of the GCS will continue to be monitored. Four stations are monitored twice a year, during peak spring runoff and late summer baseflow conditions.

Lower Basin – the Lower Basin Area-wide Remedial Action Effectiveness Monitoring Plan is in progress and will continue to be drafted in 2024. They will evaluate progress towards RAOs through assessment of biological conditions in fish and wildlife, and chemical conditions in surface water and suspended sediment. Surface water monitoring increased in 2023 to 12 times per year at 7 of the 20 monitoring sites, in response to recommendations from the 2022 NAS report to better characterize conditions in the Lower Basin and inputs to CDA Lake. Samples will be collected and analyzed in high flow events and at a fixed frequency approximately every six weeks, which represents 60% more samples.

Biological Monitoring – a multi-year applied research project has been occurring to develop monitoring tools to observe changes in lead exposure over time in tundra swan fecal samples and wood duck eggshells (beginning in spring 2024). This project is lead by EPA in collaboration with the CDA Tribe, IDFG, USGS and USFWS.

Coeur d'Alene Lake – in response to other NAS recommendations regarding CDA River inputs to CDA Lake, EPA has funded the USGS for continuous monitoring of surrogate technologies to estimate concentrations of suspended sediment, lead, and phosphorus. This includes installation monitoring, and model development at three established USGS monitoring locations – Cataldo, Rose Lake, and Harrison. The resulting models can be used to make real-time estimates and provide more accurate estimates of contaminant loads within the Lower Basin and entering CDA Lake.

*Operation and Maintenance (O&M) Responsibilities for Remedial Actions* – O&M responsibilities for remedial actions and cleanup work across the BHSS are as follows:

- Private properties remediated under BPRP – individual property owners.
- Public gravel and paved remediated roads – local governments with jurisdiction over roads.
- Remedy protection program – falls with governmental jurisdictions or property owner, or environmental covenants filed as riders to deeds or remediated property.
- CDA Trust - responsible for their own work except road and remedy protection projects, Gray's Meadow after five years, and a few others.
- CTP and Ground Water Collection System – falls to IDEQ.
- Other remedies under CERCLA – IDEQ.
- Remedies on BLM and NFS administered lands within the site and North Fork of CDA River – falls to BLM and USFS.

## PART 2 – OTHER ACTIVITIES AND RESPONSIBILITIES

*Idaho Department of Environmental Quality Lake Management Activities* – the Lake Management Plan (LMP) goals are to manage metals in contaminated lakebed sediments through reduction of nutrient inputs basin-wide from point and non-point sources. The LMP includes actions related to lake water quality monitoring, coordination among basin stakeholders, education and outreach, and identification of funding sources. Below are the objectives of the LMP:

- Improve scientific understanding of lake conditions through monitoring, modeling, and special studies.
- Establish and strengthen partnerships to maximize benefits of actions under existing regulatory frameworks.
- Finalize and implement a Nutrient Reduction Action Plan.
- Increase public awareness of lake conditions and influences on water quality.
- Establish funding mechanisms to support LMP goals, objectives, and strategies.

One recommendation from the NAS was the need to better coordinate data collection, utilization, and reporting throughout the basin. IDEQ convened a Science Coordination Team that will be instrumental in guiding scientific efforts related to management of CDA Lake and other NAS recommendations. IDEQ Lake Management Activities include:

- Continue to monitor water quality – metals, nutrients, and physical.
- Work with Leading Idaho recipients to implement phosphorus reduction projects.
- Analyze tributary data.
- Share relevant data gap monitoring results.
- Coordinate with CDA Tribe to facilitate the Tribe's monitoring in southern lake tributaries.
- Collaborate on water quality improvement effects in the CDA Basin.
- Identify opportunities to align nutrient reduction and remedial actions in the Lower Basin.
- Continue to monitor invasive aquatics.
- Continue to support TCP/YWS and Our Gem Collaborative.
- Support U of I Bay Watcher program.
- Support Local Gems program for local businesses.

*Coeur d'Alene Tribe Lake Activities* – even though the CDA Tribe retracted their support of the LMP in 2019 as an adopting government, they continue to be concerned about increased pressure on the landscape that may lead to declining water quality, as well as a myriad of other concerns. They will continue to conduct the following activities outside of the LMP process:

- Continue to monitor water quality – metals, nutrients, and physical.
- Continue to model data collected from the Lake, meteorological stations and USGS gage stations.
- Continue to monitor and treat invasive aquatics.
- Participate in the Lower Basin Project Focus Team to align nutrient reduction and remedial efforts.
- Continue to support TCP/YWS and Our Gem Collaborative.
- Support Local Gems program for local businesses.
- Work with IDEQ to implement the St. Joe River Nutrient and Watershed Assessment project.
- Continue to request that EPA reviews/evaluates their decision to “defer” a remedy for the Lake.

*Flood Control and Infrastructure Revitalization* – the BEIPC will continue to work with Upper Basin jurisdictions (local flood group) to work on potential flooding issues on the SFCDR. We are still waiting to hear back from FEMA on the new flood map from Elizabeth Park to Theater Bridge in Smelterville and will continue to work with Pinehurst to perform a similar flood zone analysis of Pine Creek. Although much of the needed work outlined in the 2009 Drainage Control Infrastructure Revitalization Plan (DCIRP) is now complete, the BEIPC will continue to assist Upper Basin communities in pursuing funding to implement the remainder of the DCIRP. The Executive Director will coordinate an O&M plan for existing drainage structures and will work with the TLG to develop ideas and potential funding requests for Basin work not covered in the 2002 OU-3 ROD and/or the 2012 Upper Basin RODA.

*Communications and Public Involvement* – the BEIPC will continue to work with Community Involvement Coordinators and Citizens Coordination Council to carry out public involvement, outreach, and education regarding Basin activities. They will also participate in Regional Outreach and Educational Committees.

*State of Washington Activities* – The Washington State Department of Ecology will continue to monitor the status of previous cleanups along the Spokane River. Additionally, the results of the 2022-2023 comprehensive sampling effort will be prepared and made available to interested parties.

*Restoration Partnership* - Rebecca did a great job today going through all the projects they are working on and those they have selected for restoration (see above notes).

Calvin commented that was the best comprehensive look in a visual format that he has ever seen regarding our work. To represent all the organizations and collective work, and being able to describe it was excellent. Thank you for doing this - it is a new way to truly showcase how much work is being done – to restore things and get it back for the community. Leslie agreed that it was excellent.

Leslie stated that we would hold off on the action item to approve the 2024 Work Plan until we review the 5-year 2024-2028 Work Plan and hear comments on both before approval.

#### **Discussion and Public Comments with CCC** – Jerry Boyd, Chair

Jerry stated that if there were any particular issues the public is concerned about, please feel free to contact Sharon or himself and they will see what they can do to share the information either to or from the Commissioners.

Rebecca stated that we haven’t talked about Limited Use Repositories (LURs) lately and she was wondering if we were picking that back up in 2024, have there been any requests from the community? Andy answered that LURs were created to take in Paved Roads waste only, so we would have to go back and



amend that language so that LURs could take in remedial waste. There haven't been any requests from the community.

There was one question on-line - will the slide presentations today be available on the BEIPC website, and the answer was yes.

**Review and Approve Draft 2024-2028 Five Year BEIPC Work Plan – Sharon Bosley (Action Item)**

This work plan is similar to years past, so Sharon will quickly walk through what has changed since last year. The Site Background section is new to both work plans but is the same historical information regarding the BHSS. Work Plans are reviewed and approved by both TLG and CCC and cover a broader range of work that will be accomplished.

**PART 1 – ENVIRONMENTAL CLEANUP WORK**

Human health activities including BPRP – complete remediation of any identified residential and community property sites and private drinking water sources, address human health risks associated with basin wide recreational activities, and provide educational resources and health advisories. Most properties remaining to be sampled and/or cleaned-up will be properties whose owners have withheld access. Remediation of high-risk properties will continue as agencies and the CDA Trust become aware of them. Implementation actions to address human health risks from exposure to lead and other metals that can occur during recreational activities will continue throughout the Upper and Lower Basin.

Lead Health Intervention Program (LHIP) – administered by PHD to provide services to prevent elevated blood lead levels in children and others living or recreating within the BHSS. These services include education and awareness about the risks associated with lead contamination and annual voluntary blood lead screenings. The Centers for Disease Control (CDC) has established a reference value for blood lead levels in young children at 3.5 micrograms per deciliter. Other site cleanup programs run by PHD include interior house dust monitoring, yard remediations, and the Institutional Controls Program (ICP) with the goal to prevent lead exposure that could result in elevated blood levels.

Repository and WCAs – continue operations at all five repositories and two WCAs as mentioned in the annual work plan and continue to explore potential sites and development plans for a WCA in the Lower Basin.

Upper Basin Remedies – continue to implement source control and water treatment remedies, ecological cleanup projects, and related human health activities. The focus for the 5-year period will be to operate the GWCS and upgraded CTP, and source control actions in the Ninemile and Canyon Creek watersheds which are the sources for the most significantly impacted water quality outside the Box.

Lower Basin Remedies – conduct pilot projects to address contaminated riverbed source areas and characterize and prioritize additional riverbank segments for stabilization. Coordinate as needed with the governmental structure that manages the Trail of the CDA remedy, and identify recreation areas for remediation or develop substitute clean areas along the South Fork and main stem CDA River. Utilize the Lower Basin PFT process to evaluate multiple objectives for source control, cleanup of channel habitat, and protecting human health. A RODA or Explanation of Significant Differences (ESD) may be necessary if additional actions are deemed necessary to address riverbed source areas. They will continue to evaluate and further characterize additional wetland properties for increasing feeding habitat for waterfowl, begin planning actions for the entire river system, and update the inventory of recreational beaches and banks to

identify those that may be considered for remediation. Adaptive management will be a key component of any implementation actions and management plans.

Basin Environmental Monitoring – continue to implement remedy effectiveness and long-term monitoring under the BEMP program to inform ongoing and upcoming near-term cleanup actions.

Operation and Maintenance (O&M) – same responsibilities as in the 2024 Work Plan.

## PART 2 – OTHER ACTIVITIES AND RESPONSIBILITIES

The scope of the 5-year work plan recognizes several work items where the BEIPC will be involved and items of work needed to accommodate some of the recommendations of the 2022 NAS study, implementation of the LMP by the State of Idaho and CDA Tribe, and coordination with activities of the Natural Resource Trustees.

Lake Management Activities – The 2002 OU-3 ROD did not include CDA Lake in the selected remedy. The 2012 Upper Basin RODA indicated that a remedy for lakebed contamination has been deferred contingent on successful management through the LMP. The 5-year work plan includes activities planned for implementation by both IDEQ and CDA Tribe as described in detail in the above 2024 Work Plan.

Flood Control and Infrastructure Revitalization – participating governments of the BEIPC and the Upper Basin jurisdictions will continue to work on potential flooding issues on the SFCDA River. The Executive Director will work with the TLG to develop ideas and potential funding requests for Basin work not covered in the ROD for OU-3 and/or the Upper Basin RODA.

Communications and Public Involvement – agencies will continue to address issues and facilitate public involvement and education in BEIPC activities.

Restoration Partnership (RP) – the Trustees will continue to implement their Restoration Plan and will coordinate with the BEIPC to provide updates on restoration planning efforts and implementation of restoration projects. The RP will continue to coordinate closely with EPA and CDA Trust to integrate restoration planning and implementation with remediation projects.

Rebecca had a correction on page 12, objective 3 under the basin-wide nutrient inventory – the CDA Tribe needs to be added in the far-right column under participants.

Felician from Alta asked a question from page 10 which addresses the 2005 NAS Study and 2022 NAS Study, Sharon stated that items of work would address recommendations from both studies.

Leslie asked for a motion to approve both the 2024 Work Plan and the Five-Year 2024-2028 Work Plan – Phil motioned; Karl seconded – all approved **M/S/C**

Rebecca provided an update on the Springstoen Bridge that crosses over the CDA River, it is going to be removed soon. The USGS gage station that a lot of us use will be relocated upriver a little ways and still be accessible.

