

## **Coeur d'Alene Basin Five-year (2015-2019) Work Plan**

### **INTRODUCTION**

This plan for calendar years 2015-2019 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 2015-2019. 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, 2015-2019. The 2015-2019 Work Plan proposes a cleanup approach and a listing of priority activities for the 5-year planning period, and will also include a 5 year review and report by EPA in 2015. 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 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 remediation of Recreational Use Areas.
- Basin Environmental Monitoring

**Table 1-1 Summary of Remedial Activities Proposed for Implementation for 2015-2019**

<b>Proposed Activity</b>	<b>Scope</b>	<b>Objective</b>	<b>Lead Agency #</b>
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 Program as required by the OU-3 ROD. Continue implementation of the Remedy Protection Program as required by the Upper Basin RODA.	Remediate properties as they are mapped and cleared for work. The BPRP is expected to be substantially complete during this 5-year period. The Roadway Surface Remediation Strategy established the Paved Road Remediation Program for the EPA and IDEQ to work with local road jurisdictions to remediate damaged paved road surfaces that serve as barriers to contaminated road subgrades. The objective is to complete this program within the objectives of the Superfund Cleanup Implementation Plan (SCIP) 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 including the Bunker Hill Box, and will be completed within the objectives of the SCIP as funds are available.	IDEQ EPA CDA Trust

<b>Proposed Activity</b>	<b>Scope</b>	<b>Objective</b>	<b>Lead Agency #</b>
Blood Lead Screening in Children	<p>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>	<p>IDEQ PHD</p>

<b>Proposed Activity</b>	<b>Scope</b>	<b>Objective</b>	<b>Lead Agency #</b>
<p>Repository Development and Management</p>	<p>Repository activities center on three objectives: (1) operations at Big Creek Repository (BCR), East Mission Flats Repository (EMFR), and Page Repository; (2) the development of additional repository sites; and (3) implementation of the Waste Management Strategy (WMS).</p>	<p>Continue to utilize BCR, and develop an expansion area for Upper Basin remediation and Institutional Controls Program (ICP) until it reaches capacity and is closed. Continue operations at EMFR for remediation and ICP. Operate and expand Page to accommodate remedy protection project, paved road program, and ICP wastes in the Box. Complete development of the Lower Burke Canyon Repository (LBCR) at the Hecla Star Impoundment area. 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 the feasibility of additional repository areas.</p>	<p>IDEQ EPA PHD CDA Trust</p>

<b>Proposed Activity</b>	<b>Scope</b>	<b>Objective</b>	<b>Lead Agency #</b>
Upper Basin Remedies	Implement the source control remedies, water treatment remedies, ecological cleanup projects, and related human health activities identified in the 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.	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.	EPA IDEQ CDA Trust with Restoration Partnership

<b>Proposed Activity</b>	<b>Scope</b>	<b>Objective</b>	<b>Lead Agency #</b>
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 what else can be done 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. 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. Additionally, it will be determined if a RODA or other decision document will be appropriate. Continue to address the need to accommodate dispersed recreation understanding the concern for human health issues.</p>	EPA with state and federal agencies and CDA Tribe

<b>Proposed Activity</b>	<b>Scope</b>	<b>Objective</b>	<b>Lead Agency #</b>
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 on a web-accessible data management system; human health-related data will not be included in this database. For the last several years, EPA has made site environmental monitoring data available through a web page. Nationally the STORET system has transitioned to the new WQX data management system and the site environmental monitoring data will be accessible at a new website: <a href="http://gispub9.epa.gov/CDA/#">http://gispub9.epa.gov/CDA/#</a> . If needed, EPA will assist interested stake holders in accessing the information.	Implement 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.

Examples of activities envisioned for implementation of the LMP throughout the 5-year planning period include, but are not limited to the following:

### **Research and Monitoring:**

1. In 2010, the Tribe and IDEQ initiated the 3 Year Nutrient Source Inventory (as identified in Section 3.3, Objective 3 of the LMP) in the St. Maries/St. Joe River watersheds. The Tribe and IDEQ selected 7 sites where water quality has been monitored. After evaluating the available data, the Tribe has decided to continue collecting flow data in the St. Maries/St. Joe watershed for another year, as well as analyze GIS data to characterize land use. Preliminary results will be presented to Watershed Advisory Groups, local stakeholders, and the TLG in 2015. The information will be used for further discussion and project identification.

IDEQ will be investigating the feasibility of installing an automated sampler in the mouth of Mica Creek in 2014 and 2015, as well as several turbidity meters in the creek to begin collecting nutrient information for this tributary to begin refining priority areas in this watershed as well.

2. In support of the Nutrient Source Inventory, IDEQ will revisit and measure the St. Joe River rebar bank pins and a survey of riverbank erosion on the lower 9 miles of the St. Maries River will also be initiated.
3. Continue joint water quality monitoring throughout Coeur d'Alene Lake for metals, nutrients, physical parameters, and biological communities. The Tribe and IDEQ will continue utilizing the ELCOM-CAEDYM and LOADEST models. These models are utilizing real-time data that is collected from Coeur d'Alene Lake including the establishment of five meteorological stations. In the summer of 2014, the Tribe installed the data logger buoy on Chatcolet Lake (collecting parameters such as water temperature and dissolved oxygen at multiple depths). The location of the logger buoy for 2015 has yet to be determined.

