



BEIPC

Basin Environmental Improvement Project Commission

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Terry Harwood
Executive
Director

February 23, 2021

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

From: BEIPC Executive Director

Subject: BEIPC March 10, 2021 Quarterly Meeting

Enclosed is the meeting packet for the upcoming March 10, 2021 BEIPC Meeting. As discussed and agreed, the Executive Director and BEIPC Staff have made arrangements for attendance at the meeting remotely or in person at the IDEQ Regional Office, 2110 Ironwood Parkway, Osprey Room. Remote attendance and wearing of masks is encouraged as the room has limited space to spread out for health reasons. Following is the WebEx information to attend remotely:

Standard Link for Commissioners, Alternates, Staff and panelist:

<https://watech.webex.com/watech/onstage/g.php?MTID=e445d87f39fbc3760293decfcb7d48873>

Click "Join Now"

You will also receive an official email from WebEx with your personal Link attached so that you are not required to correctly type the long web access Link in. Either the standard link or the personal one you receive will work.

If you only want to join the Audio Conference:

Call the number below and enter the access code.

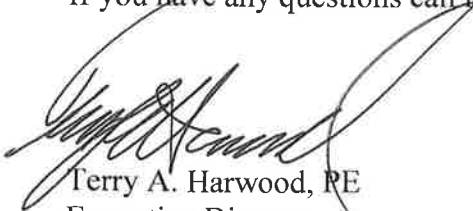
US Toll: +1-415-655-0001 or

Toll Free +1-855-929-3239

Access code: 177 470 6786

We need to elect new officers for the BEIPC so please be prepared to nominate and elect new BEIPC Chair, Vice-Chair and Secretary Treasurer.

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 10 BEIPC Meeting Packet Items

- Meeting Guidelines
- Draft March 10, 2021 Meeting Agenda
- Abbreviations and Acronyms
- Revised BEIPC Organizational Practices and Procedures
- Draft November 18, 2020 meeting minutes
- Draft 2020 Annual Report

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.

Basin Environmental Improvement Project Commission

Draft Meeting Agenda

March 10, 2021 9:30 AM – Noon
IDEQ Regional Office Osprey Conference Room
2110 Ironwood Parkway, Coeur d'Alene, Idaho

Contingent upon current health & safety protocols, the public may attend in person or remotely via the internet and/or telephone. **Remote attendance is encouraged.** To request remote access to this meeting, or to request accommodations for language or disability via the internet and/or telephone, contact Terry Harwood by March 5th at terry.harwood@deq.idaho.gov or 208-783-2528

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| 9:30 AM | Call to Order |
| 9:35 AM | Approve the minutes from the November 18, 2020 BEIPC meeting (Action Item) |
| 9:45 AM | Review and Discuss Draft 2020 Annual Accomplishment Report |
| 10:15 AM | Public Comment and Input on 2020 Annual Report |
| 10:25 AM | Approve 2020 Annual Report (Action Item) |
| 10:35 AM | CDA Lake NAS Review Process Update – Jamie Brunner, IDEQ |
| 10:50 AM | EPA Discussion on Planned 2021 Work including pilot projects in Lower Basin and update on funding in the CDA Trust – Bonnie Arthur & Kim Prestbo, EPA |
| 11:20 AM | Public Comment and Discussion Period |
| 11:35 AM | Nomination and Election of new BEIPC Officers, Chair, Vice-Chair and Secretary/Treasurer – Terry Harwood (Action Item) |
| Noon | Adjourn |

ABBREVIATIONS AND ACRONYMS

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

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

**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 Basin¹ 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 or 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.

DRAFT

BASIN COMMISSION (BEIPC)

November 18, 2020

MEETING MINUTES

Basin Environmental Improvement Project Commission
Draft Meeting Summary Minutes
November 18, 2020 9:30 AM – Noon
IDEQ Regional Office Osprey Conference Room
2110 Ironwood Parkway, 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 discussion or individual quotes

Attendees in person and on WebEx included the following:

Terry Harwood (BEIPC Executive Director)

Commissioners and Alternates present:

Mike Fitzgerald (Shoshone County), Brook Beeler (Washington State), Jess Byrne (IDEQ), Michael McCurdy (IDEQ), Leslie Duncan (Kootenai County), Calvin Terada (EPA), Phillip Cernera (CDA Tribe), Chris Hladick (EPA)

Staff present:

Gail Yost (BEIPC, Assistant to E.D., Note taker), Ed Moreen (EPA), Dan McCracken (IDEQ), Andy Helkey (IDEQ), Sandra Treccani (Washington State), , Rebecca Stevens (CDA Tribe), Dana Swift (IDEQ), Jamie Sturgess (Kootenai County), Jerry Boyd (CCC)

Call to Order and Pledge of Allegiance

The meeting was called to order by Terry Harwood at 9:40 a.m. followed by the Pledge of Allegiance.

EPA requested a few minutes to introduce changes in their staffing, they are as follows:

- Calvin Terada is the permanent Division Director of the Superfund and Emergency Management Division (SEMD).
- Jeff Philip is serving as the Acting Deputy Division Director of SEMD, covering while Sheila Fleming is on a HQ detail.
- Kira Lynch is the Remedial Cleanup Branch Chief of SEMD
- Ed Moreen will fill the SEMD Section 1 Chief position while Jeff Philip is serving as Deputy Director (up to 120 days)

Approve the minutes from the March 11, 2020 BEIPC meeting (Action Item)

Terry gave a brief update on the March 11, 2020 minutes. He had already sent the minutes around for approval, but we needed to take a second look at them and make it official at today's meeting. Brook and Rebecca both had minor changes which were noted for update. Mike Fitzgerald moved to approve the March 11, 2020 meeting minutes; Leslie second, all approved M/S/C

Review and Discuss Draft 2021 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 started with an update on the residential and commercial property remediation, which is pretty much complete. Properties can still be sampled and/or remediated if above action levels for owners granting access. Currently about 213 properties require sampling and 40 properties require remediation in the Upper and Lower Basin; 8 remain to be remediated in the Box. A total of 3,925 properties in the Basin and 3,236 properties in the Box have been remediated at the conclusion of 2020.

The Roadway Surface Remediation Strategy was developed in 2012 in recognition of the road damage caused by heavy truck traffic during remediation work. The purpose of this program was to address the deterioration of paved road surfaces that were underlain by contamination. Almost 600 road segments were identified, and all jurisdictions have now completed their programs. The Paved Roads Board will now prepare a final Remedial Action Report in 2021 to close out the program work.

Andy Helkey will be giving an update on the Lead Health Intervention Program at the next BEIPC meeting in March, 2021. Due to COVID, there was no annual summer screening completed in 2020. PHD continues to offer free lead screening for residents living within the Bunker Hill Superfund Site.

Recreation Use Activities – we are still addressing public use of recreational sites. There is a Recreation Team (EPA, IDEQ, PHD, CDA Tribe, BEIPC and CDA Trust) that meets at least biannually to evaluate and discuss priorities, and addresses human health risks while maintaining the benefits of recreation.

Repository Development & Management - There are currently four 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). The Waste Consolidation Area (WCA) located up Nine Mile is handling waste from the East Fork Nine Mile projects. Development of the Canyon Creek Repository (CCR/WCA) and rebuilding of the Silver Valley Natural Resource Trustee (SVNRT) Repository are also taking place.

Upper Basin Remedies – The Upper Basin RODA identified \$635 million for work in the Upper Basin including work at 125 mine and mill sites. Upper Basin projects include: Tamarack Complex Design and Cleanup; East Fork Ninemile Waste Consolidation Area; East Fork Ninemile Creek Riparian area; SVNRT Repository Remediation and Canyon Creek Complex CCR/WCA; Canyon Creek Quarry; and Douglas Mine and Mill in the Pinc Creek Basin.

Central Treatment Plant/Central Impoundment Area – Wood continues to be responsible for continued operation of the CTP/GWCS and has completed both the design and construction of these upgrades. They will transition operations over to the State of Idaho beginning in October of 2021, which was delayed due to COVID-19.

Lower Basin Remedies – include actions for wetlands and lateral lakes, river banks, splay areas and river bed dredging. 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. EPA will also coordinate with the Restoration Partnership to advance design on IDFG-owned Gray's Meadow to create clean waterfowl feeding habitat.

Basin Environmental Monitoring Program (BEMP) – EPA has continued 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. A comprehensive summary of data collected through the BEMP will be included in the 2020 Five Year Review.

Operation and Maintenance responsibilities for Remedial Actions – CERCLA prohibits EPA from use of funds from the Superfund Account on O&M of remedies. Responsibilities on completed and accepted remedial work may vary.

Other activities and responsibilities include the following work:

- IDEQ Lake Management Activities
- Coeur d'Alene Tribe Lake Activities
- Flood Control and Infrastructure Revitalization
- Communications and Public Involvement
- State of Washington Activities
- Coordination with the Restoration Partnership

Lake Management Activities – The State of Idaho has initiated a third-party review of lake management data by the National Academy of Sciences (NAS) to help inform an appropriate response to undesirable water quality trends. IDEQ staff continues to operate under the LMP as discussions with the Tribe and EPA continue and the third-party review commences and progresses.

Flood Control and Infrastructure Revitalization – The local flood group and the BEIPC will continue to work with the COE and FEMA to update the 2009 Flood Inundation Maps. The working group will also support the City of Pinehurst's request for COE assistance in performing similar flood zone analysis in Pine Creek. The BEIPC will continue to assist Upper Basin communities as well.

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 Restoration Partnership finalized their list of projects that they will continue to implement in 2021 (the list and descriptions are located in the 2021 Annual Work Plan). There will be ongoing coordination with EPA on remedy and restoration activities and participation in BEIPC and associated groups and committees.