Meeting was adjourned at 1:30 pm

**DRAFT**

**BASIN COMMISSION (BEIPC)**

**2023 ANNUAL REPORT**

# 2023 Draft ANNUAL REPORT



*Standard Mammoth Reach Investigation. Images provided by the CDA Trust.*



**Basin Environmental Improvement Project Commission**  
**March 2024**



## Table of Contents

Executive Summary .....	4
BEIPC Overview .....	5
BEIPC Board of Commissioners: .....	6
Program Management .....	7
Technical Leadership Group (TLG) .....	7
Citizen Coordinating Council (CCC) .....	8
Public Outreach and Citizen Involvement .....	9
BEIPC Community Involvement Activities .....	9
EPA Community Involvement Activities .....	11
IDeq and Panhandle Health District (PHD) Community Involvement Activities .....	13
2023 Work Accomplishments Part 1: Work Performed Through Federal Superfund or Other Cleanup Programs .....	16
Lead Health Intervention Program (LHIP) .....	16
Basin Property Remediation Program (BPRP) including Private Drinking Water Supply .....	18
BPRP in the Box .....	18
BPRP in the Basin .....	18
Contaminated Waste Disposal and Management .....	19
Repositories .....	20
Waste Consolidation Areas .....	22
Additional Disposal Locations .....	24
Upper Basin Remedies .....	24
East Fork Ninemile Creek Drainage (EFNM) .....	24
Canyon Creek Drainage .....	25
Lower Basin Remedies .....	27
Gray's Meadow Remedial Action and Restoration .....	27
Lead Bioaccessibility .....	29
Dudley Reach Pilot Planning .....	29
River Channel Data Collection .....	30
State of Washington Projects .....	30

Recreational Sites.....	30
Box Activities.....	31
Basin Activities .....	31
Basin Environmental Monitoring.....	32
BEMP Programmatic Planning .....	32
Surface Water .....	33
Groundwater.....	34
Suspended Sediment .....	35
Biological Resources .....	35
2023 Work Accomplishments Part 2: Other BEIPC Activities and Responsibilities.....	37
Lake Management Activities.....	37
National Academy of Sciences & Coeur d’Alene Lake Advisory Committee .....	37
IDEQ Lake Management Activities.....	38
Coeur d’Alene Tribe Lake Activities .....	40
Restoration Partnership.....	42
Challenges Ahead.....	47

To obtain a copy of this report or other information visit [www.basincommission.com](http://www.basincommission.com)

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*Lower Canyon Creek Riparian Area. Images provided by the CDA Trust.*

## *Executive Summary*

The Basin Environmental Improvement Project Commission (BEIPC) is responsible for coordinating environmental remediation to address heavy metal contamination, natural resource restoration and water quality in the Coeur d'Alene Basin (Basin). The BEIPC also participates in guiding and coordinating infrastructure upgrades and improvements to protect the environmental cleanup remedy and enhance living conditions in the communities of the Basin. The Basin is defined as the watersheds of the Coeur d'Alene River (CDA River), Coeur d'Alene Lake and the Spokane River within the Idaho Counties of Shoshone, Kootenai, and Benewah, as well as the Coeur d'Alene Tribal Reservation within Idaho.

During Calendar Year 2023, the BEIPC coordinated and monitored accomplishments by various implementing entities for environmental remediation and natural resource restoration work included in the BEIPC 2023 Annual Work Plan and the five-year operating plan. During this timeframe the 2024 Annual Work Plan and an updated five-year plan were also developed. The environmental remediation work was performed through the federal Comprehensive, Environmental Response, Compensation and Liability Act (CERCLA) Program, the State of Idaho environmental cleanup programs, and actions under the direction of the Environmental Protection Agency (EPA) by the Coeur d'Alene Work Trust (Trust) formed under the ASARCO Bankruptcy settlement. Natural resource damage restoration work was performed by the Coeur d'Alene Basin Natural Resource Trustees (Restoration Partnership) which includes the Coeur d'Alene Tribe (CDA Tribe), State of Idaho Department of Environmental Quality (IDEQ), Idaho Department of Fish and Game (IDFG), U.S. Fish and Wildlife Service (USFWS), Bureau of

Land Management (BLM) and the U.S. Forest Service (USFS). The Panhandle Health District (PHD) continued to manage the Institutional Controls Program (ICP) to control the release and migration of contamination remaining in place after remediation.

## *BEIPC Overview*

The BEIPC was established by the Idaho State Legislature and implemented through a Memorandum of Agreement (MOA) among implementing parties. The BEIPC's primary purpose is to work with the EPA and IDEQ to implement the Interim Record of Decision (ROD) for OU-3 throughout the Basin and implement the Interim Upper Basin ROD Amendment (RODA) for portions of OU-3 and OU-2 to advance the remediation of heavy metals contamination in the Upper Basin (confluence of the North and South Forks of the CDA River to the head waters of the South Fork above Mullan).

The Basin is considered to be Operable Unit 3 (OU-3) of the Bunker Hill Mining and Metallurgical Complex Superfund Site originally listed on the CERCLA National Priorities List in 1983. Operable Units 1 and 2 (OU-1&2) are the populated, industrial, and undeveloped areas in a 21 square mile area encompassing the communities of Pinehurst, Smelterville, Wardner, and Kellogg and outlying Shoshone County lands known as the "Bunker Hill Box". OU-3 includes the remainder of the site outside the Box in the Basin where contamination has come to be present.

In addition, the BEIPC is involved in:

- Assisting the EPA in developing and managing the Superfund Cleanup Implementation Plan (SCIP), a comprehensive cleanup plan for the Upper and Lower Basins based on remedies selected in the OU-3 ROD and Upper Basin RODA,
- Coeur d'Alene Lake management planning and implementation,
- Heavy metal contamination remediation efforts at mining sites in the North Fork of the CDA River (NFCDR),
- Assisting the Restoration Partnership in the implementation of their natural resource restoration program as provided for in the CDA Basin Restoration Plan; and
- Leading multi-agency coordination in addressing potential flooding in the South Fork CDA River (SFCDR) and Pine Creek drainages.

Legislation and the MOA creating the BEIPC authorized appointment of a seven-member board comprised of:



- Four members from Idaho, one representing the state, and one each representing the county commissions from Shoshone, Kootenai, and Benewah Counties, appointed by the Governor of Idaho.
- One representative of the state of Washington appointed by the Governor of Washington.
- One representative appointed by the Council of the Coeur d'Alene Tribe.
- One federal representative of the United States appointed by the President.

In 2023, Terry Harwood, the longtime Executive Director for the Basin Environmental Improvement Project Commission retired. The new Executive Director of the Basin Commission is Sharon Bosley. She took over the leadership role in September of 2023.

BEIPC Board of Commissioners:

Name	Title	Representing
Leslie Duncan Chair	Kootenai County Commissioner	Kootenai County
Brook Beeler Vice Chair	Regional Director, Washington Department of Ecology	State of Washington
Jess Byrne Secretary/Treasurer	Director, Idaho Department of Environmental Quality	State of Idaho
Casey Sixkiller	Regional Administrator EPA, Region 10	Federal Government
Dave Dose	Shoshone County Commissioner	Shoshone County
Caj Matheson	Coeur d'Alene Tribal Council Member	Coeur d'Alene Tribe
Philip Lampert	Benewah County Commissioner	Benewah County



*North Idaho Fair Informational Booth. Picture provided by PHD.*

## *Program Management*

The BEIPC operates in accordance with the Idaho statute and the MOA among the governing entities. It is responsible for coordinating the activities of federal, tribal, state and local government agencies implementing the ROD for OU-3 and the Upper Basin RODA for human health and ecological remediation activities. It is also involved in the efforts by the Restoration Partnership to restore natural resources in accordance with their CDA Basin Restoration Plan. Working through the implementation and management of Institutional Controls in the Box and Basin (ICP), the BEIPC coordinates efforts to protect the cleanup remedies, human health, and the environment from the release and migration of contaminants.

The Executive Director (ED) works with the seven governmental entities and their agencies to establish annual work plans, manages the activities and programs of the BEIPC, works to expand community involvement in the Basin work and assists governments and partners on various projects at their request. To assist the ED in program management, planning, and implementation, the states of Idaho and Washington, the EPA, the Coeur d'Alene Tribe and the Counties have provided volunteer staff "on loan" to coordinate with the ED and provide routine intergovernmental input on technical and policy issues. Other support groups include the Technical Leadership Group (TLG) and the Citizen Coordinating Council (CCC).

### Technical Leadership Group (TLG)

The TLG is the BEIPC primary technical advisory group. It is comprised of federal, state, local and tribal representatives as well as interested private citizens serving on the Project Focus Teams (PFTs) who provide expertise in science, engineering, logistics, regulatory aspects, and land management in the Basin. The TLG advises the BEIPC on work planning and implementation while striving toward consensus-based recommendations. In 2023, the ED and

TLG developed the 2024-2028 Five-Year and 2024 draft work plans to implement the remedy in OU-2 and 3.

In addition to providing technical assistance, practical knowledge, and to assure projects are coordinated with BEIPC activities, the TLG members schedule meetings to provide a forum for discussions on individual project affects, discuss opportunities to minimize impacts to affected stake holders and exchange information.

#### November 2<sup>nd</sup>, 2023

The TLG sponsored an in-person/virtual meeting in Coeur d'Alene. The meeting provided updates on the South Fork of the Coeur d'Alene River Basin Environmental Monitoring Program (BEMP) data collection efforts as well as 2023 Bunker Hill Superfund Site (BHSS) construction activities. The state also provided an update on the Coeur d'Alene Lake Advisory Committee (CLAC) project status which provided up to \$33 million towards projects that both reduced phosphorus and addressed follow-up recommendations from the National Academy of Sciences recommendations for Coeur d'Alene lake. Updates were also provided by the Restoration Partnership addressing the newly selected restoration projects and a Recreation site update for the Basin.

#### Citizen Coordinating Council (CCC)

The CCC serves as the main avenue for public input into the BEIPC activities. It is comprised of politically and geographically diverse members and was established to provide local citizen review and input on Basin related work to the BEIPC.

The CCC facilitated communications to its members and the public on an as-needed basis by e-mail, flyers, newspaper ads and posting to the BEIPC website and EPA Facebook. Throughout 2023, the CCC relayed information to its members and the public regarding activities in the Basin.

In addition to receiving various reports for review and comments, CCC members were involved in the following BEIPC activities in 2023:

#### July 27<sup>th</sup>, 2023

The CCC sponsored an in-person/virtual meeting in Kellogg in collaboration with EPA to discuss Waste Disposal Area information. Topics included an introduction to the Bunker Hill Superfund Site; Waste Management Strategies, overview of existing repositories and Waste Consolidation Areas (WCAs); and monitoring, operation, and closure procedures. Summary meeting notes can be located on the BEIPC website at [www.basincommission.com](http://www.basincommission.com).

November 29<sup>th</sup>, 2023

At the November BEIPC meeting, the CCC reaffirmed that the CCC would continue to concentrate on holding special meetings to discuss specific issues and keep the CCC members informed of activities through the extensive mailing list maintained at the BEIPC office. A link to a CCC survey was provided at this meeting and through EPA's November Basin Bulletin. This survey will provide the BEIPC with important information on community interests, needs and concerns.

## *Public Outreach and Citizen Involvement*

### BEIPC Community Involvement Activities

During Calendar Year 2023, all BEIPC meetings were held in person with a virtual option available at the November meeting. The BEIPC maintained an up-to-date Basin website at: [www.basincommission.com](http://www.basincommission.com). Meeting information was announced on the website, and at the BEIPC office in Kellogg, Idaho. The BEIPC also participated in public education/outreach efforts. The joint information booth at the North Idaho Fair was provided and occupied by representatives from the various government agencies participating in the Basin.

