

Basin Environmental Improvement Project Commission

Meeting Summary Minutes

March 6, 2024, 9:00 AM – 3:00 PM

Marimn Health Wellness Center

1100 A St, Plummer, Idaho 83851

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), Caj Matheson (CDA Tribe), Scott Fields (CDA Tribe), Dave Dose (Shoshone County), Brook Beeler (Washington State), Karl Rains (Washington State)

Staff present:

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

Call to Order

Leslie Duncan welcomed everyone to the BEIPC meeting and called it to order at 9:05am. The Commissioners then introduced themselves.

CDA Tribal prayer followed by a performance by the Rose Creek Drummers

LoVina Louie from the CDA Tribe gave a Tribal prayer and introduced the Rose Creek Drummers. In their culture they always start everything with a prayer which is important for everyone gathered today who are here to talk about our beautiful water, our beautiful lake.

Review and Approve Draft November 29, 2023 Meeting Notes – Sharon Bosley (**Action Item**)

There were no corrections to the draft November 29th meeting minutes that were provided to each Commissioner prior to today's meeting. A motion was made by Brook Beeler to approve the minutes as provided. Caj Matheson seconded the motion, all Commissioners approved the meeting notes. **M/S/C**

Climate Assessment and Adaptation Planning – Laura Laumatia & Ailyana James, CDA Tribe

Laura Laumatia first introduced her program staff before starting their presentation assisted by Ailyana James.

In September, they finalized their climate impact assessment. This kicked off their climate work after gathering comprehensive data over the different entities of the Tribe, both on the reservation and throughout the aboriginal territory of the Coeur d'Alenes. The assessment included: overview of land use changes; Schitsu'umsh calendar and phenological changes; regional climate impacts; energy; food and agriculture; housing; land and water; health and public safety; facilities and infrastructure; and recommendations. The Tribal culture is comprised of five seasons and everything they do in their traditions is based around water. It is important that we are all here today to figure this out together for the sake of future generations, and for the sake of the land. Based on the planning impact assessment,

we found various projected weather precipitation changes as this winter has already been very unpredictable. Average temperatures in Idaho have risen about 2 degrees over the last century and are on track to rise between 5 to 15 degrees by the end of the century. The number of freeze free days in the Coeur d'Alene Basin is projected to increase from the historical average of 196 days to about 222 to 300. That is a lot of days freeze free especially for our Idaho climate. On May 1st, the snow water equivalency is expected to decrease from the historical average of 10 inches to less than 3 inches by the end of the century. Ailyana has been involved in snow science and has noticed less snow than in previous years, which may be an example of how we need to prepare for this summer's air quality and drought.

Laura talked about what is happening with Coeur d'Alene (CDA) Lake. Her slide showed a rough analysis of the water temperature at their C5 site which is just south of where the CDA River comes into CDA Lake. We are hoping to do more analysis and modeling of temperature changes that impact the lake over the next year. One of the things that is very noticeable if you look at the last decade, you can see that the lake is warming earlier and warming more which, as we know from the NAS (National Academy of Sciences) report, does not bode well for things like stratification. Warming temperatures also have potential impacts of the release of metals and nutrients from the bottom sediments, and other issues related to harmful algae blooms.

Another big concern that the NAS report did not pay enough attention to is the impacts of land use changes in the CDA and St. Joe Basins - one being the pressures of population growth. Kootenai County added 33,000 people between 2010 and 2020, all of this is coming with increasing pressures on our forests. Data taken from Global Forest Watch where you can analyze by watershed, the CDA River Watershed saw an increase in timber harvest and forest loss from 2016 through 2022, and about 13% decrease in tree cover since the year 2000. Across the basin it is even higher because of the St. Joe's rate of tree loss - from 2000 to 2022, the basin lost 20% of its tree cover which is significant. This website also has the potential to break out loss of tree cover from fire versus deforestation which is not a major factor here. Laura's slide of the St. Joe watershed showed the loss of tree cover in that area over the last 20 years, and it is not slowing down. They are very concerned and are looking for opportunities to monitor and discuss how this kind of tree loss is changing the hydrology of our region, how it's changing soil health as we are experiencing heat domes, and what we need to think about in the way we do our timber harvests. We need to be more protective of the microorganisms that exist within our soil that are so critical for nutrient cycling and for retaining carbon, nitrogen, and phosphorus. For a long time, we have been trying to understand increases in phosphorus in the lake and we suspect that this is a contributor, which we will continue to investigate. We are also concerned about the loss of biodiversity in tree species and understory in wildlife, birds, etc. that are accompanying this kind of change.

We need to look at the entirety of the lake, not just the northern part. We have 6 monitoring sites across CDA Lake that are reported on regularly. The southern part of the lake is very impaired, as shown in a picture from 2022 where the entirety of Chatcolet Lake is green from an algae bloom. We are experiencing the same algae blooms that we are sounding the alarm about for the potential in the northern lake like we are experiencing in the southern lake. Even at moderate flows, we are having massive nutrients flood into our system and sink into the sediments that get cycled through. We just want to highlight this as a major climate impact that ties into the warming temperatures we need to be paying attention to.

Ailyana spoke about the actions of the Tribe. One of the first things is energy and emission reductions. They conducted a greenhouse gas emissions inventory which was finalized at the same time as the climate assessment. One of the biggest parts was transportation. Other actions included solar installations, solar for all, clean energy fellow, EV planning and energy planning for the reservation in general. For solar installation training – 10 trainees spent a week (40 hours) on how to install and take care of solar panels in preparation for a 36kw installation on the Coeur Center, which is the big, beautiful building you see coming into Worley, with completion around the end of the month. The solar for all – they applied for a sub-award through the Bonneville Environmental Foundation for installations on tribal homes, with the goal to decrease the cost of energy on the reservation, increase energy sovereignty and resilience, and to create workforce opportunities within the community. Like the solar training, this funding will help train to include battery storage, solar panels, grid alternatives, and basic solar training. Laura added that this foundation application was for the entire state of Idaho but a portion of what is awarded would be set aside for Idaho tribes.

Based on the climate impact assessment, three key factors were identified for impacting human & environmental health: extreme heat & drought; air quality; and water quality. Air quality was one of the biggest factors they were focused on, especially with the expected heat that we could possibly experience, which would then factor in drought. There is a climate vulnerability index which is available online that shows this across the nation as well as various social statuses, and different time & health impacts. Ailyana's slide focused on the Plummer/St. Maries area which is in the 73rd vulnerability percentile for air pollution-related deaths (the highest in a 200-mile radius), and 59th percentile for air pollution-related illnesses, thus impacting people's livelihood. Their air quality program monitors the air pollutants and makes sure people are abiding by EPA standards on the reservation; air station in Plummer that collect air quality data; and installation of a new air station (southern reservation) as well as multiple purple air monitors for outdoor PM 2.5 monitoring.

Another thing they are looking at is a partnership with Gonzaga Institute for Climate, Water, and the Environment. They have already helped Ailyana receive a certificate in climate action planning. They hope to host a symposium surrounding a discussion of extreme heat and wildfire smoke impacts in the area by promoting collaboration, risk communication and reduction, and provide health and climate science resources. This will begin by getting people together in the communities of CDA and Spokane to look at promoting collaboration between all of us, and addressing what the priorities are for wildfire smoke and air quality. It will start by surveying community perceptions of what the priority should be and what people are understanding based on these impacts. The Northwest Climate Resilience Collaborative will help construct box fan filters for vulnerable community members and other community service work relating to extreme heat and air quality.

The Climate Pollution Reduction Grant (CPRG) is a two-part funding opportunity that we just finalized and submitted our Priority Climate Action Plan (PCAP) that incorporates measures to reduce Green House Gas emissions; focus on building energy, transportation, waste reduction and HVAC system installation. So, from that PCAP we also created a Community Engagement Plan to further develop the Comprehensive Climate Action Plan (CCAP). Based on the community engagement and feedback, we'll see what the community really wants to prioritize. Then we will start implementing those reduction programs and try to implement policies possibly in different projects that will address those measures identified in the PCAP.

Environmental and Climate Justice Community Change Grant is essentially empowering disadvantaged communities and their partners to design, develop, and implement programs for addressing these environmental justice issues within climate change. Indigenous populations across the world are the most impacted by environmental justice issues. Ailyana believes they are going to have a lot of success in this program. It will focus on each of the communities across the reservation to do some sort of modeling and scenarios of different ecological economic growth within the tribe and seeing how to incorporate regional infrastructure into those things. Green infrastructure involves tree canopy, storm water infrastructure, climate resilience building code development, but it can pretty much fall under anything that will make our buildings and our physical environment prettier to be around and increase the livelihood and well-being of the community and environment in general.

The Northwest Inter Tribal Food Sovereignty Summit faces the impact and damage to their native food, which is from historical things but also climate change. This weekend, they will meet to discuss, share, and learn about Tribal food economies, small business development, climate resilience, and youth engagement in food systems and traditions within the scope of food sovereignty. There will be a big focus on the youth engagement so they can take the next steps after us.