Public Comment and Input on 2021 Work Plan

At this time, Mike Fitzgerald opened it up for any comments – which there were none from the commission or the public.

Approve 2021 Annual Work Plan (Action Item)

Rebecca moved that the 2021 Work Plan be approved as presented; Leslie second, all approved
M/S/C

CDA Lake NAS Review Process Update – Jamie Brunner, IDEQ

Jamie presented an update on the NAS scope of work. A contract has been signed to perform a third-party review of the lake water quality data.

The study will address the following:

- Evaluate current water quality in the lake, lower rivers and lateral lakes with a focus on observed trends in nutrient loading and metals concentrations, while also considering how changes in temperature or precipitation could affect those trends.
- Consider the impacts of current summertime anoxia on the fate of the metals and nutrients.
- Consider whether reduced levels of zinc entering the lake as a result of the upgrade to the Central Treatment Plant and other upstream activities are removing an important control on algal growth.
- Discuss whether metals currently found in lake sediments will be released into the lake if current trends continue. If sufficient data are not available to result in a high level of confidence in its conclusions, the National Academies will identify the additional data that are required to achieve an appropriate level of confidence.
- Discuss the relevance of metals release in the lake to human and ecological health.

They appreciate Kootenai County's contribution of \$200,000 and EPA's \$20,000 to this effort. They will also continue to look at nutrient reduction projects and implement those when found. Right now, they are wrapping up a restoration project on Wolf Lodge Creek which they anticipate will reduce nutrient levels. It is being funded by the Restoration Partnership and IDEQ and sponsored by Kootenai/Shoshone Soil Conservation District. Jamie stated there will be a kick-off meeting that has not been scheduled yet, and all partners involved will be invited. Brook asked if the meeting was going to be a public meeting, or more technical in nature; Jamie said more technical in nature as they will be coordinating with the National Academies on how to get them the data they need to be reviewing and how the process is going to work more specifically. She will keep the BEIPC apprised of their activities as well as the "Our Gem" group.

Central Treatment Plant and Lower Basin Project Updates – Ed Moreen & Kim Prestbo, EPA

Ed started with a presentation of the Central Treatment Plant (CTP) and Ground Water Collection System (GWCS). This will be an update from their presentation that was given at the BEIPC meeting in March, in which they were still at the testing phase. A major milestone was achieved in October with the entire system entering the one-year O&M period. It has gone through acceptance testing phases; all systems are operating; GWCS is pumping through the treatment plant; and the CTP is treating the ground water and Bunker Hill Mine water. Data is being gathered, but initial CTP effectiveness has shown a significant drop in Zinc concentrations when compared to the new discharge limits. Lead and Phosphorus are also showing similar results.

Kim Prestbo spoke in more detail about the GWCS, which consists of the 7,000 ft. cutoff wall and a series of extraction wells. The wall was constructed in 2018, with gaps left to allow ground water to continue to flow. In 2019, nine extraction wells were put in place along with a conveyance pipeline to convey the groundwater into the CTP. There were two goals - to improve the treatment capacity

and achieve lower discharge concentration to meet the new criteria. In January 2020, they began pumping water to the CTP and testing the system in full. Last summer, the gaps were closed and aquifer testing done, which was completed along with the acceptance testing for the CTP. This allowed the start of the O&M phase in October. The springtime run-off will test the flows as they continue to monitor, collect data and evaluate through the O&M period. There have been no evidence of Seeps in the SFCDA since March 2020, but is an ongoing part of the monitoring and coordination with Idaho Transportation Department (ITD) as they monitor the freeway.

Rebecca asked Ed about the Phosphorus level being below detection, and if this was at the same time as the sampling event on his slide? He answered that it was common in what they saw in all the sampling.

Lower Basin updates – two major components of the Lower Basin are the In-Channel work and the Off-Channel Flood Plain contamination. EPA is focusing on the Lower Basin river channel to identify pilot project technologies to address contaminated riverbed sediments - working with the LB Project Focus Team and the CDA Trust. In early 2021, the Trust will identify technologies to test in the riverbed for the Dudley Reach pilot project; then begin the Remedial Planning Process (ARAR compliance, pre-design data collection, remedial design, etc.), with construction likely to occur in 2024 or 2025.

Kim gave a quick update on the Gray's Meadow Project – this large wetland project was selected and prioritized by EPA and the Restoration Partnership - to reduce soil metal contamination to safe levels for waterfowl and recreationists; to return agricultural land to clean productive wetland and riparian wildlife habitat; to improve water quality in Black Lake; and to provide clean recreational, educational, and cultural opportunities for public use. This will combine remediation and restoration at the design stage which is very unique. They are proceeding with how to de-water/water transfer out of Black Lake discharge points to points south on the CDA River; and continuing with the ARAR's, compliance and reviews. The working schedule is as follows:

- 60% basis of Design Report/Remedial Action and Restoration Work Plan – Spring 2021
- Cave Lake infrastructure construction – 2021 (March through June)
- Pilot Tilling Study – following completion of Cave Lake infrastructure construction.
- Lamb Peak infrastructure construction – Fall/Winter 2021
- Remediation and Restoration construction 2022-2023

Patrick Hickey EPA talked about the need for a WCA in the Lower Basin due to the pilot projects that are coming up and the potential for waste to be generated. Even though no designs have been made or technologies selected, they felt it important to get the information out to the local community for their input. They published notices in the local newspaper, social media, project web updates and the Basin bulletin, as well as direct mailings to local addresses and various emails. A 2009 developed citizen criteria for repositories was used as a foundation for the public to address concerns or comments. A 60-day period for input, which ended on September 30th, produced about 30 comments total. Suggestions included looking at alternatives for the WCA; support and opposition for dredging; mapping potential siting areas; the potential to use CDA River floodplain and lateral lakes as disposal areas which would then be capped; and adding criteria to include potential economic development once construction and capping were complete. A responsive summary will be sent out to all those who commented and those on the Bunker Hill list later this month. It will also be posted in the Basin bulletin, on the EPA website and CDA Basin Facebook page. A property that was purchased by the Trust on S. River Road could possibly be used for

staging equipment and source material for gravel, rock and cover soil. Geotechnical and characterization studies would be required to verify if this site could be used as a WCA in the future.

Mike Fitzgerald asked what timeline they are looking at in the next year or so. Patrick answered that they are waiting for the completion of the characterization study and the decision on the pilot projects which will be in 2021. The project will need to be decided upon before they can start estimating if they need a WCA, how big it needs to be or where it should be located.

Rebecca gave a couple of updates for interest. There was recently a meeting with the governments that oversee the management of the Trail of the CDA's, the railroads consultant tested the Harrison City Beach this past year and results came back 8ppm Lead which is very low and encouraging. Also, US Fish and Wildlife Service, in the event of an ice-up in the lower lateral lakes, are prepared if deterrent is necessary for migratory waterfowl in the Harrison Slough area.

Public Comment and Discussion Period

A question for Ed came through the chat room – they asked if a waste discharge permit was necessary for the new CTP into the SFCDA? Ed stated because they are performing under CERCLA and could not issue a permit to themselves, they did not need to obtain one; but all analysis was performed for the discharge.

Jamie Sturgess commented on the great progress made in the last year in spite of COVID issues. A year ago, we set out a schedule for EPA to have selected a pilot project remedy by the end of 2020. It has now been ticked up a year to 2021. He urged the EPA to get on with the pilot project testing, even on a smaller scale, so we are not having this same conversation a year from now. Ed clarified when he mentioned 2021 that it was for early 2021 for the pilot project technologies selection. Working in the river is going to be challenging, a lot will need to be learned and acquired to start working in the channel itself. Many things need to be considered including water surface elevation increases – to understand if they will increase significantly or other impacts that may be caused from these projects. They do think about smaller scale as well, but there is a certain scale when you are not accomplishing anything. They want to accomplish a positive outcome in the channel.

Review and Discuss 2021-2025 Five Year Draft Work Plan

Terry reviewed and reported on the five year work plan. This work plan also has two sections – the work under CERCLA by the implementing agencies and other activities. The first part 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; Basin Environmental Monitoring; and O&M responsibilities for Remedial Actions.

Human health activities – the Basin Property Remediation Program (BPRP) will continue at the request of the property owners when access is granted. We will also provide educational resources and health advisories to manage the potential for metals exposure through the consumption of fish. The new Our Gem map is out as well as updated fish advisories. Human health related activities will still be incorporated into the environmental cleanup projects as needed. A Remedial Action report for the Paved Roads Program will be completed in 2021.

The Lead Health Intervention Program – PHD will continue to administer screening of children for elevated blood lead levels. The threshold value for levels in young children is 5 micrograms per deciliter. Due to COVID, no annual screening took place in 2020.

Repository and WCA Development & Management – operation and management will continue at the current repositories with potential site development of future WCA's in the Lower Basin.

Upper Basin Remedies – operate the groundwater collection system and new CTP; heavy focus on the cleanups in Ninemile, Canyon Creek and Pinecreek; and implement source control and water treatment remedies under the Superfund Cleanup Implementation Plan (SCIP).

Lower Basin remedies – continue 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. Terry is very impressed with the work planned at Gray's Meadow this year.

Basin Environmental Monitoring – continue implementing the Basin Environmental Monitoring Program (BEMP) under the updated plan produced in 2020.

O&M Responsibilities for Remedial Actions – Terry briefly covered responsibilities for remedial actions and cleanup work on the site. Each program defines its responsible parties and required maintenance to protect the work completed.