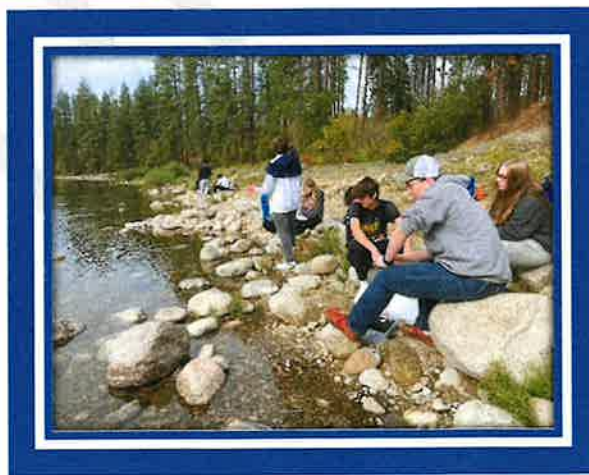
In addition, the various governmental entities represented by the BEIPC continue to support the TLG and CCC by being involved in the activities of those groups. Their involvement includes meeting with citizen groups, giving technical presentations, participating in Basin events, holding tours of Basin project areas, updating information throughout the Basin, and publishing various documents to provide updates on Basin activities.

As part of the public outreach program, the Basin Commission continued to make numerous presentations to local business and community groups concerning activities of the BEIPC which include planned cleanup actions and activities required to protect the remedy, human health, and the environment. The following is a partial list of BEIPC community involvement activities throughout the year:

- Attended the Silver Valley Transportation Team meeting numerous times to update them on Superfund activities in the Silver Valley and impacts on transportation facilities.
- Met with Kootenai County TLG representatives to brief them on issues before each BEIPC meeting.
- Operated the booth on several occasions at the North Idaho Fair.
- Attended the Idaho Four Counties Natural Resource Committee meetings to update them on cleanup actions and discuss other topics of concern.



- Participated in The Confluence Project working with close to 300 high school students in a yearlong program educating them on their local watershed through on-site studies and classroom work.
- Contributed to Our Gem Collaborative working to preserve lake health and protect water quality by promoting community awareness of local water resources through education, outreach and stewardship.
- Published three articles in the CDA Press through the Our Gem collaborative that were specific to BEIPC work.
- Regularly attended the Coeur d'Alene Chamber Natural Resource Committee. The ED was elected the board secretary for the committee in 2024. In addition, presented at the October monthly meeting on BEIPC activities.
- Posted BEIPC and CCC meeting dates and agendas to the BEIPC website, newspaper press release, and with assistance from EPA and IDEQ through social media and informational flyers.
- Shared reports and activities updates, meeting notices, and work plans to TLG and CCC members by email for review and comment.
- Shared BEIPC related information with the EPAs Community Involvement Coordinators (CICs), IDEQ and the Lake Management Plan (LMP) staff for publication on their Facebook pages.
- Continued to update the BEIPC website. The website provides information to keep the public informed including how to become involved and participate in the process; and opportunities for the community to provide input. Updates, including agendas and summary minutes of quarterly meetings, are posted to the website at [www.basincommission.com](http://www.basincommission.com).



*Lake City High School at The Confluence Project Water Quality Field trip to Corbin Park. Images from BEIPC.*

### EPA Community Involvement Activities

EPA Region 10 makes coordinating with local communities and residents a priority. The cleanup team wants to give people meaningful opportunities to be involved in and informed about the cleanup. EPA's many community involvement activities are done in partnership with others, including the IDEQ, BEIPC, and PHD. We are happy to report another productive year of important community involvement accomplishments in the Basin. Highlights include:

- EPA continued to follow its Community Involvement Plan (CIP) for the cleanup: <https://semspub.epa.gov/src/document/10/100137919>. The plan lays out how community members can get information and be involved, summarizes local concerns, and give input. It also outlines how EPA collaborates with its partners. Many local people helped develop this plan.
- EPA continued to partner with the CDA Trust, IDEQ and PHD to increase public health messaging and education related to limiting exposures to heavy metals. New health signs continue to be posted around areas commonly used for recreation. About 70 signs have been placed to date.



Example health sign. Image provided by BEIPC.

- The agency produced the document *Coeur d'Alene Basin Cleanup: 2023 Construction Season Preview*. It gave an overview of investigations to design protective cleanups and cleanup activities for the year. EPA distributed it widely to partners and community members.

- EPA worked with the U.S. Geological Survey to produce the document *Frequently Asked Questions about water quality in the Coeur d'Alene Basin area*. It answers questions related to USGS's annual surface water sampling in the Basin.
- The agency, in coordination with its partners, conducted outreach on several projects this year, distributing flyers locally: *Hecla Star Complex*, *Gray's Meadow Agriculture to Wetland Conversion Project*, *Ninemile Basin seasonal cleanup activities*, and *Trucks Resume Hauling to Lower Burke Canyon Repository*. Outreach was also conducted for lead health education, soil testing and property cleanups, recreation and health, repositories, the Gray's Meadow agriculture to wetland conversion project, and more. EPA also produced a handout for participants on the BEIPC August 2023-cleanup tour, and a fact sheet on a study to monitor swan health.

In addition to the above, EPA continued the following activities in 2023:

- Maintained the **Coeur d'Alene Basin Facebook** page which provides site updates to the public. Find it at [www.facebook.com/CDAbasin](https://www.facebook.com/CDAbasin). The page offers site news, photos, and resource information. EPA invites participation, suggestions, and postings, and shares partners' posts.
- Published the **Basin Bulletin** newsletter in March, July, and November. The Basin Bulletin provides news and updates about the Coeur d'Alene Basin Cleanup.
- Provided staff support and regular participation at meetings of the BEIPC, CCC, and TLG in keeping with EPA's commitment to the BEIPC process. In 2023, BEIPC quarterly meetings were held both in-person and virtually.
- EPA continued to maintain the website for the Basin Cleanup. It offers the public access to updates, site documents, and background information. Suggestions for improvements are always welcome. (Website URL: [www.epa.gov/superfund/bunker-hill](https://www.epa.gov/superfund/bunker-hill))
- EPA maintained document collections related to the cleanup at several area libraries for public access: Wallace Public Library, Spokane Public Library, St. Maries Library, and Kellogg Public Library.
- Project managers met as requested with local officials, interest groups, and others to provide updates and answer questions in 2023.
- EPA continued to work with the media in 2023, arranging press availability sessions as needed, fielding questions from reporters about the site, running newspaper display ads, and issuing press releases on high-interest activities.

### IDEQ and Panhandle Health District (PHD) Community Involvement Activities

IDEQ and PHD conduct education, public engagement, and health awareness activities related to the CDA Basin cleanup. Kellogg PHD is the primary partner for health messaging and outreach through the Lead Health Intervention Program. The aim is to raise awareness about lead intervention and to support the continuation of healthy trends for children, families, and visitors to the area.

The following are highlights of 2023 activities:

- Taught ICP course for the North Idaho College's Annual SafetyFest.
- Guest lecture at Gonzaga's School of Nursing (Spring & Fall).
- Restocked Play Clean Brochures in local laundromats and other public locations.
- Attended Idaho's Lead Advisory Committee Meetings, providing updates on Lead Health Intervention Program (LHIP) events and outreach activities. Discuss statewide activities.
- Attended Community Based Marketing Training workshop & consultation for ways to improve community outreach efforts.
- Presentation and site tours provided to new Kootenai Health Resident Doctors.
- Participated in Lower Basin Waste Consolidation Area planning meetings.
- Hosted a booth at City of Coeur d'Alene's Earth Day event.
- Presented and provided site tour to PHD's Health Promotions Team for lead awareness training.
- Collaborated with HUD and Idaho Housing and Finance Association (IHFA) to discuss HUD housing in the BHSS and provide lead awareness training.
- Presented to Kootenai County Realtor's Association on ICP and site history.
- Attended Silver Valley Chamber meetings to give updates on 2023 remedial activities and site projects.
- Attended Silver Valley Economic Development Council Meetings to give updates on 2023 remedial activities, site projects and outreach activities.
- Provided education and 578 giveaway bags to preschool through third grade classes at 6 different local schools and at the Harrison School District Health Fair for K-8th grade students.
- Hosted three public meetings for proposed ICP Rule/Statute changes.
- Presented to PHD's Nurse Family Partnership team about lead awareness and testing.
- Conducted Annual Blood Lead Screening Event (6-day event).



- Hosted and manned a booth at the North Idaho Fair (10-day event).
- Present at the Spring, Summer, and Fall Basin Environmental Improvement Project Commission Meetings.
- Hosted pizza parties and provided educational materials to residents at the Canyon Side and Amy Lyn Apartments.
- Met with Shoshone County's newly appointed County Commissioners and provided information about ICP services and LHIP programs.
- Presented to PHD's Board of Health on results of annual lead screening event.
- Hosted booth at Shoshone Medical Center's Kid's Health Fair, providing each child with bag of educational information, goodies and healthy snacks. Also hosted a soil shop, provided blood lead testing, and water sampling and provided additional blood lead screening services.
- Posted flyers for EPA's work projects throughout the year.
- Disbursed Basin Bulletin and EPA project updates throughout site. EPA released three Basin Bulletins in 2023: March, July, and November.
- Presented and provided site tour for area teachers for continuing education credits.
- Attended Silver Valley Transportation Team meetings.
- Tours of the Central Treatment Plant were provided to multiple groups.
- Hosted a booth and provided education about the ICP to attendees of PHD's All District Staff Meeting.
- Hosted a booth at Silver Mountain's Halloween Trunk or Treat event.
- Attended EPA meetings on identifying a Lower Basin Waste Consolidation Area.
- Attended Silver Valley Chamber of Commerce Members Meet and Greet.
- Attended Silver Valley Economic Development Council's Uptown Kellogg Revitalization Meetings.
- Attended Community Improvement Coordination Meetings.



*Trunk or Treat picture provided by PHD.*

- Attended joint meetings between Idaho Department of Health and Welfare's Childhood Lead Poisoning Prevention Program and Pediatric Environmental Health Specialty Units to provide knowledge about lead related topics and concerns.
- Conducted 20 in-home follow-ups for individuals with high blood-lead levels or elevated house dust.
- Provided additional blood-lead testing to area residents at the June and October Kellogg Elks Blood Drives.
- Assisted the City of Osburn with their Arbor Day tree planting event, providing clean barrier material, a handwashing station, and giveaways.
- Hosted a booth at the Health and Wellness Expo at the Kootenai County Fair Grounds providing outreach and educational materials to attendees.
- Conducted a lead safety video contest for area high school students.
- Hosted a booth at the Shoshone County Senior Health Fair providing education and outreach to attendees.
- Provided education, outreach materials, and giveaways to Mullan's Jeep Jamboree participants.
- Attended Kellogg School District's All-Class Reunion, providing educational information on the clean-up to attendees.
- Created new brochures for use during 2023 and 2024.
- Hosted a lead safety poster contest for area first through third grade students in conjunction with Lead Poisoning Prevention Week. Posters submissions were displayed at PHD's Kellogg Office.
- Provided area schools with posters and stickers to highlight National Handwashing Week.
- Attended South Fork Watershed Advisory Group meetings throughout the year.
- Present at the Kellogg Realtor's Surf and Turf training event.
- Presented at the Bonner County Blood Lead Testing Initiative training to provide continuing education credits to local health care providers.
- Presented to Liz Bryan with the University of Idaho.
- Hosted a booth at the Silver Valley Care's Event at Kellogg Park.
- Did class presentations for Wallace Junior High history classes.
- Met with PHD Epidemiology Team to provide update on lead health education and follow ups.

## 2023 Work Accomplishments Part 1: Work Performed Through Federal Superfund or Other Cleanup Programs

### Lead Health Intervention Program (LHIP)

Screening of children for elevated blood lead levels has been occurring annually in the CDA Basin since 1996. For children with elevated blood lead levels, follow-up consultations from a public health professional are available through the Lead Health Intervention Program to assist families with identifying ways to reduce lead exposures. The screening program also informs the Basin cleanup efforts, although cleanup decisions are not based on annual blood lead testing results. The goal is to prevent lead exposures that could result in elevated blood lead levels.