Laura stated another part of their food sovereignty and security is making sure that we have the natural resource systems to be able to sustain food production on the reservation, both traditional and western systems. We are a partner in the US Department of Agriculture (USDA) Climate Smart Commodities for Idaho: A Public-Private-Tribal Partnership, which is the largest grant ever obtained by the University of Idaho, to promote climate resilient practices in agriculture. A big piece of this will look at the production of biochar, and if you are following biochar at all, it is the miracle drug of climate resilience, we're hoping it promises even half of what it's touted to be. Biochar is a charcoal like substance that is produced under low oxygen, high heat circumstances. It's an indigenous technique from the Amazon they are finding helps retain moisture and nutrients within the soil, so it has a lot of promise for drought resilience. We will be working with our fire and fuel crews as we purchased an air curtain burner, and as we hire someone to operate this machinery, they will be in charge of working with fuels from timber slash to put in it. Not all slash will be able to be used because these burners are slow operating machines, but if this is as promising as they hope they may end up getting more air curtain burners in the future. This would be a bonus as it has very little emissions production as the carbon is staying in the biochar and not released into the air, so you can use this burner in a residential area. They will be focusing on their fuels work between Plummer and Worley to start and track how much is produced, how long it takes to produce it, how many man hours, and costs. We may be able to produce biochar in economically viable amounts that we could even sell it or use it to apply to our own restoration projects. We are also expanding our research as we have 50 acres in current Ag production in the Hangman Valley that we're going to be applying biochar in different amounts. We will also be applying it with ash and compost to see how the soil responds, how well it does with moisture, how it does in terms of nutrient retention, and then how it does with carbon emissions. We have some pretty sophisticated equipment coming in that will measure the carbon emissions from the soil and has promise to address a lot of the land use-related changes we are seeing. Our outreach will include workshops as we learn and we'll share with farmers our results and share other practices that are climate resilient such as reduced till, no till, intercropping, and nutrient management. Our hope is that farmers will enroll as it will pay the farmer and offset the risks they are taking to improve their practices.

Next, in addition to that USDA project, which is intended to be on the ground practices, not a research track, we also have some pending funding in a couple of different places. One is we are partnering with the US Forest Service (USFS); they just submitted a proposal to take biochar and apply it at Moon Gulch, which should definitely interest this group. That particular repository has been plagued with saw grass and so it looks green, but not the green we want. We are excited to be working with their team to monitor the application of biochar and see how native grass mixes respond. The Forest Service has seen in its test sites near Moscow and those in Montana when you add biochar to the soil, native seeds are more likely to respond positively and to these invasives less positively. So that has a lot of promise for not just agriculture, but to support restoration.

And then we have a pending proposal with the Bureau of Indian Affairs. Dr. Danielle Ignace is a CDA Tribal member and a physiologist at the University of British Columbia. She worked with us to put together a proposal that would look at sampling across CDA Tribal forests for us to understand the different types of forests we have here – what is happening with carbon nitrogen cycling in our soil mixture, drought risk, and tracking what’s happening in our forest to determine what we should be doing in terms of forest management. And then we have a team from AmeriCorps coming in the next few weeks. They are going to be looking to expand our capacity for all of EPO and food commodities warehouse, because we have a good community garden that needs some cleanup and love after COVID. They will also be repairing our greenhouse which will help the food sovereignty and security piece as well. Other projects – Hangman Creek riparian restoration, restore historic camas fields, box fan filter building for air quality preparedness, and tree canopy mapping and tree inventory in Desmet and Plummer.

We wanted to wrap up with a call to action and wanted to show you that we moved from assessments to action, but we never really stopped the action part. As we formalize our programs, we are hoping to expand our team and feel there's a lot of things that the Basin Commission and the basin community could also be aware of. We have long been concerned we haven't seen a detailed plan on the wildfire risk to the remedy in the basin; do we have a plan for interacting with fire management agencies; do we understand what the risk of fire could do to repositories - i.e., are we incorporating increased precipitation into design. I know that we've been talking about 100-year floods, but even if in your resilience – not in just terms of precipitation – but the drought piece as well. Are we thinking about what we need to if we have a long season of drought and plantings that are not likely to succeed; are we adequately talking about land use changes across the basin and taking the information from the Idaho Gem State Air Quality Initiative. Our priority from the climate action plan shows that greenhouse gas emissions from land use, land use changes, and forestry have increased significantly in the last 10 years. Are we talking about what is causing those changes and how we can address them collectively. Also, are we looking at things like snow water equivalency. Laura showed a map of Idaho from the Idaho Climate Economic Impact Assessment that shows the snow water equivalent over the last century and how it is decreasing. Are we forecasting what this means for the tributaries of the CDA River. How are we tracking and mitigating our emissions in the work we do in clean up and are we accounting for those emissions. Are we looking to offset those as we use heavy equipment to do our work. Hopefully these questions spark some discussions among staff and Commissioners, and we are happy to answer any questions you might have about the work we are doing.

Wade Jerome, USFS, stated that Laura spoke on wildfire and timber harvests but are they also looking at bug infestations that are killing trees. Laura answered yes, they are and how we can better identify some of those pests, and responsibilities as there is a wide variety of opinions on how we should be addressing those.

Caj Matheson appreciates all the work the staff and everyone is doing, and working with them is exciting to be a part of. This demonstrates a level of leadership that we need with this changing environment. He commented on the map showing the southern end of the lake and how green Chatcolet Lake is. He thinks everyone is aware of how the CDA Tribe has pushed hard on the protection of the lake and making sure that we do things in a way that protects that moving forward. A lot of times it feels like we are stepping so far out, but we see how the southern end of the lake which is an indicator of where all the stuff is going to start happening. This puts us in a situation where we have to be the ones out there complaining a little bit louder, a little bit more about believing in calling on all of us to be better protectors of the lake. His question – given all the data and work you are demonstrating here today, what does this mean in terms of the NAS review? One of the Tribe’s frustrations in the review was that CDA Lake was doing better, but the Tribe’s data did not match the information that was put out there. Even if we did agree with the tone of those headlines, and it is this great, it’s not going to be that great given the potential climate change. Can she expand on this and what was in the review related to climate change? Laura stated there was an entire chapter on climate change in that report which said everything we just said here today – that we have an increased risk of harmful algae blooms, we have an increased risk of nutrient cycling and metals mobilization from stratification caused by the arcs we see in that temperature graph. Every risk that we have always worried about under the auspices of public management is exacerbated by climate change. I don’t know that we are in a position quite yet to forecast what month or year that we get to that tipping point. Her takeaway from that picture is that some tipping points have already passed and we’re only talking about it, we need to be working urgently to take the extra protection we need. She does not know that we have the science to tell us exactly at this point as there are a lot of unknowns. We do know that February was the warmest February on record, and we continue to cycle up in unforeseen ways. So, what we did five years ago has already been altered. She thinks their science technical team is going to have a lot of good work come out, and believes they are closer to give us some predictive tools that could help us. The problem with climate and all of this, is so much has already happened and we need to act now and not wait for those models to tell us what to do.

Brook Beeler thanked them for an awesome presentation and was super excited that the Tribe was working through this process. The State of Washington will be doing similar work with climate resilience strategy and the questions that she posed at the end are questions that were running through her mind. What are we doing to integrate the known climate impacts of every project put on the ground, and what are we doing to mitigate the greenhouse gas emissions from those projects. She doesn’t know if this is the place for the Commission to lean in or help strategize, but if others are interested there is an opportunity to help support the work you are doing and expand it a little further into the Basin.

Review and Approve Annual Accomplishment Report – Sharon Bosley (Action Item)

Sharon gave an overview of the BEIPC. We were created by legislation in 2002 through a Memorandum of Agreement (MOA) between the seven governments to oversee the Basin Commission, and we work to coordinate restoration and remediation as well as improvements in water quality in the CDA Basin. We also work with stakeholders and community members to inform them of the work going forward and work completed in the past year. Introductions have already been given, but the infrastructure of the

commission consists of federal, state, and local government agencies that help implement the Record of Decision (ROD) for Operable Unit 3 (OU-3) and the Upper Basin ROD Amendment (RODA) released in 2012 for human health and ecological remediation activities. Two different groups serve as our main avenue for public input to the BEIPC -- the Citizens Coordinating Council (CCC) and Technical Leadership Group (TLG). The CCC is comprised of politically and geographically diverse members and was established to provide local citizen review and input; the TLG is the primary technical advisory group comprised of federal, state, local and tribal representatives, as well as interested private citizens who serve on Project Focus Teams (PFT) to provide expertise, science, engineering, logistics and regulatory aspects -- both work closely with the BEIPC.

This report will cover public outreach and citizen involvement, environmental cleanup work, and other activities and responsibilities.

Public outreach and citizen involvement – there are many pages in the report that detail all the different activities that were accomplished. BEIPC work includes updates to the website, sharing of important information with our partners and others, attending outreach events, and participating in stakeholder meetings to provide updates on basin work. EPA produces many documents providing updates on the work being done, sampling results, the BEIPC tour, and restoration work. They also produce the Basin Bulletin, update their webpage as well as the CDA Basin Facebook page. Sharon quickly introduced her staff and the volunteer staff from IDEQ, Washington Department of Ecology, EPA, and the CDA Tribe – all of whom help with all related things. She continued with the outreach efforts from IDEQ and Panhandle Health District (PHD) – they provide the annual blood lead screenings, provide updates and training throughout the season, host booths at local events throughout the year, and attend global meetings as needed. One thing the BEIPC added to their outreach events this year was the confluence project that is provided to local students.

