BEIPC Coeur d'Alene Basin Five-year (2024-2028) Work Plan

SITE BACKGROUND

The Bunker Hill Superfund Site, sometimes referred to as the Coeur d'Alene Basin Site, is in northern Idaho, sections of the Coeur d'Alene Tribe's Reservation, and in northeastern Washington along portions of the Spokane River. The Site includes mining-contaminated areas in the Coeur d'Alene River corridor, adjacent floodplains, downstream water bodies, tributaries, and fill areas, as well as the 21-square-mile Bunker Hill "Box" where historical ore-processing and smelting operations occurred. The Bunker Hill Superfund Site, which was listed on the Superfund National Priorities List (NPL) in 1983, is divided into the following three study and cleanup areas called Operable Units or OUs:

- OU-1 includes the populated areas of the Bunker Hill Box.
- OU-2 comprises the non-populated areas of the Bunker Hill Box.
- OU-3 includes all areas of the Coeur d'Alene Basin outside the Bunker Hill Box where miningrelated contamination is located. OU-3 is often called "the Basin."

The Site is also divided into two geographic areas with common sources of contamination: The Upper Basin and the Lower Basin. The Upper Basin is primarily in the eastern portion of OU-3 and extends from the headwaters of the South Fork Coeur d'Alene River (SFCDR) close to the Idaho/Montana border to the confluence of the South and North Forks of the Coeur d'Alene River near Kingston, Idaho. The Box is included as part of the Upper Basin when referring to remedies that improve water quality and lessen migration of contaminated sediment to the Lower Basin. It does not include, however, remedies in the Box that focus on reducing risks to people. The Lower Basin is primarily in the western portion of OU-3, west of the Upper Basin and Box. It includes the mainstem of the Coeur d'Alene River, adjacent lateral lakes, floodplains, and associated wetlands. Although Coeur d'Alene Lake and portions of the Spokane River are within the Site and OU-3, they are not considered part of the Lower Basin

INTRODUCTION

This plan for calendar years 2024-2028 covers environmental cleanup and improvement activities in the Coeur d'Alene (CDA) Basin (the Basin) planned by the Basin Environmental Improvement Project Commission (BEIPC) and cooperating agencies and governments in accordance with responsibilities as stated in the August 2002 Memorandum of Agreement (MOA) establishing the BEIPC. This plan has been prepared by the Executive Director with review and approval by the Technical Leadership Group (TLG) and review by the Citizen Coordinating Council (CCC) and is based on their recommendations for activities and work to be performed in the 5-year period, 2024-2028. Annual work plans will address specific actions from this five-year plan. This proposed five-year work plan is organized as follows:

Part 1 - Environmental cleanup work performed through the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) by the U.S. Environmental Protection Agency (EPA) and State of Idaho or work performed by responsible parties.

Part 2 - Other Activities and Responsibilities

Part 1 includes work to implement the 2002 OU-3 Interim Record of Decision (ROD) and the 2012 Upper Basin (Box and OU-3) Interim ROD Amendment (RODA).

Part 2 includes work and responsibilities concerning management of Coeur d'Alene Lake by the Coeur d'Alene Tribe (CDA Tribe) and State of Idaho, restoration of natural resources by the Natural Resource Trustees (Restoration Partnership or RP) and work the BEIPC has assumed based on recommendations from the 2005 National Academy of Sciences (NAS) Study and requests from the government agencies, citizens, and communities of the Basin.

PART 1 - ENVIRONMENTAL CLEANUP WORK

For Part 1, the scope of the proposed five-year work plan corresponds generally to the level of federal and state funding and the funding sources anticipated and work expected to be performed by the Coeur d'Alene Custodial Work Trust (CDA Trust) over the five-year period, 2024-2028. This work plan proposes a cleanup approach and a listing of priority activities for the 5-year planning period. The proposal includes the following work:

- Human Health directed activities including Residential and Community Property and Private Drinking Water Supply Remediation, and the Recreation Use Activities Program.
- Lead Health Intervention Program
- Repository and Waste Consolidation Area Development and Management
- Remedial actions in the Upper Basin including source control actions, water treatment, and related human health activities provided for in the 2012 Upper Basin Interim RODA.
- Remedial actions and/or Pilot Projects in the Lower Basin and risk reduction activities associated with recreational areas.
- Basin Environmental Monitoring
- Operation and Maintenance Responsibilities for Remedial Actions