The following table shows the Basin Blood Lead summary results from 2018 – 2023 for children residing in the Basin 6 months through 6 years of age.

Year	2018	2019	2020*	2021**	2022**	2023
Number of Children	88	84	4	19	40	94
Minimum (µg/dL)	1.4	1.9	1.9	<1	<1.0	1.0
Maximum (µg/dL)	9.0	14	6	7	30	7
Average (µg/dL)	2.4	2.5	3.5	1.9	4.2	2.0
Geometric Mean (µg/dL)	2.0	1.9	3.1	1.5	2.2	1.8

\*2020 screening event was cancelled due to the Covid-19 pandemic.

\*\*Venous Test Results Only. In 2022 an additional 61 children had capillary test results, 51 of which were below detection (<3.3 µg/dL) and 46 older participants had capillary test results, 38 of which were below detection.

On October 28, 2021, the CDC lowered the blood lead “reference value” (BLRV) from 5.0 µg/dL to 3.5 µg/dL. PHD uses this new lower reference value for all follow-up calls and offers for in-home consultations. Historically PHD has used the Lead Care Plus model of machines for analyzing the capillary draws which has a minimum detection limit of 1.9 µg/dL. A recall of test kits for the Lead Care Plus machines issued on May 7, 2021, made test kits unavailable by the time of our 2022 screening. As an alternative, two Lead Care II model machines, which have a minimum detection limit of 3.3 µg/dL, were used. Because of this higher detection limit, venous drawings were encouraged. This higher detection limit impacted overall averages for the 2021 and 2022 events. A total of 101 children between 6 months to 6 years were tested in the Basin

but due to the use of alternative machines and higher detection limits, only venous results are reported above. Test kits for the Lead Care Plus machines have since been replenished.

In 2023 the LHIP offered three additional blood lead testing events, providing area residents with even more access to blood lead screenings. These events included the Kellogg Elk's Club Blood Drives held in June and October and the Shoshone Medical Center Kid's Health Fair in September. In total, the LHIP interacted with approximately 350 individuals during 2023. Out of those individuals, 160 Basin residents and recreators were tested within the Basin at our various events throughout the year. Of those event participants, 98 were children between the ages of 6 months and 6 years, 12 were children over 6 years of age, and 50 were adults. There were an additional 164 tests performed for residents of the Box at these events.

When an individual is identified with an elevated blood lead level, it is recommended their physician be notified and PHD will make an appointment for an in-home visit to identify potential sources of exposure in and around the home<sup>1</sup>. These in-home consultations help PHD, and individual families, identify ways to reduce exposure risks. In addition, PHD can help identify potential exposure pathways that the cleanup project can address to prevent future lead exposures.

PHD will continue to offer free blood lead screening for residents living within the Bunker Hill Superfund Site boundaries year-round. In addition, PHD is planning to conduct its annual summer screening in 2024 with a \$50 incentive for children between ages 6 months to 6 years of age.

In 2023, the LHIP will continue to offer these additional services:

- HEPA vacuum loan program for cleaning residences.
- Free supplies to aid homeowners in performing safe home renovations and/or dirt disturbance activities.
- Education, outreach, and awareness for parents, children, community members, recreationalists, and visitors.
- Education classes and hands-on activities in local schools for Pre-K thru 12<sup>th</sup> graders.
- Education and outreach at community events.
- Presentations and tours to community members, medical residents, and realtors, educating on the importance of lead exposure prevention.

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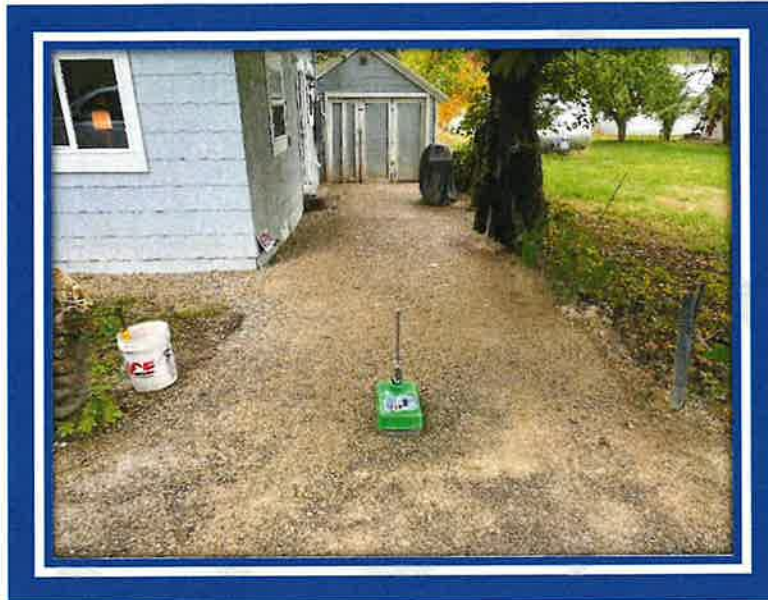
<sup>1</sup> The Panhandle Health District (PHD) offers a follow-up consultation if any child has a blood lead level greater than 3.5 µg/dL, the "reference value" established by the Centers for Disease Control & Prevention (CDC) in 2021.



- Sampling of soil, dust, paint, water, and other media as appropriate.

#### Basin Property Remediation Program (BPRP) including Private Drinking Water Supply

Sampling and cleanup of residential, commercial, common-use areas, and rights-of-way (ROWs) continued in 2023 as part of the Bunker Hill site's Basin Property Remediation Program (BPRP). IDEQ implements this program in OU-1; the CDA Trust implements this program in OU-3.



*Looking South. Completion of nuclear density testing. Image provided by CDA Trust.*

#### **BPRP in the Box**

To date, a total of 3,236 properties have been remediated in the Box with no new BPRP properties being completed in 2023. As was reported in 2022, IDEQ continued to track the remaining nine Box properties that require remediation in case the current owners grant access, or the property changes owners.

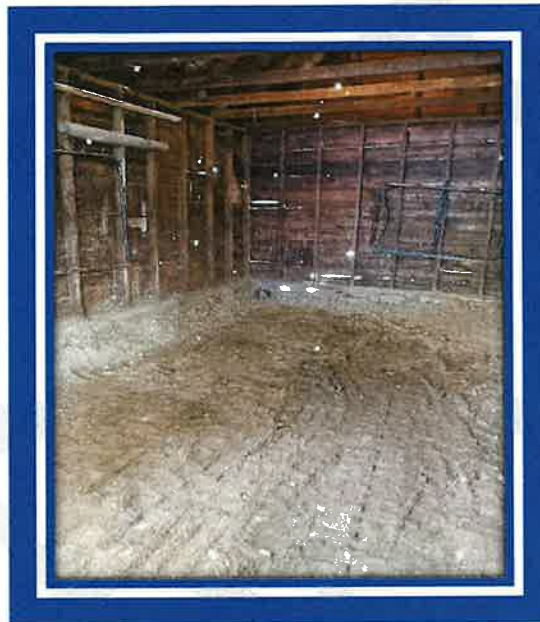
#### **BPRP in the Basin**

The CDA Trust completed the following BPRP activities in 2023:

- Maintained six reverse osmosis, under-sink water filtration systems to treat drinking water from private sources.
- Collected 55 soil samples from two residential properties.
- Collected three private drinking water samples from one property.

- Remediated four residential and commercial properties amounting to a total of 0.98 acres cleaned up during the Fall construction season. This resulted in 45 truckloads of waste being disposed of in site repositories.

At the conclusion of 2023, a total of 3,935 properties have been remediated in the Upper and Lower Basin of OU-3. 202 properties remain to be sampled whose owners have directly refused or have not responded to multiple requests for access, and of these, 38 are estimated to require remediation.



*Inside garage. Excavating up to 12-inches.  
Photo used by permission of the Coeur d'Alene Trust.*

### Contaminated Waste Disposal and Management

Contaminated waste disposal and management is an ongoing process at the Bunker Hill site that must meet the demand for the disposal of historic mining related contamination generated under various remediation programs and under the Institutional Controls Program (ICP). Facilities to accommodate disposal of these wastes are engineered and constructed to reliably contain materials and prevent contaminants from being released to surface water, groundwater, or air in concentrations that will cause state and/or federal standards to be exceeded. Without the expansion of existing disposal facilities or the construction of new facilities, continued remediation and control of contamination could be compromised and potentially stopped.

### Three Categories of Facilities

The contaminated waste disposal and management program currently includes a three-part approach and category of facility to safely dispose of site-generated waste. Facilities in current use and development include the following:

- Repositories that are large, centrally located areas within the Upper and Lower Basin where contaminated soil and material excavated during remedial and ICP actions are transported to be managed and secured.
- Waste Consolidation Areas (WCAs) in the Upper Basin located adjacent to or near specified remedial action source areas.
- Community Fill Plan (CFP) areas developed in recognition that the ICP allows use of contaminated soils for fill material to create more developable ground in the Upper Basin. Agreements between waste generators and property owners with space available to use the contaminated fill in compliance with the ICP are approved by EPA, IDEQ, and PHD.

### Repositories

Five repositories received remedial action and ICP waste in the 2023 field season. The Big Creek Repository (BCR) and the Big Creek Repository Annex (BCRA) near the community of Big Creek and the Lower Burke Canyon Repository (LBCR) serve the Upper Basin, and East Mission Flats Repository (EMFR) near Cataldo serves communities in the Lower Basin. The Page Repository, located near Smelterville, receives remedial action and ICP wastes generated by the cleanup activities conducted in the "Box." All but Page are operated by the CDA Trust. Both IDEQ and the CDA Trust direct waste to the repositories to minimize transportation distances and costs. In addition, the Page Repository continues to use recycled construction materials extracted from Box and Basin waste streams which helps to further reduce repository operating costs. The water quality monitoring program found operations at all repositories have not impacted adjacent surface or ground waters. A summary of activities completed in 2023 at each repository is described below:

### Lower Burke Canyon Repository (LBCR)

- In 2023, LBCR received 1,699 truckloads from ICP for a total waste placement of 9,500 cubic yards (cy). LBCR currently has approximately 1,028,025 cy of capacity left for disposal.
- Stabilized slopes by track walking.
- Created low area sump near decontamination pad to ensure that runoff from the asphalt area is contained on site.

- Constructed drainage swale around south end of fill limits to collect any runoff during rain on snow events.
- Crowned center of waste area to encourage drainage to runoff collection ditches.
- Installed additional storm water management controls including shredded wood and silt fencing on steep slopes to further protect against erosion.
- The ICP disposal area will not be available to receive ICP waste through the winter months because of heavy snow accumulation in Burke Canyon. ICP waste will instead be directed to BCR for disposal.



*Lower Burke Canyon Repository. Image provided by the CDA Trust.*

#### Big Creek Repository (BCR)

- In 2023, the BCR received 480 truckloads from the ICP, for an estimated 3,300 cubic yards (cy) of waste placed on the east slope.
- At the end of the 2023 construction season, the BCR contained approximately 683,137 cy of waste. BCR currently has approximately 83,022 compacted cy of capacity left for disposal.
- Year-end repository shutdown activities were completed and included:
  - All road surfaces were graded and sloped inward to collect runoff to capture and prevent ponding.



- Waste was graded and sloped inward to collect runoff to capture into roadside ditches.
- The ICP area is managed by the CDA Trust's Operations Contractor during the winter closure period. Prior to spring runoff, all ICP waste resulting from winter operations will be transported and stockpiled on top of the BCRA repository for processing and future placement and compaction.

#### Big Creek Repository Annex (BCRA)

- In 2023, the BCRA received 90 truckloads from the ICP for an estimated 765 cy of waste placed and compacted. This repository has approximately 168,696 cy of capacity remaining.

#### Page Repository

- In 2023, construction of cell #4 continued.
- Page received 4,472 truckloads of ICP waste, including 1068 truckloads of concrete and 205 loads of woody debris. The total estimated volume of material placed at Page in 2023 based on the year-end survey was 18,900 cy. Page has approximately 468,000 cubic yards of remaining waste capacity.