Lead Health Intervention Program (LHIP) – you will receive additional updated information from Mary today in her LHIP presentation. PHD continues to screen children for elevated blood lead levels which has been occurring annually in the Basin since 1996. This year they had 189 children (94 Basin, 95 Box) within the 6 months to 6-year range with a maximum level coming in at 7 micrograms per deciliter ($\mu\text{g}/\text{dL}$), the minimum at 1.0 $\mu\text{g}/\text{dL}$ averaging out at 2.0 $\mu\text{g}/\text{dL}$. They conducted three additional lead screenings events providing area residents with even more access. In 2023, 160 Basin residents and recreators participated – 164 participated in the Box.

Basin Property Remediation Program (BPRP) – this program continues to address contaminated soils and replaces them with clean materials for areas exceeding the limit. In the Box, there were no new properties remediated so the total to date remains at 3,236. In the Basin, 3,935 total properties have been remediated. In 2023 they continued to maintain six reverse osmosis water drinking filtration systems, collected 55 soil samples from two properties and three drinking water samples from one property, and remediated four properties.

Contaminated Waste Disposal Management – these facilities accommodate the disposal of contaminated waste and are engineered and constructed to reliably contain those materials and prevent contamination that can exceed state and/or federal standards. There are five repositories centrally located in the Upper and Lower Basins where contaminated soils and materials can be transported to be secured from either remediations or Institutional Controls Program (ICP) actions. Sharon showed a slide listing all 5 – Lower Burke Canyon, Big Creek and Big Creek Annex, Page, and East Mission Flats – and

discussed the waste that was delivered to each and the capacities remaining. Big Creek and Page are utilized in the winter and the others are monitored as we receive rain and snow events. Waste Consolidation Areas (WCAs) are located near, and accept waste from, specifically identified sources such as remedial actions. There are two located in the Basin – the Canyon Creek Complex combined Repository/WCA and the East Fork Nine Mile Creek WCA. Canyon Creek is the newest WCA Site and did not receive any waste in 2023, but they will be receiving a lot of waste in 2024. The Nine Mile Creek WCA was expanded which will increase capacity and allow an additional 640,000 cy of waste rock and mine tailings. It will continue to receive remedial action waste as well as generate clean fill that is utilized for some of the stream restoration projects. Having the location of this WCA near source areas has saved the project approximately \$8.5 million in transportation costs and significantly minimized traffic through local communities. A Lower Basin WCA site is still being evaluated and EPA is giving full consideration to the analyses from the PFT before deciding.

Upper Basin Remedies – prioritized cleanups will continue to reduce human and wildlife risks to lead and other heavy metal exposures and are expected to significantly improve water quality. The following summarized the 2023 construction activities:

East Fork Nine Mile Creek Drainage (EFNM)

A lot of work was completed in 2023 – 147,000 cy of contaminated waste rock and mine tailings were hauled from the Dayrock Mine and placed at the EFNM WCA, in addition to 2,728 ft of stream channel reconstruction of Nine Mile Creek. At the Tamarack Complex, 155,500 cy of waste were hauled to the WCA, and 290 ft of tributary channel was reconstructed. Sharon shared a slide of the Dayrock site and all the work that went into the stream channel reconstruction.

Canyon Creek Drainage

Approximately 1.7 acres of mine waste rock and tailings were regraded and capped with clean soil at the Star Complex, and site infrastructure upgrades included 16 dewatering wells for continued remedial actions in 2024. Characterization and sampling activities at several different upcoming projects happened at Frisco Black Bear Reach, Gem Complex, Standard-Mammoth Reach, and at Lower Burke Canyon Creek Riparian Area. They will continue to monitor surface and groundwater in the Canyon Creek Basin and designs were completed for both the Flynn Mine and Black Bear Fraction projects.

Lower Basin Remedies – the 2002 OU-3 ROD includes remedial actions for wetland and lateral lakes, riverbanks, splay areas, and riverbeds. Remediation objectives include reducing risks to human health and wildlife and improving habitat quality in the CDA River system.

Gray's Meadow Remedial Action and Restoration

A collaborative effort on this agricultural land to clean, diverse, productive wetlands and riparian waterfowl/wildlife habitat. This year's progress included cultural resource monitoring activities for both the Cave Lake and Lamb Peak Wetlands, localized dewatering of both wetlands, constructed two water control structures in Cave Lake Wetland, excavated and placed contaminated soils, constructed restoration habitat features including loafing islands and pond features, and constructed water control embankments.

Lead Bioaccessibility

There have been a lot of studies done over the years to try and add amendments to the soil in the CDA Basin. 85% of the wetland areas are contaminated so if you could come up with a remedy to amend the soil, there would be less waste that would need to be hauled away. EPA is testing the application of jarosite-based remediation on contaminated soils. Remediation is accomplished by converting lead and arsenic into jarosite-group minerals that are stable at acidic conditions, which could provide protection by reducing the absorption via stomach acid. Essentially you are trying to reduce the bioavailability that can be absorbed so that maybe in the future these amendments could be done instead of remediation. Field studies measure the effects of oxidizing and reducing conditions in seasonal wetland sediments. These studies also identify non-invasive biological metrics for monitoring tundra swans and wood duck lead exposure by tracking and measuring lead concentrations in sediment, feces, eggshells, and blood.

Dudley Reach Pilot Planning

Planning for the Dudley Reach pilot riverbed remediation project continued to address source control in the river channel. It is a very dynamic process, and a lot of thought must be taken into consideration. A 30% design is completed for the Dudley Reach Scour Hole pilot project to include dredging and capping of the contaminated sediment. This will also depend on the siting for the Lower Basin WCA. Within the 37 river miles, channel data collection included boat-based sampling of suspended sediment and surface water at 78 locations, riverbank erosion pin monitoring at 5 locations, and riverbank soil sampling.

State of Washington

The Department of Ecology completed a comprehensive sampling event for the Spokane River beach sites. They sampled beach material, suspended sediment, surface water at 3 locations during different flows, and XRF'd beach materials. Results will be available later in 2024.

Recreational Sites

The effort continues to help educate people where and how to safely recreate. One new sign was installed, and three signs that were previously installed in the Lower Basin had to be replaced due to vandalism. In the Box, outreach efforts continued, and an enhanced trail barrier was installed on a volunteer trail system near the Shoshone County airport by re-applying gravel to the cap that had degraded. In the Basin, cleanup work at the informal recreation site at the beach by Black Rock trailhead was completed. Riparian plantings were also installed on Tribally owned property near the Cataldo bridge to discourage access. EPA and the CDA Trust continued to evaluate other recreational areas in the Upper and Lower Basin for future cleanup work.

Basin Environmental Monitoring Plan (BEMP)

Basin-wide monitoring is completed by several different agencies and uses an updated programmatic plan to design efficient data collection to support site-wide management decisions. A Data Management Plan (DMP) was finalized in 2023 and provides guidance on data requirements for all entities who are collecting environmental data so it can be put into one source for extraction later. The data platform is through scribe.net and will be available for the public to utilize. For assistance finding information, contact Jennifer Crawford with EPA or Sharon Bosley. Under the BEMP plan, monitoring is structured into three geographically based tiers:

- Site-specific Remedial Action (RA) effectiveness and performance monitoring – The Canyon Creek RA Effectiveness Monitoring Plan was finalized and demonstrates how remedy effectiveness is making progress towards RA objectives. Also, a Lower Basin RA Monitoring Plan is being drafted with finalization in 2024.
- Area-wide monitoring – this occurs after completion of the highest priority RA and follows this general schedule: surface water (years 1-5), suspended sediment (years 1-5), and fish/benthic macroinvertebrates (years 4-5).
- Basin-wide long-term monitoring – track long-term monitoring for all remedial actions.

Surface Water

The US Geological Survey (USGS) collected water quality samples from 20 sites as part of the surface water BEMP. Four sites in OU-2 (Box) were sampled twice, 16 sites in OU-3 (Basin) were sampled under a variable frequency schedule (4 to 12 times), and a sampling schedule of 12 times per year is expected. Samples were collected during a range of hydrologic events: peak runoff, high snowmelt runoff, baseflow conditions, and fall rain event. Samples are analyzed for nutrients, trace metals and ions, suspended sediment, some for mercury, and some to calculate the Idaho copper criteria.

Groundwater

Groundwater was sampled at the Groundwater Collection System (GCS) alongside the Central Impoundment Area (CIA) during high flow conditions in May 2023 including 59 monitoring wells, 4 piezometers, and 9 extraction wells - 72 during base flow, 71 sites were sampled including 59 monitoring wells, 3 piezometers, and 9 extraction wells. Samples are analyzed for metals, phosphorus, and other parameters, and conducted to capture baseline data across the site that reflects the conditions of groundwater quality. A pre and post seepage study was conducted – pre in 2017 and post in 2022 – in the South Fork CDA River (SFCDR) between Kellogg and Smelterville, and in summary, show a reduction in groundwater loads of dissolved zinc (86%), dissolved cadmium (81%), and total phosphorus (88%).

