

Coeur d'Alene Basin Five-year (2016-2020) Work Plan

INTRODUCTION

This plan for calendar years 2016-2020 covers environmental cleanup and improvement activities in the Coeur d'Alene Basin planned by the Basin Environmental Improvement Project Commission (BEIPC) and cooperating agencies and governments in accordance with responsibilities as stated in the Memorandum of Agreement 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 CY 2016-2020. 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 EPA and State of Idaho or work performed by responsible parties.

Part 2 - Other Activities and Responsibilities

Part 1 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 work and responsibilities concerning management of Coeur d'Alene Lake by the CDA Tribe and State of Idaho, restoration of natural resources by the Natural Resource Trustees and work the BEIPC has assumed based on recommendations from the National Academy of Sciences (NAS) Study and requests from 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 Trust over the five-year period, 2016-2020. The 2016-2020 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 (Basin Property Remediation Program, BPRP), the Mine and Mill Site characterization program, the Paved Road Remediation Program, and the Remedy Protection Program.
- Blood Lead Screening in Children
- Repository Development and Management
- Remedial actions in the Upper Basin including source control actions, water treatment, and related human health activities provided for in the Upper Basin RODA.
- Remedial actions and/or Pilot Projects in the Lower Basin and risk reduction activities associated with recreational areas.

- Basin Environmental Monitoring

Table 1-1 Summary of Remedial Activities Proposed for Implementation for 2016-2020

Proposed Activity	Scope	Objective	Lead Agency #
Human Health directed activities including the Basin Property Remediation Program (BPRP); Paved Road Remediation Program; Remedy Protection Program	Complete the residential and community property and private drinking water source remediation program and continue implementation of the Paved Road Remediation. Complete the Remedy Protection Program in the Basin and complete the Mine and Mill Site characterization task to identify mine and mill sites especially in close proximity to residential properties that might pose a threat to human health in the Box and Upper Basin.	Remediate properties as they are identified and sampled and accepted for work. The BPRP will be substantially complete during this 5-year period. Remediation at a limited number of additional high risk properties may continue beyond this period. Continue the Mine and Mill Site characterization program to determine possible impacts to human health and complete the program within this 5-year period. EPA and IDEQ developed the Roadway Surface Remediation Strategy which established the Paved Road Remediation Program to work with local road jurisdictions to remediate damaged paved road surfaces that serve as barriers to contaminated road subgrades. The goal is to complete this program within this five-year period as funds are available. The Remedy Protection Program was established in the RODA to reduce the potential for erosion and recontamination of existing clean barriers installed within community areas in the Upper Basin. The remedy protection work in the Bunker Hill Box was completed in 2015. The remaining work in the Upper Basin will be completed within this five year period.	IDEQ EPA CDA Trust

Proposed Activity	Scope	Objective	Lead Agency #
Blood Lead Screening in Children	<p>Panhandle Health District (PHD) administrates screening of children for elevated blood lead levels through Shoshone Medical Center providers. This has been occurring annually in the CDA Basin since 1996 as a public health service and as part of the Lead Health Intervention Program. The purpose of the screening is to identify children with elevated blood lead levels and provide follow-up from a public health professional to identify ways to reduce lead exposures. The screening program also provides data to assess the effectiveness of the Basin cleanup efforts. The cleanup action decisions are not based on annual blood lead testing results. Rather, the goal is to prevent lead exposures that could result in elevated blood lead levels. Community wide and area-wide results are made available to the public. Additionally, EPA and IDEQ support PHD by developing new information materials and distribution points for Basin recreation-specific education and heavy metal (lead) intervention.</p>	<p>In 2012 the Centers for Disease Control established a new threshold value for blood lead levels in young children. According to CDC's fact sheet, "This new level is based on the population of children aged 1-5 years in the U.S. who are in the top 2.5% of children when tested for lead in their blood. Currently, that is 5 micrograms per deciliter of lead in blood." Previously, CDC's blood lead level of concern" was 10 micrograms per deciliter. In response to this change the PHD has used the 5 micrograms per deciliter as the trigger for follow up since 2012. Blood lead screening will continue during this 5 year planning period.</p>	IDEQ PHD