#### East Mission Flats Repository (EMFR)

- In 2023, the EMFR repository received 2,481 truckloads from the ICP and 49 truckloads from the BPRP and recreational site remediation.
- Final in-place, compacted volume calculated from truckload count was approximately 14,100 cy. EMFR currently has approximately 148,860 cy of capacity left for disposal.
- Semiannual groundwater monitoring was conducted at six monitoring wells located on or near EMFR. Groundwater and surface water monitoring results indicate that disposal activities have not impacted water quality near the site.
- The ICP disposal area will be available at the east end of EMFR to receive ICP waste during the winter closure period and managed by the Trust's Operations Contractor. Prior to spring runoff, all ICP waste will be transported and stockpiled on top of the repository for processing and future placement and compaction.

#### **Waste Consolidation Areas**

Waste consolidation areas are located near, and accept waste from, specifically identified sources such as mine and mill site remedial actions implemented by EPA, the CDA Trust, and IDEQ. Unlike repositories, footprints of WCAs are developed using current and near future



waste estimates from nearby remedial action project areas and are constructed to be open for a shorter period. WCAs are only expanded if additional wastes are encountered during the selected remedial actions. The following two Upper Basin WCA's were operated in 2023:

*Canyon Complex Repository and Waste Consolidation Area (CCR/WCA)*

- Initial construction was completed in 2022 on the CCR/WCA which is located southeast of the LBCR. This site was developed to receive waste from nearby source remediation sites and other mine remediation areas.
- No waste materials were placed in the CCR/WCA in 2023. The total volume of material placed in the CCR/WCA to date is approximately 604,000 cy.
- In 2023, minor operations and maintenance work including maintenance of Best Management Practices was conducted at the site.

*East Fork of Ninemile Creek Waste Consolidation Area (EFNM WCA)*

- 2023 was the second year of construction of the Phase 2 Final Cover and Expansion effort primarily focusing on waste placement and compaction. The final expansion will increase capacity at the EFNM WCA to allow placement of approximately 640,000 cy of contaminated waste rock and mine tailings from ongoing EFNM projects.
- In 2023, the EFNM WCA received approximately 303,000 cy of waste from remedial actions in EFNM drainage resulting in an approximate compacted volume of 243,000 cy. The total volume of material placed in the WCA to date is approximately 1,123,000 cy. Temporary cover materials were placed over the contaminated waste rock and mine tailings at the WCA prior to winter shutdown.
- To date, the EFNM WCA site has generated approximately 350,000 cy of rock and 375,000 cy of soil for EFNM remedial actions. Having the location of this waste disposal area near the source areas has saved the project upwards of approximately \$8.5 million in transportation costs and significantly minimized traffic through local communities.



*East Fork Ninemile Waste Consolidation Area. Image provided by the CDA Trust.*

## Additional Disposal Locations

### Community Fill Plan Areas

No CFP areas were developed in 2023.

### Mullan ICP Transfer Station

The CDA Trust operates the Mullan transfer station which provides the city of Mullan residents with a convenient place to dispose of their ICP wastes which are then permanently disposed of in a locally engineered facility (e.g., the BCRA or LBCR).

In 2023, 170 truckloads of waste were transported from the Mullan ICP Transfer Station to the LBCR. Also in 2023, 15 truckloads of concrete waste were transported from the Mullan ICP Transfer Station to the Page Repository for disposal.

### New WCA

In 2023, a PFT evaluated potential locations proposed by EPA during a public comment period on, and to consider alternative locations for a new WCA to dispose of waste generated from Lower Basin remedial actions. EPA is giving full consideration to the analyses performed by the PFT before making a decision. The Lower Basin WCA site has not been approved by EPA.

### Upper Basin Remedies

The 2012 Upper Basin RODA identified cleanup work in the Upper Basin. The goals of the 2012 Upper Basin RODA cleanup include prioritizing Upper Basin/Box source areas for cleanup to improve water quality and address risks to human health and the environment. It called for cleanup in the Box that would improve water quality in the South Fork Coeur d'Alene River. It also focused on source control actions that address particulate lead which poses a risk to human health and ecological receptors. The prioritized cleanups under the 2012 Upper Basin RODA will continue to reduce human and wildlife risks to lead and other heavy metal exposures in the Upper Basin and are expected to significantly improve water quality. Upper Basin cleanups complement those in the Lower Basin by reducing the overall loading of contaminated materials to the Coeur d'Alene Basin watershed and the potential for recontamination in the Lower Basin.

### East Fork Ninemile Creek Drainage (EFNM)

The following summarizes the 2023 construction activities conducted in EFNM:

- Approximately 147,500 cy of contaminated waste rock and mine tailings were hauled from the Dayrock Mine and placed and compacted at the EFNM WCA. In addition, approximately 160 feet of West Fork Ninemile Creek, 378 feet of EFNM Creek, and 2,190 feet of Ninemile Creek stream channel were re-constructed as part of the project.

- Approximately 155,500 cy of contaminated waste rock and mine tailings were hauled from the Tamarack Complex and placed in the EFNW WCA. In addition to the removal of mine waste rock and tailings approximately 290 feet of tributary channel was re-constructed within the Tamarack Complex.



*Tamarack rock dumps post excavation 2023. Provided by the CDA Trust*

Other activities conducted in 2023 included the following:

- Operation of the EFNW WCA (see separate section in this report titled “Contaminated Waste Disposal Areas and Management”).
- Continued surface water monitoring in the EFNW Basin.
- Operations and maintenance (O&M) of the Interstate Callahan Mine Rock Dumps, the Success Mine Complex, Interstate Millsite and Rex Mine No. 2/ Sixteen-to-One.

#### **Canyon Creek Drainage**

In 2023, activities in the Canyon Creek drainage consisted of the following:



- Approximately 1.7 acres of mine waste rock and tailings were regraded and capped with clean soil at the Star Complex. In addition, site infrastructure upgrades, including 16 dewatering wells, were installed throughout the site to support continued remedial action in 2024.
- Conducted characterization and sampling activities at the Frisco Black Bear Reach (7 sites) located in the upper reaches of Canyon Creek.
- Conducted characterization and sampling activities at the Gem Complex (4 sites) located in the upper reaches of Canyon Creek.
- Conducted characterization and sampling activities at the Standard-Mammoth Reach (10 sites) located in the upper reaches of Canyon Creek.
- Conducted initial characterization and sampling activities at the Lower Canyon Creek Riparian area (5 sites) located in the lower reaches of Canyon Creek.
- Continued surface water and ground water monitoring in the Canyon Creek Basin.
- Continued development of the Canyon Creek Quarry (CCQ). The CCQ will supply clean aggregate materials to future Canyon Creek remedial action projects.
- Completed the design for the Flynn Mine and Black Bear Fraction project to support future cleanup.

Other activities conducted in 2023 included the following:

- Operation of the Canyon Complex Repository/WCA (see separate section in this report titled “Contaminated Waste Disposal Areas and Management”).



*Hecla-Star hydroseed application. Images provided by the CDA Trust.*

### Lower Basin Remedies

The cleanup described in the 2002 OU-3 ROD for the Lower Basin includes actions for the wetlands and lateral lakes, the riverbanks, splay areas, and riverbed. These remedial actions, envisioned primarily as pilot studies, are being evaluated for implementation. The remediation objectives in the Lower Basin include reducing risks to human health and wildlife by reducing exposure to particulate lead and improving habitat quality in the CDA River system. Remedies that address human health or ecological exposure, coupled with continued evolution of our understanding of sediment transport and recontamination in the Lower Basin, are interconnected with natural resource restoration actions.

### Gray's Meadow Remedial Action and Restoration

In 2023, EPA continued work on the Gray's Meadow (formerly Black Lake Ranch) project. Gray's Meadow is a collaborative effort between the EPA, the CDA Trust and the Restoration Partnership with Idaho Department of Fish and Game as the landowner, to remediate and restore approximately 700 acres of publicly owned contaminated agricultural land to clean, diverse, productive wetlands and riparian waterfowl/wildlife habitat.

In 2023, progress on the Gray's Meadow project included:

- Cultural resource monitoring activities for both the Cave Lake and Lamb Peak Wetlands.
- Localized dewatering of the Cave Lake and Lamb Peak Wetlands.
- Construction of two water control structures in Cave Lake Wetland.
- Excavation and placement of contaminated soils.
- Construction of restoration habitat features, including loafing islands and pond features.
- Construction of water control embankments.

In 2023, there was a Lower Basin Project Focus Team meeting held to discuss upcoming work plans for 2024.

For more information on restoration projects that were implemented (or initiated) in the Lower Basin, please refer to the Restoration Partnership section of this report.





*Water Control Structures under construction in the Cave Lake Wetland of the Gray's Meadow Project*



*Embankments and habitat features under construction in the Lamb Peak Wetland of the Gray's Meadow Project*

### Lead Bioaccessibility

In 2023, EPA continued studies related to lead bioaccessibility and amendments, as well as metrics for measuring lead exposure in waterfowl as discussed in the BEMP section of this report. Several studies were completed or are ongoing including:

- A bench-scale treatability study with EPA's Office of Research and Development (ORD) to explore the application of jarosite-based remediation technologies to significantly decrease lead (Pb) bioavailability in contaminated soils. Bunker hill soils were included among other Superfund site samples and treated using jarosite-based techniques via batch and soil column approaches, followed by subsequent speciation and X-ray mapping analyses at advanced synchrotron facilities. These data will be paired with in-vitro bioaccessibility and mouse model in vitro bioavailability measurements to determine pre- and post-treatment efficacy. The research will enable continued development of PLJ-based remediation technologies as well as facilitate future field application. This is building off previous published work from ORD (DOI: 10.1021/acs.est.1c06067).
- Field studies measure the effects of oxidizing and reducing conditions in seasonal wetland sediments on lead bioaccessibility.
- Field studies identify non-invasive biological metrics for monitoring tundra swan and wood duck lead exposure by accurately tracking ranges within the basin and measuring lead concentrations in sediment, feces, egg shells, and blood.

### Dudley Reach Pilot Planning

To address source control in the river channel, planning for the Dudley Reach pilot riverbed remediation project continued in 2023. The location is downstream of the grade break near River Mile 160, near the site of a former dredging operation. The riverbed footprint is over 1,200 acres, spanning 37 river miles and contains approximately 5-10 million cubic yards of contaminated sediment. EPA has developed several alternatives for testing in the Dudley Reach, including capping, dredging and riverbed weirs. A Draft Riverbed Management Plan was completed in 2021 that describes an approach for the entire Lower Basin riverbed below Cataldo and divides the riverbed into sediment management areas (SMAs) as a starting place to conceptualize addressing the riverbed source areas throughout the channel and help facilitate remediation planning. Remedial technologies were assessed for potential effectiveness primarily focused on lead load reduction, system responses (changes in flood water levels), and implementability. The approach includes an initial integrated remediation scenario for the entire riverbed.

In 2023, the CDA Trust completed a 30% design for the Dudley Reach Scour Hole Pilot Project that combines multiple remedial technologies, including bank stabilization measures and dredging and capping contaminated riverbed sediments.

#### River Channel Data Collection

In 2023, data collection efforts associated with the river channel included the following:

- Boat-based river sampling of suspended sediment and surface water at 78 locations on the Coeur d'Alene River from Harrison to the Mission Boat Launch.
- Riverbank erosion pin monitoring at 5 locations in the Dudley Reach. Samples were collected to characterize riverbank soils.
- Work in the Cataldo Reach included:
  - Monitored erosion pins installed in past years at 28 riverbank locations.
  - Soil sampling for metals analysis from the bank face at 35 riverbank locations.
  - Surface soil composite sampling for metals analysis at riverbed and island locations.

#### State of Washington Projects

The Department of Ecology completed a comprehensive sampling event for the Spokane River beach sites. Samples were collected of beach material, suspended sediment (quality and quantity), and surface water at three locations during three flow regimes (low, medium, and high). Beach material was also evaluated using x-ray fluorescence. The sampling event ran from September 2022 through September 2023. Results will be made available to the public in 2024.