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 and is collected by boat during high flow events only.

Biological Resources

Annual waterfowl surveys are conducted from early February to late April in the Lower Basin floodplain wetlands; recording observations of waterfowl use and tundra swan mortalities during the spring migration. Hopefully, this will provide monitoring tools to help understand the ecological health and remedial action effectiveness at area-wide and project specific scales in the Lower Basin.

2023 Work Accomplishments Part 2: Other BEIPC Activities and Responsibilities

IDEQ Lake Management Activities

Discussions among the CDA Tribe, IDEQ, and EPA related to the NAS recommendations and future lake management activities are ongoing and various aspects outlined in the Lake Management Plan (LMP) and listed below are essential to continue to monitor the core of the lake.

Science Core Program

- CDA Lake core monitoring
- Aquatic plant survey
- Draft conceptual lake model report – final report in 2024
- Science Coordination Team to address NAS recommendations.
- Pilot bay monitoring

Education & Outreach

- Provided LMP updates to community.
- Participated in The Confluence Project (TCP), Our Gem Collaborative & Local Gem program with CDA Chamber
- Provided Leading Idaho updates.
- Coordinated with University of Idaho (U of I) Bay Watchers
- Participated in Stormwater and Erosion Education Program (SEEP)

Nutrient Inventory/Reduction

- Analyzed water quality for 11 tributaries/10 smaller drainages (NAS recommendation)
- Coordinated with EPA – sampled phosphorus during high flow events on the CDA River
- Implemented projects throughout the Basin to reduce phosphorus load to CDA Lake through Leading Idaho initiative.

Partnerships

- Science Coordination Team, Alta Science, IDEQ, CDA Tribe, USGS, EPA, and U of I
- Lower Basin project prioritization with Avista Corporation
- CDA Chamber Natural Resources Committee (NRC), Our Gem, SEEP, 4-C (Four Counties Natural Resource Committee), others
- Basin Advisory Group (BAG) & Watershed Advisory Group (WAG) meetings.
- Facilitated the CDA Lake Advisory Committee's (CLAC's) review and project selection for Leading Idaho
- Worked with BEIPC

Coeur d'Alene Tribe Lake Activities

Science Core Program

- CDA Lake monitoring & modeling
- Milfoil control with bottom barrier and mechanical harvester treatments

Education & Outreach

- Provided Lake updates to community.
- Participated in TCP, Our Gem Collaborative & Local Gem program with CDA Chamber
- Coordinated with U of I Bay Watchers

Lake and River Water Quality Sampling

- Continued to sample CDA River at Harrison, St. Joe River, Chatcolet Lake, and CDA Lake
- Analyzed water quality data and continued calibration of AEM3D model for the Lake.

Partnerships

- CDA Chamber NRC, Our Gem, 4-C, others
- BAG & WAG meetings.
- Worked with BEIPC

Restoration Partnership (RP)

A collaborative effort whose primary mission is to implement a restoration plan to help restore the health, productivity, and diversity of injured natural resources. This past year they expended just over \$1.3 million on restoration projects – a complete list can be found in this year’s Accomplishment Report. In 2023, the RP solicited the public for project ideas – 16 were submitted, 3 did not meet the RP Eligibility Criteria, and 3 withdrew. More information can be found on their website www.restorationpartnership.org

Rebecca Stevens asked a question to Dan McCracken about the repositories and WCA’s in the Basin – does the remediation arm side of IDEQ do any surface, water quality monitoring in streams like at Big Creek and Big Creek Annex. Dan answered there is typically more groundwater monitoring wells around all the repositories because we are particularly concerned about water infiltrating through the waste and combining with the developed metals which leach into groundwater first before surface water, but there has been surface water monitoring around some of those sites in the past. He would have to look and see what kind of data we have, but the typical monitoring we use for water quality is a groundwater focus.

Leslie asked for a motion to approve the Annual Accomplishment Report – Brook Beeler made a motion to approve, Caj Matheson seconded – all approved **M/S/C**

Annual Blood Lead results from 2023 (Annual August screening) – Mary Rehnborg, PHD

Mary is the program manager for PHD and will update us on last summer’s blood lead screening results. Her presentation will cover the health effects of lead, Lead Health Intervention Program (LHIP) background, 2023 LHIP approach, and 2023 LHIP results.

Health Effects of Lead

Everyone knows that lead is not good for your body, but it does have a variety of different issues and doesn’t always affect the same person the same way. There are people that can have issues with brain memory loss and others have issues with kidney problems. Our biggest focus is on children 6 months to 6 years of age, as they are the most susceptible to the exposures of lead. Other at-risk populations include pregnant women and recreational or workers who are in these lead rich environments (i.e. mining industry). The Centers for Disease Control (CDC) has historically set lead reference levels to what was considered a normal amount of lead in the blood, but the more we learn we realize no amount of lead in the blood is good. These standards have changed from those of the 1950’s and 60’s, our limit now is set at 3.5 µg/dL for children and still set at 10 µg/dL for adults.

Lead Health Intervention Program (LHIP) background

The LHIP is a public health service and not a study or experiment. We have been doing screenings in the Box with partnership from the CDC and the Idaho Dept. of Health & Welfare since 1974. In 1985, PHD took over the program and has been running it since. We have been monitoring the Basin since 1996. Anyone that lives, works, or recreates within the ICP boundaries does qualify to get tested. We do offer a \$50 incentive for that age group of 6 months to 6 years.

2023 LHIP Approach

This year's approach was so much smoother than in past years where we have had some hiccups with product recalls and other issues. The process starts with an informed consent from the parent or guardian and the blood test is offered by either venous or capillary (i.e., fingerstick). The fingerstick is not as accurate, but if it comes back at or over 3.5 µg/dL, then we do require the venous draw. The parent can decline, but the incentive would only be given if the draw happens. The venous draws are then sent to a lab to be analyzed and results followed up on with the parent. Screenings happen in August, but we did hold some additional screenings at community events – walk ins throughout spring/summer/fall, Kellogg Elks Blood Drive in June, Shoshone Medical Center Kid's Health Fair in September, and again at the Kellogg Elks Blood Drive in October. We are always looking to expand and encourage any ideas.

2023 LHIP Results

We saw a total of 189 children, 95 from the Box and 94 from the Basin in the 6 months to 6-year range. We also saw a large increase in the older population participating – from 7 years or older – 103 in total, 53 in the Box and 50 in the Basin.

Box Remedial Action objectives state that no more than 5% of children in each community within the Box will have blood lead levels equal to or greater than 10 µg/dL, and less than 1% with blood lead levels equal to or greater than 15 µg/dL. Mary showed a slide of results dating back to 1974 with the levels dropping over time. We continue to see those numbers come down, but still slightly above the US average - we are making great progress. She also showed a slide of percentage of children with those levels at or under the 10 µg/dL. We do get spikes throughout time and depending on the participation, for instance, the big spike in 2019 happened with one family. We are constantly paying attention to those spikes and realizing that there are exposures still out there. Even though we've done a lot of cleanups and made great progress, we still have things we have to control and educate people about. So, of the 95 children tested, the average was 2.0 µg/dL – the minimum came in at 1.0 and the maximum was 7.0.

Basin Remedial Action objectives are slightly different than the Box as we have to approach each region in a different manner. The goal is to reduce exposures to soils with concentrations greater than 700 mg/kg of lead or 100 mg/kg of arsenic (or parts per million which is frequently referenced). Also, reduce exposures to lead in house dust, and cumulative exposures not to exceed USEPA's health risk goals (less than 5% chance that a typical child at an individual residence does not exceed 10 µg/dL). Mary's slide showed the Basin results since 1996 with the levels dropping and some spikes here and there. She also showed blood lead levels since 1996 broken down between the Upper and Lower Basin as there are different exposures – Upper Basin is more notably where actual mine and mill sites operated, and the Lower Basin is where contaminants have washed down the river system and settled out into the flood plain where people recreate. There were 94 children tested in the Basin with the same average as the Box at 2 µg/dL – the minimum came in at 1.0 and the maximum was 7.0, so very similar this year to the Box. Mary mentioned that Idaho still considers the reference level at 5.0 with legislation currently working on adjusting, but their program will use the CDC guidance of 3.5.

PHD conducted 20 in home follow-ups and investigations. When allowed into the home, they do house dust sampling, check for lead-based paint, check toys, and other possible exposures. There were 16 phone consultations and 38 letters sent with more information – these are not nearly as effective, but still a step in the right direction. Our most identified sources this year were:

- Recreating in un-remediated areas – a lot of these were in the Lower Basin as that area grows in population and popularity. Additional outreach and follow safety tips to reduce exposures.
- Occupational related – a lot of miners bring their work clothes home for washing, dryer lint is tested. PHD attempts to work with industries to provide education and tips on how to reduce exposure at work and reduce tracking.
- Lead-based paint – they identify a lot of older homes with lead-based paint. They conduct assessments and address, if needed.

Leslie asked how they test for lead in the paint, and Mary said they don't do the monitoring for the paint as they do not have the resources. She believes that the lead-based paint level is at 400 ppm, but she sees levels come in much higher than that.

