BEIPC
Basin Environmental Improvement Project Commission
1005 W. McKinley, Kellogg, Idaho 83837
(208) 783-2528 • FAX: (208) 783-4561 • http://www.basincommission.com • info@basincommission.com

Terry Harwood
Executive
Director

February 25, 2020

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

From: BEIPC Executive Director

Subject: BEIPC March 11, 2020 Quarterly Meeting

Enclosed is the meeting packet for the upcoming March 11, 2020 BEIPC Meeting. The meeting will begin at 9:30 AM at the Kellogg Panhandle Health District Office, 35 Wildcat Way, Kellogg, Idaho. Lunch will be provided for Commissioners, Alternates, Staff and CCC and TLG Chairs.

If you have any questions call me at 208-783-2528 or e-mail at terry.harwood@deq.idaho.gov.

Terry A. Harwood, PE
Executive Director

Enclosure

March 11 BEIPC Meeting Packet Items

- Draft Mach 11, 2020 Meeting Agenda
- Meeting Guidelines
- Abbreviations and Acronyms
- Draft November 20, 2019 Meeting Minutes
- Revised BEIPC Organizational Practices and Procedures
- Listing of Input, Questions, Concerns, and Discussions for inquiries to the Executive Director and from the last CCC and BEIPC Meetings
- Daft 2019 Annual Report
- Draft Amended Resource Partner 2020 Annual Work Plan Section

Basin Environmental Improvement Project Commission

Draft Meeting Agenda

March 11, 2020 9:30 AM – 3:30 PM

Panhandle Health District Office, 35 Wildcat Way, Kellogg, Idaho

9:30 AM	Call to Order and Pledge of Allegiance
9:35 AM	Approve Minutes from the November 20, 2019 Meeting. **(Action Item)**
9:45 AM	Review and Discuss Draft 2019 Annual Report
10:30 AM	Public Comment and Input on Report
10:40 AM	Approve 2019 Annual Report **(Action Item)**
10:45 AM	Break
11:00 AM	CDA Lake Update – Jamie Brunner, IDEQ; Rebecca Stevens, CDA Tribe
11:15 AM	IDEQ CDA Regional Office Topics including Point Source Permitting, 303d Listing of Water Bodies for Mercury and SFCDA River WAG – IDEQ
11:30 AM	Restoration Partnership Update Including RP BEIPC Work Plan Section for 2020 - Philip Cernera, CDA Tribe
11:45 AM	Approve of RP 2020 Work Plan Section as addendum to approved 2020 BEIPC Work Plan **(Action Item)**
Noon	Lunch
1:15 PM	Outreach Activities during the last quarter – Terry Harwood; Val Wade, PHD
1:30 PM	CCC and Public Input Session and Discussion – Jerry Boyd, CCC Chair
1:45 PM	Central Treatment Plant/Ground Water Collection System Update – Ed Moreen, EPA; Rod Zion COE
2:30 PM	Break
2:45 PM	BEIPC/Local Flood Group, COE and FEMA Flood Analysis and Mapping Update – Terry Harwood
3:00 PM	Discussion on BEIPC Meetings and Tour for 2020 – Terry Harwood
3:15 PM	Citizen Input and Discussion
3:30 PM	Adjourn

Amended 11/19/08

BEIPC MEETING GUIDELINES

- The Executive Director is directed to manage these guidelines.

- The agendas for BEIPC meetings are draft agendas and may be modified by the Commissioners by motion and majority vote at the beginning of the meeting to accommodate unanticipated program and scheduling changes.

- Parties requesting a scheduled time slot on BEIPC meeting agendas to present technical or other information shall discuss the request with the Executive Director a minimum of four (4) weeks prior to the meeting date. If the draft agenda can accommodate the subject matter and time needed for its presentation and at the request of the Executive Director, the requesting party shall forward an electronic copy of the proposal for the item to the Executive Director a minimum of three (3) weeks prior to the meeting date. If the item is of a technical nature, the Executive Director will present the technical proposal and or presentation to the TLG for information and review prior to the BEIPC meeting. TLG consideration of the proposal shall not prevent its presentation to the BEIPC.

- Parties making presentations needing overhead equipment, utilizing Power Point or other projection presentations shall furnish their own equipment or make arrangements with the Executive Director. Projection screens shall be provided by the BEIPC at meeting locations.

- At each BEIPC meeting, an open public comment and presentation period shall be set aside for any member of the public to make comments and presentations concerning the Basin or issues being discussed by the BEIPC and presenters on the meeting agenda. The Executive Director is responsible for adjusting the public comment periods on the agenda to ensure that the public is afforded the opportunity to comment concerning an issue of discussion at BEIPC meetings. Each presenter shall have a maximum of three (3) minutes to comment or make a presentation. These presentation times will be monitored by the Executive Director. Presenters shall be recognized by the Chair of the BEIPC meeting prior to speaking. If a presenter needs more time, they shall make arrangements with the Executive Director for a scheduled time slot on the agenda.

- Issues requiring BEIPC discussion and voting such as programs of work, five year work plans, annual work plans, and budget and funding issues shall be presented prior to the final vote on each such issue. The public comment time slot will be managed as outlined above.

ABBREVIATIONS AND ACRONYMS

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

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

(Updated January 2018)

DRAFT

BASIN COMMISSION (BEIPC)

November 20, 2019

MEETING MINUTES

Basin Environmental Improvement Project Commission
Draft Meeting Summary Minutes
November 20, 2019, 9:30am– 3:45pm
Coeur d'Alene Inn, 560 Appleway Ave, Coeur d'Alene, Idaho

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 discussions or individual quotes.

Attendees included the following:
Terry Harwood (BEIPC Executive Director)
Commissioners and Alternates present:
Jack Buell (Benewah County), Brook Beeler (Washington State), Michele Pirzadeh (EPA), Rebecca Stevens (CDA Tribe), John Tippets (IDEQ), Michael McCurdy (IDEQ), Leslie Duncan (Kootenai County), Mike Fitzgerald (Shoshone County), Phil Lampert (Benewah County)
Staff present:
Gail Yost (BEIPC, Assistant to E.D., Note taker), Dan McCracken (IDEQ), Jerry Boyd (CCC Chair), Dana Swift (IDEQ), Sandra Treccani (Washington State), Bonnie Arthur (EPA)

Call to Order and Pledge of Allegiance
The meeting was called to order by Commissioner Chair Jack Buell at 9:30 a.m. followed by the Pledge of Allegiance.

Approve Minutes from the August 21, 2019 Meeting. (Action Item)
Mike Fitzgerald moved to approve the August 21, 2019 meeting minutes; Rebecca second, all approved **M/S/C**

Review and Discuss Draft 2020 Annual Work Plan
Terry Harwood shared the process of creating the annual and 5-year work plans. The work plans are divided into two sections – Part 1 covers environmental cleanup work performed through CERCLA (Comprehensive Environmental Response, Compensation and Liability Act). It includes work to implement the Record of Decision (ROD) for Operable Unit 3 (OU-3) and the Upper Basin ROD Amendment (RODA) for OU-2 and 3. Part 2 includes Other Activities and Responsibilities – Lake Management Plan, Natural Resource Trustees, work on recommendations from the National Academy of Sciences (NAS) and requests from the communities and citizens of the Basin.

He continued with the first section going over human health activities including property remediation and drinking water supply remediation (as it pertains strictly to private wells and not public water systems), paved roads program, lead health intervention and recreational sites. He did not include Remedy Protection as they just completed the last project up Burke Canyon.

Other cleanup work: Repository Development and Management, remedial actions in the Upper & Lower basin (including related human health activities) and the Basin Environmental Monitoring Program (BEMP).

Terry gave an update on the Basin Property Remediation Program (BPRP), after this year there will be 216 properties in the Upper and Lower Basin requiring sampling and 43 properties that require remediation; in the Box there are eight properties remaining. A total of 3,918 properties in the Basin and 3,235 in the Box have been remediated at the conclusion of 2019.

On the paved roads program - Wardner, Smelterville, Eastside Highway District, Pinehurst, Osburn, Wallace, Mullan and Shoshone County Box have completed all their eligible segments. In 2020, Kellogg will finish their last 2 roadways; there will be 50 remaining road segments in Shoshone County Basin that will be addressed with remaining funding.

Terry stated that Andy Helkey will be giving an update on the Lead Health Intervention Program so he will let him cover this section. He also gave a brief summary on the Recreation Sites Program as they continue to sample high usage areas in the upper and lower basin. This and other work will continue in 2020.

Repository Development & Management - There are currently three operational repositories within the OU-3 area; Big Creek Repository (BCR), Big Creek Repository Annex (BCRA), East Mission Flats Repository (EMFR) and Lower Burke Canyon Repository (LBCR). The Page Repository provides for disposal of remedial and ICP wastes in the Box (OU1 and OU2). Development of the Canyon Creek Repository (CCR) and rebuilding of the Silver Valley Natural Resource Trustee (SVNRT) Repository are also taking place. The Waste Consolidation Area (WCA) located up Nine Mine is handling waste from the East Fork Nine Mile projects. Bonnie Arthur clarified the differences in repositories – the WCA designation is just for mine and mill cleanup waste versus ICP and remedial waste repositories.

Upper Basin Remedies – The Upper Basin RODA identified $635 million for work in the Upper Basin including work at 125 mine and mill sites. It is expected to provide improvement to surface water quality and reduce the contribution of contaminated groundwater to surface water. The ROD will also address treating the water coming out of the Bunker Hill mine. The EPA Superfund Cleanup Implementation Plan (SCIP) identifies the priority setting process and outlook for sequencing work over the next ten years. As another five year review happens in 2020, it will report on the work completed for the whole site. Other Upper Basin projects include: Interstate Mill Site, Tamarack Complex, East Fork Ninemile Waste Consolidation Area, Dayrock Mine and Lower East Fork Ninemile Creek riparian area, Canyon Creek Complex (Repository/Waste Consolidation Area) in Canyon Creek and Douglas Mine and Mill in the Pine Creek Basin.

Central Treatment Plant/Central Impoundment Area – the upgrades are coming along on schedule. These upgrades have been necessary for some time – treating the Bunker Hill Mine discharge water and the groundwater collected from the Groundwater Collection System (GCS) near the CIA. The 1-year O&M period will begin in May 2020, with the State taking over in May 2021.

Lower Basin Remedies – include actions for wetlands and lateral lakes, river banks, splay areas and river bed dredging. Maintenance and monitoring will continue at the Incremental Thin-Layer Capping site at Lane Marsh and soil amendments will be bench tested. Additional disposal capacity will be evaluated to serve potential, future lower basin remediation and pilot project implementation. To address the contaminated sediment transport in the CDA River, EPA will continue working to finalize the approach for pilot project selection in the Dudley Reach area, which is considered the most significant upstream lead loading segment into the river.

Basin Environmental Monitoring Program (BEMP) – EPA continues to optimize and restructure the BEMP, updating data quality objectives to better meet both remedial action effectiveness and long term monitoring needs of the cleanup. The updated BEMP Plan will be finalized in the first quarter of 2020. It is intended to guide the collection, analysis, and interpretation of environmental data while providing flexibility for adaptive management as remediation work is completed and information regarding site conditions evolves. This updated plan will also incorporate the site-wide Program Quality Management Plan and a site-wide Data Management Plan.

Lake Management Activities – The OU-3 Interim ROD anticipates the State, Tribe, federal agencies, and local governments would implement a Lake Management Plan (LMP). Terry worked on and incorporated changes into this 2020 Work Plan that were agreed upon by all parties - Rebecca commented that the objectives as shown on the screen came right out of the LMP and the comments/tasks are additions that they worked on with EPA.

Flood Control and Infrastructure Revitalization – Terry gave a brief discussion on the NAS (National Academy of Science) recommendations on flood controls for storm water runoff and side drainage flooding to protect the remedies in place. In the ROD Amendment for the Upper Basin, the Remedy Protection projects were created to help with these drainage issues. A local flood group was formed during 2018 to address potential flooding issues on the SFCDA River. This group and the BEIPC worked under an MOA with the Army Corps of Engineers to perform flood analysis on the river. Work to determine the best approach to coordinate with FEMA to develop new flood inundation maps will be implemented in 2020, at least the section between Elizabeth Park and Pinehurst. The BEIPC will continue to assist Upper Basin communities and

utilities in pursuing funding to implement the remaining needs noted in the Drainage Control Infrastructure Revitalization Plan (DCIRP).

Communications and Public Involvement – Multi agency coordination worked together to carry out public involvement, communication, and education related to BEIPC and agency activities. They will continue to facilitate the public involvement process in the Basin.

State of Washington Activities – the Washington State Department of Ecology continues to monitor the status of previous cleanups along the Spokane River. Site visits are performed along with visual documentation of performance and sediment accumulation.

Restoration Partnership – The Partnership is still reviewing full applications and making funding decisions for restoration projects. A full update will be included in an amendment to the 2020 Work Plan introduced at the March 2020 meeting.

Public Comment and Input on Work Plan

Brook asked for a summary on how the Recreation Sites Plan was put together. Dan McCracken answered that the recreation sites strategy was developed in 2016 after several public outreach events and open houses. This allowed people to come in and indicate which basin recreation sites they frequented the most. The conclusion was that recreation happens everywhere. Through PHD and the lead intervention program, and when crews are out on site, they were able to prioritize sites known to have contamination and concentrate on those specific areas. Rebecca added that they also look at land ownership in making this decision.

John asked if our approval of this work plan was necessary for the Trust to perform work on behalf of EPA – could they still move forward. Terry said the Trust also puts out a work plan, as Bonnie had incorporated some of these ideas into our plan. EPA coordinates with the Trust to get the work approved. John wondered if it was a nicety or legal requirement for the work the Trust does. EPA still has the authority, but we all try to work together to get projects completed. Michele from EPA said her understanding is they can authorize the Trust to complete work outside the plan, but their desire is to have it consistent with the Basin Commission which has been the practice over the years, so there is coordination and consistency between both plans. Bonnie agreed but added there is a lot of internal planning that takes place with all of the stakeholders, this is the input into the decisions that EPA and the Trust make for what's going to take place that year and the years to come. Terry stated that funds have to follow CERCLA law and the Consent Decrees in the settlement agreements. Dan also stated if they are using CERCLA appropriated funds, the State has to match those dollars. The BEIPC work plan is the form the State has established to provide concurrence to what the appropriated funds will be spent on.