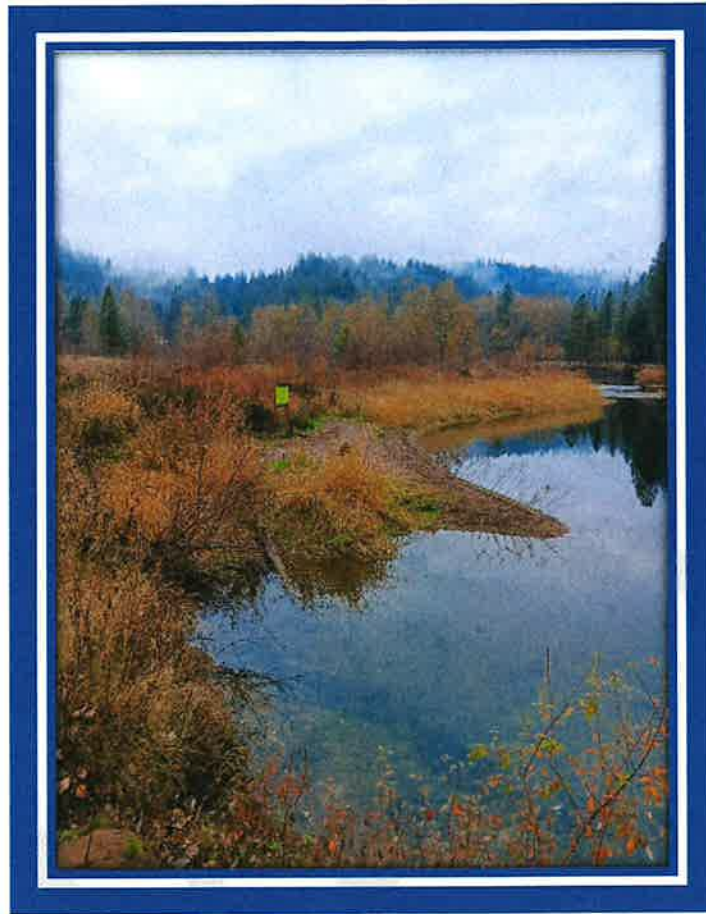
#### Recreational Sites

Work on Recreation Areas in 2023 included sampling, remediation, and public education/outreach activities for areas in both the Box and Basin.

#### Signage

In 2023, one new sign was installed at a Lower Basin location. Three signs that were installed in previous years in the Lower Basin had to be replaced due to vandalism. Locations included boat launches, informal river access points, and beach areas.





*Sign at Cataldo Bridge. Image provided by CDA Trust.*

#### Box Activities

EPA, DEQ, and PHD continued public outreach efforts to inform recreational users of ways to protect their health when recreating in areas where they may be exposed to contaminated soils and water. A volunteer trail system created by public use on IDEQ's property located north of the Shoshone County Airport in Smelterville has become increasingly popular over the past few years and was beginning to show signs of barrier deterioration. Due to the increased use an enhanced trail barrier consisting of compacted gravel was installed in the fall of 2023. Additional health signage will be installed in the Spring of 2024.

#### Basin Activities

The 2023 cleanup work in the Basin focused on the following Lower Basin recreation sites:

- EPA completed the remaining cleanup work at the informal recreation site at the beach across from Black Rock Trailhead.
- EPA and the CDA Trust coordinated with the Tribe to install riparian plantings to discourage access through contaminated soils at Tribally owned parcel near the Cataldo

bridge along the Trail of the Coeur d'Alene's. Initial actions such as this will continue to be evaluated in areas where ongoing recontamination due to flooding is a concern.

EPA and the CDA Trust continued to evaluate other recreational areas in the Upper and Lower Basin for future cleanup work.



*Beach across from Black Rock Trailhead*

*Photo used by permission of the Coeur d'Alene Trust. Photo taken by Jennifer Crawford*

### Basin Environmental Monitoring

The Bunker Hill Basin Environmental Monitoring Plan (BEMP) Workgroup continued in 2023 as an annual forum to share basin-wide monitoring results and planning amongst partner agencies. This workgroup includes IDEQ, USGS, USFWS, the Coeur d'Alene Tribe, the Coeur d'Alene Trust, and EPA.

### BEMP Programmatic Planning

An updated BEMP programmatic plan was finalized in 2021 and provides the framework for ongoing remedy effectiveness and long-term monitoring associated with actions in the Upper and Lower Basins. The goal of the updated and optimized BEMP is to design efficient data collection plans to support site-wide management decisions. The BEMP incorporates adaptive management principles and is anticipated to evolve during the remedy implementation timeframe. The over-arching plan includes the Site-wide Quality Management Plan (completed in 2015) and media-specific Quality Assurance Project Plans (QAPPs).

Under the updated BEMP programmatic plan, monitoring is structured into three geographically based tiers:



- Site-specific Remedial Action (RA) effectiveness and performance monitoring.
- Area-wide monitoring.
- Basin-wide long-term monitoring.

In 2023, the area-wide Canyon Creek RA Effectiveness Monitoring Plan was finalized. The objective of this area-wide monitoring is to demonstrate how remedy effectiveness is making progress towards the Remedial Action Objectives (RAOs) within the Canyon Creek Basin. Similarly, an area-wide plan for the Lower Basin is being drafted and anticipated to be finalized in 2024. Area-wide monitoring occurs after completion of the highest priority RA(s) within the Area, according to the following general schedule: surface water (years 1-5), suspended sediment (years 1-5), and fish / benthic macroinvertebrates (years 4-5).

A programmatic Data Management Plan (DMP) for the Bunker Hill Site was finalized in March 2023 with partners from the CDA Tribe, USGS, IDEQ, USFWS and CDA Trust. The DMP provides guidance on data requirements for all entities collecting environmental data supporting the Site. Human health related LHIP data, limited access BPRP, and ICP data will not be included in this database and instead maintained in existing IDEQ systems. Data upload to Scribe.net continued in 2023 and work began on an internal and public access data viewing platform. Until these tasks are complete, stakeholders can make specific data requests to the EPA Remedial Project Manager associated with the work being conducted (Jennifer Crawford). Data management is an ongoing process that requires utilization of an interagency workgroup for implementation to ensure consistency, completeness and consensus of data warehoused.

Throughout 2023, the USGS, IDEQ, USFWS, CDA Trust and EPA continued BEMP sampling. Specific sampling activities are outlined below.

### Surface Water

In 2023, the USGS collected water-quality samples from 20 sites as part of the surface-water BEMP. Four sites in OU-2 were sampled twice. Sixteen sites in OU-3 were sampled under a variable frequency schedule ranging from four to twelve times per year. Sampling up to twelve times per year is expected to help better characterize conditions in the Lower Basin and inputs to Coeur d'Alene Lake, which was recommended in the 2022 report from the National Academy of Sciences, Engineering, and Medicine (<https://nap.nationalacademies.org/catalog/26620/the-future-of-water-quality-in-coeur-dalene-lake>).

Samples were collected during a range of hydrologic events: peak runoff conditions in early May, high snowmelt runoff in late May, baseflow conditions in September, and a fall rain event in November. All samples were analyzed for nutrients, selected trace metals and major ions,

and suspended sediment. In addition, 20 samples were analyzed for total and filtered mercury, and 16 samples were analyzed for constituents (dissolved organic carbon and additional cations and anions) needed for the biotic ligand model to calculate the state of Idaho copper criteria. Three OU-3 sites were also sampled two additional times (during winter low flows in January and runoff recession in July) to help evaluate efficacy of the groundwater collection system.

Twelve of the sixteen OU-3 sites are collecting continuous streamflow data and are telemetered with real-time streamflow access. Information can be viewed at <https://waterdata.usgs.gov/id/nwis/rt>. All gaging station stream discharge and water-quality records for the BEMP gages for water year 2023 are worked up, approved, and furnished electronically at <https://waterdata.usgs.gov/id/nwis/current/?type=BEMP>. The annual data summaries will be completed and delivered to EPA during the first quarter of calendar year 2024.

In 2022, the USGS collected discharge measurements and water-quality samples from nine surface-water sites during the August seepage study in the SFCDR between Kellogg and Smelterville. The study was designed to quantify post-remedy groundwater loading to the SFCDR from the Central Impoundment Area (CIA) and was compared to results of a parallel study (<https://doi.org/10.3133/sir20195113>) conducted in September 2017 prior to installation and operation of the groundwater collection system. The 2022 seepage study report was published in December 2023 (<https://doi.org/10.3133/sir20235125>). In summary, the results show a reduction in groundwater loads of dissolved zinc (86%), dissolved cadmium (81%), and total phosphorus (88%) entering the SFCDR compared to 2017. This indicates that the groundwater collection system at the CIA reduced loadings of trace metals and phosphorus to the SFCDR, which have implications for improved water quality downstream in the main-stem Coeur d'Alene River and in Coeur d'Alene Lake.

### Groundwater

Groundwater monitoring in 2023 was the second year of baseline data collection following implementation of the Groundwater Collection System (GCS) at the CIA, and completion of the prescribed optimization period. The GCS completed construction in December 2019 and operated under an optimization period through Fall 2021, at which point operation and maintenance responsibilities were transferred to IDEQ. During high flow conditions in May of 2023, 72 groundwater sites were sampled including 59 monitoring wells, 4 piezometers, and 9 extraction wells. During base flow conditions in October, 71 sites were sampled including 59 monitoring wells, 3 piezometers, and 9 extraction wells. The laboratories analyzed the samples for metals, phosphorus, and other parameters. Sampling was conducted to capture baseline data across the site that reflects the conditions of groundwater quality following stabilization of hydrogeologic conditions to full GCS pumping operations and to characterize groundwater quality at the A-4 Gypsum Impoundment. EPA and IDEQ are currently reviewing preliminary

data from the 2023 baseflow sampling event which will be evaluated in the 2023 Annual Groundwater Quality Report for OU 2. Water level monitoring continued through 2023 with approximately 60 in situ transducers installed across the site; water level data will also be incorporated into the Annual Report. The next water quality monitoring effort will be performed during high flow conditions around April/May 2024.

#### Suspended Sediment

Suspended sediment sampling is conducted to obtain information regarding the amount and characteristics of sediment being transported at specific times and locations in the river system. The CDA Trust currently collects suspended sediment samples opportunistically by boat during high-flow events only. The river flow threshold criterion for conducting opportunistic sampling of suspended sediment is approximately 8,000 cubic feet per second (cfs) at Cataldo (USGS station 12413500). The Water Year (WY) 2023 flow at Cataldo met the threshold criterion and boat-based sampling and data collection were performed.

#### Biological Resources

The USFWS conducted annual waterfowl surveys from early February to late April in Lower Basin floodplain wetlands, recording observations of waterfowl use and tundra swan mortalities during the spring migration.



*Photos Sarah Emeterio, USFWS*

In 2023, EPA scientists continued work with the CDA Tribal, state, federal, and local partners on a collaborative effort to monitor a migratory bird that relies on local resources for its survival, the Tundra Swan. As swans forage for rooted aquatic plants, they incidentally ingest contaminated sediment with lead concentrations that can be many times greater than the concentration considered safe for waterfowl. Lead contamination poses a health risk to these swans.



Waterfowl study planning also expanded to wood ducks in 2023, with field work to commence in 2024. Wood ducks' nest at Bunker Hill and forage shallower in the sediment on invertebrates and thus provide a different exposure indicator of Pb contamination than Tundra Swans. Utilizing monitoring of both these waterfowl species will provide tools for monitoring ecological health and remedial action effectiveness at area-wide and project-specific scales in the Lower Basin as well as provide information for project remedial design to ensure waterfowl most susceptible to lead exposure access clean areas preferentially instead of unremediated wetlands with high lead concentrations.



*Photos Sarah Emeterio, USFWS*

## *2023 Work Accomplishments Part 2: Other BEIPC Activities and Responsibilities*

### Lake Management Activities

The Coeur d'Alene Lake Management Plan (LMP), developed by the CDA Tribe and IDEQ, was finalized in 2009. Since then, the CDA Tribe and IDEQ have been implementing core aspects of the LMP such as water quality monitoring, modeling, nutrient source inventory, and education/outreach.