Calvin Terada said this was a wonderful presentation and thanked her for all that she does – about a year ago he asked her if she had a wish list, what she would put on that list. Mary had sent him an email and listed 5 things – partner with schools and do more outreach; participate in the kids fair and other events; adding more capacity for testing especially on Fridays when she only has one nurse on staff; be able to offer increased incentives either for a longer time or ways to do that; and figure out a mobile clinic, how to be able to get out and be more mobile. He stated that clearly, she has been able to accomplish some of these, has she thought about a wish list for this year. Mary answered that her outreach coordinator Emily has really stepped up our efforts of getting out there. She's started talking to church groups too as some of them do their own schooling, and not just focus on the public schools. They have been able to attend more events – home and garden shows, health and wellness expos – so they are making progress. The one thing on her wish list she has not been able to accomplish is the money stuff, but she knows they must be smart as funds are limited, what will be most beneficial with the funds they have. This year at our summer lead screening, we hope to make it more fun like a bouncy house, balloons, ice cream setup – make it more family friendly instead of clinical. Mary also wants to step up ways to advertise. She did have a mobile patrol unit secured through the health district, but that fell through so she is still exploring options at what they can do there. Other ideas for incentives have come up like winning weekend getaways instead of just the money. They are always open and looking for ideas and suggestions.

Sandy Treccani said there is a question online from Bonnie Douglas, “Do they question how long a child has lived in the Silver Valley before testing?” Mary answered yes, they do – that is part of the questionnaire. We have had people move in from other regions, and although we do not have a lot of the migrant population up in North Idaho, we do pick up on people with those higher levels.

Tamara Langton asked Mary if she was going to touch on budget changes for healthy homes – Mary explained that she was just finalizing her budget for next year and they have allocated some funds to start focusing on what's called the Healthy Homes Initiative – hoping to get into people's homes and do house cleaning techniques, cleaning basket giveaways – they do identify when there is not proper cleaning happening in the house like frequent vacuuming and laundry – there is an accumulation of these elevations in some homes - so they can teach people and educate them on how to keep a healthy home that will help protect them. They will be partnering with Housing and Urban Development (HUD) as they already have a healthy homes project they do; we'll see what kind of program we can develop specifically for our site.

Rebecca asked if PHD tracks those that have lived in the Silver Valley and had exceedances in their blood leads that have then moved on and if they still track their health conditions. Mary said unfortunately they do not, they don't have the capability to do that. It would take the patients permission and their desire for us to continue monitoring and tracking, and just the health district resources – it would take more medically trained personnel like doctors or physicians – and she is simply not educated enough to take something like that on. There have been some studies over the years that she could provide to Rebecca. Rebecca gave kudos to her and Emily Hasz for coming down to the reservation and teaching students at the Childhood Learning Center, teaching 3-year-olds how to wash their hands and recreate safely in the CDA Basin.

Jerry Boyd wanted to know how their equipment failure from a year ago got resolved. Mary stated the recall on their test units used were with the finger pokes, the contractor of the manufacturer used decided to move their operations to China, so a year's worth of tests was compromised. The improper handling caused that recall. A lot of parents do not want their kids to have venous draw even though they are less painful. We resolved the issues and are back up and running at full speed.

Val Wade liked the idea that Emily was going into the churches. She was curious when the kids were getting tested this year if they saw many from the Lower Basin or even the Spokane River area. Mary answered unfortunately not – that is one of the areas they are going to start looking at. Questions arise do we need to set up a testing facility or do a clinic in the Lower Basin. We used to house one at the Medimont Grange but there was very little participation. Another idea was the park at Harrison Beach, most weekends it is packed with children so maybe we could set up a mobile unit for a few weekends. This is a huge part of the demographic we are not reaching; how can we make it more convenient for those in the Lower Basin and even Spokane River people.

Jess Byrne stated that Mary talked about not having infinite resources, what is the funding source for the LHIP. Mary answered that it is all part of the settlement funds – and Dana Swift said correct, there are supplemental funds from the EPA to fund Emily's salary and outreach & advertising but most of the LHIP is funded through settlement dollars.

Val wanted to know if PHD had any other mechanism for blood lead testing other than what they are doing in Kellogg and Mary said the district does not. The PHD (in Kellogg) is the sole department within our agency that does this testing. They have talked about securing analyzers so that clinics could do testing but that is a continuing discussion they are having. Shoshone Medical Center and Heritage Health have secured testers, so there are others that can test. Mary is impressed with the pediatric clinics in CDA and Post Falls as they have made blood lead testing part of their routine for well child checkups. She would like to see the other health districts step up, but they haven't explored the option for the Hayden area.

Tamara asked how many phlebotomists are used in testing. Mary answered that's another aspect of us being able to do this is that we must have certified phlebotomists. We get ours through Shoshone Medical Center and must be cognizant of their schedules to make sure they have the available staff to help us at our August screenings. We always ensure we have two phlebotomists at a minimum.

EPA New Lead guidance – Kira Lynch, EPA

Kira gave an update on the guidance that EPA published in January that documents updated screening levels for lead at residential sites, which doesn't mean just properties where people are living, it is any area we're assessing where there is going to be unrestricted access to children to contaminated soil. Previous action levels for lead in soil were based on guidance from 1994 and resulted in the screening level of 400 parts per million (ppm) and the basis for that was being able to have 5% or less probability of a child with a blood lead of less than 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$). We know there are much lower levels that can cause detrimental effects to children that carry throughout their lifetime. This is the primary reason EPA has updated the screening levels across the board. The new guidance that we are targeting is either 200 or 100 ppm level in soil. The difference will equate to blood lead levels to approximately 5 $\mu\text{g}/\text{dL}$ or 3.5 $\mu\text{g}/\text{dL}$. Our modeling looked at what kind of levels in soil can result in different exposures and resulting levels in children. The reason we went with a 2-tiered approach on the screening levels is to adjust the level down to the lower level if we're assessing or dealing with a cleanup in a community where those children may be exposed to multiple sources of lead other than contaminated soil (i.e., paint, air exposure pathways). This is our way to look at when we're screening those types of communities and using a lower level to adjust for cumulative exposures in that community. Why did the EPA make this change? It is one of the top priorities that we have in the agency right now to be dealing with lead exposures for children. Current science shows lead exposure is more dangerous to children's health than previously understood.

Screening levels are numbers that we use at the initial stage of assessing the site to be able to go in and evaluate if levels are high enough to be concerned about and do we need to evaluate them more thoroughly. All the Superfund sites across the nation are now going to be using these new screening levels, but they are not clean up levels. We all know that different cleanup sites have all kinds of factors for consideration and site-specific factors that impact how we need to design cleanup strategies, and how and what kind of cleanup goals need to be set. Screening levels are just the first step to calculating site specific cleanup levels. Bunker Hill is already a mature site that is in the process and clean up levels have already been developed. What we need to do now is go back and look at the assumptions made in calculating those original cleanup levels and bring in the new science and have those consistent with the new target for lower blood lead levels. There is a lot of information on the work that has been done, where we are tracking children, where we know they had higher blood lead levels, and we can go back and say where those exposures are happening and what is causing those. This information needs to be brought into our new plan as well as the science on lowering the screening levels.

Current Bunker Hill Residential Soil Lead Action Levels:

Box Residential Soils -

- Removal and replacement of soils with lead greater than or equal to 1000 mg/kg

Basin Residential Soils -

- Removal and replacement of residential soils with lead greater than or equal to 1000 mg/kg
- Install barrier such as vegetative barrier to limit migration of soils with lead between 700 and 1000 mg/kg

Box and Basin Goal –

- 5 percent or less probability of a typical child having a blood lead level > 10 µg/dL and a 1 percent or less probability of a typical child having a blood lead level > 15 µg/dL.
- Panhandle Health District offers consultations and follow-up with all children who test over 3.5 µg/dL

Next Steps:

Evaluation -

- Perform evaluation to ensure cleanup levels and actions remain protective.
- Work with cleanup partners to review decades of historical data including more than 7000 properties that have been cleaned up.
- Evaluation will take six months to a year or longer.

Decision -

- Continue to follow the current plan if no changes are required.
- If changes are required, EPA will ask for community input on a new proposed plan.
 - Consider all public comments.
 - EPA will issue a formal decision (remedy, or cleanup plan)

This will be a team effort as we have a lot of historical information that needs to be pulled together. We need to at least do an assessment if there are properties where we did partial remediations based on earlier cleanup, and whether that means there are properties that will need to be revisited. We also need to look at and prioritize what additional actions need to be considered to bring this in line with our new goals. Anything that will be considered a significant difference from our existing decision documents would have to go through a process and put out a new proposed plan and possibly a ROD Amendment for the various Operable Units. The other option would be to make some modifications through an ESD (Explanation of Significant Difference) document. We won't know the path for moving forward until we've had the opportunity to work with the team to identify what we think needs to be done, what are the updates to the cleanup level, and how does that translate into modifications to our current strategy.