Rebecca asked if EPA has a status update on the Lower Basin programmatic approach to ARARs compliance document. Bonnie said they had a recent meeting and hoping to get a draft out in December for review. Rebecca then asked what the game plan was for the next five-year review on how to address the Lake and LMP. The last two reviews it has been an appendix, especially now with the Tribe withdrawing from the LMP. Jeff Philip answered they will address the fact the Tribe has withdrawn out of the LMP; there will be an optimization review team to look at the data and what they currently know about the Lake conditions and processes. This will inform how they address the five-year review; they will be working with everyone to figure out how to address the Lake. John wanted Jeff to explain more about the optimization program; what exactly will they do and how comprehensive their review will be. Jeff explained that they have had this optimization team review Bunker Hill basin work several times in the past, like the CTP and a lot of the remedies, to optimize engineering and effectiveness. As far as the Lake, this will be a more general optimization review of the data and processes; an independent look at the Tribe and States data to better inform and figure out the next steps. EPA is working directly with the Tribe and the State to determine the scope which they are finalizing now. John followed up that IDEQ has been looking at additional resources to do a comprehensive assessment from this data to see if we are at risk for releasing metals back in the water column. IDEQ has made some inquiry's with several agencies, was EPA's optimization team review a result of this request or independent – Jeff said yes a result, but not to fulfill this request; it's to help inform EPAs next steps. Michele added that their internal agencies short assessment of what an outside view might tell them and what more comprehensive study may need to be done. John stated they have asked the National Academy of Science to compile a draft project scoping document that will be reviewed and shared for input.

Mike Fitzgerald asked Terry for an update on the roads program and how they are looking budget wise. Terry explained the roads program from the beginning and their selection for which roads to complete and a budget. A competitive bidding process has allowed for all of the program with all but 2 Box roads and approximately 50 road segments in the Basin for Shoshone County remaining with money left from the $54M budget. Approximately $3.6M is left in the Basin allocation, but Terry figures they will be short $1.5M to complete all the segments. If we could figure out a way to finish the work in the Basin, we would still be under the original allocation coming in about $52M. Mike said the understanding from the locals is that the whole program underspent the budget, so they want to ask the Commission to come up with a plan or strategy for those excess monies that are within the context and framework of what those dollars were allocated for. Terry wants to get the entire list of approved projects done first then see where we are funding wise.

Approve 2020 Annual Work Plan (Action Item)

John made a motion to approve the 2020 Annual Work Plan, Michele second, all approved **M/S/C**

Terri Seymour was introduced. She is filling the position left by Tim Kastning in Russ Fulcher's office.

Review and Discuss 2020-2024 Five Year Work Plan

Terry reviewed and reported on the five year work plan. This includes human health directed activities; lead health intervention program; repository development and management; remedial actions in the Upper Basin; remedial actions and/or pilot projects in the Lower Basin; and Basin Environmental Monitoring.

He highlighted the operations will be completed at Big Creek Repository (BCR) but will be using the Big Creek Annex (BCRA) which is across the creek. Other highlights will move the old Silver Valley Natural Resource Trustee (SVNRT) Repository in Canyon Creek to the site of the Canyon Creek Repository and development of that repository. The need will still be there to develop additional repositories or waste consolidation sites.

The Superfund Cleanup Implementation Plan (SCIP) implements the source control and water treatment remedies, along with ecological cleanup projects and related human health activities; Bonnie stated they anticipate updating this plan in 2020 along with the five year review.

Terry briefly talked about the Lower Basin remedies – working with the Restoration Partnership and Lower Basin Project Focus Team (PFT) to address the proposed actions that were previously selected; and continue to educate people about recreational activities. Actions that are not identified by the ROD may require an Explanation of Significant Differences (ESD) – Brook asked if the ESD has a public involvement component and Terry answered yes. Michele explained it is not required, but the ESDs do go thru a public comment period, then they are sent to headquarters for signature at the administrator level. Similar actions are taken at the State level for approval. Rebecca added the ESDs also go to the concurring parties that signed the ROD.

Terry touched on the contamination in the Dudley Reach area, which is in the area of the Mission and downstream from Cataldo. Most of the sediments are coming from the Lower Basin river channel and not the Upper Basin. The five year plan hopes to produce and implement a management plan to address this highly contaminated area.

Craig Cooper from IDEQ Lake Management Plan spoke on the nutrient reduction inventory work. IDEQ and the Tribe have worked together for a number of years to compose a basin wide nutrient inventory so we know where the phosphorus is coming from and its sources. We'll use this as a basis to inform our actions in developing an implementation plan. We are in the final version, a draft report has been provided to the TLG with input due by mid-December. A report should be out by early next year.

Rebecca asked if Kootenai County would like to be listed under the 'Lead Agencies or Partners' especially as it pertains to the Aquatic Invasive Species section, to be more inclusive to those working on it. Leslie answered that they could be – Hayden Lake Watershed Association has actually taken point on issues for Hayden Lake, but they could always be consulted. She has not heard anything yet for Coeur d'Alene.

Terry briefly covered on the multi-agency outreach that has been and is ongoing with education and several other outreach efforts. These agencies will continue to address issues and facilitate public involvement in BEIPC activities. He also mentioned the Restoration Partnership Trustees coordination of efforts to restore natural resources through remedies in the Restoration Planning Area.

Public Comment and Input on Five Year Plan

Dan Redline from IDEQ, also alternate trustee for the Restoration Partnership for the State, asked if the website address could appear on the five year plan, as it appears on the annual work plan. He also stated since the work plans outline all the work that is happening, shouldn't it also include a section to address long term O&M? Terry said there are various parties responsible for O&M. Michele added that it was a good point and important part of the overall project. Maybe not every single aspect of the O&M, but a general acknowledgment that there is ongoing O&M across all of the projects for public awareness, and documented in both work plans. Terry said he would write up something for both plans and distribute for approval. Bonnie clarified some of the O&M responsibility as far as the Trust work, and said she would help Terry.

Dave Fortier referenced that on page 10 under 'Bank erosion inventory' in the participant column, Soil & Water Conservation Districts (SWCDs) should be added, as they completed the inventory with water quality funds – Terry added to the plan. Dave also agreed on adding the O&M sections to the plans, and identifying groups responsible for long term maintenance.

Kevin Yrjana introduced himself from Northwind and a Silver Valley native, looking at all the work coming up in the next five years and wants to know when he would be able to bid on some of the projects for the Lower Basin. Bonnie answered that from starting the project to beginning the work is sometimes a couple year process – the bid process for Dudley earliest would probably be 2022. She wasn't sure on some of the other project for certain. Dan Redline said where it shows Avista as a partner, they also develop a one year and five year work plans for erosion control in the CDA Lake Basin, and those could be provided to Kevin. Jamie Brunner from IDEQ further elaborated, they often have a good partnership with Soil & Water Conservation Districts as they do a lot of the hiring of contractors for bank stabilization projects. He could contact the Kootenai/Shoshone district and Benewah district for work.

Approve 2020-2024 5 Year Work Plan (Action Item)

Brook made a motion to adopt the five year work plan with changes as captured; Rebecca second, all approved **M/S/C**

Outreach Activities during the last quarter – Terry Harwood

Terry quickly reviewed his activities over the last quarter which included the following:

- Working with FEMA and locals for further flood map revisions.
- Addressed concerns from the public about CDA Lake.
- Continued to work with Silver Valley Transportation Team.
- Took Kootenai County representatives on tour of the site with the help from the Trust.
- Discussed August tour and if one is still wanted for this year 2020.
- Involved in the NACEPT, but group disbanded in October by the Administration, no further work anticipated.

Val from PHD spoke on the activities she worked on for outreach. She did acknowledge the help from several agencies who help PHD and include IDEQ, EPA, BEIPC and the Tribe. Other activities include:

- Hosted a booth at the North Idaho Fair.
- Also hosted a booth at Coeur Fest in Coeur d'Alene.
- Participated in the annual Shoshone Medical Center Kid's Wellness Fair.
- Field trips for students from Spokane Community College and Cd'A High School.
- Traveled to University of Idaho as guest speakers for Environmental Science Class.
- Handwashing techniques shared with elementary school students.
- EPA posts project activities and accomplishments on CDA Basin Cleanup Project Facebook page and produces the Basin Bulletin.
- Hosted booth at Trunk or Treat – and will also set up at Our Gem Symposium.
- She pointed out a banner set up in the back of the room that gives the public an overview of the Central Treatment Plant work.

She wanted to let everyone know that she is available for groups or interested parties for further outreach and education possibilities. Mike Fitzgerald recognized Val for all her hard work and effort which has gone over really well in the community.

LMP Update – Jamie Brunner, IDEQ

Jamie Brunner IDEQ and CDA Lake Management Coordinator – gave an update on the Our Gem Symposium held in November. There were about 200 people in attendance, good cross section of the community on different panels, keynote speakers, good discussions and feedback. They are going to get the planning committee back together and keep the momentum going for next year. They had great sponsors who helped keep the cost of attending down. She also restated that the Nutrient Inventory Draft has been distributed to the TLG for review. December 15th will be the deadline for comments; they should have a final version out after the first of the year.

Leslie Duncan moved and John Tippets 2nd to go into executive session under Idaho Code 74-206(1)(b) during lunch. **M/S/C**

Lunch

Leslie moved and Rebecca 2nd to come out of Executive Session, with no decisions being made. **M/S/C**

Recreation PFT Update – Dan McCracken, IDEQ

Dan presented Recreation Sites Project Focus Team update. This presentation will cover the project focus team purpose; discuss completed projects in the basin; update on projects in the box; updating health information signage in the basin; and talk about ongoing and future work. The PFT was originally established in the early 2000's, much of the work focused on creating an inventory and identifying recreation sites for action as part of the 2002 ROD. Once these efforts were completed, the PFT discontinued work. In 2016, agencies worked together on the Recreation Sites Strategy which was prompted by nearing the completion of the other human health actions. The Lead Health Intervention Program was continuing to see kids with high blood lead levels, a lot of that being tied back to exposure in the recreational areas. The PFT was reformed and starting working on implementing actions in the Recreation Sites Strategy. These include: manage human health risk from exposure during recreational activities; identify priority sites; identify maintained sites to replace highly contaminated areas; identify actions to add to the risk management toolbox; and identify locations to apply certain actions or ideas for pilot projects.

Some of the completed projects in the Basin include:

- Seasonal hand washing stations located at Cataldo, Rainy Hill, Rose Lake & Medimont
- Continue to update health information signage – a lot more information added with maps, historic site information, and historic photos along with the health information.
- Ninemile fishing pond – completed by the Trust, areas around the pond remediated and stocked with fish.
- Larson Road fishing pond – in Mullan - small portion of the parking area and small surface areas remediated; Hecla stocks this pond with fish.
- Grays Bridge road – across from Canyonside apartments, by Lower Burke Canyon Repository – remediated highly contaminated area where kids were found playing.
- Coeur d'Alene River road parking pullout – capped popular parking area for people recreating on the river.

Box Sites status – all the projects are located along the South Fork between Kellogg and Pinehurst.

- Mountain View Park – across I-90 from the CIA, owned by the City of Kellogg; open space, good launching spot for dog walking and hiking. Some capping work done in the 1990's, cap still in place except for along the SF – additional signage will be put in place.
- Theater Bridge River Access – by the Smelterville exit, owned by Idaho Transportation Dept.; old piles of tailings found and removed; working with ITD for future use. Also swimming hole found to have high levels, adding signage here as well.
- Airport River Walk – next to Shoshone County Airport, area remediated with Smelterville Flats in the 1990's; high water events since remediation but results still show under 1,000/ppm. The pond that was left in place shows high levels, continuing with follow-up sampling. The trail along the river - cap is still good except down along the SF which is consistent with other areas. They will be working on health information signs all along the trail.
- Smelterville Flats – on the western side of the flats, behind the gate at the airport, owned by Shoshone County. Remediated in the 1990's, similar effort to see if the remedy held up, isolated areas found to have elevated levels. The County has long-term plans with airport expansion and will eventually be capped.
- Pinehurst Trailhead – exposed soil after a water leak was found to have high levels, place where kids were accessing the river. Additional work completed to stabilize the bank and vegetation growth has helped cover exposed areas. Working on visible health signage and access controls to the banks of the river.

Rebecca mentioned that this location gets used heavily; she wanted to know who owns this parcel between the trail and the river. Dan answered the trail itself is owned by Idaho Parks & Recreation, the other part he believed is owned by the McKee family. Andy said Ed Short owns one parcel and the other parcel is the McKee family. Rebecca also stated that locals are utilizing the shoulder of the trail between Pinehurst and Smelterville, so the Trail Commission, State, EPA and the Tribe have repaired that ROW in this last year. Andy added that the water district put a clean cap and revegetated the area they worked on until vegetation can grow back in the spring.

Dan updated what has been done on health information signage; they are systematically replacing old signage with new updated, high visibility signage that can be read without having to go up the banks to read. They are placing these in the Lower Basin along the river, and have approval by the Trail Commission for placement along the trail corridor. An annual inventory will be done to see how the river changes, and if signage is still effective keeping them up-to-date.

Ongoing and future work will include outreach and education, which is a huge component of the recreation site effort. They will continue to update and add signs; target outreach to river

property owners; and promote use of remediated and clean sites. Sediment management at public access sites will include curbing, pavers, and hard surfaces; revegetation and rock capping on beaches and banks where bare soil exists. They will also continue to develop youth fishing opportunities for Kellogg or Smelterville areas, to compliment the ones completed in Mullan, Ninemile and Osburn.

Matt Nykiel from the ICL appreciated all the work they were doing, very strategic and effective, but sad that the river corridor will always have contamination. He wanted to know how they make the decisions on where the signs go and which ones get put in. Dan answered that through prior public input, the strong message is people will still recreate. The public, through their signage, should be able to make an informed decision; rock banks with vegetation compared to talcum powder sediment banks, and how safely they can recreate without taking mobile sediments home for exposure. Their messaging can show where people where to 'play safe' or 'caution - stay out'.

Rebecca announced that Dan McCracken had been chosen at the TLG Chair, and she is the Vice-Chair. She also wanted to recognize Anne McCauley for all her years working on the site, and thank her for all her hard work as she is retiring; also presented her with a card and custom lake water ☺

CCC and Public Input Session and Discussion

Jerry Boyd from the CCC spoke on their outreach and his concern in the Lower Basin. He is hoping to schedule a lower basin CCC meeting in the spring, probably in Medimont or Harrison. They do not meet on a regular basis unless there is an issue to address for public discussion and information.

Meetings scheduled for the BEIPC for next year are:
March 11th in Kellogg
May 20th in Coeur d'Alene
August 26th in Wallace, meeting/tour
November 18th in Spokane Valley

Blood Lead Report – Andy Helkey, PHD

Andy Helkey from PHD, presented results for 2019 Annual Blood Screening based on information taken in August; this gives a better idea of the exposure during the summer time period. The LHIP is a Public health service offered by the State to those that live within the Box (since 1974/1985) or the CDA River Basin (since 1996); offered to those between 6 months and 6 years of age with a cash incentive of $30. It has been opened up to anyone who lives within the Superfund site boundaries to come in and be tested, even adults.

LHIP Procedures

Screening is done by skin puncture with results provided to participant or parent immediately after analysis. If the results are over 5 µg/dl a venous draw is collected and sent off for laboratory confirmation. For adults, results are over 10 µg/dl. This is usually a two day wait period for results followed up by phone and letter. Free home consultations are available to try to find the source as well.

Health effects

The health effects associated with lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in the body, especially the nervous system. No safe level of lead exposure has been identified. Once it enters the body and bloodstream it is available to every soft tissue organ in your body.