Part 2 – Other Activities and Responsibilities – the five-year work plan recognizes work items the BEIPC will be involved in and items of work needed; it also includes Lake Management activities; flood control and infrastructure revitalization; communication and public involvement; and coordination with Restoration Partnership. Terry quickly addressed these items as some we have already touched on in the 2021 Work Plan. The CCC will continue to be the focus organization to address issues and facilitate public involvement in BEIPC activities.

Mike clarified points of change for the five-year work plan for focus of update as: the O&M Responsibilities; the addition of the NAS study for the Lake; and the Restoration Partnership work. Terry added the work they are all doing on the Flood Mapping changes as well.

Public Comment and Input on Five Year Plan

At this time, Mike Fitzgerald opened it up for any comments – there were two from the public not pertaining to the five year plan, so they will be addressed after the work plan has been approved. There were no other comments from the commission or the public.

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

Leslie made a motion to adopt the five year work plan as presented; Phillip second, all approved
M/S/C

Additional questions from the Public

First question – is there a replacement for Andy Helkey at PHD? Andy answered that Mary Rehnborg has been promoted to that position. She has been with PHD for about 9 years as the ICP manager. There are two additional openings that they are in the process of filling.

Second question – is the La Nina going to raise the possibility of flooding? Terry stated there are changes in the climate; Ed stated they do track the flows very closely because they want to have on-water high-flow sampling of the river to get suspended sediments. La Nina actually results in higher than average moisture so we can expect we will see greater moisture. Does that

mean we will see higher flows, not necessarily – it will depend how it comes in, the timing of such and what the snow pack is doing?

Jerry Boyd stated he has no updates for the CCC, but he is available if needed.

Andy Helkey gave an update on outreach, obviously our in-person outreach events were seriously limited by COVID-19 this year. Their response was doubling up on public service announcements on the radio, increased their presence on social media, and also helped with the property owner packets and educational material that went out under the BEIPC for property owners in the Lower Basin and adjoining waterways. Since there was no annual blood lead screening, they have still been conducting them by appointment the entire time and following up with any elevated results.

Terry updated everyone for next year's plans for BEIPC meetings. He will monitor the COVID situation for the March meeting, which would need to be held in the Spokane Valley. Terry had also postponed the executive session that was to happen today until March's meeting. He is working on the Accomplishment Report and will be sending out requests to everyone for their sections.

Terry recognized Jack Buell for his years of service on the BEIPC -- and a plaque will be presented.

Roll call to all commissioners to adjourn the meeting, all approved **M/S/C**

DRAFT

**BASIN COMMISSION (BEIPC)
2020 ANNUAL
ACCOMPLISHMENT REPORT**

2/10/21

2020 ANNUAL REPORT



*Basin Environmental Improvement
Project Commission*

March 2021

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

Or contact:

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Cover Photo, Overview of Updated Central Treatment Plant in Kellogg, Idaho Treating Bunker Mine Discharge and Contaminated Ground Water From Under the Central Impoundment Area

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 2020, the BEIPC coordinated and monitored accomplishments by various implementing entities for environmental cleanup and natural resource restoration work included in the BEIPC 2020 Annual Work Plan and the five-year operating plan. It also developed a 2021 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 2020:

| Name | Title | Representing |
|-------------------------------|--|---------------------|
| Jack Buell, Chair | Benewah County Commissioner | Benewah County |
| Leslie Duncan | Kootenai County Commissioner | Kootenai County |
| Mike Fitzgerald Vice-Chair | 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 |
| Jess Byrne | 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 2020, the ED and TLG developed the 2021-2025 Five-Year and Calendar Year 2021 draft work plans and studied and developed project and program proposals to implement the remedy in OU-2 and 3.

Public Outreach and Citizen Involvement

Community Involvement

During Calendar Year 2020, the BEIPC held an in-person public meeting in March and a virtual public meeting in November. The scheduled May and August meeting with site tour were cancelled due to the COVID-19 situation. The BEIPC maintained an up-to-date Basin website at: www.basincommission.com. Meeting information was announced on the website, in local newspapers, flyers posted throughout the community and at the BEIPC office in Kellogg, Idaho. The BEIPC also participated in public education/outreach efforts. The joint information booth at the North Idaho Fair was also cancelled due to COVID.

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.

In 2020, no CCC meetings were held due to the COVID situation. Throughout 2020, 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 2020

In addition to receiving various reports for review and comments, CCC members were involved in the following BEIPC activities in 2020:

October

The draft 2021 Annual Work Plan and 2021-2025 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 virtual meeting.

November

At the November virtual BEIPC meeting, the CCC Chair reaffirmed that the CCC would continue to concentrate on holding special meetings when possible 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.

BEIPC Communications and Public Involvement

In 2020, the BEIPC continued its efforts to maintain public involvement in spite of the COVID situation concerning BEIPC activities and communication between the Basin community, the BEIPC and agencies involved in the cleanup. The CCC continued to be the focus organization to help implement this process.

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

- ED met with Kootenai Environmental Alliance in January to update them on Basin cleanup accomplishments and issues.

- ED met with CDA Tribe BEIPC Commissioner to update him on cleanup and natural resource issues in the Basin in February.
- ED met with Kootenai County Natural Resources Board in February to give them an over-view of Basin cleanup activities.
- ED met with the Kootenai County TLG Representative prior to the March BEIPC quarterly meeting to update him on Basin issues.
- ED met with Silver Valley Transportation Team to update them on Superfund activities in the Silver Valley and impacts on transportation facilities.
- ED met with Idaho Congressman Fulcher's North Idaho Representative to discuss Superfund and Bunker Hill Site issues in February and the North Idaho Representative and Washington Office Staff in August to give them a site tour.
- BEIPC Assistant provided assistance to BEIPC groups and Staff on communications material including presentations, brochures, news articles, displays, banners, and advertising.
- Assistant 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.
- Assistant sent out reports and activities updates, CCC and BEIPC meeting notices as well as BEIPC work plans to CCC members by email for review and comment.
- Assistant 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.
- Assistant 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.
- ED 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. BEIPC funded some of the Consultant work.

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. Despite the unique challenges posed this year by the COVID-19 pandemic, we're pleased to report another productive year of important community involvement accomplishments in the Basin.

Highlights include:

- EPA continued to follow its Community Involvement Plan for the cleanup: <https://semspub.epa.gov/src/document/10/100137919>. The plan lays out how community members can get information and be involved, and summarized local concerns and input. It also outlines how EPA collaborates with its partners. Many local people helped develop this plan.
- EPA invited public input on criteria for siting Waste Consolidation Areas in the Lower Coeur d'Alene River Basin. EPA provided background information and announced a 60-day public input period several ways: the July 2020 Basin Bulletin, public notices to four newspapers, a fact sheet mailing to over 2,400 Lower Basin addresses, a listserv message to over 3,000 email addresses, social media posts, and web postings. We also developed a presentation that was posted on the Basin Commission's web page(See next bullet.)
- EPA issued the *EPA Responsiveness Summary: Lower Basin Waste Consolidation Areas Siting Criteria*: <https://semspub.epa.gov/src/document/10/100285186>. The document gives EPA's responses to 31 comments from 8 individuals. We received input from local community members, the Sierra Club, the Coeur d'Alene Tribe, and the Kootenai Environmental Alliance.
- EPA worked with our partners to provide information packets to property owners along the CDA River, to help educate about health risks and ways to reduce exposures to metals. EPA updated its brochure "Healthy Living in the Silver Valley and CDA Basin" to give people practical information about the contamination and tips for staying healthy: <https://semspub.epa.gov/src/document/10/100272444>. This brochure was included in the packet.
- EPA is continuing to partner with IDEQ and Panhandle Health District to increase public health messaging and education related to limiting exposures to heavy metals. New health signs continue to be posted around areas commonly used for recreation. Well over thirty signs have been posted.
- The agency, in coordination with its partners, conducted outreach on several projects this year, distributing flyers locally: Ninemile Basin Summer Fieldwork, Canyon Creek Basin Summer Fieldwork, Trucks Resume Hauling to Lower Burke Canyon Repository, Sampling Resumes at Douglas Mine and Mill Site, Construction Resumes at Canyon Complex Repository, and Canyon Complex Repository project viewscape. Outreach was also conducted for lead health education; the Bunker Hill Central Treatment Plant/Groundwater Collection System Project; soil testing and property cleanups; recreation and health; repositories; habitat restoration; roads projects; and more.
- EPA extended the completion for its fifth Five-Year Review for the Bunker Hill Superfund Site. We expect to complete the final report by late spring/early summer 2021. 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 2020. EPA provides staff support and regular participation at meetings of the BEIPC, CCC, TLG, and PFTs. This year, due to the COVID-19 pandemic, the May and August BEIPC meetings and summer cleanup projects tour were cancelled, and the November meeting was held virtually.
- EPA continues to maintain the website for the Basin Cleanup. It offers the public access to updates, site documents, and background information. Suggestions for improvements are always welcome. (Website URL: www.epa.gov/superfund/bunker-hill)
- 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 2020.
- EPA regularly worked with the media in 2020, 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.

IDEQ and PHD Community Involvement Activities

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

Due to measures taken to help prevent the spread of the COVID-19 virus, PHD followed the CDC guidance and most public outreach and education activities were postponed or canceled. The focus shifted to other methods of outreach.