Caj asked for more clarification on the 200/100 action level – and Kira explained they have given them a lot of flexibility on how that gets interpreted but in general, and once again, they are not necessarily the cleanup level but the screening level. Generally, the idea was that the project team would look at the community and people who were the receptors and what they could be exposed to; and if there were multiple exposure routes and concerns about human exposure, they would use 100 ppm as the screening level. We know we have risks, but for the Bunker Hill Site when we recalculate our cleanup level, we need to consider what we want that targeted blood lead level to be. Then we can decide if we're going to put it anywhere between that 3.5 and 5 µg/dL.

On online question – maybe back to Mary – do mining properties have measures in place to make sure workers aren't bringing lead home on their clothes. Mary answered that each of the mines has health and safety officers, and they do provide what's called a "dry" where the miners are supposed to take off their work clothes, leave them on site, and showers are available as well. They are provided the guidance that they should be doing this, but it is not mandatory. The other issue is taking their clothes to wash when they are dirty enough – all our local laundromats have what they call digger machines that are specific, heavy-duty machines – instead of taking them home. The miners are encouraged through

our outreach as well, but it comes down to convenience. They are educated through their annual refresher that they must attend and have a specific section on not bringing lead home to their family and for their own exposure too.

Dan McCracken asked if other programs with the EPA and other federal agencies are also looking at policy changes to reduce lead exposure i.e., the Toxic Substances Control Act (TSCA) or the Safe Drinking Water Act (SDWA) programs, the Food and Drug Administration (FDA). Kira did not know the answer to that for sure, but from the standpoint of the EPA, they are looking at multiple updates across the board within all programs to be able to address and deal with childhood lead exposure. Most of those she is aware of are coming out of the Office of Children's Health and our Education & Prevention. She will find out this information as she is not sure about the TSCA regulations on paint and if there is anything in the works for lowering standards in that program.

Val wanted to know if they drop the screening level in the Silver Valley to like 300 ppm, does that mean someday you're going to have to go back and re-remediate all those yards where there are children. Kira answered correct in a general sense – the cleanup level that was defined for the Box was 1000 ppm and we used that level to determine where we needed to act for the property cleanups that were done. Going forward, that cleanup level is probably going to be closer to 200 ppm. So, what we need to do is go back in and look at those cleanups and assess whether any of those need additional work. In many cases, the entire yard was above 1000 ppm and the remedial action was removal of the soil and clean fill brought back in. The lowering of the cleanup level won't impact any of those yards, but in other yards where we did partial cleanups because some of the yard was below action level, those ones will need to be assessed to determine whether we should go back in and do a partial additional cleanup. All this needs to be weighed against all the factors and look at where we know exposures are happening in children and come up with a strategy of where we want to put our energy for exposures that are more critical. A good example, because of the lead screenings, was going back to the property where children were testing high, and in one case found where the original remediation did not take the soil from around the tree because we wanted to save that tree. So, what was happening, that child was playing in that soil that was left which resulted in a higher blood lead test. Kira said they need to look at what we've done in the past and collect information along with where we want to go and make a strategic decision about how that changes what we're going to do as far as remedies going forward.

Val felt it was important for everyone to understand regarding the yards that were not remediated because they were 900 ppm on average for the whole yard, even though maybe some parts were higher than 1000 ppm and some were lower, they averaged it out. When you think about all those kids and parents who are not getting their blood tested and may never get tested. She is concerned that this is a State of Idaho problem because there is nothing that says a doctor must test the kids for lead, the parents have to ask for that to be done and sometimes pay for it out of pocket. Val is also concerned with the screening levels changing that some yards still won't be addressed. Kira said they will be absolutely doing that – going back and reassessing the data that we have available and potentially collecting additional data on the areas where we drew our boundaries and sampling more homes outside of that. That is part of what we will be doing as part of this reassessment – taking additional actions at some of those homes that may have been left behind because they were below our previous action level.

Jess wanted to know if they have a general idea or percentage of properties that are below 1000 ppm. Dan McCracken answered that in their review of properties that are in the bucket of above 100 and less than 1000 ppm, it was a lot. Kira answered too, a lot of properties - when they did that review it was around 4,000 approximately. Jess asked then if these would be the primary focus and Kira said correct. One of the reasons we want to be able to go into this very strategically is because that could end up being a lot of work and a significant cost. So, for the next 6 to 8 months, we will pull together and come up with a strategic plan. This plan needs to be based on actual data and the numbers of how significant this effort is going to be and whether it's something we have to document through a ROD amendment or just general guidance. If it is solely saying we're going to lower the cleanup level and result in doing many more residential removals, we may be able to do it with an ESD.

Rebecca added that this is national guidance and not a rule change, which are two very different things. Just a reminder that the Natural Resource Trustees proved up injury to waterfowl and songbirds at 530 ppm which EPA adopted. She thinks we just need to watch this closely and work together. This could be a big game changer but being a part of the strategic planning, the Tribe will want to be involved - and Kira said absolutely.

Public Comments & Discussion – there were no public comments at this time.

Citizens Coordinating Council (CCC) Updates – Jerry Boyd

Jerry is the current Chair of the CCC, which is the liaison to provide information to the public or from the public back to the BEIPC. The last several years we've been focused on issues that the public has identified and want addressed. These meetings were both public and virtual, some with a lot of turnouts depending on the issues at the time - one of those was the CCC meeting regarding repositories. So, the public does have an influence on topics concerning this site. We have some upcoming meetings that Sharon will go over and the topics that will be discussed. Anytime the public has a particular concern, they can forward it on to him or Sharon and we'll see how we can get input to and from the public and the BEIPC.

Sandra had a question pop up online – do they still test children in kindergarten, and Mary answered no, they do not.

CCC Survey and upcoming meetings & agendas – Sharon Bosley

Sharon quickly went through the CCC survey, upcoming meetings & agendas. Back in November, she put out a Google Form survey to get an idea on what the community would like to have discussed at meetings and where they would like to have them. We had 51 people respond with the majority having knowledge of the Bunker Hill Superfund Site. On the question of whether they were familiar with the BEIPC, just over half were aware – so she will work harder on getting that information out there to the public. Over ¾ of the respondents live in the CDA Basin – most in Coeur d'Alene, followed by Plummer, Worley, and Kellogg. And again, over ¾ of the respondents replied that they would like to attend a CCC meeting. There was a tie in votes for the time of day they would prefer between morning and evening, and locations voted on were Coeur d'Alene and Kellogg. All the work in the Basin, followed by an interest in CDA Lake and the Lower Basin were the topics of interest that gained the most votes. Other topics include – Lower Basin with a specific interest in bank stabilization, Prichard Creek, Lower Basin repository, phosphorus reduction, mitigation of growth impacts and policy. We will consider all these additional ideas as we go forward with our CCC meetings – two of which will be upcoming - the first one will be held on April 3rd in CDA at the Public Library. We will discuss CDA Lake Management from both

IDEQ and the CDA Tribe (Leading Idaho, human health study and Science Coordination Team); Lower Basin updates (riverbank stabilization, riverbank pilot study, finalized Lower Basin prioritization plan, BEMP and wetland projects); time for public questions and comments; and closing remarks. The second meeting will be held in Kellogg on June 5th at Panhandle Health District. Topics will include regional blood lead level results; new EPA blood lead guidance; Lower Basin updates (riverbank stabilization, riverbank pilot study, finalized Lower Basin prioritization plan, BEMP and wetland projects); time for public questions and comments; and closing remarks. Jerry Boyd has indicated it is time for him to retire as the Chair of the CCC, so we will be holding elections for this position and for Vice-Chair. She encourages the community to attend these meetings and to step up and consider taking on the responsibility of the Chair and Vice-Chair. Please feel free to ask her any questions regarding the survey or CCC meetings, or how to become more involved.

Sandy said the online question asked if there will be an online option for these meetings, and Sharon answered yes. The online response is they appreciate being able to attend virtually.

Meeting adjourned for lunch – Executive Session under Idaho Code 74-206 (1) A

Calvin Terada made the motion to go into Executive Session, Jess Byrne seconded - all approved **M/S/C**

CDA Trust fund Presentation – Dan Silver

Dan Silver presented on CDA Trust – he will discuss how we are planning together and then will go into the money portion. The Trust is a product of the ASARCO bankruptcy and is an environmental remediation trust. Its beneficiary is EPA, and their assets consist of money and properties. Region 10 led the way to get the other regions more comfortable using the trust model rather than just taking money itself. Two critical references – EPA decides what environmental actions it wants the Trust to do and second, says yes or no to the annual budget. The most important thing is not the money, but that there is no conflict anymore between the responsible party and EPA. We have a highly collaborative integrated activity and are working in the same direction; our frustrations tend to be more analytic. The Trust has set up a clean, fast, sharp procurement process and uses the marketplace to get the best value they can get. Dan showed a pie chart of the Upper Basin RODA and their estimated costs broken out for each of the types of actions we have – water collection & treatment, source control in Canyon Creek Basin and Nine Mile Basin, remedy protection, repositories, and stream & riparian stabilization. The cost estimate for just the Upper Basin ranges between \$400 and \$868 million, which seems like a huge difference – sometimes costs come in high, sometimes lower. Nine Mile Basin, for instance, will cost more and seems true for Canyon Creek as well, but water collection will cost less. What this big range tells us is we will not have enough money to do the Lower Basin, at least not yet. The Trust and EPA have settled on a 10-year prioritization and planning tool that they have been using in the last few years. The Trust is forbidden to spend any money unless EPA says yes to do so. They sit down with EPA several times a year and talk about what's out there in the future, what are their challenges, and how they go forward. His slide showed how they plan from characterization, to design, and on to construction. The monitoring and annual O&M work are constant whereas the others are site specific for each step of the project.