PROPOSED ACTIVITY	SCOPE	OBJECTIVE	* LEAD AGENCY
Human Health directed activities including the Basin Property Remediation (BPRP), and Recreational Use Activities programs.	Complete remediation of any identified residential and community property sites and private drinking water sources as they are identified during the 5-year planning period. Address human health risks associated with basin wide recreational activities. Provide educational resources and health advisories to manage the potential for metals exposure through the consumption of fish. Incorporate human health related activities in the environmental cleanup projects as needed.	Remediate properties as they are identified and sampled and accepted for work. Most properties remaining to be sampled and/or cleaned-up will be properties whose owners have withheld access or properties whose owners have not responded to numerous contact attempts. For these reasons, it is anticipated that most of the remaining remediation will occur after property transfer or sales occur. Remediation of high-risk properties will continue as agencies and the CDA Trust become aware of them. Implement actions to address human health risks from exposure to lead and other metals that can occur during recreational activities throughout the Upper and Lower Basin.	IDEQ EPA CDA TRIBE PHD

PROPOSED ACTIVITY	SCOPE	OBJECTIVE	* LEAD AGENCY
Lead Health Intervention Program (LHIP)	The Panhandle Health District (PHD) administers the LHIP which provides a variety of services to prevent elevated blood lead levels in children and others living or recreating within the Bunker Hill Superfund site. These services include education and awareness about the risks associated with lead contamination and annual voluntary blood lead screenings. The purpose of these blood lead screenings is to identify children with elevated blood lead levels and provide in-home follow-up services from a public health professional to identify sources of and ways to reduce lead exposures. Information from blood lead screenings provides the PHD with valuable information on the effectiveness of the LHIP, as well as other site cleanup programs such as interior house dust monitoring, yard remediations, and the Institutional Controls Program (ICP). The goal of each of these programs is to prevent lead exposures that could result in elevated blood levels. Community and area- wide results are made available to the public.	The Centers for Disease Control has established a reference value for blood lead levels in young children at 3.5 micrograms per deciliter of lead in blood. The reference is not health based and is not a regulatory standard. States independently determine action thresholds based on state laws, regulations, and resource availability. In response to this, PHD uses the 3.5 micrograms per deciliter as the trigger for follow up. Blood lead screening will continue during this 5-year period.	IDEQ PHD

PROPOSED ACTIVITY	SCOPE	OBJECTIVE	* LEAD AGENCY
Repository and Waste Consolidation Area (WCA) Development and Management	Repository and WCA activities center on these objectives: (1) operations at Big Creek Repository (BCR); (2) operations at the Big Creek Repository Annex (BCRA), East Mission Flats Repository (EMFR), Lower Burke Canyon Repository (LBCR), and Page Repository; (3) continued development and use of the East Fork Ninemile Canyon WCA for disposal of remedial action waste materials from the Ninemile drainage; (4) continued development and use of the Canyon Complex WCA and Quarry for remedial actions in Canyon Creek drainage; the siting and development of WCAs in the Lower Basin for implementation of remedial actions there.	Continue operation at BCR, BCRA and LBCR for Upper Basin remediation and the Institutional Controls Program (ICP). Continue operation at EMFR for remediation and ICP in the Lower Basin. Continue operation and expansion at Page to accommodate ICP wastes in OU-1 and OU- 2 (the Box). Continue to utilize the WCAs in East Fork Ninemile and Canyon Creek for specific site remediation. Continue implementation of the Waste Management Strategy within the Area of Contamination. Evaluate repository and WCA cover design criteria and alternatives and develop cover plans which will include the final designs and monitoring plans. Consider the feasibility of future use options in the cap design phase for repositories and WCAs. Continue to explore potential sites and development plans for WCA sites in the Lower Basin and construct sites when location decisions have been made.	IDEQ EPA PHD