The following are highlights of 2020 activities:

- Hosted Kellogg Middle School after school program for lead health education at the Staff House Museum. *
- Met with and assisted Coeur d'Alene High School students with senior projects.*
- Assisted with the Confluence Project Snow Science Field Trip with Plummer and Lakeside High School students at Lookout Pass.*
- Hosted booth at Safety Fest.*

- Took part in job shadow program with Coeur d'Alene High School.*
 - Presented at first quarter MSHA required Galena Mine Safety Meetings.*
 - Presented to Wallace High School Environmental Science Students.*
 - Taught handwashing techniques to the entire Silver Hills Elementary School.*
 - Gave tours to Kootenai Medical Center Residents. *
 - Presented to Gonzaga University Students.*
 - Presented the Kootenai County Realtors Association.*
 - Presented to the Coeur d'Alene Chamber of Commerce.*
 - Developed a new ICP brochure.
 - Developed a new "Lead Exposure at work" brochure.
 - Continued to research and develop outreach posters and handouts for future outreach events.
 - Assisted University of Idaho researchers with survey applicants and images for presentations.
 - Published several advertisements in Shoshone News Press.
 - Increased the number of public service announcements on regional radio stations.
 - Ran a 5-week advertisement on Facebook that reached over 20,000 people regarding summer recreation.
 - Updated Fish Advisory outreach materials with current recommendations for the Coeur d'Alene River and Chain Lakes.
 - Updated the Play Clean website: deq.idaho.gov/playclean
 - Followed up on high blood lead referrals from local physicians.
 - Mailed informational packets to private property owners along the Lower Coeur d'Alene River.
- * Occurred before COVID-19 CDC guidance.

Calendar Year 2020 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 2011 – 2020 for children residing in the Basin 6 months to 6 years of age.

| Year | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--------------------|------|------|------|------|------|------|------|------|------|------|
| Number of Children | 75 | 83 | 92 | 77 | 94 | 70 | 105 | 88 | 84 | 4 |
| Min (µg/dL) | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.0 | 1.4 | 1.9 | 1.9 |
| Max (µg/dL) | 12.0 | 8.0 | 16.0 | 11.0 | 13.0 | 9.0 | 20.0 | 9.0 | 14 | 6 |
| Ave (µg/dL) | 3.1 | 3.3 | 2.8 | 3.1 | 3.2 | 3.2 | 4.3 | 2.4 | 2.5 | 3.5 |
| GeoMean (µg/dL) | 2.6 | 3.1 | 2.5 | 2.9 | 2.8 | 2.9 | 3.5 | 2.0 | 1.9 | 3.1 |

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.

For 2020, Panhandle Health District (PHD) followed CDC guidance and suspended the annual summer incentivized screening due to the Covid-19 pandemic. Potential exposure risk for screening participants, compliance with gathering limitations established by Governor’s orders, and shortage of medical personnel all lead to the decision to suspend the screening for 2020. PHD did still offer free screenings by appointment for residents living within the Bunker Hill Superfund Site boundaries.

When an individual is identified with an elevated blood lead, it is recommended their physician be notified and 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 4 children between 6 months to 6 years of age screened in the Basin, 2 individuals over the age of 18 from the Basin received screenings through PHD, both were below minimum detection limit of 1.9 µg/dl. In the Box, 2 children between 6 months to 6 years received screenings through PHD in 2020, both were below the minimum detection limit of 1.9 µg/dl. In addition, 7 individuals over the age of 18, who resided out of the area and work in the Basin, received screenings through PHD, again all were below minimum detection limit of 1.9 µg/dl.

PHD will continue to offer free blood lead screening for residents living within the Bunker Hill Superfund Site boundaries year round. In addition, PHD is planning to conduct its annual summer screening in 2021 with a \$40 incentive for children between ages 6 months to 6 years of age residing within the Basin.

During 2021, 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 schools for 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 | 1,449 |
| 2019 | 30 | 13 | 1,356 |
| 2020 | 9 | 1.3 | 99 |

The CDA Trust BPRP Program collected a total of 67 soil samples from 4 residential and commercial properties throughout 2020. In addition, 7 private drinking water system samples were collected from 2 properties.

The CDA Trust BPRP Program completed remediation of 9 residential properties for a total of 1.3 acres in 2020. The construction season started on June 10th and finished on November 3rd.

At the commencement of 2020, the CDA Trust continued to maintain 6 existing reverse osmosis under-sink water filtration systems treating drinking water from private sources. At the request of the landowner, maintenance ceased in 2020 for the 7th installed system and removal will occur in 2021. This system will be re-installed if future owners' request.

At the conclusion of the 2020 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 did not complete any remediation in the Box this year, as there were not any transfer of ownership or change in access status for the remaining refusal properties. Nine Box properties remain to be cleaned up once owners grant access.

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 ended with 593 eligible road segments based on the original roadway inventory and subsequent reviews by the jurisdictions and Roads Board. Work completed in 2020 included paving projects by Shoshone County and the City of Kellogg.

The local road jurisdictions have completed remediation of 580 roadway segments to date, 254 in the Box and 326 in the Basin. Many of these projects were completed in coordination with Remedy Protection Program 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, Kellogg, and the East Side Highway District have completed their Paved Roads Program. Shoshone County completed all of their paved roads work in the Box during the 2020 construction season. On October 7, 2020 Shoshone County completed the last of their Basin paved roads construction. They also have expended all of their Paved Roads Program funding allotment leaving 13 unaddressed roadway segments.

The Paved Roads program has completed 580 roadway segments varying in widths of 12 to 48 feet. During the 8 years of construction it produced in excess of 95 miles of new and restored roadway surfaces in the Bunker Hill Site with a total Program expenditure of \$47,750,267.

A remedial action completion report will be produced in 2021 to wrap up this successful remedial action.



Bunker Avenue Base Preparation for Paving, Kellogg



Completed Streets in Silverton

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 currently includes a three-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. 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.

Facilities to accommodate disposal of waste from remedial and ICP activities are engineered and constructed to reliably contain materials and prevent contaminants from being released to surface water, groundwater, or air in concentrations that will cause state and/or federal standards to be exceeded. Facilities in current use and development include Repositories that are large, centrally located areas within the Upper and Lower Basin where contaminated soil and material excavated during cleanup and ICP actions are transported to be managed and secured. The second current approach is the use and development of Waste Consolidation Areas (WCAs) in the Upper and Lower Basins, 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.

Five Repositories were operated to receive remedial action and ICP waste in the 2020 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 2020, BCR received waste from BPRP, ICP and Paved Roads Program Projects. Waste streams delivered to BCR were placed on the east slope of BCR.

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 2020, BCR received 32 truckloads from the BPRP, 148 from the ICP, and 2,151 from the Paved Roads Program for an estimated 19,870 cy of waste placed. At the end of the 2020 construction season, the BCR contained approximately 640,335 cy of waste soils. BCR currently has approximately 90,430 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 resulting from winter operations will be transported and stockpiled on top of BCRA repository for processing and future placement and compaction.



Big Creek Repository

Big Creek Repository Annex

In 2020, BCRA received 126 truckloads from the ICP, and 110 truckloads from the Paved Roads Program for an estimated 2,670 cy of waste placed. BCRA currently has approximately 169,961 compacted cy of capacity left for disposal. 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 2020, LBCR received 53 truckloads from BPRP, 1,094 truckloads from the ICP and 278 truckloads from the Paved Roads Program for a total waste placement of 9,490 cy. LBCR currently has approximately 1,048,705 compacted cy of capacity left for disposal. 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 2020, the East Fork WCA received 135,630 cy of waste from remedial actions in EFNM drainage resulting in a compacted volume of 127,845 cy. The total volume of material placed in the WCA to date is approximately 635,981 cy. In 2020 the Phase 3 Expansion of the WCA was completed, including installation of approximately 180,558 square feet of base drainage system throughout the Phase 3 Expansion area, and placement of temporary cover materials over contaminated waste rock and mine tailings at WCA prior to winter shutdown.

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.



Waste Placement Activities at EFNM WCA

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

Construction continued in 2020 on the Canyon Creek Complex Repository and Waste Consolidation Area which is located southeast of the Lower Burke Canyon Repository. This site 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 which currently has contaminated springs leaking from the base of the Repository. Access to the site is being developed to avoid heavy truck traffic around the Canyon Creek residential areas.

East Mission Flats Repository

In 2020, the EMFR repository received 19 truckloads from the BPRP and 273 truckloads from the ICP. Final in-place, compacted volume calculated from the truck load count was about 6,390 cy. EMFR currently has approximately 168,360 compacted cy of capacity left for disposal. 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.



East Mission Flats Repository

Page Repository

Page Repository received 1,685 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 2020 totaled 771 truckloads. In 2020 the ICP storage facility was relocated to this west end of the cell #1 expansion. Moving the storage facility closer to the active disposal cells makes it more efficient in placing the waste for final disposal. The total estimated volume of material placed at Page in 2020 based on the year-end survey was 29,518 cubic yards.

Additional Disposal Locations

In addition to the operational repositories, an additional area for future disposal and permanent storage of mining related contamination is currently being considered. 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.

Mullan ICP Transfer Station

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 Mullan City to maintain. The transfer station will only accept ICP waste from Mullan residents. The Trust will operate the transfer station for the foreseeable future. No waste was transferred from the Mullan ICP for disposal in 2020.

Upper Basin Remedies

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

In 2020, investigations/remedies in the EFNM Creek Drainage consisted of the following:

- Operations and maintenance (O&M) of the Interstate Callahan Mine Rock Dumps, the Success Mine Complex, and Rex Mine No. 2.
- Construction of the second and final year of remedial action for the Interstate Millsite RA project.
- Operation of the EFNM WCA.
- Continued surface water monitoring in EFNM Basin.
- Completion of the 90% design for the Lower EFNM remedial action.
- Completion of the design alternatives analysis for the Dayrock Complex to support future design activities.