In 2018, the CDA Tribe asserted that the LMP has been inadequate, as implemented, as an effective tool to protect water quality in the Lake. The CDA Tribe withdrew their support of the LMP, as an alternative to a CERCLA remedy, in 2019. IDEQ continues to implement the LMP.

### National Academy of Sciences & Coeur d'Alene Lake Advisory Committee

In 2019, at the Our Gem Coeur d'Alene Lake Symposium, Idaho Governor Brad Little called for a neutral third-party review of Lake data to take a closer look at observed Lake water quality trends and guide actions to protect the Lake moving forward. In 2020, the State of Idaho, Kootenai County, and EPA sponsored a contract with the National Academy of Sciences, Engineering, and Medicine (NAS) to conduct this review of CDA Lake data. The final report was completed in 2022 (<https://www.nationalacademies.org/our-work/the-future-of-water-quality-in-coeur-dalene-lake>) and included a number of recommendations to help guide Lake management science activities into the future.

While the NAS review was underway, recognizing community concern that on-the-ground action needed to occur, Governor Little launched the Leading Idaho Initiative for CDA Lake. This initiative provided funding for projects throughout the Coeur d'Alene Basin intended to reduce phosphorus loading to CDA Lake. Between 2020 and 2021, \$33 million dollars was allocated for this purpose. Governor Little appointed the CDA Advisory Committee (CLAC) to prioritize projects proposed to receive this funding. Implementation of Leading Idaho projects is ongoing. The CLAC includes membership from the Coeur d'Alene Tribe, City of Coeur d'Alene, Kootenai County, Kootenai Environmental Alliance, Hagadone Marine, community business owners, a Coeur d'Alene lakeshore property owner, and members of the public at large.

Discussions among the CDA Tribe, IDEQ, and EPA related to NAS recommendations and future lake management activities are ongoing. Additionally, various aspects outlined in the LMP and listed below are essential to continue while additional approaches to augment work under the auspices of the LMP are being considered.



## IDEQ Lake Management Activities

IDEQ Lake management accomplishments in 2023 consisted of the following activities:

### Science Core Program

- Routine CDA Lake core monitoring.
- Coordination with AVISTA, the Idaho State Department of Agriculture (ISDA), and CDA Tribe staff on aquatic plant surveys and responses to infestations of aquatic invasive species.
- Conceptual model report development to describe the lake's structure and mixing. The current draft report incorporates river hydrography, IDEQ electronic sonde data from 2014 – 2019, lake wind fields, preliminary AEM3D modeling, and data from a stable isotope study from 2015 into a physical description and analysis of the lake's structure and mixing. Staff at IDEQ are incorporating edits from an expert review of the draft. A final report is expected in 2024.
- Initiated development of a Science Coordination Team (SCT) to address recommendations from the NAS review report. The SCT directly addresses the NAS recommendation for better coordination of basin science efforts. The team is also helping facilitate an EPA-led initiative to get better transparency/access to basin data by the public. The SCT will play a key role in evaluating the remaining NAS recommendations and ways to implement them.
- Tested a pilot monitoring approach targeting the NAS recommendation for increased bay/littoral data collection.

### Education & Outreach Core Program Activities

- Provided updates on Lake management activities for a variety of community groups and the public.
- Participated in The Confluence Project (TCP) steering committee, teacher workshops, classroom activities, and field trips for high school students (including the Youth Water Summit).
- Participated in the Our Gem Coeur d'Alene Lake Collaborative (OG Collab), providing regular articles to the CDA Press related to CDA Lake, including Leading Idaho information and updates.
- Provided Leading Idaho updates to the CLAC.
- Participated in the Local Gems program through the Coeur d'Alene Regional Chamber of Commerce Natural Resource Committee.
- Coordinated with the Bay Watchers program, organized by the U of I through the Idaho Water Resource Research Institute, exploring ways to expand volunteer monitoring.

- Participated on the Panhandle Stormwater and Erosion Education Program (SEEP) steering committee and assisted in delivering educational programming related to water quality to the construction/development community.

#### Nutrient Inventory/Reduction

- Began compiling and analyzing tributary data collected for 11 tributaries and 10 smaller drainages to CDA Lake. This water quality data was collected to fill data gaps identified in the basin-wide nutrient inventory report. It also addresses the NAS recommendation to better understand the inputs of nutrients from lakeshore tributaries.
- Coordinated with EPA staff to include phosphorus analysis in the Lower CDA River high river flow events study targeting suspended sediment sample collection. This data will be used to update the nutrient inventory analysis for the CDA River.
- Developed a subaward agreement with the CDA Tribe to fill data gaps in tributaries to the southern end of CDA Lake, including the St. Joe and St. Maries Rivers. This is supported through Governor Little's Leading Idaho Initiative.
- Worked with recipients of Governor Little's Leading Idaho Initiative funding to implement projects throughout the basin to reduce phosphorus loading to CDA Lake. Project implementation began in 2021 and continued through 2023.

#### Partnerships with Other Entities

- Following recommendations of the NAS review report, worked with Alta Science and Engineering to convene a Coeur d'Alene Basin Science Coordination Team (SCT) to begin tackling basin-wide science questions related to CDA Lake. The SCT is comprised of scientists from IDEQ, the CDA Tribe, USGS, the EPA, and the University of Idaho.
- Coordinated with AVISTA Corp to identify and prioritize projects to enhance wetland habitat, reduce stream/riverbank erosion, and improve fisheries throughout the Basin, in addition to monitoring aquatic invasive species in CDA Lake and tributary rivers.
- Participated in the Coeur d'Alene Regional Chamber of Commerce Natural Resource Committee, the OG Collab, Panhandle SEEP, the 4-County Natural Resource Committee, and other groups focused on water quality protection to facilitate communication and collaboration.
- Facilitated and participated in Panhandle Basin Advisory Group meetings.
- Organized/participated in Watershed Advisory Group meetings for the North and South Fork Coeur d'Alene River watersheds.
- Facilitated meetings of the CDA Lake Advisory Committee (CLAC) to review and select projects to receive funding from Governor Little's Leading Idaho Initiative for CDA Lake.

- Coordinated with EPA staff to include phosphorus analysis in the Lower CDA River high river flow events study targeting suspended sediment sample collection.
- Worked with the BEIPC Executive Director to provide Lake activity updates for the BEIPC.

This continued level of coordination with BEIPC forums maximizes opportunities for information exchange and advice, while recognizing that IDEQ retains its respective decision-making authorities.

#### **Coeur d'Alene Tribe Lake Activities**

Tribal staff worked with IDEQ to assess the NAS priorities moving forward and worked with the CDA Lake Advisory Committee on ranking projects that were submitted from numerous stakeholders in the Basin. In 2023, the Tribe was awarded ARPA funding to initiate the implementation of the St. Joe Watershed Nutrient Assessment project through the end of 2025.

Discussions among the CDA Tribe, IDEQ and EPA have continued in order to determine what additional mechanisms/actions are needed to manage the hazardous materials in the lakebed sediments. Therefore, although various aspects outlined in the LMP and listed below are essential to continue, additional approaches to augment work conducted under the auspices of the LMP are being reconsidered by the Tribe. These discussions are ongoing.

CDA Tribal Lake Activity accomplishments in 2023 consisted of the following staff activities:

#### Science Core Program

- Routine Lake water quality monitoring and modeling by the Tribe continued through 2023.
- Tribal staff continued their milfoil control program in southern waters during 2023, including bottom barrier and mechanical harvester treatments. The Tribe has also continued to monitor treatment efficacies and native plant community dynamics. Control efforts are focused at high-use public sites such as boat launches, swim areas, and boating lanes. Mechanical harvesting is used to remove nuisance aquatic vegetation from high-use sites at Benewah Lake, Chatcolet Lake, and Round Lake. Harvesting also helps remove an oversupply of nutrients from nearshore areas. The Tribe removed approximately 210,849 lbs. (wet mass) of aquatic vegetation in the summer of 2023, which translates to 83 lbs. (dry mass) of phosphorus and 417 lbs. (dry mass) of nitrogen.

#### Education & Outreach Core Program

- Throughout 2023, Tribal staff provided updates on Lake activities to a variety of community groups and made presentations to the public upon request.

- In 2023, Tribal staff worked with the Confluence Project (TCP) and Coeur d'Alene Basin high school science classes with hands on based research on water quality, groundwater, and snow water equivalency which included science field trips for high school students and teachers in North Idaho.
- The Our Gem CDA Lake Collaborative (Collaborative) worked throughout 2023 to provide regular articles in the CDA Press related to CDA Lake and water quality conditions to keep this subject present in the community. For more information on the articles and to watch the recorded Speaker Series visit: <https://www.uidaho.edu/cda/cwrc/our-gem>. The Collaborative is made up of the Tribe, IDEQ, U of I Community Water Resource Center (CWRC), Kootenai County, Connect Kootenai, the BEIPC, and the Coeur d'Alene Regional Chamber of Commerce.
- Tribal staff continued to work with the CDA Regional Chamber of Commerce Natural Resource Committee to implement the "Local Gems" program.
- Tribal staff continued to collaborate with the U of I IWRRRI and agency partners to conduct Baywatchers workshops for CDA Lake Bay community involving volunteers/liaisons utilizing combined virtual and in-person meetings.

#### Lake and River Water Quality Sampling 2023

- Tribal staff continued to sample from the CDA River at Harrison, St. Joe River, Chatcolet Lake, and CDA Lake sampling locations.
- Tribal staff continued data analysis and writing the water quality reports for CDA Lake and the Tribe's Limnologist continued calibration of the AEM3D CDA Lake model.

#### Partnerships with Other Entities

- Tribal staff continued to be involved in the Panhandle Basin Northfork and Southfork CDA River Advisory Group meetings as well as the Basin Advisory Group.
- Tribal staff worked with the BEIPC ED to provide Lake updates to the BEIPC during quarterly meetings upon request.
- Tribal staff continued coordination with local governmental entities and CDA Regional Chamber of Commerce Natural Resources Committee.

This continued level of coordination with BEIPC forums maximizes opportunities for information exchange and advice, while recognizing that the CDA Tribe retains their decision-making authorities.



### Restoration Partnership

The Restoration Partnership (RP) is a collaborative effort comprising the Coeur d'Alene Basin Natural Resource Trustees which are the U.S. Department of the Interior, represented by the U.S. Fish and Wildlife Service (USFWS) and Bureau of Land Management (BLM); the Coeur d'Alene Tribe (Tribe); the U.S. Department of Agriculture, represented by the U.S. Forest Service (USFS); and the State of Idaho, represented by the Idaho Department of Fish and Game (IDFG) and Idaho Department of Environmental Quality (IDEQ). The RP's primary mission is to implement a restoration plan to help restore the health, productivity, and diversity of injured natural resources from releases of mine waste contamination and the services they provide in the Coeur d'Alene Basin for present and future generations. This includes compensation for lost human use services of those resources by developing and implementing projects under the framework of a Restoration Plan for the Coeur d'Alene Basin.

The following RP activities occurred throughout 2023:

- RP continued support for ongoing operations and maintenance by USFWS, Ducks Unlimited (D.U.), and private landowners for wetlands at the Schlepp Agriculture to Wetlands Conversion Project. The construction and implementation of this restoration project has been completed and O & M is underway. For more information visit: <https://www.restorationpartnership.org/projects/schlepp.html>.
- The Trustees coordinated quarterly reporting and site visits with the Project Sponsors and Project Leads as appropriate throughout 2023.

Implementation of the following projects continued in 2023 and the expenditures for 2023 for each are noted with a brief narrative of work that was completed.

- **Wetland and stream enhancement at Cougar Bay on Coeur d'Alene Lake (BLM and USFWS sponsors)**
  - Funds Originally Allocated in 2018 and 2019 on Cougar and Johnson parcel jointly: \$407,000.
  - Amount Expended in 2023: \$8,000.
  - Activities: 1) Culvert replacement to help the new channel handle larger spring flows and improve a short stretch of stream channel, 2) Bank improvements also were completed downstream and channel banks in the upper reach were laid back to better mimic natural point bars, 3) Noxious weed treatments to slow the invasion of reed canary grass into the floodplain and streamside areas and, 4) 750 one-gallon riparian plants were planted including water birch, pacific ninebark, black cottonwood, willows and elderberry.