Proposed Activity	Scope	Objective	Lead Agency #
Repository Development and Management	Repository activities center on these objectives: (1) completion of 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) the development and use of Waste Consolidation Areas (WCA) in East Fork 9 Mile Canyon for disposal of mine waste materials in that area; (4) the development of additional repository or waste consolidation sites; (5) implementation of the Waste Management Strategy (WMS); and (6) continued development and use of Limited Use Repositories (LUR) for disposal of materials generated from the Paved Roads Program.	Close BCR and implement use of BCRA and LBCR for Upper Basin remediation and Institutional Controls Program (ICP). Continue operations at EMFR for remediation and ICP. Operate and expand Page to accommodate ICP wastes in the Box. Develop and utilize LURs to accommodate the Paved Road Program waste and save space at the repositories. Continue to develop and utilize the WCA in 9 Mile Canyon. Implement the WMS within the Area of Contamination. Evaluate repository cover design criteria and alternatives and develop repository cover plans which will include the final designs and monitoring plans. Evaluate alternatives for addressing the loading from the repository created by the Silver Valley Natural Resource Trustees (SVNRT) in Canyon Creek near LBCR and the feasibility of establishing an additional repository in this area. Consider the feasibility of future use options in the cap design phase for repositories.	IDEQ EPA PHD CDA Trust

Proposed Activity	Scope	Objective	Lead Agency #
Upper Basin Remedies	<p>Implement the source control remedies, water treatment remedies, ecological cleanup projects, and related human health activities identified in the Superfund Cleanup Implementation Plan (SCIP) for the RODA along with any accompanying coordination on natural resource restoration actions. Specific remedial actions in the Box include design and construction of a groundwater collection system for OU-2 waters and Phase 1 upgrade of the Central Treatment Plant (CTP) to accommodate contaminated water from OU-2 and eventually (beyond the 5 year window) contaminated water from the Upper Basin. Source control actions in Ninemile Creek Watershed are the focus for the 5 year period of time.</p>	<p>The Upper Basin RODA primarily includes source control remedial actions to address contaminated surface water, soil, sediments, and source materials. Upper Basin and Box remedies are prioritized in order to address sources and reduce the contribution of contaminants to the Lower Basin. Those cleanup actions will be coordinated with natural resource restoration actions. The Plan and inherent adaptive management process will help ensure that the most effective actions are taken first. Ninemile Creek has the most significantly impacted water quality outside of the Box and was therefore identified as the initial priority for source control cleanup actions. Related human health issues will also be addressed. The Box actions will be implemented in this 5 year planning period.</p>	EPA IDEQ CDA Trust with Restoration Partnership

Proposed Activity	Scope	Objective	Lead Agency #
Lower Basin Remedies	<p>Evaluate and prioritize potential ecological remedies noted in the OU-3 ROD. Data sources to support this include RI/FS data, Clean Water Act (CWA) projects and current data collection activities. Conduct pilot projects 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. Capture any such actions in annual work plans. Ensure that remedies are coordinated with natural resource restoration activities.</p> <p>Coordinate as needed with the governmental structure that manages the Trail of the Coeur d'Alene 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 make recreation site users aware of human health risks along the river corridor and further educate people on how to minimize any risks.</p>	<p>Utilize information and recommendations from the Enhanced Conceptual Site Model (ECSM) for the Lower Basin. The ECSM serves to refine the current understanding of the Lower Basin with respect to river flows and sediment transport. EPA is working with the Lower Basin PFT to help determine the type and amount of data necessary to measure and model sediment transport and river system dynamics in the Lower Basin. The 2 Dimensional Hydraulic model will be further refined and the 2 Dimensional Sediment Transport Model will undergo validation, calibration and documentation. These data, computational models, and other information will be used to examine Lower Basin remedies previously selected in the 2002 OU- 3 ROD and determine whether the selected actions should be modified or supplemented. The Lower Basin work will likely include review of select remedial actions identified in the 2001 Feasibility Study Report. Some previously selected cleanup actions and/or pilot projects are planned to be implemented during this time period as part of development of an updated, comprehensive Lower Basin Strategic Plan that will guide work during this period and</p>	EPA with state and federal agencies and CDA Tribe

		<p>beyond. The actions that EPA intends to undertake will be documented and updated as part of the SCIP.</p> <p>Additionally, it will be determined if a RODA or other decision document(s) will be needed in order to implement the prioritized actions. Continue to address the need to accommodate dispersed recreation understanding the concern for human health issues.</p>	
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Proposed Activity	Scope	Objective	Lead Agency #
Basin Environmental Monitoring	Continue to implement remedy effectiveness and long-term monitoring. EPA continues to make analytical results from site surface water, sediment, and groundwater sampling available through WQX, EPA's Water Quality Exchange (http://www.epa.gov/storet/); human health-related data will not be included in this database. EPA no longer has regional support to make environmental monitoring data available through a web page. Site environmental monitoring data are accessible via WQX and EPA HQs can assist interested stake holders in accessing the information. Stakeholders can call 800.424.9067 for support.	Continue implementing the CDA Basin environmental monitoring plan (BEMP). The goal of the BEMP is to monitor and evaluate the progress of the remedy in terms of improving ecosystem conditions and make adjustments in the monitoring program that inform ongoing and upcoming near term cleanup actions. Information from this program will also help guide the Implementation Plan process.	EPA working with other agencies including IDEQ, USFWS, and USGS and the CDA Tribe.