Dan's next slide covers the impact of Spending on Trust Life – Simulation. He talked about how they start with a budget number and run scenarios for their investment portfolio, try to get a sense of what the risks are and what their capacity is. We know there is another pie chart coming for the Lower Basin, and sooner or later we will be able to do the work in the Dudley Reach and Cataldo Reach pilot projects. The simulation he showed - If we spend \$25 million a year, the Trust will last 46 ½ years with the regeneration of \$1.2 million yearly. EPA has selected to spend \$30 million a year because they wanted to

accelerate the cleanup – and another simulation regenerated \$923 million with the Trust lasting 30 ½ years. Changing the spending policy has a large impact on the expected outcome for the portfolio. The Trust started at just over \$436 million and has spent \$234 million so far – their gross investment value is \$373 million. After factoring in the inflation rate over the last 14 years at 35 ½% - their net investment value stands at \$255 million. At this point, they need to earn sufficient money to pay for the Upper Basin ROD and as much in the Lower Basin as possible. Dan also showed how the Trust invested their money into types of securities, and how it has changed since 2011 to today. They selected Black Rock Investment Firm, who is the largest investor in the world. Their portfolio is conservative and estimated it will earn net of inflation 5.6%. Changes are very rarely made to the portfolio, and when they are made it is a slow change over nine months, so we don't have that bad day, and then we watch it closely.

How does all this impact the community - in their master service contracts, there is a requirement that 80% of the construction workforce come from the three local counties. As of 2023, they have met this requirement with 86% of construction contractors and sub-contractors working on the site, 172 employees are local, and they estimate over the last 14 years that the economic impact has been \$234 million.

Dave Leptich wanted clarification that the long-term return rate is 5% above inflation and Dan said yes 5.6% plus inflation right now. He also wanted to know if the Trust has ever lost money in a single year or in a three-year window because you can time average – and Dan addressed that going back to the slide that showed down years in 2015, 2018, and a big down year in 2022 – recovering last year. They developed a cash reserve instead of just withdrawing the amount they were spending yearly, which their cash reserve is about 8% now. When they operate on the cash reserve, the market doesn't affect them as much. Dave asked when they pull cash, are they taking it over the long-term return rather than an individual year – and Dan answered they were not investing the cash but putting the money into a money market account. Their investments have worked very well for them, and this year has been a good year. Dave wanted to know if he is aware of what the Sharps index or Sharp ratio is on their portfolio – and Dan said he had reviewed it several times but couldn't think of what it was.

Jerry Boyd asked how much surety do we have that there will be enough money to do something in the Lower Basin, because obviously we haven't really been working down there. Dan replied that he believes we just passed the first run and are into the second. If we stay in the \$30 million yearly and the market performs, they should come close to covering that second run. We work in the world of uncertainty as we don't know how much it is going to cost until we can run those pilot projects.

Rebecca stated the rumors has it that the Superfund tax is going to come up again and big companies are going to be taxed again to support Superfund, if that happens, do you think we would be able to tap into that fund and let these investments grow over the course of time or do you think that EPA headquarters is going to say that you have this trust that's growing, why would you tap into this pipeline or fund? Dan asked her what she would do – probably try to tap into that fund. Everyone in the country is competing for that money, there is just not enough money in the country to do this kind of work, so why are we going to give you guys any since you have the Trust. Rebecca agreed especially with the limitations and design work that are put on the Trust, and then you employ people in the county. Kira stated there might be a more complicated answer to that because if there is a remedial action we're wanting to fund that is within the scope of the ability for the Trust to pay for it, we cannot ask for this fund's money. It is a key criteria and acts like a special account. If we have remedial actions outside the scope of what the Trust is

allowed to spend on, then we can get remedial action dollars. The Bunker Hill site has consistently funded some activities that are considered remedial actions with fund money.

Rebecca asked if EPA decides on the actions and decides yes or no on the work plan, but in the same breath he said EPA does not direct the Trust, how does this work. Dan answered if EPA could tell the Trust what to do, it wouldn't be a trust – it would be what you call a contract employee. He had to learn how to be independent of them, but he can't spend any money without their permission. It is a wonderful triangle, and it works. It puts us in the same place and forces us to confront the problems together.

Jerry White (previous Spokane River Keepers) asked for clarification on the three counties, he is assuming those are Idaho counties. Are any of those contracts being led on the Washington side – and Dan answered no.

Val asked if the Trust money could ever be used in the Box – and Dan said no. She asked what the reason for this was and his answer it is a trust agreement explicitly. After asking if it could be amended Dan said it could be amended if both the trustee and the United States agreed to do so. The only thing in the agreement that cannot be amended is that the trustee wants it treated as a 406B settlement fund, the rest could be amended. Val was curious if the agreement was written before that maybe there was new information and the answer was again no, it could be amended but the Trust cannot spend money in the Box without change.

Jerry Boyd thought there was something with the Asarco settlement that stated where the money could be spent. Dan has read the settlement agreement several times and does not remember it to that detail. It wouldn't stop the parties from amending, the only explicit rejection in terms of the agreement is on that tax treatment.

Tamara stated the Box has received a variety of different settlement agreements that have not been put into a trust – this is unique for a large part of the site. We have been drawing on these other settlement agreements for decades and the monies are running out. Another question came up – besides not being able to use trust funds in the Box, what are its other limitations. Dan said they cannot provide grants or inter agency agreements.

Dave Fortier said when they were going through the formation of the Trust and bankruptcy settings, he was a government representative at the time. One of the issues brought up was not allowing the trust funds to be spent on administration. The Trust was going to do the work with trust funds and not allow the money to be put into a Superfund account because it would get lost. Other trusts were set up, one for the Natural Resource damage area, which was not as well defined. It was heavily discussed where the Asarco monies would be used and how best to use them, very well defined for costs of cleaning up the Basin.

2024 Construction Activities – EPA

Tyler Chatriand is a project manager for the EPA, and he touched on some of the key construction projects that will be going on in 2024. He mentioned Sharon's earlier great overview of the work accomplished in 2023. Tyler gave brief introductions of the EPA team, so everyone knows who the current RPM's (remedial project managers) that are working on Site. EPA fully recognizes the work of all partners involved and obviously couldn't do it without everyone. Tyler showed a picture of the Bunker

Hill Superfund Site just in case there are new folks not familiar with the boundaries – it expands over 1500 square miles from Montana through the Idaho Panhandle and into Washington along the Spokane River. It is one of the biggest superfund sites geographically within the nation. He also broke down the ICP boundary, Operable Units 1 and 2 (OU-1, OU-2) in the Box, Operable Unit 3 (OU-3) in the Basin, and the CDA Tribal Reservation boundaries. OU-3 is referred to as either Upper Basin (east of the Box) or Lower Basin (downstream of the Box including 37 river miles of the CDA River).

Box activities include:

Central Treatment Plant O&M – treats contaminated groundwater from beneath the CIA as well as acid mine drainage emanating from the Bunker Hill Mine. IDEQ continues to operate the CTP, and it is running great. Water quality at the discharge continues to be below water quality discharge criteria.

East Smelterville Flats – this project is in the design phase right now. It will remove contaminated soil and place ground contamination barriers, access controls to minimize or redirect parking, and minimize recreational vehicle access to the project area.

Old Sludge Pond Closure – where sludge generated from the CTP has been discharged for disposal within the CIA for the last 30 years and has reached capacity. Sludge disposal operations have been transferred to the new sludge impoundment cells and this old sludge pond will be regraded and capped to be consistent with the rest of the CIA. This project should be wrapped up by the end of next year.

Pinehurst Elementary School – working with IDEQ to do some soil (subsurface and surface) sampling this year on unvegetated areas to inform a potential design to reduce risk of exposure at the school.

Upper Basin activities:

Basin Property Remediation Program (BPRP) – there have been 7,171 properties cleaned to date. Most remaining properties require property owner access – 202 left to be sampled, 47 of these estimated require clean up. Plans for 2024 – soil sampling at 10 properties, vacuum dust sampling, drinking water sampling from at least 4 residential properties w/private drinking water sources, and cleanup of 5 properties.

Nine Mile Basin – tributary to the headwaters of the South Fork CDA River just north of Wallace. Tyler showed a slide of the mine and mill sites in the Nine Mile Basin and what their status is regarding the remedial action – investigation, design, and construction – and their percentage of completion. Some of these projects have been completed. In 2024, they will be focusing on completion of the Tamarack Complex and Dayrock Complex projects, both of which are supported by the East Fork Nine Mile (EFNM) WCA.

- Dayrock Complex – this includes the lower portion of the EFNM Creek which was consolidated through the design process into one project. They will remove and haul 60,000 cy of mine waste to the EFNM WCA, reconstruct 3,000 ft of stream channel and riparian areas in the lower EFNM Creek, and then project stabilization and completion.
- Tamarack Complex – upstream from the Day Rock Complex, they will be removing and hauling 80,000 cy of mine waste to the EFNM WCA, reconstructing 700 ft of tributaries that will flow through the former rock dumps that are being removed, and then project stabilization and completion.