In 2020, investigations/remedies in the Canyon Creek Drainage consisted of the following:

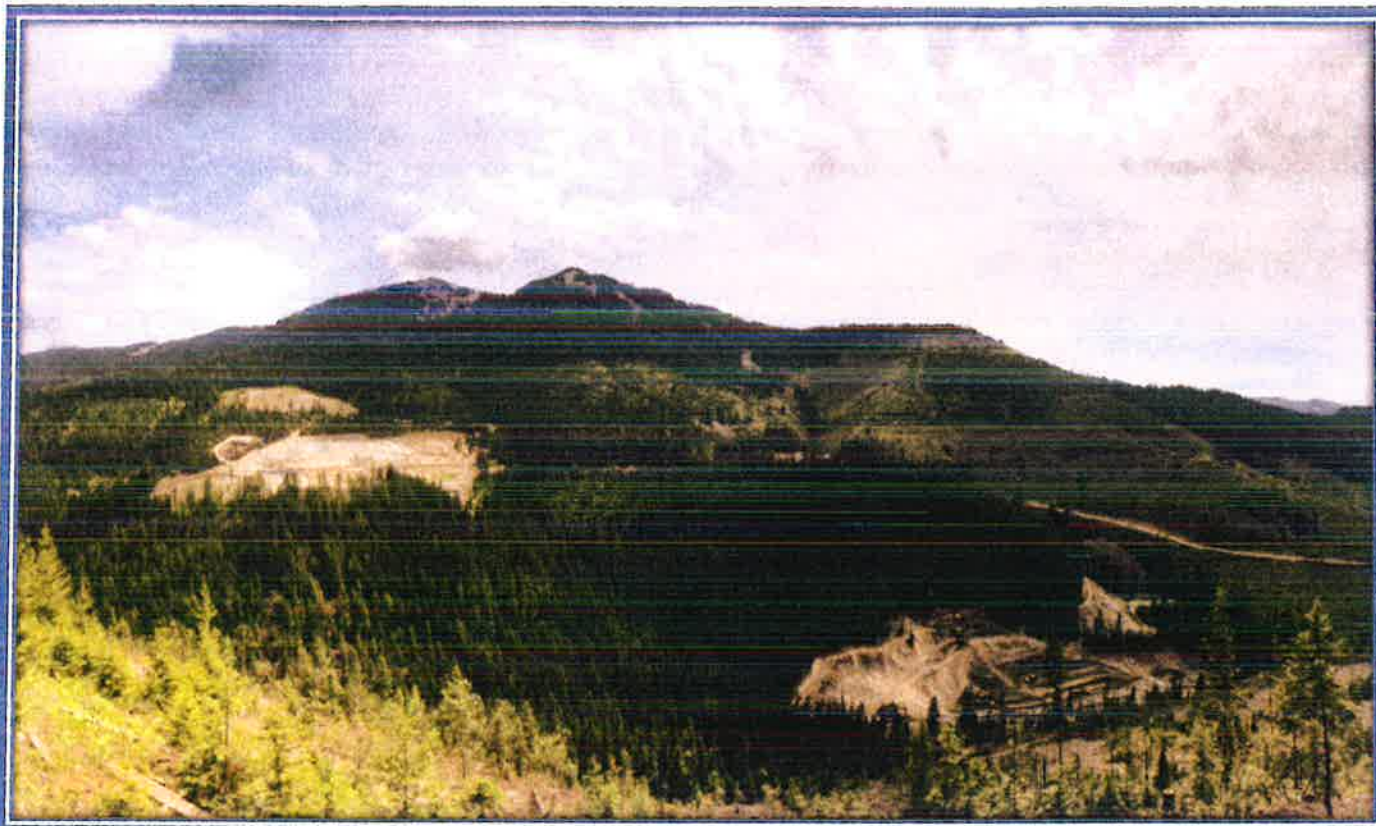
- Conducting characterization and sampling activities at the Hecla Star Complex, Black Bear/Flynn Mines and Tamarack #7 Complex.
- Continued surface water monitoring in the Canyon Creek Basin.
- Construction of the second of four years of remedial action and WCA development for the SVNRT/CCR RA project.
- Construction of road improvements and initial development of the Canyon Creek Quarry (CCQ). The CCQ will supply clean aggregate materials to CCR as well as other future Canyon Creek remedial action projects.

In 2020, investigations/remedies in the Pine Creek Drainage consisted of the following:

- Conducting characterization and sampling activities at the Douglas Mine Complex.
- Completion of the design alternatives analysis and 30% design for the Douglas Mine Complex to support future design activities.

The following summarizes the 2020 construction activities conducted in the EFNM Drainage:

- Approximately 135,630 cy of contaminated waste rock and mine tailings were hauled from the Interstate Millsite and placed and compacted at the EFNM WCA. In addition to the removal of mine waste rock and tailings there was approximately 1,135 feet of Stream Channel that was re-constructed at the Interstate Millsite.



Overview of Site Remediation Area and WCA in East Fork of Ninemile Drainage

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

- The U.S. Army Corps of Engineers (USACE) 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 is charged with administration and management of the contract.
- In October 2020, the CTP upgrades and GCS Project reached a significant milestone by starting the one-year Operations and Maintenance period. In March 2020, the treatment operations were permanently switched over to the upgraded CTP and the onsite Temporary Treatment System (TTS) facility that the Contractor had designed and constructed for continued/uninterrupted treatment during the multi-year construction of the upgraded facility was taken offline. The TTS tanks and equipment were decontaminated onsite and were demobilized in April 2020. The GCS was gradually brought online through the spring of 2020 to begin permanently conveying collected groundwaters from along the north side of the CIA to the CTP in late spring.

- Concurrent with ongoing completion of remaining construction and site restoration activities, Wood began the lengthy testing and commissioning phase in January 2020. This included, but was not limited to, factory acceptance testing, construction acceptance testing, and equipment and system testing of each component prior to testing the integrated CTP and GCS facility. The testing included the first phase of the series of peak capacity tests, which will be followed by the second and final phase for peak capacity testing during 2021 spring high flows. The commissioning phase in 2020 also included a series of pump, well, and aquifer tests for the GCS. This included, but was not limited to, individual well tests, compensating wells tests, and combined well tests. A second series of combined well tests will be performed during 2021 spring high flows.
- The Contractor's CTP/GCS operator staff received formal training on all systems during 2020. Similar tailored training will be provided by Wood to the follow-on operations contractor.
- The GCS portion of the project includes an approximately 8,000-linear feet by approximately 35 feet deep soil bentonite cutoff wall (cutoff wall) between the CIA and Interstate 90 (I-90), nine extraction wells equipped with pumps and instrumentation for measuring water elevation, discharge pressure, and discharge flowrate; a network of observation wells with instrumentation for measuring water elevation; and a system for conveying water from the extraction wells to the CTP. An additional three extraction wells were installed but were not put into service due to lower than anticipated well yield. An automated data acquisition system monitors water levels and extraction flow rates and controls pumping rates to maintain groundwater levels in select wells at specified elevations. Wood closed the remaining gaps in the cut off wall in June 2020 and GCS testing continued throughout the summer as part of the integrated testing of the facility.
- After completion of testing activities on the CTP/GCS and Sludge Impoundments System, Wood initiated the one-year operation and maintenance period on October 21, 2020, as required under the current contract with USACE. The purpose of the 1-year O&M phase is for the Contractor to continue operations of the upgraded facility through a full year, and through the various seasonal and influent flow/quality conditions to proof out the system and to implement and incorporate any necessary system and/or operational revisions. As stated above, additional high flow/high strength acceptance testing will be completed during the high flow period in spring 2021. In October 2021, operations will then transfer to IDEQ.
- EPA and IDEQ continue to monitor the performance of the GCS during full operations which began consistently in August/September 2020. This includes South Fork Coeur d'Alene River (SFCDR) water quality in the vicinity where historic seeps had been observed prior to construction and visible sediment plumes were discovered in the river in December 2018 after the cutoff wall was constructed. In February 2019, EPA was notified of an approximately six-inch subsidence in the road surface on I-90 north of the GCS cutoff wall and adjacent to visible sediment plumes that were discovered in the SFCDR. During 2019 EPA increased efforts to investigate the plumes and provide interim mitigation if necessary while completing construction and startup of the extraction wells. Monitoring will continue to further understand the phenomenon. No seeps have been observed in 2020 except for a short period in March. Idaho Transportation Department (ITD) continues to monitor the settlement on I-90 but have reported no significant changes in 2020.
- 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 collected from the GCS near the CIA. The Bunker Hill Mine water has been and continues to be treated at the CTP.

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The upgraded CTP is sized 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 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 must be in compliance with current water quality standards.

- On an average basis the upgraded CTP and GCS, as selected in the RODA, will result in significant removal of dissolved metals, the most notable of which is zinc that is currently being discharged to the SFCDR from groundwater interaction. Historic estimates of loading to the SFCDR range from 150 to 450 lbs/day but there is a significant unknown about the potential source of metals that may not be captured by the GCS. Base flow/strength typically occurs in late summer or early fall and maximum flow/strength typically occurs during spring runoff. It will take several years to observe the seasonal and annual variability and effectiveness of the remedy.

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 include reducing risks to human health and wildlife by reducing exposure to particulate lead and improving habitat quality in the CDA River system. Remedies that address human health or ecological exposure, coupled with continued evolution of our understanding of sediment transport and recontamination in the Lower Basin, are interconnected with natural resource restoration actions.

The Adaptive Management Project Management Plan (PMP) for the Lower Basin was finalized in July 2020 (EPA, 2020). This document relies on the framework and site principles developed in the Lower Basin Strategic Plan (EPA 2018). The Adaptive Management PMP outlines the process for implementing, monitoring, and adapting pilot projects and remedial actions in the Lower Basin within three identified focus areas: human health/recreational sites, source control, and wetland/lateral lakes. The PMP is part of a nation-wide pilot study to demonstrate how adaptive management can be implemented at a large complex mining site. Under the Adaptive Management PMP, the prioritization process will be iterative, and conducted periodically as needed based on funding, knowledge, opportunities, and experience gained from implementation and subsequent monitoring.