*New channel of Cougar Creek looking south. Photo courtesy of BLM.*

- **Gut Hnch'mchinmsh - Native Willow Nursery for Support of Restoration Actions throughout the Restoration Partnership Project Area (Tribe sponsor)**
  - Funds Originally Allocated in 2018: \$205,462.
  - Amount Expended in 2023: \$1,470.
  - Activities: 1) Coeur d'Alene Tribal staff provided survey information on potential harvest opportunities for the Tribe and the partnership, 2) Staff mowed reed canary grass to keep the rows of willows visible and accessible, 3) Allocations of willow harvest were determined and the numbers were shared with other RP sponsored projects and, 4) Coordination of harvest times was ongoing.
- **Culturally Significant Plants in the Hangman Creek (Tribe sponsor)**
  - Funds Originally Allocated in 2018: \$187,770.
  - Amount Expended in 2023: \$27,291.
  - Activities: 1) Tribal staff focused efforts to bring on Tribal interns to continue monitoring plant success rates as well as planting efforts and, 2) Staff completed beaver surveys and dam reinforcements as well as installed plant protectors.
- **Coeur d'Alene Lake Monitoring and Modeling (Tribe sponsor)**
  - Funds Originally Allocated in 2018: \$268,668.
  - Amount Expended in 2023: \$48,884.

- Activities: 1) Collected and analyzed water quality samples from 4 sites over an eight-month period as other Tribal budgets were used for the other sampling events, 2) Continued data analysis and writing the synthesis report for Coeur d'Alene Lake, and 3) Continued calibration of the AEM3D model and reporting to the NAS.
- **Hepton Lake (Gul Hnch'mchinmsh) Wetland Restoration Planning and Implementation (Tribe sponsor)**
  - Funds Originally Allocated in 2018: \$ 210,900 and \$85,332 from remaining funds from the Cultural Harvest opportunities in the Hangman Creek Watershed.
  - Amount Expended in 2023: \$145,932.
  - Activities: 1) Tribal staff issued a Request for Proposals for a contractor to complete winter-time construction of the levee breach during low water, 2) Water level management was ongoing and construction supplies were staged for FY24 construction, and 3) Cost share funds were applied to this project for habitat restoration.
- **Wetlands restoration planning at Gray's Meadow (IDFG sponsor)**
  - Funds Originally Allocated in 2018 \$ 250,000 (remedial match provided by the Work Trust, \$5.2 M).
  - Amount Expended in 2023: \$384,735.
  - Activities: 1) Nesting bird surveys occurred during construction activities, 2) Water level management was ongoing during construction and, 3) IDFG continued ongoing coordination with EPA and the CDA Trust throughout construction.
- **Gene Day Pond Fishing Access (IDFG sponsor)**
  - Funds Originally Allocated in 2018: \$25,000.
  - Amount Expended in 2023: \$7,500.
  - Activities: 1) Parking area was graveled and traffic control boulders placed around the perimeter and, 2) Concrete pad pouring and final site close out planned for FY24.
- **Conservation Easement, North Fork Coeur d'Alene River (IDFG sponsor)**
  - Funds Originally Allocated in 2021: \$600,000.
  - Amount Expended in 2023: \$0.

- Activities: IDFG coordinated efforts between the landowner and local Land Trust on potential conservation easement (C.E.) opportunities considering permanent protection of natural floodplain communities and cold water hyporheic flow.
- **Conservation of Agricultural to Wetlands Conversion Properties within Canyon Marsh (USFWS sponsor with the Inland Northwest Land Conservancy (INLC))**
  - Funds Originally Allocated in 2018 \$801,480 and in 2019 \$372,400.
  - Amount Expended in 2023: \$18,310.
  - Activities: 1) USFWS staff coordinated the development of the Scope of Work for the site with the collection of topographic, hydrologic, and soil agronomic data, 2) Through the cooperative agreement, DU is working collaboratively with project partners to develop a conceptual wetland restoration plan that will serve as the idealized vision for future remediation/restoration design and implementation, and 3) Another important goal is that any data that is collected will complement (and not duplicate) any data that EPA, the Coeur d'Alene Trust, or other partners collect for remedial investigations.
- **Conservation of Agricultural to Wetlands Conversion Property Gleason's Marsh (USFWS sponsor with INLC)**
  - Funds Originally Allocated in 2018: \$656,140.
  - Amount Expended in 2023: \$9,000.
  - Activities: 1) USFWS staff worked with the Inland Northwest Land Conservancy (INLC) to develop a baseline resource reports along with other administrative documents for the C.E and, 2) USFWS worked with EPA on remedial investigations with remediation planned for 2025 and 2026.
- **Lake Creek Watershed Restoration (CDA Tribe sponsor)**
  - Funds Originally Allocated in 2021: \$615,951.
  - Amount Expended in 2023: \$58,682.
  - Activities: 1) Tribal staff and their contractor completed final design for channel restoration on multiple properties in the upper Lake Creek watershed in Idaho, 2) Tribal staff met with private landowners to review design objectives and expected outcomes where the design creates channel grade and profiles within the range of historical conditions when beaver was a predominant factor in shaping the valley bottom landscape, 3) Tribal staff submitted Clean Water Act Section 404 permit application to US Army Corps of Engineers, 4) Staff completed the cultural resource inventory that are



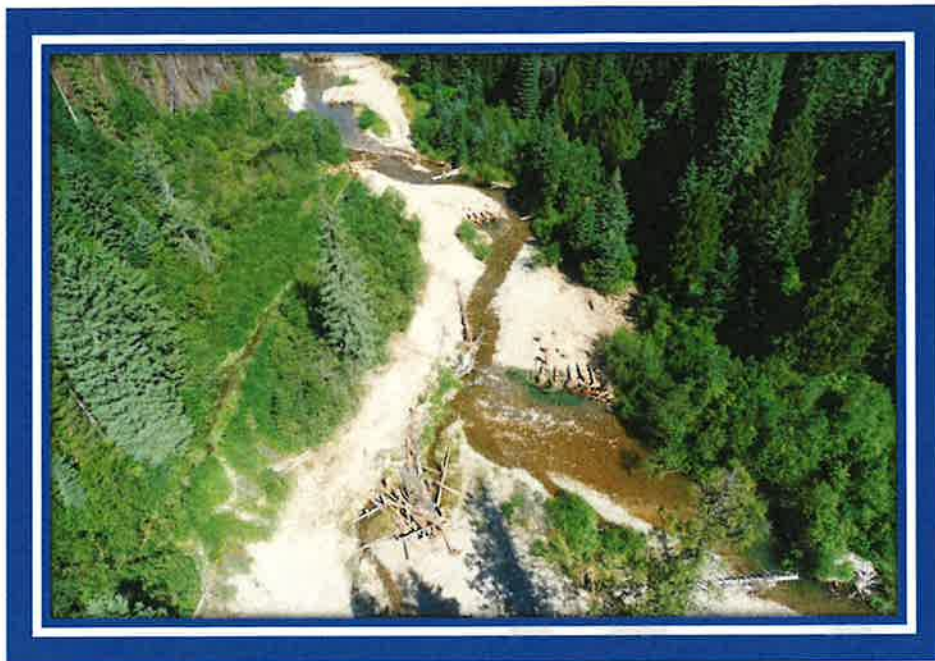
targeted for restoration 2024 and, 5) Staged native materials for habitat enhancement features along the riparian areas of Lake Creek which will add additional habitat for culturally important plants.

- **Prichard Creek Phase I: Conservation Easement and Restoration Planning (IDEQ sponsor with Idaho Forest Group and Trout Unlimited)**
  - Funds Originally Allocated in 2021: \$3,808,450.
  - Amount Expended in 2023: \$460,019.
  - Activities: 1) DEQ along with Idaho Forest Group (the landowner) and Trout Unlimited installed large woody debris structures to support stream access to the original floodplain in the upstream reaches (see photo below), 2) Native willows from the Tribe's willow nursery were planted and, 3) The next phases of restoration implementation were ongoing.
- **Red Ives Phase I Dam Removal Complete, started Phase II Planning (USFS sponsor)**
  - Funds Originally Allocated in 2019: \$30,000.
  - Amount Expended in 2023: \$180,310.
  - Activities: 1) USFS staff worked with TU in the placement of large woody debris for habitat diversification, enhancement, and floodplain connectivity, and 2) USFS staff worked with numerous partners for cost share funding on bull trout recovery efforts.

**Total Funds Expended in 2023: \$1,342,633.**

- The full annual reports can be found on the website at [www.restorationpartnership.org](http://www.restorationpartnership.org).

In 2023, the RP solicited the public for Project Ideas and 16 were submitted, 3 did not meet the RP Eligibility Criteria and 3 withdrew their project ideas. The Trustees awarded funding for 10 new (or ongoing projects) for initiation of implementation to begin in 2024. Those projects are: 1) Restore fish passage and ecosystem function in Miesen Creek along the St. Joe River- IDFG sponsor, 2) Benewah Creek 'ettumish Project - Stream/Wetland Restoration- Tribe sponsor, 3) Lake Creek conservation Easement with INLC and private landowner- Tribe sponsor, 4) Big Creek Fish Passage Barrier Removal with Sunshine Mine- Tribe sponsor, 5) Upper St. Joe River Bull Trout Habitat Restoration- USFS sponsor, 6) Little North Fork Coeur d'Alene River Watershed Enhancement- USFS sponsor, 7) Beaver Creek Phased Watershed Enhancement- USFS sponsor, 8) Assessing Fish Passage at Stream Crossings in the CDA Basin- IDFG sponsor, 9) CDA Lake Monitoring and Modeling- CDA Tribe sponsor, and 10) The paleolimnology CDA Lake from pre-disturbance to mining impacts and present day- CDA Tribe sponsor (no funding awarded at this time).



*Aerial photo of large woody debris placements in upper Prichard Creek. Photo courtesy of Idaho Forest Group.*

## *Challenges Ahead*

A great deal of work was accomplished across the Upper and Lower Basin in 2023. The cleanup and restoration efforts were focused on remediation of human health risks resulting from contaminated residential and commercial properties. This included extensive work by the CDA Trust in the EFNM Creek and Canyon Creek drainages and the Lower Basin that addressed ecological remedies and related human health issues. The EPA directed work to address the contaminated groundwater problems and mine discharges in OU-2 noted in the Upper Basin RODA. Human health related projects continue to be a priority with an additional focus on cleanup work in fish and wildlife habitat areas, and water quality improvements. The Restoration Partnership also continued moving forward with implementation of natural resource restoration actions in the Basin.

In addition to the work in the Upper Basin, the involved governments and agencies continue to develop project proposals to address Lower Basin human health and ecological issues. Because the CDA River system contains millions of tons of contaminated sediments, a portion of which is moving downstream every year, recontamination from annual flooding is a major concern for any project planned in the Lower Basin.

Major challenges ahead include:

- Development of any needed additional waste repositories and consolidation areas for disposal of remedial action and ICP wastes.
- Continued implementation of the RODA for the Upper Basin and OU-3 ROD for the Lower Basin.
- Development of a solution to major flooding issues in Lower Pine Creek, SFCDR and Main Stem of the CDA River.
- Continued coordination with the CDA Tribe and State's efforts to address CDA Lake management issues.

The ASARCO bankruptcy settlement continues to be the major source of funding for the environmental remediation actions in the Basin. Careful management will ensure that actions working to implement the Upper Basin RODA, Lower Basin OU-3 ROD, and any additional needed amendments will have funds available for the work that needs to be done. Additional funding will be needed to carry on remedial actions in the Box because funds from the ASARCO settlement cannot be used in the Box. Assuring sustainable funding intended to advance cleanup as planned continues to represent a significant challenge into the future.