PROPOSED ACTIVITY SCOPE	OBJECTIVE	* LEAD AGENCY
Remediesand water treatment remedies, ecological cleanup projects, and related human health activities identified in the 2012 Upper Basin Interim RODA along with any accompanying coordination on natural 	he 2012 Upper Basin RODA rimarily includes source ontrol remedial actions to ddress contaminated surface vater, soil, sediments, and ource materials. Upper Basin and Box remedies are rioritized to reduce human ealth exposures and reduce the ontribution of contaminants to ownstream areas including the ower Basin. Those cleanup ctions will be coordinated with atural resource restoration ctions. The inherent adaptive hanagement process will help nsure human health exposure is rioritized and that the most ffective actions are taken in linemile and Canyon Creek vatersheds which are the ources for the most fignificantly impacted water uality outside of the Box.	EPA IDEQ CDA Trust with Restoration Partnership (RP)

PROPOSED ACTIVITY	SCOPE	OBJECTIVE	* LEAD AGENCY
Lower Basin Remedies	Evaluate and prioritize potential ecological and source control remedies noted in the 2002 OU- 3 Interim ROD. Data sources to support this include Remedial Investigation/Feasibility Study (RI/FS) data, Clean Water Act (CWA) projects, and current data collection activities. Conduct pilot projects to address contaminated riverbed source areas and implement, as appropriate, remedies that are captured in decision documents and that have a low potential for recontamination and/or that may inform future remedy decisions. Characterize and prioritize additional riverbank segments for stabilization. Capture any such actions in annual work plans. Ensure that remedies are coordinated with natural resource restoration activities and the EPA's management plan. Coordinate as needed with the governmental structure that manages the Trail of the Coeur d'Alene's remedy. Identify recreation areas for remediation or develop substitute clean areas along the South Fork and main stem CDA River. Identify and implement programs to educate recreation site users regarding human health risks along the river corridor and how to minimize those risks.	Addressing risks to human health will remain a top priority through additional property cleanups, recreation site remedial actions, and education. Utilize information and recommendations from the Enhanced Conceptual Site Model (ECSM) for the Lower Basin, recent data collection efforts, and the sediment transport model to inform management plans (Lower Basin Prioritization Plan and Lower Basin Adaptive Management Plan) that target areas for active remediation over the next 3 to 5 years, evaluate the effects of remedial technologies, and identify areas for natural recovery. Utilize the Lower Basin Project Focus Team (PFT) process to evaluate multiple objectives for source control, cleanup of channel habitat, and protecting human health. Examine Lower Basin remedies previously selected in the 2002 OU- 3 ROD as well as pilot projects to test supplemental actions that are not explicitly identified by the ROD with the goal of addressing riverbed mine waste source areas and reducing the downstream transport of lead and other mine waste contaminants. A ROD Amendment or Explanation of Significant Differences (ESD) may be necessary if additional actions are deemed necessary to address riverbed source areas.	EPA with State and Federal agencies, CDA Tribe, and RP

PROPOSED ACTIVITY	SCOPE	OBJECTIVE	* LEAD AGENCY
Lower Basin Remedies (continued)		Plan and implement habitat area design and remediation (including treatability studies for soil capping and amendments) and riverbed pilot projects. Continue to implement the Grays Meadow Remediation and Restoration Project in cooperation with the Idaho Department of Fish and Game (IDFG) and the Restoration Partnership. Evaluate and further characterize additional wetland properties for increasing feeding habitat for waterfowl. Begin implementation of a riverbed management plan to address contaminants mobilized in the Dudley Reach and begin planning actions for the entire river system. Update the inventory of recreational beaches and banks to identify those beaches or banks that may be considered for remediation during the immediate 5-year period and beyond. Adaptive management will be a key component of any implementation actions and management plans.	EPA with State and Federal agencies, CDA Tribe, and RP

PROPOSED ACTIVITY	SCOPE	OBJECTIVE	* LEAD AGENCY
Basin Environmental Monitoring	Continue to implement remedy effectiveness and long-term monitoring. Analytical results from site surface water, sediment, and groundwater sampling through 2015 are available through WQX, EPA's Water Quality Exchange; data management for the Bunker Hill Site is transitioning to Scribe.net, an EPA data management system that will be administered by Bunker Hill stakeholders including EPA, IDEQ, and the CDA Trust with support from the EPA Environmental Response Team.	Continue implementing the CDA Basin environmental monitoring plan (BEMP) under updated, optimized management plan produced in 2020. The goal of the updated BEMP is to provide a framework and metrics for remedy-specific effectiveness monitoring, area-wide monitoring, and long-term/site wide monitoring to evaluate the progress of cleanup actions, and for adjusting the monitoring program to inform ongoing and upcoming near-term cleanup actions.	EPA with IDEQ, USFWS, USGS and CDA Tribe.
	*Note with planning and implem lead agencies will coordinate with agencies as appropriate.		