In February 2020, EPA met with the Lower Basin PFT to discuss progress on the habitat remediation and restoration project at Gray's Meadow (formerly Black Lake Ranch) and evaluation of pilot projects for source control in the channel. These focus areas were selected through the 2018 prioritization process involving EPA, agency partners, the Restoration Partnership, and members of the CCC. A third focus area included ongoing human health intervention projects and strategies for reducing exposure at Lower Basin recreation sites.

Gray's Meadow is a collaborative effort between the EPA, the CDA Trust and the Restoration Partnership to remediate and restore approximately 700 acres of publicly owned contaminated agricultural land to clean, diverse, productive wetlands and riparian waterfowl/wildlife habitat. Investigation work in 2020 included soil (sonic and direct-push drilling), groundwater, and surface water monitoring. Soil sampling occurred at 140 locations for environmental and physical parameters. The 30 percent design was completed and reviewed by multiple stakeholders. The 60 percent design will be completed during the first quarter of 2021.

As part of the 60 percent design process, informed by the data and stakeholder input, EPA prioritized water management to relocate the historic discharge from Black Lake to the Coeur d'Alene River. A design to relocate the discharge point for the Cave Lake field to the Coeur d'Alene River is being finalized and, pending final review, the new outfall will be constructed during the winter of 2021 when water levels are low.

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. EPA completed Year 3 of sediment monitoring after application of a soil cap over an expanded test area. Nine sediment core samples were collected and analyzed for lead concentration and aerial photography was obtained to document vegetation recovery. The results indicate that thin-layer capping may be effective in reducing lead exposure to waterfowl compared to the underlying native lead-containing sediment while maintaining the integrity of local wetland vegetation. EPA also continued 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. Lab test results were received in December 2020 and February 2021 and are currently under review.

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. The riverbed consists of over 1,200 acres and contains approximately 5-10 million cubic yards of contaminated sediment. EPA has developed several alternatives for testing in the Dudley Reach, including capping, dredging and riverbed weirs. In 2020, EPA completed a Pilot Project Alternatives Analysis to further refine the target area and develop and evaluate candidate projects, including Class 4 cost estimates and screening - level modeling analysis to assess potential effectiveness and characterize potential system responses. A Draft Riverbed Management Plan is currently under review that describes an approach for the entire Lower Basin riverbed below Cataldo and divides the riverbed into sediment management areas (SMAs) as a starting place to conceptualize addressing the riverbed source areas throughout the channel and help facilitate remediation planning. Remedial technologies were assessed for potential effectiveness (lead load reduction), system responses (changes in flood water levels), and implementability. The approach includes an initial integrated remediation scenario for the entire riverbed.

In 2020, data collection efforts associated with the river channel included the following:

- Sediment sampling at 61 locations using vibracore and direct push drilling in Dudley Reach and Killarney Lake peninsula;
- Erosion pin monitoring at 10 locations in the riverbed in Dudley Reach, including surface sediment characterization;
- Erosion pin installation and riverbank sampling at 25 locations in the Coeur d'Alene River;
- Beach sediment characterization.

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, several efforts were undertaken in 2020 including airing radio announcements, staffing informational booths, and providing educational presentations to school students

and installation of new information signage in use areas. The purpose of these activities was to provide health tips to reduce risks of exposure to heavy metals for 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.



CDA River Bed Analysis Work

State of Washington Projects

A periodic review evaluating the overall status of the Spokane River beach sites was planned for 2020, but was put on hold because additional sediment data was planned to be collected in late 2020 for another site in the Spokane River. We wanted to include that data in the beach site review as it will reflect metals loading in river sediments. That sediment sampling was completed in 2020, and the periodic review is now planned for 2021. It will include a complete survey of each of the remediated beach sites along the Spokane River in Washington that was conducted in 2018, including results from XRF analyses and the observations summarized in a technical report dated June 2019, and the sediment sampling from the site downstream of the beaches. 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 2020 included sampling, remediation, and public education/outreach activities for areas in both the Box and Basin. New health information signs were developed and installed to inform users of contamination and provide consistent health messaging. Fourteen new signs were installed at Lower Basin locations and three new signs were installed at Upper Basin locations. New signage in the Lower Basin focused on replacing health messaging signs at informal river access points and beach areas. 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. In 2020, IDEQ and the Coeur d'Alene Tribe updated and reprinted the Our Gem map of Coeur d'Alene Lake and disseminated maps to numerous governments, agencies, interest groups, stakeholders, Lower Basin residents, local realtors, and local Chambers of Commerce. Additional maps will be disseminated at boat inspection stations and other groups starting in the Spring of 2021 considering COVID-19 pandemic guidelines.

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. A cleanup plan has been selected for Theater Bridge River Access and work is under contract to commence in 2021. Two new signs were installed on IDEQ property at a popular swimming area northwest of Theater Bridge. A cleanup alternative is under development for the Airport River Walk with work expected to be implemented in 2021.

2020 cleanup work in the Basin focused on the following recreation sites: Medimont boat launch, Rainy Hill boat launch, Anderson Lake boat launch, Thompson Lake boat launch, East of Rose Lake boat launch, Burke Canyon informal recreational area, and the remediated Lower Constitution Millsite in Pine Creek where recreational activity has been observed. Approximately 21,570 square feet were remediated with clean barriers installed during cleanup work in 2020. At four boat launches, willows and/or alders were planted to discourage families from recreating on soils near the CDA River that are re-contaminated with yearly flooding, and bare soil areas were hydroseeded to promote vegetation establishment. At the Rainy Hill and Medimont boat launches, concrete pavers were installed around existing informational signs. These concrete pavers can be washed off, in conjunction with the existing asphalt paved parking areas, after high water events to remove any accumulated sediments deposited at the boat launches.

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Initial actions such as concrete pavers or enhanced vegetation will continue to be evaluated in areas where ongoing recontamination due to flooding is a concern.

Sampling occurred at the following new potential recreational sites: Killarney Lake Peninsula and the Beach across from Black Rock Trailhead. The Trust continued to evaluate other recreational areas in the Lower Basin for future cleanup work, in addition to the Cataldo Boat Launch planning. The 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, East of Rose Lake, and Medimont. The sites selected included public boat launches and picnic areas that do not have running water.

Basin Environmental Monitoring

EPA completed review of the draft updated CDA Basin Environmental Monitoring Plan (BEMP) in 2020 and the draft final document is currently under review by the partner agencies and the Coeur d'Alene Tribe. The BEMP provides 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 BEMP is to design efficient data collection plans to support site-wide management decisions. 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 scheduled for completion in 2021 that will provide 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 will be 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 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 Draft Final Area-wide RA Effectiveness Monitoring Plan for Ninemile Basin was completed in 2020 that is also currently under review along with the BEMP.

During 2020, United States Geological Survey (USGS), IDEQ, USFWS and EPA continued BEMP sampling. Specific activities are outlined below.

Surface Water

In 2020, 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 late June and early 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 sixteen 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 late April. Spring snowmelt runoff peaked in May throughout the basin; the peak was generally of shorter duration than, but similar in magnitude to, the historic median runoff peak. Recessional samples were collected over the last two days in June and first two days in July. Fall samples were collected in September 2020 and captured baseflow conditions.

The USGS completed a long-term trends analysis of trace metal and nutrient concentrations and loads in the Basin in support of the Five-Year Review. The analysis, data and final report were published in September 2020 and are available online at <https://doi.org/10.3133/sir20205096>.

All gaging station stream discharge and water-quality records for the BEMP gages for Water Year (WY) 2020 were worked up, approved, and are furnished electronically at <https://waterdata.usgs.gov/id/nwis/current/?type=BEMP>. The annual data summaries will be completed and delivered to EPA during the first quarter of calendar year 2021.

Groundwater

In 2020, IDEQ submitted the Five-Year Analysis and Assessment Report for OU-2. IDEQ has administered the groundwater monitoring program for OU-2 since 2014. The report summarizes groundwater monitoring activities performed from spring 2015 to spring 2018 and provides a data analysis and assessment. The groundwater monitoring program has evolved through adaptive management and reflects optimization activities performed by EPA during 2015. During this period, monitoring focused on establishing seasonal baseline conditions for groundwater quality prior to construction of the groundwater collection system (GCS), which began in 2018. The program in recent years was narrowed to include only wells that did not have a complete data set to establish baseline. The report provides a statistical analysis (including baseline) of those remaining wells.

Groundwater monitoring in 2019 and 2020 focused on the GCS which completed construction in December 2019. Groundwater monitoring was not performed during high flow in 2020 due to construction during closure of the gaps in the cutoff wall. However, during base flow in October, 78 wells were sampled for metals, phosphorus, and other parameters to capture a complete baseline data set across the site that reflects the initial conditions of groundwater quality following the startup of the GCS. EPA and IDEQ are currently reviewing preliminary data from this baseflow sampling event. Water level monitoring continued through 2020 with approximately 50 in situ transducers installed across site. The next water quality monitoring effort will be performed during high flow around May 2021.

Biological Resources

USFWS conducts annual waterfowl surveys from early February to late April in lower Basin floodplain wetlands recording observations of waterfowl use and tundra swan mortalities, but these surveys were cut short in 2020 due to restrictions associated with the COVID pandemic. Several reports were completed during 2020 that summarize the long-term monitoring that has occurred in OU-2 and OU-3.