Andy reported that there is decreasing blood lead levels, they were as high as 60 in the 1950's, now the average is as low as 5 established in 2012. It is reanalyzed every 4 years, so in 2016 it was done and we could possibly see that level drop more.

Route of exposure

Ingestion is the most common exposure route as children absorb at a rate of 20-60%; for an adult that drops to 10%. Inhalation is another exposure route – almost all lead that is deposited in the lungs is absorbed into the body. Blood serves as the initial receptacle of absorbed lead and essentially distributes throughout the body making it available to all soft tissue organs.

At risk populations

Children are more affected by lead due to behavior & physiology.
Pregnant women – readily crosses the placenta adversely affecting the fetus.
Adults with cumulative exposure – generally occupational or hobby related.
Genetically - pre-disposed individuals like elderly people with osteoporosis.

Health Effects – Children vs. Adults

- Children suffer effects from lead exposure at much lower levels and absorb at higher rates.
- No safe blood lead threshold for the adverse effects of lead on infant or child neurodevelopment has been identified.
- The latent effects of lead exposure during childhood for adults; if you are chronically high as a child, you have a 40% chance of hypertension as an adult.
- Because lead exposure often occurs with no obvious symptoms, it frequently goes unrecognized.
- A blood lead test is the best tool for identifying lead exposure.

Box Remedial action objectives is to have no more that 5% of children in each community with blood lead levels $\geq$ 10 µg/dl , and less than 1% with levels $\geq$ 15 µg/dl . Back in the 1970's, average blood lead was 67.4, currently running between 2.4 to 3.2 consistently since the early

2000's. There were 169 participants (age 0-6); Andy noted one family who recreated in the Lower Basin extensively whose kids all tested high this year. Over 6 years, there were 63 participants; two tested over ≥ 10 µg/dl – both over 18 and occupation related levels.

Basin Remedial action objectives are to reduce soils with concentration greater than risk-bases levels. Lead: ≥ 700 mg/kg; Arsenic: ≥ 100 mg/lg. Reduce exposures to lead in house dust; cumulative exposures do not exceed USEPA's health risk goals lead: <5% chance that a typical child at an individual residence does not exceed 10 µg/dl. Upper and Lower Basin lead levels continue to drop every year. There were 84 participants (age 0-6); over 6 years, there were 22 participants.

Participation rates based on the estimated eligible population came in at 51% for the Box and 17% for the Basin. This was the first year the Box came in over 50%. Out of 161 households that participated, 17 had an elevated individual; follow-ups were conducted – 9 in home and 1 phone consultation. They identified sources as disturbed barriers; recreating in un-remediated areas; occupational related; and lead base paint.

Kevin Yrjana asked if the occupation related was due to mining and Andy answered yes. Due to miners working in higher lead stopes, they were able to determine exposure by washing/drying mine clothes with kids clothing, and also tested vacuums that came back with positive results. Kevin wanted to know if any of the sources stuck out more than the others, and Andy answered nothing stood out so they have to keep targeting everything.

Mike Fitzgerald asked Andy to brief the group on the situation with IDAPA and ICP. Andy said the legislature did not renew the IDAPA rules, so they have all been made temporary. Since the health districts are not a full state entity, we will need to go back and defend the ICP rule in both the House and Senate. They are working on that to present to the legislature; we need the ICP rule in the Silver Valley communities or economic development will stop. These are hazardous substances underneath everyone's barrier and the contaminant management rule allows keeping those in the site, dispose of them for free – without that, we would be hauling them to a RCRA approve facility in Oregon. Mike added that he sits on the health board and they did a wonderful go thru of the IDAPA, and got rid of a lot of redundancies and added points of clarity. There are components in there that make it a lot easier to implement, the original regulations were more restrictive. Terry said there were two ICP's for the Box and Basin – were they able to combine? Andy said they did not combine but there were duplications in both; they were able to shrink the pages considerably without losing any intent of the rule. Rebecca said the ICP must remain and it is a hot topic with the current federal administration and asked if there is anything we can do to help PHD. Andy said all the support they can get will help.

John made a motion to adjourn the meeting, all approved **M/S/C**

Revised BEIPC
Organizational Practices
and
Procedures

Basin Environmental Improvement Project Commission Board
Organizational Practices and Procedures

INTRODUCTION/OVERVIEW

The Basin Environmental Improvement Project Commission (Basin Commission) is established by Idaho State law to implement, direct, and/or coordinate environmental remediation, natural resource restoration, and related measures to address water quality and heavy metal contamination in the Coeur d'Alene Basin[1] of Idaho in a manner that is protective of human health and the environment, and consistent with local, state, federal, and tribal participation, resources, and authorities. The Basin Commission works through the direct exercise of certain authorities of the state of Idaho (as described in Section 39-8106 of the enabling legislation) and through its coordination with other entities and government and their exercise of independent authorities.

FUNCTIONS

The primary purpose and foundation of the Basin Commission's work is to implement the 2002 Record of Decision approved pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), implement/coordinate the Lake Coeur d'Alene Management Plan, and implement/coordinate other plans to address heavy metal contamination in the Coeur d'Alene Basin. Future related Records of Decision issued by the USEPA, with concurrence from the Idaho Department of Environmental Quality and the Coeur d'Alene Tribe, as appropriate, may be incorporated into the Basin Commission's work.

Key functions of the Basin Commission Board are to:

1. Annually approve its one- and five-year workplan, including annual priorities and budget;
2. Develop one- and five-year progress/activity reports;
3. Direct the implementation of its workplan;
4. Appoint an Executive Director to assist the Board in administering its workplan;
5. Receive advice from the Technical Leadership Group (TLG) and Citizen Coordinating Council (CCC) on technical and regulatory issues before the Board;
6. Consult with, and represent the interests and concerns of, organizations, entities, and constituencies it represents;
7. Regularly review the membership and functionality of the two groups (TLG and CCC) established to provide advice to the Board on technical, regulatory, and other issues; and
8. Exercise other duties as described in the Idaho legislation in Section 39-8106.

---

[1] The Basin Commission conducts its work in the Coeur d'Alene Basin of Idaho, which includes the watershed of Coeur d'Alene Lake within the counties of Shoshone, Kootenai, and Benewah, as well as the Coeur d'Alene Reservation located within the state of Idaho. Remedial actions, authorities, and duties to be exercised in Washington shall be undertaken independent of the Basin Commission's operational framework.

MEMBERSHIP

Per Idaho Public Law 39-8106(3), the Board shall include one (1) representative of the State of Idaho and one (1) representative for each of the county Commissions of Shoshone, Kootenai, and Benewah counties of the State of Idaho as appointed by the Governor of the State of Idaho. Through agreement or compact, the Board shall also include one (1) representative of the State of Washington appointed by the Governor of Washington, one (1) Tribal Council member of the Coeur d'Alene Tribe appointed by the council of the Coeur d'Alene Tribe, and one (1) representative of the United States of America appointed by the President of the United States of America.

Alternates: The appointing authority of each Commissioner may designate a primary alternate who may attend Board meetings in the event the Commissioner cannot attend.

Proxies: Proxies shall not be used for any purpose.

Filling Vacancies: Board vacancies shall be filled using the same process and criteria used to establish the Board (described above and summarized in Idaho Public Law 39-8106(3).

ORGANIZATIONAL STRUCTURE

Chairperson: The Board shall elect from its own members a chairperson whose term of office shall be two years and who can be re-elected. The chairperson shall be responsible for convening and managing Board meetings and shall work with the Basin Commission Executive Director (or staff) and the chairs of the TLG and CCC to set meeting agendas. If a vacancy occurs, the Board shall fill such a vacancy for the unexpired term at its next meeting.

Vice-Chairperson: The Board shall elect a vice-chairperson in the same manner as the chairperson. The vice-chairperson shall serve as chairperson in that person's absence.

Secretary-Treasurer: The Board shall elect a secretary-treasurer in the same manner as the chairperson. The secretary-treasurer shall be the primary point of contact between the executive director and the Basin Commission for ensuring preparation by the executive director or other appropriate staff of meeting summaries, records of financial transactions and an annual public accounting for presentation to the Basin Commission.

Staff Support: To the extent resources allow, the Board shall hire and assign staff, including an Executive Director, to provide administrative support to the Basin Commission Board to support its overall deliberations. The staff shall be responsible for making logistical arrangements, distributing agendas and meeting materials up to seven (7) days in advance of a Board meeting, providing for adequate public notice of the meeting, and preparing Board meeting summaries. As well, the Basin Commission staff, through the Executive Director, will help arrange opportunities for the Board to interact with the representatives of the Citizen Coordinating Council and the Technical Leadership Group, and the Public.

MEETING SCHEDULE/STRUCTURE

Meeting Schedule: The Basin Commission Board shall meet at least four times per year. The Board shall fix a predictable sequence of meeting dates. Board meetings shall occur throughout the area of the Basin Commission's jurisdiction. All meetings shall be announced in area newspapers (e.g., the Coeur d'Alene Press, Shoshone News Press, Spokesman Review [Idaho and Washington], Idaho News Observer, St. Maries Gazette) and shall be posted on the Basin Commission's website. Meeting times and dates shall be arranged to best meet individual Commissioner's schedules. Commissioners can attend meetings by telephone or videoconference, if suitable arrangements can be made.

Agendas: Basin Commission Board meeting agendas shall be developed by the Board chairperson, in consultation with the TLG and CCC chairs and the Basin Commission Executive Director (or staff, if not available). Every effort shall be made to circulate to the Board, the TLG, and the CCC membership and post to the Basin Commission website any agendas and meeting information at least seven (7) days in advance of the meeting. All Commissioners shall make a strong effort to identify and include in the proposed meeting agendas any issue upon which the Board may be asked to vote. The chairperson shall every effort to notify board members of any meetings that include One-Year or Five-Year workplan final decisions at least twenty (20) days in advance of the meeting.

Meeting Summaries: A designated member of the Basin Commission staff shall develop and circulate to the Board and staff for review the Board meeting draft summaries. In accordance with Idaho Open Meeting Law (at Idaho Code 67-2344), meeting summaries shall include a record of all Commissioners who are present, as well as note of all motions and resolutions proposed and their disposition and the results of all votes. Every effort shall be made to circulate these summaries within ten (10) days of every Board meeting. Final meeting summaries shall be posted on the Basin commission website and circulated to Commissioners and any other person requesting them. Every effort shall be made to rely on electronic media. All meeting summaries and Commission records shall be archived and made available to the public upon request in a timely manner.

Public Comment: All Basin Commission Board meetings shall be open to all interested parties, in accordance with the Idaho Open Meeting Law (Idaho code 67-2340 through 67-2347). Opportunity for public comment shall be provided at every official Board meeting. During this time, members of the public shall be allowed to address the board when recognized by the chairperson. The chairperson may ask individuals to limit testimony to five minutes per individual speaker and ten minutes per group. As well, members of the public shall be permitted to file written statements with the Board at any time.

Executive Session: By a two-thirds vote of the Commissioners, the Basin Commission may hold an executive session to continue deliberations, as set forth in Idaho code 67-2345. No executive session may be held for the purpose of taking any final action or making any final decision.

Expenses: All Commissioners serve without compensation by the Basin Commission. Commissioners may be reimbursed for expenses according to their participating governmental entity's rules and regulations.

DECISIONMAKING

Voting: According to Idaho Code 39-8106(4), "the board shall act by majority vote except that the vote of any Commissioner representative of the State of Idaho, the Coeur d'Alene Tribe or the United States of America, or the unanimous vote of all three (3) Commissioners representing Shoshone, Kootenai, and Benewah counties may veto any majority vote."

Quorum: A quorum shall be required for any meeting of the Commission Board. A minimum of four (4) Commissioners or designated alternates shall be in attendance to constitute a quorum. An action of the Board requires a majority vote of the Commissioners, not a majority vote of the quorum.

Good Faith: All Commissioners agree to act in good faith with respect for the interests and concerns of other commissioners. The Commissioners agree to establish a free, open, and mutually respectful exchange of views, ideas, and information. Personal attacks and prejudiced statements will not be tolerated.

Parliamentary Procedure: *Robert's Rules of Order Newly Revised* shall be the authority for all questions of procedure at any Basin Commission Board meeting. The chairperson (or vice-chair) shall be responsible for assuring proper procedures are followed.

Press Inquiries/Contact: In responding to inquiries from or initiating contact with the press or other media representatives, Commissioners agree to refrain from characterizing the views of opinions expressed by other Commissioners and to exercise comity and appropriate restraint in commenting on the Board's deliberations and processes. Publicly available meeting summaries will identify specific recommendations or decisions made by the Board.

Adoption of Protocols: These Organizational Practices and Procedures become effective when a majority of the Board votes to adopt them.

Amendments: These Organizational Practices and Procedures may be altered, amended, or repealed and new Organization Practices and Procedures may be adopted by a majority of the Board. These Organizational Practices and Procedures shall not be altered, amended, or repealed, nor shall any new protocols be adopted at any regular meeting of the Board unless notice of such is given with twenty (20) days notice.

Listing of Input, Questions, Concerns and Discussions for inquiries to the Executive Director and from the last CCC and BEIPC Meetings

Listing of Input, Questions, Concerns and Discussions from the public, CCC and government officials and public outreach activities since the last BEIPC meeting:

- ED continued to support the work of the COE and the local Flood Group concerning the COE Grant to develop hydraulic loading data for flood control on the South Fork CDA River including providing survey data to the COE. Will be meeting with COE, locals and FEMA for further discussions on flood map revisions.
- ED addressed a number of concerns from the public about the condition of CDA Lake and what if anything can be done under to reduce nutrient loadings to the lake.
- ED continued to work with Silver Valley Transportation Team on transportation needs in the valley.
- ED and BEIPC Staff continued to assist the EPA and Trust on a number of private landowner issues.
- ED met with new North Idaho Representatives for Senator Risch and Congressman Fulcher for a briefing on BEIPC and CDA Basin issues.
- ED gave a Presentation at Kootenai County Natural Resources Advisory Committee meeting on Lower Basin issues.
- PHD hosted a booth at the Silver Valley Economic Development Council's Veteran's Fair.
- EPA issued the November Basin Bulletin newsletter, and is about to issue the March newsletter.
- EPA issued a report that looks at future development in the Silver Valley: Reuse Framework: Bunker Hill Mining & Metallurgical Complex Superfund Site, Kellogg, Idaho . Ideas from local people helped shape the report.
- PHD presented to Post Falls Middle School 8th Graders.
- EPA continues to post project activities, accomplishments, and opportunities on our CDA Basin Cleanup Project FB page and project web page.
- PHD presented for the Kootenai Environmental Alliance.
- PHD presented to Kellogg Middle School Students at the Staff House Museum.
- PHD assisted a Christian Center student and Science Teacher from Hayden with a Science Fair project focused on possible lead exposure on public beaches.
- PHD took part in Coeur d'Alene High Schools Mentorship Program.
- PHD assisted with the Confluence Project Snow Science Field Trips at Lookout Pass.
- PHD hosted a booth for Safety Fest at North Idaho College.