OPERATION AND MAINTENANCE RESPONSIBILITIES FOR REMEDIAL ACTIONS

Operation and maintenance (O&M) responsibilities for remedial actions and cleanup work on the Site are as follows:

- Individual owners of properties remediated under the BPRP are responsible for operation and maintenance of the remedy and barriers on their properties in accordance with the Institutional Controls Program (ICP) administered by the Panhandle Health District (PHD).
- Operation and maintenance for public gravel and paved roads remediated in the gravel roads and paved roads remediation programs are the responsibility of the local governments with jurisdiction over those roads. Those jurisdictions include the East Side Highway District and Shoshone County, and the cities of Kellogg, Mullan, Pinehurst, Osburn, Smelterville, Wallace and Wardner.
- Operation and maintenance of projects constructed under the Remedy Protection Program are the responsibility of the governmental jurisdictions noted as the "Holder" of the Environmental Covenants executed for these projects and filed as riders to the deeds for the properties on which the work was performed. If no governmental jurisdiction is noted as the "Holder" the property owner holding title to the property involved is responsible.
- Generally, operation and maintenance for remedial work performed by the Coeur d'Alene Custodial Work Trust (CDA Trust) is the responsibility of the CDA Trust. However, there are exceptions such as with the roads and remedy protection projects. Other project examples where the CDA Trust will not be taking on long-term O&M include Gray's Meadow where Idaho Department of Fish & Game (IDFG) will take over O&M after the first five years.
- Operation and maintenance of the Central Treatment Plant (CTP) and Ground Water Collection System (GWCS) in Kellogg are the responsibility of the State of Idaho for the life of the registry funds.
- Operation and maintenance of remedies performed by various parties under CERCLA authorities utilizing funding from appropriated funds and other sources placed in EPA's Superfund Account are the responsibility of the State of Idaho.
- Operation and maintenance of remedies on Bureau of Land Management (BLM) and National Forest System Administered Lands within the Site and in the North Fork CDA River Drainage are the responsibility of the BLM and U.S. Department of Agriculture (USDA) Forest Service.

PART 2 – OTHER ACTIVITIES AND RESPONSIBILITIES

For Part 2, the scope of the five-year work plan recognizes a number of work items where the BEIPC will be involved and items of work needed to accommodate some of the recommendations of the 2005 NAS study; it also includes implementation of the Lake Management Plan by the State of Idaho and CDA Tribe and their efforts to accommodate recommendations included in the 2022 NAS study, and coordination with the activities of the Natural Resource Trustees. The plan includes the following work:

- Lake Management Activities
- Flood Control, and Infrastructure Revitalization
- Communications and Public Involvement
- Coordinate with the Restoration Partnership

2.1 LAKE MANAGEMENT ACTIVITIES

The 2002 OU-3 ROD did not include CDA Lake in the Selected Remedy. It anticipated that the State, Tribe, federal agencies, and local governments would implement a Lake Management Plan (LMP) outside the CERCLA (Superfund) process using separate regulatory authorities. The updated LMP was approved in 2009 and implementation has been underway.

The 2012 Upper Basin RODA indicated that a remedy for lakebed contamination has been deferred contingent on successful management through the LMP. The LMP's goal is to manage metals in contaminated lakebed sediments through reduction of nutrient inputs basin-wide from point and nonpoint sources. The LMP includes actions related to lake water quality monitoring, coordination among basin stakeholders, education and outreach, and identification of funding sources for lake management efforts.

As of the Summer of 2018, the CDA Tribe asserted that the LMP is inadequate, in itself, as an effective tool to protecting water quality in the Lake due to water quality triggers for lead, phosphorus and dissolved oxygen, in particular, being exceeded. These triggers were developed by the CDA Tribe and the Idaho Department of Environmental Quality (IDEQ) in the 2009 LMP. As stated in the LMP, if trends show these trigger levels are approached, this will prompt a comprehensive review to guide future management actions.