- Coeur d'Alene Basin Biological Monitoring Report Riparian Habitat (2013-2015) Bunker Hill Mining and Metallurgical Complex Superfund Site Operable Unit 2
- Coeur d'Alene Basin Biological Monitoring Report Palustrine/Lacustrine Habitat (2013-2017) Bunker Hill Mining and Metallurgical Complex Superfund Site Operable Units 2 and 3

- Coeur d'Alene Basin Biological Monitoring Report Lacustrine/Palustrine Habitat - Waterfowl Surveys (2018-2019) Bunker Hill Mining and Metallurgical Complex Superfund Site Operable Units 2 and 3

Sediment

Suspended sediment sampling is conducted to obtain information regarding the amount and characteristics of sediment being transported at specific times and locations in the river system. EPA contractors currently collect suspended sediment sampling opportunistically by boat during large floods only, to supplement the USGS sampling program. The threshold criterion for conducting opportunistic sampling of suspended sediment is approximately 25,000 cubic feet per second (cfs) at Cataldo (USGS station 12413500). The Water Year (WY) 2019 and WY 2020 flow at Cataldo did not meet the threshold criterion; therefore, no boat-based sampling and data collection were performed.

Depositional sediment sampling is conducted at defined locations throughout the Lower Basin to provide data on the amount and characteristics of sediment deposited by high-flow events. Samples are collected as soon as practicable after floodwaters recede. Depositional sampling stations in the Lower Basin include 11 within-bank (near-channel) "stake" locations and 5 off-channel "tile" locations and are used to assess sediment deposition rates and characteristics in shallow lakes and wetlands. An additional near-channel depositional sampling station is located downstream from Coeur d'Alene Lake and Post Falls Dam on the Spokane River to assess the physical and chemical characteristics of sediment carried beyond Coeur d'Alene Lake. An additional 49 supplemental tile sampling stations were installed to provide additional resolution regarding deposition rates and sediment characteristics in floodplain areas.

River flows in WY 2019 and WY 2020 were relatively low; flows did not exceed the over-bank threshold of approximately 25,000 cfs (Cataldo station), so off-channel tile locations were not inundated. BEMP near-channel depositional sediment samples were collected in May for WY 2019, and July for WY 2020. No supplemental stations were visited or sampled. Most of the BEMP stations visited both in WY 2019 and WY 2020 exhibited the characteristics of low-energy flows, with limited deposition.

The BEMP Sediment Sampling Data Summary for 2019 and 2020 will be available for download from the EPA Superfund Website.

Part 2 –

Other BEIPC Activities and Responsibilities:

Lake Management Activities

The Coeur d'Alene 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 protect water quality in the Lake. The Tribe withdrew their support as a signatory government to the LMP in 2019. In 2020, the State of Idaho, with support from Kootenai County and EPA and endorsement by the Tribe, contracted with the National Academy of Sciences to conduct a third-party review of Lake-related data. The work plan for the review includes the following:

- Evaluate current water quality in the lake, lower rivers and lateral lakes with a focus on observed trends in nutrient loading and metals concentrations, while also considering how changes in temperature or precipitation could affect those trends.
- Consider the impacts of current summertime anoxia on the fate of the metals and nutrients.
- Consider whether reduced levels of zinc entering the lake as a result of the upgrade to the Central Treatment Plant and other upstream activities are removing an important control on algal growth.
- Discuss whether metals currently found in lake sediments will be released into the lake if current trends continue. If sufficient data are not available to result in a high level of confidence in its conclusions, the National Academies will identify the additional data that are required to achieve an appropriate level of confidence.
- Discuss the relevance of metals release in the lake to human and ecological health.

Discussions among the Tribe, IDEQ and EPA have continued in order 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 reconsidered by the Tribe. These discussions are ongoing.

Lake management accomplishments in 2020 consisted of the following staff activities:

Science Core Program

- Routine lake monitoring by the Tribe and IDEQ staff continued through 2020.
- 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 monitoring and treatment activities in spring and fall 2020. IDEQ is a cooperative partner under Avista's aquatic plant management program and participate in monitoring activities and treatment option discussions.
- IDEQ coordinated with Avista staff to complete 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. Rooted milfoil was detected at Turner Bay and Twin Beaches. These areas had no previous milfoil detected. Other low priority areas surveyed included Aberdeen Lodge, Sun Up, and 16 to 1 Bays.

Surveys were also conducted in higher priority and high use areas. Rooted milfoil was detected in Bell, Blue Creek, Carlin, Cougar, Mica, Windy, and Wolf Lodge Bays as well as the Higgins Boat Launch. Milfoil was also detected in Anderson, Thompson, Blue, Black, Swan, Cave, Medicine and Killarney Lakes. Other high priority/high use areas surveyed included Beauty Bay, Kid Island, Loffs, Neachen, and Rockford Bays; Silver Beach Marina; 11th Street Marina; Delavan's Marina and Boat Ramp; and Mineral Ridge Boat Launch.

- The CDA Tribe continued its milfoil control program in southern waters during 2020, 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. Harvesting also helps remove the oversupply of nutrients in nearshore areas. The tribe removed approximately 194,489 lbs. (wet weight) of aquatic vegetation last summer, which translates to ~76 lbs. (dry weight) of phosphorus and ~371 lbs. (dry weight) of nitrogen.

Education & Outreach Core Program

- Throughout 2020, Tribe and IDEQ staff provided updates on lake management activities to a variety of community groups and made presentations to the public.
- Due to the COVID-19 pandemic, The Confluence Project (TCP) committee worked with a consultant to begin developing virtual outreach materials for high school students and teachers in North Idaho and continued to provide field trip opportunities where COVID restrictions allowed.
- The Our Gem Coeur d'Alene Lake Collaborative worked throughout 2020 to provide regular articles in the CDA Press related to Coeur d'Alene Lake and water quality to keep this subject present in the community. They also organized a virtual 2-week speaker series that was well-attended and received positive feedback. The Collaborative is made up of the Tribe, IDEQ, U of I Community Water Resource Center (CWRC), Kootenai County, Kootenai Environmental Alliance, CDA2030, and the Coeur d'Alene Regional Chamber of Commerce.
- IDEQ staff continued their involvement with the Panhandle Stormwater and Erosion Education Program (SEEP) in partnership with the U of I CWRC.
- Prior to the pandemic stay at home order issued by the Governor, Tribal and IDEQ staff participated for the 5th 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 Regional Chamber of Commerce Natural Resource Committee to implement the "Local Gems" program through virtual meetings.
- IDEQ and CDA Tribe staff continued to collaborate with the U of I CWRC and agency partners to conduct Baywatchers workshops for Coeur d'Alene Lake bay community volunteers/liaisons utilizing combined virtual and in-person meetings with appropriate safety measures in place.

Nutrient Inventory & Nutrient Reduction Core Program

- A draft basin-wide nutrient inventory report was distributed to the TLG for comments and was finalized in May 2020. The final report is available on the IDEQ lake management web page (<https://www.deq.idaho.gov/water-quality/surface-water/coeur-dalene-lake-management/>). 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 water quality information as upper watershed restoration activities are pursued. Additional monitoring on several tributaries to CDA Lake was initiated in 2020 to help fill data gaps identified in the draft nutrient inventory report, and this monitoring is ongoing.
- 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 worked with the Kootenai-Shoshone Soil and Water Conservation District to implement restoration along Reach 3 from the River Design Group assessment report, which restored floodplain connectivity and stabilized banks along approximately 2,000 feet of the stream.
- IDEQ staff installed willow hardwood cuttings along the banks of Wolf Lodge Creek lower in the watershed in fall of 2020. This was the second year of willow cutting and installation efforts to stabilize eroding banks in this area. Cuttings from the previous year had high survival rates and bank stability appears to be improving. This site will be monitored, and stabilization efforts through vegetative establishment will continue.
- 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 (all meetings were held virtually due to the pandemic)

- IDEQ and Tribal staff continued to be involved in the Panhandle Basin Advisory Group meetings, which were held virtually.
- Tribe and IDEQ staff worked with the BEIPC Executive Director to provide Lake activity updates to the TLG and BEIPC during Zoom 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 via Zoom meetings.

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 in the Upper Basin, the BEIPC and the Silver Valley Flood Control Group continued 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. 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 City of Pinehurst requested assistance from the COE to perform a similar hydraulic analysis of the Pine Creek drainage in anticipation of a flood mapping change request to FEMA for the Pinehurst area. The COE awarded a grant to Pinehurst for that purpose in November.

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 road improvement needs in the DCIRP continued to be implemented as 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.

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 (IDEQ). The Partnership's primary mission is to develop and implement a restoration plan to help restore the health, productivity, and diversity of injured natural resources from releases of mine waste contamination and the services they provide in the Coeur d'Alene Basin for present and future generations. This includes compensation for lost human use services of those resources by developing and implementing projects under the framework of a Restoration Plan for the Coeur d'Alene Basin. The following Partnership activities occurred throughout federal fiscal year 2020:

- The Trustees completed the application review process and approved funding for six new projects in January 2020: 1) Trapper Creek Bridge and Fish Passage with Shoshone County, 2) Cougar Gulch Wetland Enhancement (Johnson parcel), 3) Lake Creek Stream and Watershed Restoration, 4) Red Ives Creek Restoration and Dam Removal Design, 5) Castle Rock Ranch North Fork Coeur d'Alene River Riparian Restoration, and 6) Prichard Creek Phase 1: Conservation Easement and Restoration Planning.
- The Partnership continued support for ongoing operations and maintenance by USFWS, Ducks Unlimited, and private landowners 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.
- The Trustees continued to test and refine their administrative processes for implementing the natural resource restoration projects that have been underway since 2018 and coordinated quarterly reporting and site visits with the Project Sponsors and Project Leads as appropriate.