Note with planning and implementation of remedial activities, lead agencies will coordinate with federal, state, tribal and local agencies as appropriate.

PART 2 – OTHER ACTIVITIES AND RESPONSIBILITIES

For Part 2, the scope of the five-year work plan recognizes a number of work items that the BEIPC will be involved in and items of work needed to accommodate some of the recommendations of the NAS study; it also includes implementation of the Lake Management Plan by the State of Idaho and CDA Tribe and 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
- Restoration Partnership

2.1 LAKE MANAGEMENT ACTIVITIES

The OU-3 Interim ROD did not include CDA Lake in the Selected Remedy nor is there a remedy identified in the Upper Basin RODA. The OU-3 Interim ROD 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. Implementation of the LMP is an adaptive management process and adjustments may be necessary as monitoring and other data are obtained and analyzed.

As referenced in Subsection 4.5.1 of the 2009 LMP, many of the agencies, governments, and other stakeholders that address water quality in CDA Lake are represented on the BEIPC, TLG or CCC. As such, these various BEIPC forums represent unique opportunities for LMP coordination and implementation which IDEQ and the Tribe intend to fully utilize. In addition, LMP staff will continue to coordinate with county representatives at least quarterly.

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 of the LMP 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, and there are other crossovers between objectives. Activities outlined below that address or facilitate additional objectives have those additional objectives noted.

Table 2-1 Summary of Coeur d’Alene Lake Management Activities Proposed for Implementation for 2016-2020

Objective 1. Increase scientific understanding			
Proposed Activity	Scope	Additional Objective(s)	Lead Participants
Continue core lake water quality monitoring	Continue monitoring throughout Coeur d’Alene Lake for metals, nutrients, physical parameters, and biological communities. Opportunities to optimize field sampling will be evaluated, including evaluating potential river monitoring. Annual sampling plans will be presented to the TLG before spring sampling begins.	Facilitates Objective 5	IDEQ CDA Tribe Support from EPA
Collaborate with the MILES project	The University of Idaho EPSCoR – “Managing Idaho Landscapes for Ecosystem Services (MILES)” project will continue through 2018.	Objectives 2, 4, and 5	IDEQ CDA Tribe U of I

Partner with universities to pursue funding	IDEQ and the Tribe will continue to partner with area research universities to pursue funding to support research on nutrient sources in the watershed, nutrient cycling in lakebed sediments, and strengthening the predictive ability of ELCOM-CAEDYM.	Objectives 2, 3, 4, and 5	IDEQ CDA Tribe Universities
Science reporting	Revisions to the long term lake water quality trends will be reported to the TLG and BEIPC annually as new data is compiled each spring. As in-depth synthesis continues, results will be reported related to variables effecting long term lake trends.	Objective 2	IDEQ CDA Tribe
Objective 3. Develop and implement a nutrient reduction action plan			
Proposed Activity	Scope	Additional Objective(s)	Lead Participants
Basin-wide nutrient inventory	Nutrient loading information will be updated as appropriate, using published USGS, BEMP data and any other available sources of loading data. If additional monitoring needs are identified, LMP staff will explore possible mechanisms for gathering data.	Objectives 1, 2, and 5	IDEQ CDA Tribe
Bank erosion inventory	Bank erosion inventories will be updated as appropriate.		IDEQ CDA Tribe
Bank stabilization	IDEQ and Tribal staff will continue to collaborate with Avista Corporation, the Natural Resource Conservation Service (NRCS), the Soil & Water Conservation Districts, the Counties, and local landowners to identify, prioritize, and implement erosion reduction projects.	Objective 2	IDEQ CDA Tribe Avista NRCS Cons. districts
Nutrient reduction action plan	LMP staff will continue to communicate nutrient load monitoring and estimate results to Watershed Advisory Groups, county representatives, and other potential partners. Inventory data and stakeholder feedback from WAGs, county representatives, homeowner groups, and others will be used to inform a nutrient reduction action plan.	Objectives 2 and 5	IDEQ CDA Tribe Universities