In response to trends showing some trigger levels being approached (and some exceeded), the State of Idaho enlisted the NAS to perform a third-party review of data to provide insight into nutrient, metal, and dissolved oxygen trends and offer recommendations in data collection to better inform lake management efforts moving forward. The review was sponsored by IDEQ, Kootenai County, and EPA, with support from the CDA Tribe. Observations and recommendations from the 2022 NAS study will be used to help inform an appropriate response to undesirable water quality trends. IDEQ staff continues to operate under the LMP as discussions with the CDA Tribe and EPA continue. This work plan includes activities planned for implementation by IDEQ and CDA Tribal staff.

Objectives of the LMP (as outlined in Section 3) include the following:

- 1. Improve Scientific Understanding of Lake Conditions through Monitoring, Modeling, and Special Studies.
- 2. Establish and Strengthen Partnerships to Maximize Benefits of Actions under Existing Regulatory Frameworks.
- 3. Develop and Implement a Nutrient Reduction Action Plan.
- 4. Increase Public Awareness of Lake Conditions and Influences on Water Quality.
- 5. Establish Funding Mechanisms to Support the LMP Goal, Objectives, and Strategies.

Below are activities envisioned for implementation throughout the 5-year planning period: These activities are categorized broadly under objectives 1, 3, and 4 from the LMP; Objectives 2 and 5 are intertwined throughout all objectives.

Objective 1. Increase scientific understanding				
Proposed Activity	Scope	Additional Objective(s)	Lead Participants	
Continue core lake water quality monitoring	Continue monitoring throughout CDA Lake for metals, nutrients, physical parameters, and biological communities.	Facilitates Objective 5	IDEQ CDA Tribe Support from EPA	
Evaluate Third- Party Review	Analyze and utilize the NAS third- party review of lake data, coordinate on future data collection priorities, and strategize on the path forward	Objectives 2, 3, 4	IDEQ CDA Tribe EPA	
Objec	tive 3. Develop and implement a nut	rient reduction action pla	n	
Proposed Activity	Scope	Additional Objective(s)	Lead Participants	
Basin-wide nutrient inventory	Nutrient monitoring data from lake tributaries collected through the end of 2022 will be analyzed and reported. Results will be shared with stakeholders to inform decision-making	Objectives 1, 2, and 5	IDEQ CDA Tribe	
Bank erosion inventory	Bank erosion inventories will be updated as appropriate.		IDEQ AVISTA SWCDs	

Table 2-1 Summary of Coeur d'Alene Lake Management Activities Proposedfor Implementation for 2024-2028

Implementation coordination	Continue to collaborate with the Coeur d'Alene Lake Advisory Committee (CLAC), Restoration Partnership (RP), AVISTA Corporation, the Natural Resource Conservation Service (NRCS), the Soil & Water Conservation Districts (SWCDs), Counties, Cities, and others to identify water quality improvement projects	Objectives 2 and 5	IDEQ CLAC RP CDA Tribe AVISTA NRCS SWCDs
Aquatic Invasive Species	Continue implementing aquatic plant surveys. Identification of invasive species will be reported to AVISTA Corporation and Idaho State Department of Agriculture.	Objective 1	IDEQ CDA Tribe AVISTA ISDA Kootenai County
Remedy implementation support	Continue to participate in the Lower Basin PFT and TLG and support implementing projects identified in the 2002 OU-3 Interim ROD.	Objective 2	IDEQ CDA Tribe EPA BEIPC

Objective 4. Increase public awareness of lake conditions and influences on water quality			
Proposed Activity	Scope	Additional Objective(s)	Lead Participants
LakeASyst	LakeASyst (Lakeshore Assessment System) materials will continue to be utilized.	Objectives 2, 3 and 4	IDEQ CDA Tribe U of I
Demonstration sites	Improvement projects will be utilized to demonstrate effective strategies and encourage further implementation. Utilize Leading Idaho projects for public outreach opportunities.	Objectives 2 and 3	IDEQ CDA Tribe SWCDs Stakeholders
Our Gem Coeur d'Alene Lake Collaborative	Participate in the Our Gem CDA Lake Collaborative education subgroup to share information and get feedback from the basin-wide community	Objectives 2 and 4	IDEQ CDA Tribe Stakeholders
K-12 Education	Continue to work with the CDA Tribe, University of Idaho, and area educators to incorporate water quality education into classroom programming.	Objective 2	IDEQ CDA Tribe U of I K-12 schools
General Outreach	Continue to participate in relevant education and outreach opportunities as time and resources allow	Objective 2	IDEQ CDA Tribe U of I
Local Gems	Continue to support the Local Gems Recognition and Awards program in Collaboration with the CDA Regional Chamber of Commerce.	Objectives 2 and 3	IDEQ CDA Tribe CDA Chamber