- EFNM WCA – will receive waste from the Dayrock and Tamarack Complex projects; continue groundwater and surface water performance monitoring; complete construction of expansion that was started in 2023; and design final cover system that will be constructed over the next two years.

Canyon Creek Basin – Tyler showed a slide of the mine and mill sites in the Canyon Creek Basin, most of which are in some phase of investigation and design.

- Hecla Star Complex – this will be a 4-year cleanup. The Hecla Star Complex started pre-construction activities last year. In 2024, they will be removing and hauling approximately 26,000 cy of mine wastes to Canyon Complex Repository/WCA; install approx. 1,100 ft of new concrete box culvert under Burke Road; and haul uncontaminated rock, gravel fill, and soil to the site and revegetate excavated areas.

Lower Basin Investigation and Design activities – Jocelyn Carver

Cataldo Reach – they will be focusing on investigation around the island between river mile 166 and 167. This information will help inform future designs as we move downstream. Her slide showed recreational sites that are either being monitored and have signage in place or access controls, and some of them are targeted for future remedial design and action.

Dudley Reach Scour Hole Project – is in its preliminary planning and design phase contingent on the selection of the Lower Basin WCA.

South River Road Quarry – is in its preliminary design phase and will provide clean fill material for future remedial actions.

Lower Basin WCA – Jocelyn could not give any specific details or timeline on when they anticipate making a final selection. They understand the importance of the progression of work in the Lower Basin and how important it is for that to continue. EPA appreciates everyone’s patience as they take the time to step back and fully consider technical considerations and all the input. They are working diligently behind the scenes to come to a decision as soon as possible.

Lower Basin Wetland and Waterfowl updates: – EPA

Eric Nicoli presented on the pilot projects that are planned for 2024 and then will have waterfowl updates.

- *Gleason Wetland Project* – is approximately 270 acres in size, and the goal is to remediate the site and restore it into clean habitat for waterfowl. This project started in 2022 through the collection of soil samples as well as installing groundwater monitoring wells and staff gauges for surface water. Data collection and analyzation will continue for the next few years, then entering the design phase in 2026.
- *Lane Marsh Project* – currently under different research projects and studies. As Laura mentioned this morning, EPA has been looking at different biochar amendments and hope this might be the magic drug that will help.

- Gray's Meadow Remedial Action and Restoration* – located near Black Lake, on the east side is Cave Lake Wetland, and on the west side is the Lamb Peak Wetland. This will be the fourth and final year of construction and Eric acknowledged all the hard work that the crews have been doing out there. This project is remediating and restoring 700 acres of contaminated former agricultural land that is now publicly owned and will be restored to a healthy wetland habitat. Some of the accomplishments to highlight from last year is the amount of material that has been moved so far – approximately 400,000 cy of material has been excavated and used to build either 3 ½ miles of embankment across the site, or build habitat features that are like welcome islands for waterfowl and other wildlife to use. The rest of the project will consist of continued construction of some water control structures and gravity discharge structures to help us manage the water on site. Other work will continue on embankments, habitat features, access roads, and public viewing areas so that we can get ready for site seeding and hydro mulching to begin revegetation. Upon completion, the O&M phase will begin where EPA will inspect the project area to ensure the remedy is protective and that the restoration activities are successful. Eric then shared some slides of the Lamp Peak and Cave Lake Wetlands.
- Waterfowl Research* – Eric acknowledged Jennifer Crawford as leading this effort along with EPA's Office of Research and Development (ORD), and other partners that include: the CDA Tribe, the Idaho Department of Fish and Game (IDFG), the USFWS, and the USGS. In the Lower Basin and OU-3, the cleanup level in soil lead concentrations that we use is 530 milligrams per kilogram. This was based off the protection of waterfowl in particular because of their risk of exposure either through migration or time spent here. Unfortunately, this leads to potential mortality issues. The large-scale contamination was estimated that 18,000 acres of habitat in the Lower Basin exceeded that cleanup level. In the 2002 ROD, they identified the need to prioritize waterfowl areas to reduce these mortality issues. Some of the ways EPA is prioritizing this are by surveying and finding the areas that are most highly used by waterfowl, what areas are having recorded high mortality, and which sites have the highest concentration of lead. How to design attractive cleanups for these waterfowl to come to, and how to determine that these remedies are effective. Eric showed a slide of locations they are prioritizing based off information and data of high usage areas.

The actual research itself focused on what exposure is in the waterfowl, investigating those impacts towards them, and monitoring strategies that we can create to use in the Lower Basin. Two different types of research projects and focuses - the first being on Tundra swans. This is the third year of this research where fecal samples will be sampled which are used as a surrogate for blood lead rather than capturing the animals to collect actual blood samples. The second will be for Wood Ducks – this is the first year of research for this species. Eggshells will be collected to use as a surrogate for blood lead. It is helpful to be able to do it this way as it is less invasive and less disruptive for the waterfowl, especially with the wood ducks. The eggshells will be collected after the pre-placed wood box nest has been abandoned. It is important to know that these are two different species with different ranges throughout the Basin, different diets, exposures to the lead, and different migration patterns. The Tundra swan study will kick off March 11th, the Wood Duck study will begin April 1st- with focuses on telemetry, eggshells, feces, sediments, plants, and water.

All this research needs to have a purpose and a target and product, this way we can use this information to help guide us through these remediation projects and know that things are making a difference. A few of the end products we hope to achieve are:

- Simple tools to track remedy progress in a way that is meaningful, efficient, and inexpensive.
- Decision tree for managers to plan activities related to the BEMP.
- Waterfowl model for scenario planning to aid design of cleanup (plant type, water level, etc.).
- Strong partnership with the CDA Tribe, IDFG, USGS, and the USFWS.

Jerry White was curious if they had collected any numbers or had access with other agencies on mortality by species. Eric stated he was here today to give a quick overview of the studies that are going on. At the November BEIPC meeting, Jennifer Crawford and the team will be prepared to provide a lot more information on that. He does know that the USFWS has numbers on the reported and surveyed mortality that has been seen over the last few years. Jennifer Crawford (through the online chat) stated she would send the information on the mortality rates.

Dave Fortier asked if these were EPA projects and Eric answered yes, and in collaboration with our partners. Dave said they did this 20 years ago, how much collaboration and have they sat down and went through that perspective. Eric would have to rely on their team that has more history on the background and would love to look into this further. He does know a lot of this research builds off the information that we have and identifying those techniques that can be used because of the difficulty encountered the last few years on capturing those animals and trying to collect blood samples. This work out there is intensive, so we are just trying to find a way that's better. Dave Leptich wasn't sure if this is the answer to Dave's question, but 20 years ago they were proving up injury – this is a biomonitoring study to show remedy effectiveness, so we are looking at simple things that we can easily collect in the field that shows a remedy is being effective which is different than what was done 20 years ago – this is new biomonitoring research.

Jerry Boyd wanted to know if they could talk about any trends that they've noticed or that any of the agencies has noticed as far as mortality is concerned – are they going up or down. Rebecca said it depends on the water and weather patterns. Eric agreed, the weather patterns during migration as in what happened a couple of years ago greatly affected them, and they had a heightened increase in mortality.

Rebecca commented to answer some questions as to why some of these projects go on longer, and just wanted to remind folks that the goal in any of these actions is to meet the intent of the ARAR's (applicable and/or relevant and appropriate requirements), and they are doing this and being diligent which is important. She thanked everybody that has been working on this – and from the Tribe's standpoint, they appreciate the relationship with EPA and the Trust. These are big decisions, thanks for your patience as we navigate some of these tougher projects.

Val went back to an earlier conversation about the CIA and groundwater, in an earlier BEIPC meeting there was some talk about groundwater monitoring up Government Gulch. She wanted to know if this information was available as she could not find it. Tyler mentioned that EPA was to start looking at Government Gulch now that the groundwater collection system was installed and running well. There are several existing wells in Government Gulch that have not been sampled in years, so that is being reinitiated this year as well as potentially installing additional wells. This is still in the planning phase. As far as what is publicly available, he can look into that and follow back up with her as he is not exactly sure. Val maybe misunderstood but she thought there was some data. Tyler said the existing well network was monitored through 2014 until the focus shifted to the GCS.

Public Comments & Discussion

Dave Fortier is concerned about the Lower Basin and the approach they are taking; he does not think they need to review the National Research Damage Assessment (NRDA) reports and the studies that were done. The plans that were developed for the restoration look like they are duplicating a lot of what was already done. Another concern up Nine Mile at the Rex Mill site, he was the project manager doing interim actions there. At that time, the general thinking was to remove the tailings, but couldn't as there was no place to take them. In the last two five-year reviews and the ROD, he can't find anything definitive about the Rex Mill site. Dave would like to find more information as there is a new private landowner who is starting to build on the site.

There were no more comments, and nothing on-line.

Brook Beeler made a motion to adjourn the meeting, seconded by Jess Byrne– all approved **M/S/C**

Adjourned at 2:20