DRAFT

BASIN COMMISSION (BEIPC)

2019 ANNUAL

ACCOMPLISHMENT REPORT

2/05/20

2019 ANNUAL REPORT

BEIPC

Basin Environmental Improvement Project Commission

March 2020

2/03/20

Table of Contents

To obtain a copy of this report or other information visit www.basincommission.com

Or contact:

Terry Harwood, Executive Director, BEIPC
Phone: 208-783-2528
E-Mail: terry.harwood@deq.idaho.gov

Cover Photo, Remediation of Interstate Mill Site, East Fork Ninemile Canyon

Executive Summary

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

During Calendar Year 2019, the BEIPC coordinated and monitored accomplishments by various implementing entities for environmental cleanup and natural resource restoration work included in the BEIPC 2019 Annual Work Plan and the five-year operating plan. It also developed a 2020 Annual Work Plan and an updated five-year plan. The environmental cleanup work was performed through the federal Comprehensive, Environmental Response, Compensation and Liability Act (CERCLA/Superfund) Program and the State of Idaho environmental cleanup programs, and actions under the direction of the Environmental Protection Agency (EPA) by the Coeur d'Alene Work Trust (Trust) formed under the ASARCO Bankruptcy settlement. Natural resource damage restoration work was performed by the Coeur d'Alene Basin Natural Resource Trustees (Restoration Partnership) including the Coeur d'Alene Tribe (CDA Tribe), State of Idaho Department of Environmental Quality (IDEQ) and Idaho Department of Fish and Game (IDFG), U.S. Department of Interior through the U.S. Fish and Wildlife Service (USFWS) and Bureau of Land Management (BLM) and U.S. Department of Agriculture through the U.S. Forest Service (USFS). The Panhandle Health District (PHD) continued to manage the Institutional Controls Program (ICP) to control the release and migration of contamination remaining in place after remediation.

BEIPC Overview

Authorization and Duties

The BEIPC was established by the Idaho State Legislature and implemented through a Memorandum of Agreement (MOA) among implementing parties.

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

The BEIPC's primary purpose is to work with the EPA and IDEQ to implement the Record of Decision (ROD) for OU-3 throughout the Basin and implement the Upper Basin ROD Amendment (RODA) for portions of OU-3 and work in OU-2 included in the Amendment designed to advance the cleanup of heavy metals contamination in the Upper Basin (confluence of the North and South Forks of the CDA River to the head waters of the South Fork above Mullan).

In addition, the BEIPC is involved in:

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

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

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

The Executive Director of the Basin Commission is Terry Harwood.

BEIPC Membership as of December 2018:

Name	Title	Representing
Jack Buell, Chair	Benewah County Commissioner	Benewah County
Leslie Duncan	Kootenai County Commissioner	Kootenai County
Mike Fitzgerald	Shoshone County Representative	Shoshone County
Phillip Cernera	Lake Management Director	Coeur d'Alene Tribe
Brook Beeler	Regional Director, Washington Dept. of Ecology	State of Washington
John Tippets	Director, Idaho Department of Environmental Quality	State of Idaho
Chris Hladick	Regional Administrator, EPA, Region 10	Federal Government

Program Management

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

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

Technical Leadership Group (TLG)

The TLG with its Project Focus Teams (PFTs) is the BEIPC primary technical advisory group. It is comprised of federal, state, local and tribal representatives as well as interested private citizens serving on the PFTs who provide expertise in science, engineering, logistics, regulatory aspects, and land management in the Basin. The TLG advises the BEIPC on work planning and implementation while striving toward consensus-based recommendations. In 2019, the Executive Director and TLG developed the 2020-2024 Five-Year and Calendar Year 2020 draft work plans and studied and developed project and program proposals to implement the remedy in OU-2 and 3. The TLG's Lower Basin PFT met in May to discuss and work on potential project proposals for implementation in the Lower Basin.

Public Outreach and Citizen Involvement

Community Involvement

During Calendar Year 2019, the BEIPC held meetings and deliberations open to the public and maintained an up-to-date Basin website at: **www.basincommission.com**. Meetings were held at various locations within the Basin with locations and dates announced on the website, in local newspapers, flyers posted throughout the community and at the BEIPC office in Kellogg, Idaho. EPA, IDEQ and the BEIPC held a number of community meetings to discuss proposed project work in the Basin and Box. The BEIPC also participated in public education/outreach efforts including the joint information booth at the North Idaho Fair.

Citizen Coordinating Council (CCC)

The CCC serves as an information conduit to and from the BEIPC on citizen, community, and special interest issues, and on environmental cleanup and restoration concerns. It is comprised of politically and

geographically diverse members and was established to provide local citizen review and input on Basin related work to the BEIPC.

CCC Meetings and Communication

The CCC facilitated communications to its members and the public on an as-needed basis by e-mail, flyers, newspaper ads and posting to the BEIPC website and EPA Facebook. CCC members were invited on the August tour of project work and issues in the Upper Basin.

At CCC meetings, members were updated on ongoing BEIPC and agency activities and asked to provide input on a variety of issues. The CCC informed the BEIPC of its activities by the CCC Chair making reports at BEIPC meetings. Throughout 2019, the CCC arranged for transmission of information to its members and the public regarding activities in the Basin.

Chronology of Selected CCC Activities and Input to the BEIPC in 2019

In addition to receiving various reports for review and comments, CCC members were involved in the following BEIPC activities in 2019:

February
The CCC Chairman reported on general citizen issues at the February BEIPC Meeting.

May
The CCC Chairman reported on general citizen issues at the May BEIPC Meeting and attended the TLG Lower Basin PFT meeting on May 14.

August
CCC members were invited to the BEIPC Site Tour on August 21, and a number attended along with TLG Members, federal, state, and local government officials, members of the public, press, and the Idaho Congressional Delegation.

October
The draft 2020 Annual Work Plan and 2020-2024 Five Year Work Plan were set out to the CCC members and other interested parties for comment prior to completing the final draft documents for consideration and approval by the BEIPC at the November meeting.

November
At the November BEIPC meeting, the CCC Chair reaffirmed that the CCC would continue concentrate on holding special meetings to discuss specific issues and keep the CCC members informed of activities through the use of the extensive mailing list maintained at the BEIPC office.

Additional Outreach Activities

In addition to the activities of the CCC, the various governmental entities represented by the BEIPC continue to support the TLG and CCC by being involved in the activities of those groups. The governmental entities have been involved in outreach activities including meeting with citizen groups, giving technical presentations, participating in Basin events, holding tours of Basin project areas, maintaining information posting throughout the Basin, and publishing various information documents to provide updates on Basin activities and to give answers to common environmental cleanup and improvement questions.

As part of the public outreach program, the Basin Commission ED continued to make numerous presentations to local business and community groups concerning activities of the BEIPC and planned cleanup actions and activities required to protect the remedy, human health, and the environment. The ED also hosted the tour of projects in August by interested parties.

BEIPC Communications and Public Involvement

In 2019, the BEIPC continued its efforts to strengthen public involvement in BEIPC activities and communication between the Basin community the BEIPC and agencies involved in the cleanup. The CCC continues to be the focus organization to help implement this process.

The following is a partial list of BEIPC community involvement activities throughout the year:

- Executive Director made a presentation on the Bunker Hill Site cleanup activities at the annual Idaho Society of Professional Engineers meeting in June.
- Executive Director met with Kootenai County TLG Representatives prior to each BEIPC quarterly meeting to update them on Basin issues.
- Executive Director met with Silver Valley Transportation Team on a quarterly basis to update them on Superfund activities in the Silver Valley.
- Executive Director met with Idaho Congressman Fulcher and his North Idaho Representative to discuss Superfund and Bunker Hill Site issues in February.
- Executive Director attended the Silver Valley Redevelopment meeting to update local folks on cleanup activities and planned work for 2019 construction season in May.
- Executive Director met with Idaho Governor's North Idaho Representative in August to brief him on CDA Basin cleanup activities.
- Executive Director held a field tour for Kootenai County Basin Commissioner and North Idaho Representative for Congressman Fulcher in August.
- BEIPC Staff Participated in public education/outreach efforts in a joint booth with IDEQ, EPA and PHD at the North Idaho Fair in August.
- Coordinated a field tour of sites in the Upper Basin for the Basin Commissioners, agency representatives, and citizens in August. Participants viewed the Central Treatment Plant and Ground Water Extraction project areas in Kellogg, paved road projects, a recreation site project in Ninemile Canyon, and mine and mill remediation sites in the East Fork of Ninemile Canyon.
- Provided assistance to BEIPC groups and staff on communications material including presentations, brochures, news articles, displays, banners, and advertising.

- Publicized BEIPC and CCC meetings by posting the dates and agendas to the BEIPC website, newspaper advertising, and through electronic media and distribution of informational flyers with assistance from EPA and IDEQ.

- Sent out reports and activities updates, CCC meetings and BEIPC meetings as well as BEIPC work plans to CCC members by email for review and comment.

- Shared BEIPC related information with the Community Involvement Coordinators (CICs) of EPA, IDEQ and the Lake Management Plan (LMP) staff for publication on their Facebook pages.

- Continued to populate the BEIPC website with new information about BEIPC related activities and other information as requested by various agencies and advisory groups. The website provides information to keep the public informed including how to become involved and participate in the process; and opportunities for the community to provide input. Updates, including agendas and summary minutes of quarterly meetings, are posted to the website at **www.basincommission.com**.

- Executive Director worked with BEIPC Consultant, Corps of Engineers (COE), FEMA and the local Flood Group concerning remapping of flood zones in the South Fork CDA River channel from Elizabeth Park to Pinehurst. BEICP funded the Consultant work.

- Executive Director served on the National Council on Environmental Policy and Technology assisting EPA's Washington Office and Region 10 on climate change problems in Alaska affecting Alaska Native Village communities. This work included two days in the EPA Washington Office in July.

EPA Community Involvement Activities

Coordinating with local communities and residents is a priority for EPA Region 10. The cleanup team wants to give people meaningful opportunities to be involved in and informed about the cleanup. Many of EPA's community involvement activities are done in partnership with others, including the IDEQ, BEIPC, and PHD. Highlights for the year include:

- The EPA continued to follow its Community Involvement Plan for the cleanup. The plan lays out how community members can get information and be involved, and summarizes local concerns and input. It also outlines how the EPA collaborates with its partners. Many local people helped develop this plan.

- Ideas from local community members helped shape a new report about the development of IDEQ-owned land parcels on the Bunker Hill Superfund Site. In spring 2019, EPA, IDEQ, and PHD held stakeholder meetings and a community forum to identify a range of future use options, described in the report "Reuse Framework: Bunker Hill Mining & Metallurgical Complex Superfund Site." The report is available at www.epa.gov/superfund/bunker-hill. It is a tool for IDEQ and local stakeholders to support redevelopment and revitalization, consistent with community goals and site considerations.

- In November, EPA's Office of Policy delivered a Building Blocks for Sustainable Communities Open House in Kellogg. The City of Kellogg applied for, and was awarded, the technical assistance through the Sustainable Communities Program. Local officials participated in the session. The focus was on Government Gulch development, potential solutions to parking issues, and building on the work accomplished at the Superfund Redevelopment Initiative sessions from April 2019.

- In 2019, EPA and its partners conducted four Remedy Protection Projects, completing the Remedy Protection Program. We worked closely with local jurisdictions, community members and property owners. These projects help protect completed cleanup work. Agency fact sheets, door-to-door communications, and other related outreach efforts have been ongoing. Local jurisdictions are also especially involved with public outreach.

- The agency, in coordination with its partners, conducted outreach on several projects this year including: Canyon Creek Basin Summer Fieldwork, Ninemile Basin Summer Fieldwork, trucks hauling waste to the Lower Burke Canyon Repository, and the Kellogg area Central Treatment Plant and Groundwater Collection System Project. Outreach was also conducted for lead health education; soil testing and property cleanups; recreation and health; repositories; habitat restoration; roads projects; and more.

- EPA began outreach for the fifth Five-Year Review for the Bunker Hill Superfund Site. Early products include a Basin Bulletin article, a public notice in the local newspapers, an email listserv message, and a web page update. We're asking the public for information and ideas that will assist us with the review. EPA is required to review Superfund cleanups at least every five years at sites where contaminants remain in place. We use the review to make sure cleanup actions are protecting human health and the environment.

- The **Coeur d'Alene Basin Facebook** page continues to provide site updates to the public. Find it at **www.facebook.com/CDAbasin**. The page offers site news, photos, and resource information. The EPA invites participation, suggestions, and postings.

- Publication of EPA's **Basin Bulletin** newsletter continues. Published three times per year, in March, July, and November, it provides news and updates about the Coeur d'Alene Basin Cleanup.

- The agency maintained its commitment to the BEIPC process throughout 2019. EPA provides staff support and regular participation at meetings of the BEIPC, CCC, TLG, and PFTs. EPA provided a tour guide handout for participants at BEIPC's annual Basin Cleanup Tour, and several EPA project managers presented their projects.

- EPA continues to maintain the website for the Basin Cleanup. It offers the public access to updates, site documents, and background information. This year we updated the website's photo library. Suggestions for improvements are always welcome. (Website URL: www.epa.gov/superfund/bunker-hill)

- EPA maintains document collections related to the cleanup at several area libraries and at the EPA Coeur d'Alene Field Office for public access.

- Project managers met several times with local officials, interest groups, and others to provide updates and answer questions in 2019. Additionally, EPA led site tours for interested parties including provided presentations to groups in the area, and staffed booth exhibits at local events. EPA also supported interagency exhibits about the cleanup at the Earth Day event, North Idaho Fair, and Shoshone Medical Center's Children's Health Fair.

- EPA regularly worked with the media in 2019, arranging a number of press availability sessions, fielding questions from reporters about the site, running newspaper display ads, and issuing press releases on high-interest activities.

BEIPC August Field Tour

IDEQ and PHD Community Involvement Activities

IDEQ, PHD and EPA conduct education, public engagement, and health awareness activities related to the CDA Basin Cleanup. Kellogg PHD is the primary partner for health messaging and outreach. The aim is to raise awareness about lead intervention and to support the continuation of healthy trends for children, families, and visitors to the area. The following are highlights of 2019 activities:

Education related activities

- Conducted a hand washing activity as part of Lead Health Prevention Education for K-3 students in Mullan, St. Maries, Kellogg, Cataldo, Harrison and Plummer.

- Presented Superfund site history to Wallace High School, Kellogg High School, Coeur d'Alene High School and Post Falls Middle School.

- Attended and helped judge scientific research projects at the Youth Water Summit held at North Idaho College.

- Hosted a handwashing event at Canyonside Apartments, located in Burke Canyon across from the Lower Burke Canyon Repository.

- Regularly gave tours to Kootenai Medical Center Residents.

- Assisted with a tour of the site as a part of the Confluence Project for Coeur d'Alene High School Environmental Science Students.

- Assisted with the creation of a Case Study based on challenges related to risk communication for University of Idaho's Environmental Science Students.

- Organized and partnered with University of Idaho to put on an Environmental Health and Science Fair for students and the community.

- Hosted a booth at Silver Hills Elementary Family Science Night.

- Hosted a booth at Pinehurst Elementary Year End Celebration/family night.