Implementation coordination	The LMP team will continue to coordinate with Coeur d'Alene Basin Watershed Advisory Groups, county representatives, and other stakeholders to coordinate implementation opportunities. LMP staff will provide support on implementation of selected projects that align with LMP goals, as opportunities arise.	Objectives 2 and 5	IDEQ CDA Tribe
Management action tables	LMP staff will continually update the MATs as new information is provided by stakeholders and will perform a full audit of the tables again in 2020.	Objective 2	IDEQ CDA Tribe Stakeholders
Aquatic Invasive Species	The Tribe will continue to implement the invasive Aquatic Plant Survey and Treatment Program within their current jurisdiction, and IDEQ will continue implementing their aquatic plant surveys within northern pool bays. Identification of invasive species will be reported to Avista Corporation and Idaho State Department of Agriculture without delay for response.	Objective 1	IDEQ CDA Tribe Avista ISDA
Remedy implementation support	The LMP Coordinators will continue to be involved 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 and revised as needed.	Objectives 1 and 2	IDEQ CDA Tribe
Demonstration sites	Improvement projects will be utilized to demonstrate effective strategies and encourage further implementation. These sites will be utilized to develop outreach and educational tools.	Objectives 2 and 3	IDEQ CDA Tribe Stakeholders
Symposia	LMP coordinators will continue to partner with the Spokane River Forum, CDA Vision 2030, and others to plan Our Gem Symposia approximately every 18 months, or as warranted.	Objectives 2 and 3	IDEQ CDA Tribe Stakeholders

K-12 Education	LMP staff will continue to work with area educators to incorporate water quality education into curricula	Objective 2	IDEQ CDA Tribe Universities K-12 schools
General Outreach	LMP staff will continue to participate in relevant education and outreach opportunities as time and resources allow.	Objective 2	IDEQ CDA Tribe U of I
Collaborative educational efforts	LMP coordinators will continue to collaborate with U of I Community Water Resource Center staff, Spokane River Forum, and others to expand educational opportunities.	Objective 2	IDEQ CDA Tribe U of I
Local Gems	LMP staff will continue the Local Gems outreach program through 2020.	Objectives 2 and 3	IDEQ CDA Tribe
LMP activity updates	LMP staff will continue to present updates to various groups throughout the 5-year period, as appropriate.	Objective 2	IDEQ CDA Tribe
Waterfront demonstration coordination	LMP staff will continue to coordinate with city, county, and regional partners to explore potential for demonstration projects and educational signage in local waterfront parks.	Objectives 2 and 3	IDEQ CDA Tribe Stakeholders

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

2.2 FLOOD CONTROL AND INFRASTRUCTURE REVITALIZATION

During the 5 year planning period, the BEIPC will continue to seek funding for a flood zone analysis and any needed development of flood control structures including an updated and certified levee system in the South Fork CDA River and Lower Pine Creek. The Executive Director will continue to work with the EPA for implementation of selected in-stream CERCLA remedies included in the RODA. The BEIPC will continue to assist Upper Basin communities and utilities in pursuing funding to implement the Drainage Control Infrastructure Revitalization Plan (DCIRP) and the Executive Director will coordinate with the local infrastructure jurisdictions on an Operation and Maintenance plan for existing drainage structures in the Upper Basin.

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. The CCC is a group of citizens providing local input to the BEIPC board, and meets quarterly.

2.4 RESTORATION PARTNERSHIP

The CERCLA natural resource trustees in the Coeur d'Alene Basin are the United States (represented by the U.S. Forest Service (USFS), U.S. Fish and Wildlife Service and U.S. Bureau of Land Management), the Coeur d'Alene Tribe, and the State of Idaho (represented by the Idaho Department of Fish and Game and Idaho Department of Environmental Quality). A series of lawsuits followed the Superfund designation in the Coeur d'Alene Basin for response costs and natural resource damages. Natural resources injured by contamination included 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 Memorandum of Agreement 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 Coeur d'Alene 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 Coeur d'Alene Basin.

In 2013, the Trustees branded their new name as the Restoration Partnership (Partnership) and, began developing a Restoration Plan and Environmental Impact Statement (EIS) following NEPA. This plan will be a comprehensive guide for restoration of injured natural resources in the Coeur d'Alene Basin and will be coordinated with remediation activities.

During the 5-year planning period, the Partnership will continue to coordinate with the BEIPC, participate in Project Focus Teams (PFTs), and provide updates on restoration planning efforts and ongoing implementation of projects that were identified in the 2007 Interim Restoration Plan and once completed, the programmatic EIS. The Partnership will continue to coordinate with EPA to integrate restoration planning with remediation projects.