4. Both the Tribe and IDEQ are collaborating with the University of Idaho EPSCoR – “Managing Idaho Landscapes for Ecosystem Services (MILES)” project, which will take place through 2018. The project will support joint outreach activities, special studies, and will be used to leverage support for additional research. In 2014 and/or 2015, MILES will place four sondes (probes) in the St. Joe River, the Coeur d’Alene lateral lakes, and possibly Cougar Bay, to provide data to enhance ELCOM-CAEDYM modeling and our understanding of river/lake dynamics.
5. In 2013, the Tribe and the University of Idaho submitted a joint NSF proposal to support social and ecological modeling of the watershed. In 2015, 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.
6. Present the draft 5-year monitoring reports for TLG review and comment when they are available.

### **Nutrient Reduction and Implementation**

1. Participate in Coeur d’Alene Basin Watershed Advisory Groups in order to coordinate implementation opportunities. Provide support on implementation of other selected projects that align with LMP goals. Provide support in development and implementation of sub-watershed assessments and community action plans for Fernan, Blue and Wolf Lodge Creeks as part of the Kootenai-Shoshone Soil and Water Conservation District led effort funded by the 2014 the USFS Western States Competitive Grant.
2. Communicate nutrient reduction results to Watershed Advisory Groups and other potential partners for feedback and project identification.
3. Provide an annual overview of LMP implementation activities to the CCC and solicit their input.
4. A set of tables identifying management entities and actions aka; Management Action Tables (MATs) affecting lake water quality in the Coeur d’Alene basin was created as part of the 1996 LMP effort. These MATs were updated and revised through an audit process conducted during 2007 by the Tribe and IDEQ using EPA CWA grant funding, available through the BEIPC, and are a key component of the 2009 LMP. The LMP identifies an audit of these MATs every 5 years. The audit process was initiated in 2014 by IDEQ and the Tribe and will continue into 2015.
5. Prioritize and initiate riverbank stabilization projects along eroding riverbanks in the St. Joe and lower St. Maries Rivers. IDEQ and Tribal staff will collaborate with Avista Corporation, the Natural Resource Conservation Service (NRCS), the Soil & Water Conservation Districts, the Counties, and local landowners. Planning for future project sites under the IDEQ agreement with Avista began in 2014 and will continue into 2015, with subsequent implementation.

6. 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.
7. The LMP Coordinators will continue to be involved in the Lower Basin PFT and support implementing projects identified in the 2002 OU-3 Interim ROD.

### **Outreach and Education**

1. The LMP Education/Outreach Program, Lake\*A\*Syst (a home owner's guide to environmental stewardship within the Coeur d'Alene Basin), was developed in 2013, and a limited number of manuals was printed. IDEQ and the Tribe will be revising the materials based on stakeholder feedback in 2014-2015. A joint website that includes online access to Lake\*A\*Syst Program materials was developed in 2014. Lake\*A\*Syst workshops were held in the Fernan Lake watershed in 2014. Workshops will be made available to bay associations and other groups interested in the program. Volunteer monitoring opportunities will be explored with bay associations, where there is interest, to develop relationships with the community and enhance efficiency in data collection.
2. Participate in joint educational outreach events such as: the North Idaho Fair, Leadership Coeur d'Alene, Women in Science, training of camp counselors at Camp Cross, Camp Four Echoes (Girl Scouts), and UI - Coeur d'Alene camps (Back to the Earth, school water quality days).
3. Conduct K12 educational activities related to water quality and Coeur d'Alene Lake health at schools throughout the Coeur d'Alene Basin.
4. Continue to participate on an Advisory Committee to support the University of Idaho (UI) Extension Master Water Steward Program (IDAH20), and be involved in activities of the UI Community Water Resource Center.
5. Continue collaborating with the Spokane River Forum and the University of Idaho CWRC to expand research and educational opportunities.
6. Continue joint Lake Management media campaign. Conduct semi-regular stakeholder workshops, such as the 2014 "Our Gem" symposium, to engage stakeholders in short-term action planning and provide updated science information to the public..
7. Update and reprint *Our Gem* Coeur d'Alene Lake map, as needed.
8. Revise all electronic and print media to complement *Our Gem*/Lake Management website and increase public awareness of current monitoring and implementation efforts.
9. Continue outreach program for local businesses that helps increase commercial involvement in stormwater abatement and promotion of water quality, including volunteer recognition program and partnering on adoption of techniques such as rain

gardens, green roofs, etc. This program will be used to increase awareness of ways to promote water quality as well.

10. Present LMP activity updates to various groups throughout the year such as the North Idaho/Washington Lakes Conference, homeowners' associations, environmental organizations, and chambers of commerce
11. Coordinate with city and regional partners to explore potential for demonstration projects and educational signage in local waterfront parks.
12. Pursue funding opportunities to enhance LMP programming and provide expanded support for research, implementation and outreach activities.

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 complete the Inventory and Spread Sheet of Existing Drainage Infrastructure and coordinate with the local infrastructure jurisdictions on an Operation and Maintenance plan for 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 (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

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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.