- Provided a site tour for Eastern Washington University students.

- Provided a site tour for Spokane Community College students.

Other community presentations and events

- Hosted a booth at the following events:
    - Shoshone Medical Center's Children's Health Fair
    - Spokane River Forum
    - Our GEM Symposium
    - North Idaho Fair
    - North Idaho College Safety Fest*
    - Veterans Career Fair hosted by Silver Valley Economic Development Council
    - Leadman Triathlon at Silver Mountain
    - The Great Idaho STEM Together Conference in Coeur d'Alene*
    - CoeurFest in McEuen Field, Coeur d'Alene
    - Earth Day Fair, Coeur d'Alene

  *also presented

- Presentations:
    - Society of Mining Exploration & Engineering, Coeur d'Alene Chapter
    - Community Library Network at the following Libraries; Pinehurst, Hayden, Post Falls, Spirit Lake and Sandpoint
    - Environment Day for Coeur d'Alene Leadership
    - Kootenai Environmental Alliance in Coeur d'Alene
    - Matchwood Brewing: Summer Adventure & Safety Series in Sandpoint
    - Bunker Hill Task Force
    - Shoshone County Commissioners
    - Silver Valley Economic Development Council
    - Kootenai Electric
    - Historic Silver Valley Chamber of Commerce

- Panhandle Health District Board of Health
- Shoshone County Realtor's Association
- Community Forum for Superfund Redevelopment
- Kellogg School District
- Kootenai Realtor's Association

North Idaho Fair Joint Booth Blue Ribbon Winner

Calendar Year 2019 Work Accomplishments

Part 1 -
Work Performed Through Federal Superfund or Other Cleanup Programs:

Lead Health Intervention Program

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

The following table shows the Basin Blood Lead summary results from 2010 – 2019 for children residing in the Basin 6 months to 6 years of age.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Children	108	75	83	92	77	94	70	105	88	84
Min (µg/dL)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.4	1.9
Max (µg/dL)	20.0	12.0	8.0	16.0	11.0	13.0	9.0	20.0	9.0	14
Ave (µg/dL)	2.5	3.1	3.3	2.8	3.1	3.2	3.2	4.3	2.4	2.5
GeoMean (µg/dL)	2.1	2.6	3.1	2.5	2.9	2.8	2.9	3.5	2.0	1.9

In early 2012, the Centers for Disease Control & Prevention (CDC) changed its "level of concern" associated with childhood lead poisoning from a blood lead level of 10 micrograms per deciliter (µg/dl) to a new "reference value" of 5µg/dl. The new lower value means that more children will be identified as having lead exposure allowing parents, doctors, public health officials, and communities to take action earlier to reduce the child's future exposure to lead.

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

In addition to the 84 children between 6 months to 6 years of age screened in the Basin, 22 individuals over the age of 6 from the Basin also participated in the 2019 summer screening. In the Box, 169 children between 6 months to 6 years and 63 individuals over the age of 6 participated in the 2019 summer screening.

PHD will continue to offer free blood lead screening for residents living within the Bunker Hill Superfund Site boundaries year round. In addition, PHD will again be conducting its annual summer screening in 2020 with a $30 incentive for children between ages 6 months to 6 years of age residing within the Basin.

During 2020, the Lead Health Intervention Program will continue to offer the additional services:

- Year-round blood lead screening and follow-ups
- In-home consultations for individuals with elevated blood lead
- HEPA vacuum loan program for cleaning residences
- Education, outreach, and awareness for parents, children, community members, recreationalists, and visitors
- Education classes in local school's grades K-12
- Annual Environmental Science and Health Fair
- Education and outreach at community events
- Sampling of soil, dust, paint, water, and other media as appropriate

Basin Property Remediation Program (BPRP)

Year	Number of Property Addresses	Area Remediated (Acres)	Waste From BPRP Disposed of in Repositories (Truckloads)
2007	373	60	9,240
2008	352	57	8,129
2009	547	149	18,780
2010	311	70	10,725
2011	243	64	9,795
2012	216	73	9,127
2013	128	44	3,500
2014	95	30	3,647
2015	82	37	3,069
2016	74	23	2,692
2017	48	20	1,062
2018	54	26	1449
2019	30	13	1,356

The CDA Trust BPRP Program collected a total of 103 soil samples from 4 residential and commercial properties throughout 2019. In addition, 15 private drinking water system samples were collected from 6 properties.

The CDA Trust BPRP Program completed remediation of 30 residential and commercial properties for a total of 12.9 acres in 2019. The construction season started on April 29th and finished on October 14th.

The CDA Trust continued to maintain 7 existing reverse osmosis under-sink water filtration systems treating drinking water from private sources in 2019.

At the conclusion of the 2019 field season, properties remaining to be sampled and/or cleaned up in the Upper and Lower Basin are those whose owners have refused access, or who have not responded to repeated contact attempts by the Trust and IDEQ.

IDEQ completed remediation at three properties in the Box whose owners changed from refusing access to allowing cleanup work to proceed. Eleven Box properties remain to be cleaned up, once owners grant access.

Remedy Protection Projects

Remedy Protection is a high priority in the Upper Basin RODA and the SCIP developed by EPA in the fall of 2012. The objective of this work is to protect the installed human health related remedy from recontamination and scouring caused by heavy precipitation and tributary flooding. In 2012, planning, survey and design began on a number of projects in the urban areas of the Box and Upper Basin portion of OU-3 noted in the RODA. IDEQ completed Remedy Protection work in the Box in 2015.

In 2019, the CDA Work Trust completed design of the Tiger Creek project in Mullan and the Star Parking and Gem areas in the Canyon Creek drainage.

The CDA Trust worked on construction of several projects in 2019:

- Started and completed the Black Cloud Culvert replacement project in Ninemile Drainage,
- Started and completed the Star Parking Area project in Burke/Canyon Creek,
- Started and completed the Gem Area project in Canyon Creek,
- Completed the Tiger Creek (including Eight Street) project in Mullan. Construction on the Tiger Creek project started in 2018.

With the work noted above, the Remedy Protection Program is complete in the Box and Basin.

Lifting Large Manhole For Installation on Tiger Creek Project Mullan

Installation of Fish Passage Bottomless Structure on Black Cloud Creek Project Ninemile Road

Paved Roadway Surface Remediation Program

EPA and IDEQ implemented the roadway surface remediation program in 2013 to address the deterioration of contaminated paved road surfaces due to heavy traffic during site remediation activities to ensure road surfaces continue to serve as barriers that reduce or eliminate exposures to underlying contamination. The program includes 591 eligible road segments based on the original roadway inventory and subsequent reviews by the jurisdictions and Roads Board. Work completed in 2019 included paving projects by Shoshone County and the City of Kellogg. Shoshone County completed segments in Pine Creek, Nuchols Gulch, Woodland Park, and Nine Mile. The City of Kellogg completed work on McKinley Avenue, and also finished paving all of the streets associated with their sewer replacement project.

The local road jurisdictions have completed remediation of 541 roadway segments to date. Many of these projects were completed in coordination with remedy protection projects and major subsurface utility projects in Mullan, Wallace and Kellogg, which were funded by public utilities or through local bond elections and USDA Rural Development grants.

The Cities of Mullan, Wallace, Osburn, Pinehurst, Wardner, Smelterville, and the East Side Highway District have completed their Paved Roads Program. The City of Kellogg should finish their program in 2020 after completing Bunker Avenue, Wildcat Way and a portion of Hill Street. Shoshone County will complete their program in 2021 when they close out their Basin scope. A remedial action completion report will be produced in 2022 to wrap up this successful remedial action.

McKinley Ave. West Under Construction Kellogg

Completed Silver Valley Road Shoshone County

Contaminated Waste Disposal and Management

Introduction

Contaminated waste disposal and management is an ongoing process that must meet the demand for the disposal of historic mining related contamination for the entire Basin environmental and human health related cleanup program. The contaminated waste management program includes a four-part approach to dispose of waste material generated by the BPRP and other cleanup actions performed by EPA through the Trust or IDEQ; and waste generated by private parties and local government agencies under the ICP and Paved Roads Program. Without the expansion of existing disposal facilities or the construction of new facilities, continued cleanup and control of contamination could be compromised and potentially stopped.

Each of the four approaches to waste disposal are engineered and constructed to reliably contain waste materials, and prevent contaminants from being released to surface water, groundwater, or air in concentrations that will cause state and/or federal standards to be exceeded. The first approach includes Repositories that are large, centrally located areas within the Upper and Lower Basin where contaminated soil and material excavated during cleanup actions is transported to be managed and secured. The second approach uses Waste Consolidation Areas (WCAs) in the Upper Basin, located adjacent to or near the waste source areas, serving for consolidation or placement of wastes from specifically identified sources such as mine and mill site actions The third approach involves the Community Fill Plan (CFP) developed in recognition that the ICP allows use of contaminated soils for fill material to create more developable ground in the Upper Basin, its use taking place under agreement between a generator and a property owner with space for fill approved by the PHD in compliance with the ICP and with the approval of EPA and IDEQ for any CFPs proposed to dispose of 5,000 cubic yards (cy) or greater. The fourth approach, use of a

Limited Use Repository (LUR), takes advantage of the relatively low volume of base materials excavated during the paved roads projects, and their inclusion with the relatively inert asphalt or Portland cement concrete which makes up 30 – 50% of the wastes generated when roads are torn up for remediation. The three primary goals for constructing LURs are: 1) the economy of disposing low toxicity wastes in places close to roads projects, 2) conserving repository space for more contaminated remediation waste, and 3) increasing the developable space inventory in the Upper Basin.

Five Repositories were operated to receive remedial action and ICP waste in the 2019 field season. Big Creek Repository (BCR) and Big Creek Repository Annex (BCRA) near the community of Big Creek and Lower Burke Canyon Repository (LBCR) serve the Upper Basin, and East Mission Flats Repository (EMFR) near Cataldo serves communities in the Lower Basin. The Page Repository, located near Smelterville receives the ICP and remedial action wastes generated by the cleanup activities conducted in the "Box." EMFR, BCR, BCRA and LBCR are operated by the Trust. Page is operated by IDEQ. Both IDEQ and the Trust directed waste to the repositories to minimize transportation distances and costs. In addition, the Page Repository continues to use recycled construction materials extracted from Basin and Box waste streams which helps to further reduce repository operating costs. A summary of activity at each site is described in the sections below.

Big Creek Repository

During 2019, BCR received waste from BPRP, ICP, Paved Roads Program, and Remedy Protection Projects. Most waste streams delivered to BCR were placed on the east slope of BCR with some waste placed on top of BCR to reach final grade elevation. Based on results of the soil test plots installed in 2017, the Trust completed the installation of the final vegetated cover system on the north, south, and west face of BCR. Installation included the placement of a 12-inch layer of topsoil (total of 12,700 cy), application of fertilizer, soil amendments, and a permanent seed mixture and stabilization of the final cover system using a bonded fiber matrix (BFM) and fiber rolls.

The water quality monitoring program at BCR found operations have not impacted adjacent surface or ground waters.

The year-end repository shutdown activities have been completed and include:

- All road surfaces were graded and sloped inward to collect runoff to capture runoff and prevent ponding.
- Additional storm water management controls including straw waddles and hydro-seeding with a native seed mix were installed on finished slopes to further protect against erosion of these surfaces.

In 2019 BCR received 325 truckloads from the BPRP, 221from the ICP, 8 from the Remedy Protection Program, and 982 from the Paved Roads Program for an estimated 15,000 cy of waste placed. At the end of the 2019 construction season, the BCR contained approximately 620,465 cy of waste soils. BCR currently has approximately 110,300 compacted cy of capacity left for disposal. The ICP area will be managed by the Trust's Operations Contractor during the winter closure period. Prior to spring runoff, all ICP waste will be transported and stockpiled on top of the repository for processing and future placement and compaction.

Big Creek Repository Annex

In 2019 BCRA received 21 truckloads from the BPRP, 133 from the ICP, and 322 from the Paved Roads Program for an estimated 4,950 cy of waste placed. Operation of the Annex capitalizes on the use of the existing infrastructure at BCR such as the main entrance and wash station.

Lower Burke Canyon Repository

During 2019, LBCR received 284 truckloads from BPRP, 383 truckloads from the ICP, 866 truckloads from the Remedy Protection Program, and 1,071 truckloads from the Paved Roads Program for a total waste placement of 25,252 cy. The year-end repository shutdown activities have been completed and include:

- Stabilize slopes by track walking.
- Create low area sump near decontamination pad to ensure that runoff from the asphalt area is contained on site.
- Construct drainage swale around south end of fill limits to collect any runoff during rain on snow events.
- Crown center of waste area to encourage drainage to runoff collection ditches.
- Install additional storm water management controls including straw waddles and silt fencing on steep slopes to further protect against erosion.

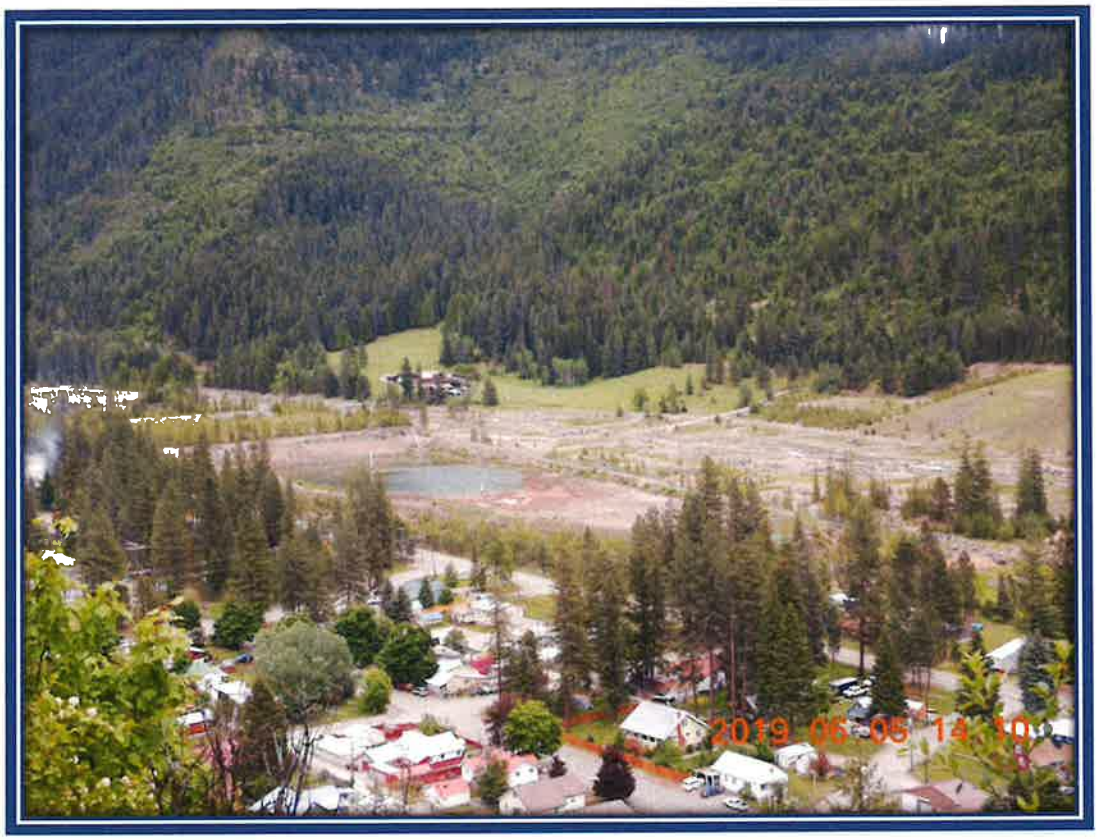
East Fork of Ninemile Creek Waste Consolidation Area (WCA)

During 2019 the East Fork WCA received 146,075 cy of waste from the Success Mine Complex Dump. Additional work conducted at the WCA included expansion for additional capacity and continued generation of soils for future capping and repairs. To date, the East Fork WCA site has generated approximately 170,000 cubic yards of rock and 250,000 cubic yards of soil for East Fork Ninemile Creek Remedial Actions. This has saved the project approximately $8.4 million and significantly minimized traffic through local communities.