- Implementation of the following 21 projects continued in 2020 with the exception of some work being delayed due to the COVID-19 pandemic. The amounts expended in 2020 are noted with a brief narrative of work that was completed.
 - Wetland and stream enhancement at Cougar Bay on Coeur d'Alene Lake (BLM and USFWS sponsors).
 - Funds Allocated: \$282,000
 - Amount Expended: \$243,064
 - 2020 Activities: A conceptual plan for the wetland improvements, including the new channel, as well as pond excavation and mound areas. While working with USFWS and Ducks Unlimited: mowed the reed canary grass and prepared site for additional treatment. Construction is planned for 2021.
 - Cougar Gulch Wetland Enhancement (Johnson parcel) (BLM and USFWS sponsors).
 - Funds Allocated: \$125,000
 - Amount Expended in 2020: \$0
 - 2020 Activities: Site survey and conceptual plan for wetlands improvements completed.
 - Development of a native riparian plant nursery adjacent to Hepton Lake and the St. Joe River (CDA Tribe sponsor).
 - Funds Allocated: \$205,462
 - Amount Expended in 2020: \$57,821
 - 2020 Activities: 2 acres reed canary grass treated and site was prepped for 2021 plantings.
 - Cultural Harvest opportunities in the Hangman Creek Watershed (CDA Tribe sponsor).
 - Funds Allocated: \$97,335
 - Amount Expended in 2020: \$4,774
 - 2020 Activities: Secured 75 adult Chinook salmon from the Leavenworth National Fish Hatchery and released them into Hangman Creek for Tribal members to utilize traditional fishing techniques in this portion of Hangman for the first time in over a century.
 - Culturally Significant Plants in the Hangman Creek (CDA Tribe sponsor).
 - Funds Allocated: \$187,770
 - Amount Expended in 2020: \$25,986
 - 2020 Activities: 4 acres with native camas seed broadcasted, purchased 1,900 culturally significant tall-one planting stock, and 400 western red cedar tall ones to be planted in 2021.
 - Coeur d'Alene Lake Monitoring and Modeling (CDA Tribe sponsor).
 - Funds Allocated: \$268,668
 - Amount Expended in 2020: \$77,234
 - 2020 Activities: collected and analyzed water quality samples from 4 sites, 6 times throughout the year, and completed the time-series trend analysis for metals and nutrients.
 - Coeur d'Alene Lake Education and outreach (CDA Tribe sponsor).
 - Funds Allocated: \$81,008
 - Amount Expended in 2020: \$36,382
 - 2020 Activities: Due to the COVID-19 pandemic no in-classroom instruction, however, converted all curriculum into a virtual database for the teachers in the Idaho Panhandle, re-printed the Our Gem Coeur d'Alene Lake Map, and submitted monthly factual based Our Gem Collaborative articles to the Coeur d'Alene Press.

- Hepton Lake (*Gul Hnch'mchinmsh*) Wetland Restoration Planning (CDA Tribe sponsor).
 - Funds Allocated: \$ 210,900
 - Amount Expended in FY20: \$98,602
 - 2020 Activities: 1) Biological Evaluation/Assessment to USFWS for Section 7 of ESA Compliance, 2) Clean Water Act Section 401 Water Quality certification was approved, 3) Cultural Resources Inventory and Assessment was completed to comply with the National Historic Preservation Act, and 4) US Army Corps of Engineers (COE) 404 application was submitted in March 2020 and is being reviewed by COE.
- Wetlands restoration planning at Gray's Meadow (IDFG sponsor).
 - Funds Allocated: \$ 250,000
 - Amount Expended in 2020: \$30,849
 - 2020 Activities: The 30% design documents were released for stakeholder review and comment, surface and groundwater monitoring, soil characterization and geotechnical borings, coordination with EPA CERCLA remedial efforts, and public stakeholder involvement.
- Gene Day Pond Fishing Access (IDFG sponsor)
 - Funds Allocated: \$25,000
 - Amount Expended in 2020: \$0
 - 2020 Activities: Administrative lease agreements underway and plans for construction being developed.
- Black Rock Slough Wetland enhancement (IDFG sponsor)
 - Funds Allocated: \$75,000
 - Amount Expended in 2020: \$24,100
 - 2020 Activities: Phase I of project is ongoing and construction of water control structure has been installed.
- St. Joe River Streambank Stabilization and Vegetation Project (IDEQ sponsor with Benewah Soil and Water Conservation District)
 - Funds Allocated: \$3,500
 - Amount Expended in 2020: \$3,500
 - 2020 Activities: The project is now complete. Streambank and riparian restoration including rock, willow bundles, and cottonwood trees was implemented on ten private properties on the St Joe River. The project treated a total of 1,450 feet of streambank and approximately 0.5 acres of riparian zone.
- Wolf Lodge Creek Reach 3 Stream Restoration and Habitat Enhancement Project (IDEQ sponsor with Kootenai-Shoshone Soil and Water Conservation District)
 - Funds Allocated: \$195,814
 - Amount Expended in 2020: \$26,054
 - 2020 Activities: Engineering designs were completed, permits obtained and construction is underway with large woody debris installation and native willow plantings. The project includes stream restoration along 2,000 feet of Wolf Lodge Creek on two private properties. The project will be completed in 2021.

- Conservation of Agricultural to Wetlands Conversion Properties within Canyon Marsh (USFWS sponsor with the Inland Northwest Land Conservancy).
 - Funds Allocated: \$801,480
 - Amount Expended in 2020: \$12,774.55
 - 2020 Activities: 420 acres and 80 acres planted for soil stabilization total acres secured in a Conservation Easement.
- Conservation of Agricultural to Wetlands Conversion Property Gleason's Marsh (USFWS sponsor with the Inland Northwest Land Conservancy).
 - Funds Allocated: \$656,140
 - Amount Expended in 2020: \$506
 - 2020 Activities: 255 acres total acres secured.
- Lake Creek Watershed Restoration (CDA Tribe sponsor)
 - Funds Allocated: \$615,951
 - Amount Expended in 2020: \$13,194
 - 2020 Activities: Data collection, preliminary designs on fish passage features, road grading, and plantings.
- Castle Rock Ranch North Fork Coeur d'Alene River Riparian Restoration Project (IDEQ sponsor with Kootenai-Shoshone Soil and Water Conservation District)
 - Funds Allocated: \$12,265
 - Amount Expended in 2020: \$0
 - 2020 Activities: Riparian restoration plans completed riparian plantings to be completed in 2021. The project includes approximately 8 acres of riparian plantings along the North Fork Coeur d'Alene River on a privately-owned working cattle ranch.
- Prichard Creek Phase I: Conservation Easement and Restoration Planning (IDEQ sponsor with Idaho Forest Group (IFG))
 - Funds Allocated: \$1,908,450
 - Amount Expended in 2020: \$4,983
 - 2020 Activities: Idaho Forest Group (IFG) pursuing conservation easement for approximately 1,900 acres of property along Prichard Creek and nearby forested uplands. IFG, IDEQ, and IDFG completed a memorandum of agreement with Trout Unlimited for cooperative work on the project, metals characterization was conducted for soil and water on the property, and restoration plans are being developed.
- Trapper Creek Bridge and Fish Passage Enhancement (IDFG sponsor with BLM and Shoshone County)
 - Funds Allocated: \$135,000
 - Amount Expended in 2020: \$0
 - 2020 Activities: completed topographic site survey, geotechnical evaluation, and design alternatives considered.
- LiDAR Acquisition in Priority Restoration Areas (USFS sponsor)
 - Funds Allocated: \$50,000
 - Amount Expended in 2020: \$50,000
 - FY20 Activities: 105,000 acres of data were collected in the CDA Basin and processing of the raw data has been completed.

- 2/10/21
- Red Ives Phase I Dam Removal (USFS sponsor)
 - Funds Allocated: \$30,000
 - Amount Expended in FY20: \$0
 - 2020 Activities: Planning was underway and the Idaho Panhandle National Forest has received additional grant funding from Idaho Conservation League to assist in the Red Ives Creek Restoration project.

This year the Trustees assessed or restored:

- 675 acres of wetlands secured through Conservation Easements
- 3,500 linear feet of stream/riverbank
- 86 acres of native plants
- 105,000 acres of LiDAR data for restoration prioritization collected

Total Funds Allocated (2018-20): \$6,216,743

Total Funds Expended in 2020: \$709,824

For more detailed information on the above projects, please visit the website at:
www.restorationpartnership.org.

Challenges Ahead

As in past years a great deal of on the ground work was accomplished across the Basin in 2020 in spite of the effects of the COVID-19 situation. All of this work was accomplished while following public health and safety protocols concerning the virus. 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, Canyon Creek and Pine Creek drainages and the Lower Basin 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.

There continues to be the question concerning performance of remedial actions on sites in the Lower Basin that have the potential of being recontaminated during spring runoff or high flow events before removal or stabilization of 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 and consolidation areas for disposal of remedial action and ICP wastes; continued implementation of the RODA for the Upper Basin and OU-3 ROD for the Lower Basin; development of a

solution to major flooding issues in Lower Pine Creek, SFCDR and Main Stem of the CDA River; 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.

An important activity in 2021 will be providing information and data to the National Academies of Sciences, Engineering and Medicine in its analysis concerning CDA Lake and future water quality conditions in the Lake. This work is being sponsored by IDEQ, Kootenai County and the EPA.

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 are all but exhausted. Some other source of funding will be needed to carry on remedial actions in the Box because funds from the ASARCO settlement cannot be used in the Box. Assuring sustainable funding intended to advance cleanup as planned in the RODs and amendments, along with operation and maintenance of the implemented remedies, restoration of injured natural resources, and management of CDA Lake, the tributaries emptying into the Lake and surrounding lands continue to represent a significant challenge into the future.