Coordination with BEIPC forums will maximize opportunities for information exchange and advice working under the 2002 BEIPC MOA and work plans. Future coordination with the BEIPC recognizes that IDEQ and the CDA Tribe retain their respective decision-making authorities under CERCLA and the Clean Water Act (CWA).

2.2 FLOOD CONTROL AND INFRASTRUCTURE REVITALIZATION

Under a 2018 MOA, participating governments of the BEIPC and the Upper Basin jurisdictions (Local Flood Group) will continue to work on potential flooding issues on the South fork Coeur d'Alene River (SFCDAR). During this 5-year planning period, the Local Flood Group and the BEIPC will continue to work with the U.S. Army Corps of Engineers (COE) and Federal Emergency Management Agency (FEMA) to implement an update to the 2009 Flood Inundation Maps based on the current flood zone analysis by the COE on a portion of the river from Elizabeth Park to the Theater Bridge in Smelterville. Based on the new flood maps it is anticipated that updated analysis of the need for

certified levees in the SFCDAR will also be initiated in the planning period. The working group will also continue to support the City of Pinehurst's request for COE assistance in performing a similar flood zone analysis in Pine Creek. Although much of the needed work outlined in the 2009 Drainage Control Infrastructure Revitalization Plan (DCIRP) is now complete, the BEIPC Executive Director will continue to assist Upper Basin communities and utilities in pursuing funding to implement the remainder of the DCIRP. The Executive Director will coordinate with the local infrastructure jurisdictions on an Operation and Maintenance plan for existing drainage structures in the Upper Basin. The Executive Director will work with the TLG to develop ideas and potential funding requests for Basin work not covered in the ROD for OU-3 and/or the Upper Basin ROD amendment.

2.3 COMMUNICATIONS AND PUBLIC INVOLVEMENT

During the 5-year planning period, the agencies will continue to address issues and facilitate public involvement and education in BEIPC activities. The agencies will also facilitate communication between the Basin community, the BEIPC, the Superfund cleanup, and natural resource restoration implementing agencies. The CCC will continue to be the focus organization to assist in implementing this process.

2.4 RESTORATION PARTNERSHIP

The CERCLA natural resource trustees in the CDA Basin are the United States (represented by the USDA Forest Service, U.S. Fish and Wildlife Service, and BLM, the CDA Tribe, and the State of Idaho (represented by the IDFG and IDEQ. A series of lawsuits followed the Superfund designation in the CDA Basin for response costs and natural resource damages. Natural resources injured by contamination include but are not limited to; surface and groundwater, fish, birds, riparian resources, macroinvertebrates, and phytoplankton.

Under CERCLA, settlements were reached with all parties. Following the final 2011 settlement agreement, the Trustees entered into a MOA to address the planning and implementation of restoration for natural resources and associated services injured, destroyed or lost as a result of the release of mining-related hazardous substances into the CDA Basin.

As specified in CERCLA the funds will be dedicated to projects that restore, rehabilitate, replace, and/or acquire the equivalent of the injured natural resources. The Trustees' goal is to restore the health, productivity, and diversity of injured natural resources and the services they provide in the Restoration Planning Area.

The Trustees will continue to implement their Restoration Plan which is a programmatic guide for restoration of injured natural resources in the Restoration Planning Area and those activities will be coordinated with remediation actions. During the 5-year planning period, the Partnership will continue to coordinate with the BEIPC and provide updates on restoration planning efforts and implementation of restoration projects that will be solicited by the Trustees and from interested parties. The Partnership will continue to coordinate closely with EPA and the CDA Trust to integrate restoration planning and implementation with remediation projects. See annual BEIPC Work Plans for more details or refer to www.restorationpartnership.org.