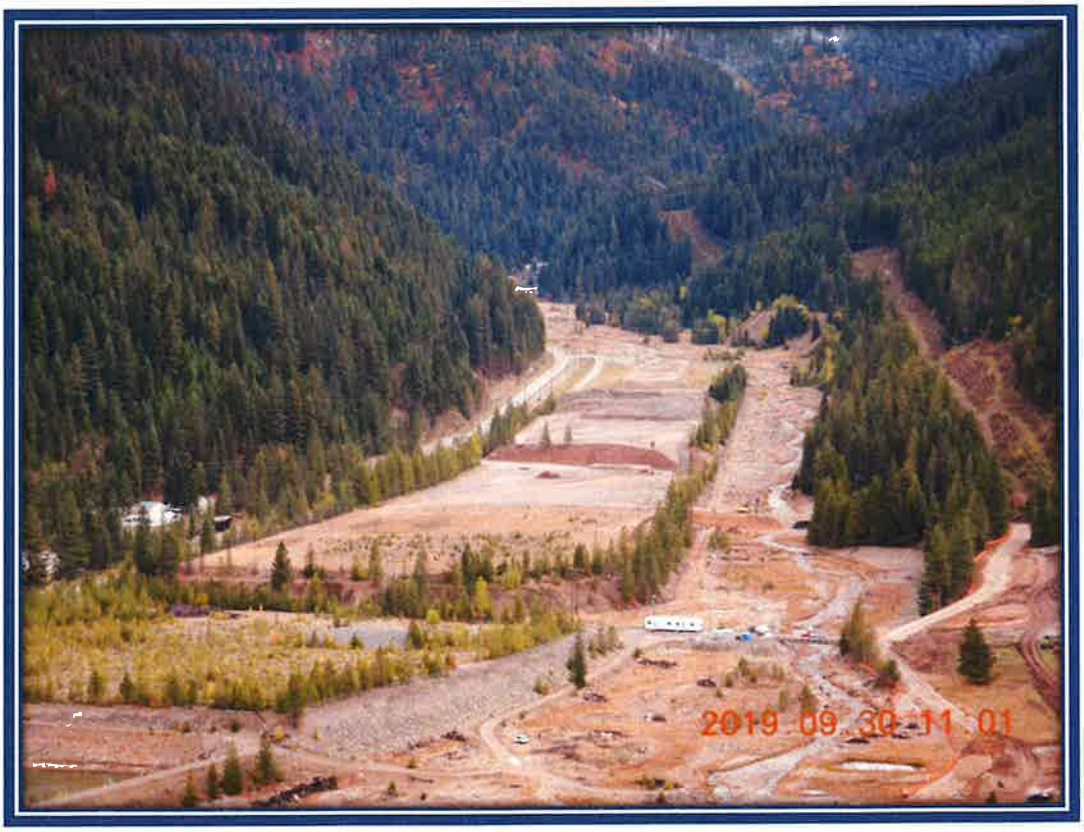
Placing Cover Material Over Final Liner on WCA in EFNM Canyon

Canyon Creek Repository Waste Consolidation Area (WCA)

Construction began in 2020 on the Canyon Creek Repository Waste Consolidation Area which is located southeast of the Lower Burke Canyon Repository. This WCA is being developed in order to receive waste from source cleanup sites and other mine remediation areas. It will also accept the full volume of the existing Silver Valley Natural Resources Trustees repository, approximately 610,000 cy, constructed in 1995 to reduce contaminate loading to the South Fork of the Coeur d'Alene River. Access to the WCA is being developed to avoid heavy truck traffic around the Canyon Creek residential areas.



Canyon Complex WCA Location Across Canyon Creek



Canyon Complex WCA Beginning Construction

East Mission Flats Repository

In 2019, the EMFR repository received 586 truckloads from the BPRP and 412 truckloads from the ICP. Final in-place, compacted volume calculated from the truck load count was about 9,691 cy. The ICP disposal area will be available at the east end of EMFR to receive ICP waste during the winter closure period and managed by the Trust's Operations Contractor. Prior to spring runoff, all ICP waste will be transported and stockpiled on top of the repository for processing and future placement and compaction.

Semiannual groundwater monitoring was conducted at six monitoring wells located on or near EMFR. Groundwater and surface water monitoring results indicate that disposal activities have not impacted water quality near the site. Two new monitoring wells were installed to replace two wells that were not as productive as existing wells in the past.

Page Repository

Page Repository received 3,131 truckloads of waste from Box Remedial Action projects including the Central Treatment Plant (CTP) upgrades, groundwater collection system, and Paved Roads Program. ICP waste delivered to Page in 2019 totaled 1,873 truckloads. Much of the ICP and remedial action waste delivered to Page consisted of concrete debris and other coarse materials utilized to construct a foundation mattress for repository expansion. The total estimated volume of material placed at Page in 2019 based on the truck counts was 37,500 cubic yards.

Shoshone County Transfer Station LUR

Closed in 2018

East Zanetti Yard LUR

Closed in 2018

Government Gulch LUR

The Government Gulch LUR received 929 truckloads for an estimated 8,300 cy of waste generated by the Paved Roads Program in 2019 completing the second cell of the LUR. Following final compaction of the waste, clean topsoil was imported and seeded for the final cover on the LUR.

Government Gulch CFP

This CFP is located directly adjacent to the Government Gulch LUR. Waste placement was completed at the CFP in 2018, and work completed in 2019 included placing the final cover soil and seeding.

Additional Disposal Locations

In addition to the operational repositories, two separate areas for future disposal and permanent storage of mining related contamination are currently in some stage of consideration and/or planning. The repository site selection process initiated in 2008 culminated in the identification of two new repository sites in the Upper Basin; the Osburn Tailings Impoundment (OTI) near Osburn and the LBCR. LBCR is currently accepting waste and the Osburn Tailings Impoundments will be considered for use in the future depending of disposal needs.

A second location currently under development is the Canyon Complex Repository (CCR). The location of the CCR is the former Silver Valley Natural Resource Trustee Repository (SVNRT) location near the LBCR. Based on waste projections, additional disposal capacity was required in Canyon Creek basin and the SVNRT site ranked high using the site selection criteria from 2008. Use of the CCR site will prevent transporting waste through downstream communities.

Mullan ICP Disposal Area

The Mullan ICP Disposal Area served as the local repository for activities conducted in the City of Mullan. However, because the disposal area is now effectively full, it is being closed though a transfer station will remain on site. The transfer station ensures that future local ICP wastes get disposed of in an engineered facility (e.g. BCRA or Lower Burke Canyon Repository), and local ICP users can continue to use the facility as they are currently accustomed. The Disposal Area was capped and left for the City to maintain. Following construction, the transfer station will only accept ICP waste from Mullan residents. The Trust will operate the transfer station for the foreseeable future. 150 cy of waste from the Mullan ICP site was removed for disposal in 2019. The waste material was hauled to LBCR for disposal.

Upper Basin Remedies

Cleanup Actions in East Fork Nine Mile Creek (EFNM) and Canyon Creek

In 2019, investigations/remedies in the EFNM Creek Basin consisted of the following:

- Operations and maintenance (O&M) of the Interstate Callahan Mine Rock Dumps and Rex Mine No. 2.
- Construction of the fourth and final year of the Success Mine Complex Remedial Action (RA) project.
- Construction of the first of two years of remedial action remedial action for the Interstate Mill Site RA project.
- Operation of the EFNM WCA.
- Continued surface water monitoring in EFNM Basin.
- Conducting additional characterization and sampling activities to assist in determining the remaining remedial actions needed in the Nine Mile Creek Basin including Dayrock Mine and Lower East Fork Ninemile,
- Completion of the design alternatives memorandum and 30% design for the EFNM Tamarack Complex to support future design activities.

In 2019, investigations/remedies in the Canyon Creek Basin

- Conducting additional characterization and sampling activities at the Hecla Star Complex and Tamarack #7 Complex.
- Construction of the first of four years of remedial action and WCA development for the SVNRT/CCR RA project.

The following summarizes the 2019 construction activities conducted in the EFNM Basin:

- Approximately 63,066 cy of contaminated waste rock and mine tailings were hauled from the Success Complex and placed and compacted at the EFNM WCA.
- Approximately 38,042 cy of contaminated waste rock and mine tailings were hauled from the Interstate Mill Site and placed and compacted at the EFNM WCA.
- Approximately 2,115 feet of Stream Channel was constructed at the Success Complex.
- In 2019 a total of approximately 91,181 cy of compacted material was placed at the WCA. The total volume of material placed in the WCA is approximately 508,137 cy.
- In 2019 the first section of final cover liner and cover material was placed at the WCA along with temporary cover materials over contaminated waste rock and mine tailings at WCA prior to winter shutdown.

Central Treatment Plant (CTP) and Groundwater Collection System (GCS)

- The Corps of Engineers awarded the Design/Build/Operate Contract to AMEC/Foster Wheeler (AMEC) in 2016 and issued the Notice to Proceed on Feb 2, 2017. Prior to commencement of work AMEC was acquired by Wood. Wood assumed the responsibility for the continued operation of the existing Central Treatment Plant (CTP) and will continue to operate it until one year after the completion of the upgrades to the plant and construction of the Groundwater Collection System (GCS). Wood responsibilities also include design and construction of the CTP upgrades, new GCS and new lined Sludge Impoundment on top of the Central Impoundment Area (CIA). The Corps of Engineers (COE) is charged with administration and management of the contract.

- During the 2019 construction season, Wood completed construction of the GCS, new lined Sludge Impoundments and CTP upgrades. Tasks at the CTP included: constructing buildings and installing CTP upgrade components (New 30' concrete reactor tanks, new filter building and filter vessels, new thickener tank, new supplemental back-up generator and all accompanying HVAC, Electrical, and Instrumentation and Controls). Construction Acceptance Testing and System Testing was initiated in December 2019 at the CTP and continues. The final installation of the new liner system for the sludge impoundment area resumed in the spring and was completed, as were the installation of the pipes and connections. Wood installed extraction wells, piping, power, controllers, backup generators, and cleanout vaults at the GCS. There are openings in the cut-off wall that will be closed after the collection system undergoes testing in spring 2020. After the wall is closed, the GCS will undergo further testing as part of the integrated testing of the facility. After completion of testing activities on the CTP/GCS and Sludge Impoundments the system will be operated by Wood for one year under the current contract. Operations will then transfer to IDEQ.

- In February 2019, EPA was notified of an approximately six-inch subsidence in the road surface on Interstate 90 north of the GCS cut-off wall and adjacent to visible sediment plumes that were discovered in the SFCDA River. The sediment plumes were first observed in mid-December in the vicinity where historic seeps have been observed and monitored previously. Subsidence in this vicinity had been observed and addressed by ITD in the past; however EPA increased efforts to investigate the plumes and provide interim mitigation if necessary. EPA and IDEQ continued to monitor water quality in and around the plumes as well as groundwater levels to further understand the phenomenon and how it may be related to the cut-off wall that had been recently installed. The turbidity plumes ceased in late September, but EPA will continue to monitor surface water and groundwater closely through start-up and optimization of the GCS. ITD continues to monitor the settlement on Interstate 90.

- The CTP upgrades are necessary to treat additional influent flow from the GCS, improve system reliability, meet current more stringent discharge requirements, and operate in High-Density Sludge (HDS) mode. These upgrades have been necessary for some time to provide dependable and more efficient water treatment of the Bunker Hill Mine water, and the groundwater to be collected from the GCS near the CIA. The Bunker Hill Mine water has been and continues to be treated at the CTP. The upgraded CTP is intended to treat influent flows at rates that nearly triple the current rate of base flows from the Bunker Hill Mine. Excess flow from the Bunker Hill Mine will be diverted to in-mine storage. The plant is currently not capable of meeting discharge standards when being operated in HDS mode, the upgraded plant when operating in HDS mode will result in much less sludge production, more efficient operating conditions, and the need for fewer sludge ponds being constructed over time. Following treatment, the effluent discharged from the CTP to the SFCDA River will be required to be in compliance with current water quality standards. On an average basis, the GCS is expected to result in significant removal of dissolved metals, the most notable of which is zinc that is currently being discharged to the SFCDA River from groundwater interaction, as discussed in the following paragraph.

- The project includes approximately 8,000-linear feet of cutoff wall between the CIA and Interstate 90 (I-90), a series of extraction wells, and a conveyance pipeline to the CTP that extends along the north side and over the top of the CIA. Groundwater flow and concentration of metals predicted by the mathematical model represents the range from base flow/strength through maximum flow/strength. Base flow/strength typically occurs in late summer or early fall and maximum flow/strength typically occurs during spring runoff. By considering seasonal and annual variability and groundwater monitoring well data from south of I-90, the estimated dissolved zinc loading to the gaining reach of the SFCDA River ranges from 150 to 450 pounds per day (lbs/day). A significant unknown is the potential source of metals in tailings under and north of I-90 that will not be captured by the groundwater collection system. However, the optimistic target is to capture up to 90% of the predicted load to this gaining reach from south of I-90.

Overview of CTP Nearing Completion

Lower Basin Remedies

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

Using the framework and site principles developed in the Lower Basin Strategic Plan (EPA 2018), EPA began drafting an Adaptive Management Plan (AMP) in 2019 for planning, implementing and monitoring pilot projects and remedial actions in the Lower Basin within three identified focus areas: human health, habitat remediation, and source control. This Lower Basin AMP is being developed as part of a nation-wide pilot study to demonstrate how adaptive management can be implemented at a large complex mining site.

In October 2018, EPA culminated a year-long prioritization process which resulted in a list of projects for inclusion in the 10-year Basin plan and the CDA Trust's 2019 implementation plan. The EPA reached out to agency partners, the Restoration Partnership and members of the CCC to help identify key values, projects and objectives that should be considered in the selection process. A workgroup of agency staff with experience and specific expertise working in the Lower Basin used a Multi-Objective Decision Analysis (MODA) technique to illuminate the trade-offs among a set of potential remediation projects for implementation. In May 2019, EPA presented the results of the evaluation to the Lower Basin PFT and outlined next steps for project work within each of the three focus areas. Going forward, the Lower Basin PFT will continue to assist the Lower Basin Project Selection Process by providing updates on new technologies, pilot projects for consideration, key technical input, and project ideas. Under the AMP, the prioritization process will be iterative, and conducted periodically as needed based on funding, knowledge, opportunities, and experience gained from implementation and subsequent monitoring.

Habitat restoration projects scored high in the prioritization process and EPA selected the Idaho Fish and Game's (IDFG) Gray's Meadow property (formerly Black Lake Ranch) to remediate and restore approximately 700 acres of publicly owned contaminated agricultural land to clean, diverse, productive wetlands and riparian waterfowl/wildlife habitat. The project will be completed as a collaborative effort between the EPA, the CDA Trust and the Restoration Partnership. In 2019, EPA convened a Gray's Meadow design team, performed additional characterization, and evaluated design concepts for the project. EPA expects to complete the 60 percent design in 2020 with a goal to start construction as early as fall of 2021. In 2019 EPA also assisted the Restoration Partnership in achieving a conservation easement in Canyon Marsh and expects to support several other conservation easements on private wetland properties in 2020.

At Lane Marsh, EPA continued two pilot projects to evaluate wetland mitigation options. Incremental Thin Layer Capping (ITLC) is one method considered promising for sensitive wetlands to cost-effectively reduce ecosystem impacts from contamination while limiting the hydraulic effects of remedial actions. In 2019, EPA continued to monitor and evaluate the application of native alluvial material on wetland vegetation response. EPA also began the bench-scale treatability phase to explore the efficacy of biochar amendments on Lane Marsh wetland sediment as compared to a control (no amendments), lime, and activated charcoal to reduce soil lead bioavailability under environmental conditions realistic for wetlands.

To address source control in the river channel, pilot testing is planned for the Dudley Reach, downstream of the grade break near River Mile 160, near the site of a former dredging operation. In 2019, EPA continued efforts to evaluate and refine options for pilot testing several technologies within this reach. The riverbed consists of over 1,200 acres and contains approximately 5-10 million cubic yards of contaminated sediment. The hydraulic and sediment transport model is being used to simulate the impacts of typical and extreme floods as well as changes to the system over a five-year and 30-year period. This informs a management plan that targets areas for active remediation, evaluates the effects of remedial technologies, and identifies areas for natural recovery. EPA has developed several alternatives for testing in the Dudley Reach, including capping, dredging and riverbed weirs.

Data collection efforts continued in 2019 with the installation of erosion pins in the river bed at key locations. Select riverbed cores were obtained during the effort to supplement the existing data sets given the heterogeneous nature of the river bed and the complex nature of the Coeur d'Alene River. Riverbank erosion pins installed by the Kootenai-Shoshone Soil and Water Conservation district in the previous decade were also recovered and measured to the extent they were still undisturbed. Crews were poised to collect runoff boat-based sediment samples but flows remained low during spring runoff therefore resources were not expended.

Health Intervention Program projects lead by IDEQ and PHD continue to be relevant and meaningful Basin-wide. Projects aim to lower human exposure rates to heavy metals through educational outreach. With help from partnering agencies, a number of efforts were undertaken in 2019 including airing radio announcements, staffing informational booths, and providing educational presentations to school students and installation of new information signing in use areas. This purpose of these activities was to provide health tips to recreationists. Long-term planning for addressing Human Health Risks as a result of recreational activities at dispersed recreation sites in both the Lower and Upper Basin is described in the Recreation Sites Section of this Report.

State of Washington Projects

A complete survey of each of the remediated beach sites along the Spokane River in Washington was conducted in 2018 with the results from XRF analyses and the associated observations summarized in a technical report dated June 2019. Using the information from the report, a periodic review evaluating the overall status of the beach sites is due for early 2020. In general, it was observed that the beach sites closest to the Washington-Idaho border have accumulated sediment from upstream sources that contain heavy metals. Current concentrations at the upstream beach sites, however, have not reached the action levels that were used when conducting the cleanups. Overall, the cleanup at each of the beach sites is in good condition.

Recreational Sites

Work on Recreation Areas in 2019 included sampling, remediation, and public education/outreach activities for areas in both the Box and Basin. New health information signs were developed and installed, with several unique types of signs intended to inform users at different types of sites and provide consistent health messaging. Five new signs were installed at Lower Basin locations and 23 new signs were installed at Upper Basin locations. New signage in the Lower Basin focused on replacing health messaging signs at public river access points. New signage in the Upper Basin focused on health messaging signs at mine and mill sites where recreational activity has been observed. Upper Basin signs were installed as initial actions until the sites can be remediated. The new signs include historic photos, maps, and other information in addition to health messaging.

Recreation site work in the Box focused on the SFCDA River between Mountainview Park in Kellogg and the Pine Creek trailhead in Pinehurst. IDEQ received data for sampling and XRF screening of areas along the river currently being utilized for recreation activities at Mountainview Park, Theater Bridge River Access, Airport River Walk, Smelterville Flats, and the Pinehurst Trailhead. Follow up samples were collected in 2019 and work began to develop remedial action alternatives which are expected to be implemented in 2020.

2019 cleanup work in the Basin focused on the following recreation sites: Nine Mile Fishing Pond, Larson Fishing Pond, Grays Bridge (at intersection with Burke Road), and CDA River pull-outs. Approximately 44,000 square feet were remediated with clean barriers installed during cleanup work in 2019. The CDA Trust continued to identify and evaluate other recreational areas in the Lower Basin for future cleanup work, in addition to the Cataldo Boat Launch planning. The CDA Trust also continued a program to provide seasonal hand washing stations at formal recreation sites. Temporary hand washing stations were provided during the summer months at Cataldo, Rainy Hill, Rose Lake, and Medimont. The sites selected included public boat launches and picnic areas that do not have running water.

Recreation Site Signing and Wash Station

Basin Environmental Monitoring

The Draft CDA Basin Environmental Monitoring Plan (BEMP) was completed in 2019 and is under final review. The CDA BEMP will provide the framework for ongoing remedy effectiveness and long-term monitoring associated with actions in the Upper, Middle and Lower Basin. The goal of the updated and optimized CDA BEMP is to design efficient data collection plans to support site-wide management decisions. Specific monitoring goals include:

- Assessing long-term status and trends of contaminants in Site media;
- Evaluating the performance and effectiveness of pilot projects, interim and final remedial actions;
- Providing data for CERCLA-required five-year reviews of the progress on remedy implementation;
- Evaluating progress toward Remedial Action Objectives (RAOs); and
- Improving understanding of Basin processes and variability to optimize subsequent remedial action implementation.

The CDA BEMP incorporates adaptive management principles and is anticipated to evolve during the remedy implementation timeframe. The over-arching plan includes the Site-wide Quality Management Plan (completed in 2015) and media-specific Quality Assurance Project Plans (QAPPs). A programmatic Data Management Plan for the Bunker Hill Site is currently under development that provides guidance and data requirements for all entities collecting environmental data at the Site. Human health-related data will not be included in this database. The database platform selected for this site is Scribe and the repository is the EPA Region 10 subscription to Scribe.net. EPA has been working with each entity that collects data for the Bunker Hill Site to migrate their data to the new Scribe platform. Until this task is completed, stakeholders can make specific data requests to the EPA Remedial Project Manager

The CDA BEMP is structured into three geographically based tiers: Site-specific Remedial Action (RA) effectiveness and performance monitoring; Area-wide monitoring; and Basin-wide long-term monitoring. A Site-specific RA Effectiveness Plan for East Fork Ninemile Creek was completed in 2017. A Draft Area-wide RA Effectiveness Monitoring Plan for Ninemile Basin is currently under review that identifies monitoring procedures at greater spatial and temporal scales. This tier is effective for evaluating changes in concentrations of contaminants of concern (COCs) in environmental media and indicator species response following RA implementation of many source sites cumulatively within Ninemile Basin.

In 2018, EPA completed a RA Effectiveness Monitoring Plan for the Groundwater Collection System (GCS) under construction along with upgrades to the Central Treatment Plant (CTP) in OU-2. Baseline conditions for groundwater and surface water were established prior to installing the GCS, which initiated in 2018. Remedy performance monitoring will be conducted throughout the startup and testing of the GCS. RA effectiveness monitoring will begin following optimization of the GCS.

During 2019, United States Geological Survey (USGS), IDEQ, USFWS and EPA continued BEMP sampling. Specific activities are outlined below.

Surface Water

In calendar year 2019, USGS collected 68 stream discharge measurements and water-quality samples from 16 OU-3 and 4 OU-2 surface water stations during a range of hydrographic events. Samples were collected during the first flush in April, during peak spring snowmelt runoff in May, during the hydrograph recession

in July, and during baseflow conditions in September. Each site was sampled between two and four times during the year. Samples were analyzed for nutrients, selected trace metals and major ions, and suspended sediment.

Twelve of the 16 OU-3 stations are collecting continuous streamflow data and are telemetered with real-time streamflow access. Information can be viewed at **http://waterdata.usgs.gov/id/nwis/rt**

There were no significant winter flow events, so winter sampling targeting the first flush associated with spring snowmelt runoff in early April. Spring snowmelt runoff was variable across the basin, with multiple peaks in April and May in most locations. Peak spring snowmelt runoff sampling occurred in mid-May; this peak was the largest peak at some sites, but others peaked during the April sampling event. Recessional samples were collected in July. Fall samples were collected in September 2019 and captured baseflow conditions.

The USGS completed a seepage study in September 2017 to evaluate groundwater loading of dissolved cadmium and zinc to the SFCDA River between Kellogg and Smelterville prior to installing the GCS and performing upgrades to the CTP. The analysis and final report on this study was published in 2019 and is available online at: https://doi.org/10.3133/sir20195113.

All gaging station stream discharge and water-quality records for the BEMP gages for Water Year (WY) 2019 were worked up, approved, and will be included in the 2019 USGS annual data report for Idaho. The annual data summaries will be completed and delivered to EPA during the first quarter of calendar year 2020.

Groundwater

Groundwater monitoring in 2019 focused on the GCS which completed construction in December 2019. BEMP sampling in 2019 was associated with monitoring water quality during construction and understanding the current or baseline conditions prior to full implementation of the GCS. IDEQ sampled groundwater from six monitoring wells during May high flow conditions. In late September/October during baseflow, IDEQ sampled groundwater from 56 monitoring wells and two drive point piezometers located in the SFCDR. In addition to measurement of water levels and typical field parameters, samples were analyzed for selected trace metals and major ions, nutrients, total dissolved solids and total suspended solids.

BEMP monitoring under the RA Effectiveness Plan for the GCS will resume after startup, testing and optimization of the system. Startup and testing of the GCS will begin after the upgraded CTP is ready to receive groundwater, starting in February 2020.

Biological Resources

USFWS conducted waterfowl surveys from early February to late April 2019 in lower Basin floodplain wetlands recording observations of waterfowl use and tundra swan mortalities. In 2019, temperatures remained below normal until the third week of March when ice began to recede. All of the survey wetlands remained frozen during this time with the exception of some open water at the mouth of the Coeur d'Alene River at Harrison Slough and in the middle of Cave Lake, which provided access to resting areas within deep water in mid-March. As a result, peak migration occurred on March 28th and two weeks later began to decline for the remainder of the survey period. However, waterfowl numbers were very low and abbreviated throughout the entire survey compared to other years.

The highest waterfowl use was observed at Cave Lake, Schlepp's East Field, Canyon Marsh, Killarney Lake, and Swan Lake. The highest swan use was observed at Lane Marsh, Strobl Marsh, and Swan Lake. High numbers of swans (estimated over 5,000) were also deterred from Harrison Slough, but these efforts occurred at dawn before the surveys were conducted and only 825 swans were observed at Harrison Slough during the survey periods. The swan maximum high daily count was 3,610 and over 500 swans were observed in the lower Basin for five weeks during 2019.

Large numbers of swans staging and feeding at Harrison Slough resulted in 145 mortalities observed in 2019, and another 14 mortalities were observed incidentally during deterrent efforts. Prolonged cold weather conditions likely contributed to the high number of mortalities, which kept most of the lower Basin wetlands frozen while open water at Harrison Slough attracted large numbers of swans where they remained until the end of March. These high concentrations of swans at Harrison Slough for several weeks likely contributed to increased exposure and high mortality. However, daily deterrent methods (3/16 through 3/28) likely reduced the number of mortalities that would have occurred if these efforts were not undertaken.

EPA is currently reviewing a draft 2018-2019 Waterfowl Survey Report. This document will be finalized in 2020. The CDA Basin Biological Monitoring Report - Riparian Habitat (2013-2015) for OU-2 has been finalized and will be available in February 2020.

Sediment

Sediment data for WY 2019 (October 1, 2018 to September 30, 2019) are summarized below. In 2014 the threshold criteria for sampling of suspended sediment was raised from 20,000 cfs flow to 25,000 cfs at Cataldo. In the past during these events, EPA's contractors have collected high-volume isokinetic sediment samples at bridge locations. Since the bridges are relatively few and widely spaced, the data provide a "snapshot" of conditions but not the spatial and temporal variability of flow and sediment dynamics throughout the flood. Discharge conditions in 2019 did not trigger the threshold criteria for sampling of suspended sediment in the channel.

Due to low spring runoff in 2019, depositional sediment samples were collected at only eleven near-channel locations with expected measurable deposition. River flows in WY 2019 were relatively low; flows did not exceed the over-bank threshold of approximately 20,000 cfs (Cataldo station). Only five in-channel locations had measurable deposition for analysis (Pinehurst, Enaville, Cataldo, Rose Lake, and Spokane River near the Stateline). Bulk lead concentrations ranged from 104 mg/kg at Enaville to 3,570 mg/kg at Rose Lake. Bulk zinc concentrations ranged from 175 mg/kg at Enaville to 3,870 mg/kg at Rose Lake. The BEMP Sediment Sampling Data Summary for 2018 is now available for download from the EPA Superfund Website at: https//semspub.epa.gov/src/collection/10/SC39274.

Part 2 –
Other BEIPC Activities and Responsibilities:

Lake Management Activities

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

As of the summer of 2018, the Coeur d'Alene Tribe determined that the LMP is inadequate, in itself, as an effective tool to protecting water quality in the Lake and the Tribe has been in discussions with IDEQ and EPA to determine what additional mechanisms/actions are needed to manage the hazardous materials in the lake bed sediments. Therefore, although various aspects outlined in the LMP and listed below are essential to continue, additional approaches to augment work conducted under the auspices of the LMP are being contemplated. These discussions will continue during 2020.

Lake management accomplishments in 2019 consisted of the following staff activities:

Science Core Program

- Routine lake monitoring by the Tribe and IDEQ staff continued through 2019.

- Curly leaf pondweed was identified at the Coeur d'Alene Third St. boat launch and Boardwalk Marina late summer 2018. Avista Corporation and Idaho State Department of Agriculture (ISDA) staff coordinated treatment activities in spring and fall 2019.

- IDEQ completed visual rooted aquatic plant surveys along shoreline areas of Coeur d'Alene Lake categorized as low priority in a previous habitat suitability assessment. These areas are surveyed every five years. Surveys were also conducted in higher priority areas, including Bell, Wolf Lodge, and Mica Bays, as well as the Silver Beach and Eleventh Street Marinas. Two known patches in Wolf Lodge Bay were confirmed in 2019. Treatment was coordinated by Avista and ISDA staff. Annual reports of plant surveys are forwarded to Avista. IDEQ is a cooperative partner under Avista's aquatic plant management program.

- The CDA Tribe continued its milfoil control program in southern waters during 2019, including bottom barrier and mechanical harvester treatments. The CDA Tribe is continuing its monitoring of treatment efficacies and native plant communities. The tribe is focusing control efforts at high use public areas such as boat launches, swim areas, and boating lanes. Mechanical harvesting has worked well in opening up these areas to recreational activities. Mechanical harvesting also helps remove the oversupply of nutrients in nearshore areas. The tribe removed approximately 187,000 lbs (wet weight) of aquatic vegetation last summer, which translates to ~74 lbs (dry weight) of phosphorus and ~371 lbs (dry weight) of nitrogen.

IDEQ staff partnered with University of Idaho to advise a graduate student in completion of her thesis report. The project involved monitoring attached algae growth and nutrient levels in northern bays to inform future studies that may help improve understanding of nutrient loading dynamics.

Education & Outreach Core Program

- Tribe and IDEQ staff participated in the Coeur d'Alene Chamber of Commerce "Coeur Fest," a one-day event at McEuen Park that targeted area residents and highlighted natural resources. There were several hundred visitors to the booth, which featured an interactive zooplankton display and resource handouts.

- Throughout 2019, Tribe and IDEQ staff provided updates on lake management activities to a variety of community groups and made various presentations to the public.

- Tribe and IDEQ staff participated in several K-12 educational programs, including The Confluence Project (TCP) for high school students; water science days at Ramsey and Hayden Meadows Elementary; Women in Science Fair at North Idaho College (NIC); and the 3rd annual Coeur d'Alene Water Festival, which hosted over 300 fifth-graders from area schools.

- Tribe and IDEQ worked with partners including Kootenai Environmental Alliance, University of Idaho Community Water Resource Center (CWRC), and area high schools to obtain funding for TCP from the Coeur d'Alene Tribe, allowing the purchase of much-needed equipment for hands-on learning field trips.

- TCP partners hosted the third Youth Water Summit at North Idaho College, hosting more than 400 North Idaho high school students in presenting water science-related research, judged by more than 100 agency and business representatives.

- IDEQ staff continued involvement with the Panhandle Stormwater and Erosion Education Program (SEEP) in partnership with the UI CWRC.

- Tribe and IDEQ staff participated for the 4th year in a training that provides information related to water quality and land use regulation for realtors, reaching 40 realtors. Evaluations indicate its continued popularity.

- Tribe and IDEQ staff continued to work with the Coeur d'Alene Chamber of Commerce Natural Resource Committee to implement the "Local Gems" program.

- IDEQ and CDA Tribe staff continued to collaborate with the UI CWRC and agency partners to conduct Baywatchers workshops for Coeur d'Alene Lake bay community volunteers/liaisons.

- Tribe and IDEQ staff organized the fourth Coeur d'Alene Lake "Our Gem" symposium in Coeur d'Alene in November, with help from the Spokane River Forum. There was good community participation (approximately 200 attendees) and dialogue that has resulted in continued momentum in stakeholder interest and activities.

Nutrient Inventory & Nutrient Reduction Core Program

- A draft basin-wide nutrient inventory report was distributed to the Technical Leadership Group in the fall of 2019, and comments were accepted through the end of the year. The final report will be available in early 2020. This report highlights areas of high nutrient loading as well as areas where more data is needed to determine relative loads.

- A monitoring station placed in lower Wolf Lodge Creek continues to monitor water quality. This will help capture more nutrient loading data and document baseline water quality information prior to upper watershed restoration activities. Additional monitoring on several tributaries to CDA Lake was initiated in 2019 to help fill data gaps identified in the draft nutrient inventory report.

- IDEQ staff continues to be involved in the Coeur d'Alene Tributaries Watershed Advisory Group (WAG). Planning efforts in the Wolf Lodge drainage are ongoing to implement restoration activities in areas identified as priority segments in a channel assessment report developed by the River Design Group. IDEQ staff installed riparian plantings along the banks of Wolf Lodge Creek lower in the watershed in fall of 2019, and planning for streambank stabilization at this site is ongoing.

- IDEQ staff worked with Avista Corporation, NRCS, the Benewah Soil and Water Conservation District, the Idaho Soil and Water Conservation Commission, and private landowners to complete stabilization of eroding banks along the St. Joe River on private recreational lots as well as a larger project on Avista property.

Partnerships with Other Entities

- IDEQ and Tribal staff continued to be involved in the North Fork Coeur d'Alene River, CDA Lake Tributaries, and the St. Joe/St. Maries Rivers WAGs.

- Tribe and IDEQ staff worked with the BEIPC Executive Director to provide Lake management activity updates to the TLG, CCC, and BEIPC during quarterly meetings and for written reports.

- Tribe and IDEQ staff continued coordination with County staff, the CDA 2030 Project, and have continued participation in the Coeur d'Alene Chamber's Natural Resources Committee.

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

Flood Control and Infrastructure Revitalization

Working through the MOA developed and implemented in 2018 for flood control, the BEIPC and the Silver Valley Flood Control Group continued to investigate opportunities to deal with flooding and its impacts on the communities and the Superfund remedies. The formal partnership continued to work with the U.S. Army Corps of Engineers (COE) to complete the analysis for the SFCDA River from Elizabeth Park to Pinehurst by funding the needed surveys of River cross sections by the BEIPC and City of Kellogg's Consultant. The COE and BEIPC Consultant are currently working on preparation of a Flood Map Revision request to FEMA for that reach of the River.

The BEIPC continued to assist Upper Basin communities and utilities in pursuing funding to implement the Upper Basin Drainage Control and Infrastructure Revitalization Plan (DCIRP). As in previous years, a large number of the priority drainage control projects and roads needs in the DCIRP continued to be implemented as Remedy Protection and Paved Roadway Surface Remediation projects included in CERCLA/Superfund cleanup activities. A number of the local utility jurisdictions continued to replace potable water lines and sanitary sewers ahead of road and street actions under the Paved Roadway Program and the remedy protection work was coordinated with the utility work to enhance the accomplishments being made with the funds available.

Restoration Partnership

The Restoration Partnership (Partnership) is a collaborative effort comprising the Coeur d'Alene Basin Natural Resource Trustees which are the U.S. Department of the Interior, represented by the U.S. Fish and Wildlife Service (USFWS) and Bureau of Land Management (BLM); the Coeur d'Alene Tribe (Tribe); the U.S. Department of Agriculture, represented by the U.S. Forest Service (USFS); and the State of Idaho, represented by the Idaho Department of Fish and Game (IDFG) and Idaho Department of Environmental Quality (DEQ). The Partnership's primary mission is to recover the natural resources that were injured by releases of mine waste contamination, and compensate for lost human use services of those resources by developing and implementing projects under the framework of a Restoration Plan for the Coeur d'Alene Basin.

The following Partnership activities occurred throughout 2019:

- The Partnership solicited Restoration Project Ideas from the Trustees and the public in the Spring/Summer of 2019 and received 44 Project Ideas. The Trustees utilized the Project Selection Criteria Matrix for ranking the Project Ideas to determine eligibility and determined that 16 Ideas would advance to Full Application. The Trustees worked with those applicants to develop the full applications of which would be ranked and decisions would be made in 2020.

- Ongoing operations and maintenance continued for wetlands at the Schlepp Agriculture to Wetlands Conversion Project. The construction and implementation of this restoration project has been completed. For more information visit: http://restorationpartnership.org/wetland_restoration_project.html.

Implementation of the following natural resource restoration projects was underway in 2019:

- Conservation Easements along the Coeur d'Alene River corridor by the USFWS.
- Wetland and stream enhancement at Cougar Bay on Coeur d'Alene Lake by BLM and USFWS.
- Development of a native willow plant nursery adjacent to Hepton Lake on the St. Joe River by the Tribe.
- Wetlands enhancement at Hepton Lake on the St. Joe River by the Tribe.
- Projects for the replacement of injured/lost tribal cultural services (fish and culturally significant plants) in the Hangman Creek Watershed by the Tribe.
- Coeur d'Alene Lake monitoring, modeling, and outreach by the Tribe.
- Wetlands restoration planning at Grey's Meadow along the Lower Coeur d'Alene River by IDFG.
- Water Control Structure installation at Black Rock Slough Phase I by IDFG.
- Gene Day Pond Public Access Improvements with the Shoshone County Sportsman Association and sponsored by IDFG.

- Wolf Lodge Creek Stream Restoration and Habitat Enhancement by the Kootenai-Shoshone Soil and Water Conservation District and sponsored by IDEQ.

- LiDAR Acquisition in Priority Restoration Areas by the USFS.

For more information on the Partnership, the Plan or the projects, please visit our website at: www.restorationpartnership.org.

Challenges Ahead

As in past years a great deal of work was accomplished across the Basin in 2019. The cleanup and restoration effort was focused on a mix of items; remediation of human health risks resulting from contaminated residential and commercial properties and public roads; extensive work by the CDA Trust in the EFNM Creek and Canyon Creek drainages on ecological remedies and related human health issues; and EPA directed work to address the contaminated ground water problems and mine discharges in OU-2 noted in the Upper Basin RODA. Human health related projects continue to be a priority, but cleanup work in fish and wildlife habitat areas, and surface and ground water is moving forward with EPA working with the BEIPC, IDEQ, the CDA Trust, other cooperating agencies and stakeholders. The Restoration Partnership is also moving forward with implementation of natural resource restoration actions in the Basin.

Besides the RODA for the Upper Basin, the involved governments and agencies continue to develop project proposals to address Lower Basin human health and ecological issues. Because the CDA River system contains millions of tons of contaminated sediments, a portion of which is moving downstream every year, recontamination from annual flooding is a major concern for any project planned in the Lower Basin. A major question is, should we perform remedial actions on sites in the Lower Basin that have the potential of being recontaminated during spring runoff or high flows due to rain on snow events before we remove or stabilize the contaminated sediments in the beds and banks of the River?

Other major challenges include: management of the ICP by PHD; development of any needed additional waste repositories for disposal of remedial action and ICP wastes; continued implementation of the RODA for the Upper Basin and OU-3 ROD for the Lower Basin; development of a solution to major flooding issues in Lower Pine Creek, SFCDR and Main Stem of the CDA River; and continued coordination with the CDA Tribe and State's efforts to address CDA Lake management issues and the Restoration Partnership to implement natural resource restoration actions throughout the Basin.

As in the past, the ASARCO bankruptcy settlement and the Hecla settlement continue to be the major sources of funding for the environmental remediation and natural resource restoration actions. Careful action through the implementation of the Upper Basin RODA and Lower Basin OU-3 ROD, any additional needed amendments plus diligent work on the part of the Restoration Partnership is necessary to ensure that the available funds are expended in a judicious manner. Current funding projections indicate that the funds from the Hecla settlement for remedial actions will be exhausted soon. Some other source of funding will be needed to carryon remedial actions in the Box because funds from the ASARCO settlement cannot be used in the Box. Assuring sustainable funding intended to advance cleanup as planned in the RODs and amendments, along with operation and maintenance of the implemented remedies, restoration of injured natural resources, and management of CDA Lake continue to represent a significant challenge into the future.

DRAFT

AMENDED RESOURCE PARTNER

2020

ANNUAL WORK PLAN SECTION

2.5 RESTORATION PARTNERSHIP (Partnership) BEIPC 2020 Annual Work Plan Amendment 3/11/2020

The Restoration Partnership (Partnership) is composed of the Coeur d'Alene Basin Natural Resource Trustees, comprised of representatives of agencies/governments who have management and stewardship responsibilities for fish, wildlife, and other natural resources in the Basin. They are the U.S. Department of Agriculture, represented by the U.S. Forest Service (USFS); the U.S. Department of the Interior, represented by the U.S. Fish and Wildlife Service (USFWS) and Bureau of Land Management (BLM); the Coeur d'Alene Tribe; and the State of Idaho, represented by the Idaho Department of Fish and Game (IDFG) and Idaho Department of Environmental Quality (DEQ).

The following natural resource restoration projects will continue to be implemented in 2020.

- Conservation Easements along the Coeur d'Alene River corridor by the USFWS.
- Wetland and stream enhancement at Cougar Bay on Coeur d'Alene Lake by BLM and USFWS.
- Development of a native willow plant nursery adjacent to Hepton Lake on the St. Joe River by the Coeur d'Alene Tribe.
- Wetlands enhancement at Hepton Lake on the St. Joe River by the Coeur d'Alene Tribe.
- Projects for the replacement of injured/lost tribal cultural services (fish and culturally significant plants) in the Hangman Creek Watershed by the Coeur d'Alene Tribe.
- Coeur d'Alene Lake monitoring, modeling, and outreach by the Coeur d'Alene Tribe.
- Wetlands restoration planning at Grey's Meadow along the Lower Coeur d'Alene River by IDFG.
- Water Control Structure installation at Black Rock Slough Phase I by IDFG.
- Gene Day Pond Public Access Improvements with the Shoshone County Sportsman Association and sponsored by IDFG.
- Wolf Lodge Creek Stream Restoration and Habitat Enhancement by the Kootenai-Shoshone Soil and Water Conservation District and sponsored by IDEQ.
- Ongoing operations and maintenance for the Schlepp Agricultural to Wetlands Conversion Project with the landowner sponsored by USFWS.

- LiDAR Acquisition in Priority Restoration Areas by the USFS.

During the last quarter of FY19 the Trustees received 44 Project Ideas of which 16 were advanced to Full Application. During the first quarter of FY20, the Trustees reviewed and ranked the Applications they received from a number of stakeholders and ranked them through the Project Selection Criteria Matrix for eligibility. In December 2019, the Trustees selected 6 restoration projects for funding in 2020. The following projects were selected;

- Cougar Gulch Wetland Enhancement with a private landowner and USFWS and BLM as sponsors.
- Lake Creek Watershed Restoration within Idaho by the Coeur d'Alene Tribe.
- Prichard Creek Phase 1: Conservation Easement and Restoration Planning with the Idaho Forest Group and sponsored by IDEQ.
- Red Ives Creek Restoration and Dam Removal Design by the USFS.
- Trapper Creek Bridge and Fish Passage Project with Shoshone County and sponsored by the BLM.
- Castle Rock Ranch North Fork Coeur d'Alene River Streambank Protection and Riparian Buffer Enhancement with a private landowner and sponsored by IDEQ.

In 2020, there will be ongoing coordination with EPA with remedy and restoration activities and participation in BEIPC and associated groups and committees.

For more information, refer to **www.restorationpartnership.org**.