

Basin Environmental Improvement Project Commission 2024 Work Plan



CDA Basin Superfund Timeline





2024 Annual Workplan





Human Health Remedies

Residential and Commercial Property Remediation

2024 Goals

- Complete sampling and remediation if sampling above action levels
- 202 properties in "Basin" require sampling
 - 9 properties need remediation in "Box"
 - 36 properties need remediation in "Basin"





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Human Health Remedies

Lead Health Intervention Program

2024 Goals

- Free blood lead screening for residents living within the Bunker Hill Superfund Site boundaries
- Continue Annual summer screening with \$50 incentive for children between ages 6 months and 6 years

Bunker Hill Box Average Blood Lead: 1974-2019





Human Health Remedies

Recreational Use Activities

2024 Goals

- Develop a strategy document for the Box (Basin strategy was previously created)
 - Lay out goals
 - Inventory recreation areas
 - Manage risk
 - Outreach activities
- CDA Trust will monitor completed remediation projects and install new signage
- Future remediation recreation sites will be prioritized



Challenges

- Recontamination during high water or flood events
- Remote and spread-out recreational areas



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Repository and Waste Consolidation Area Development and Management



Facilities are built to accommodate disposal of contaminated waste

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Repositories

Five Repositories

- Page-operated by IDEQ
 - 403,074 cy remaining capacity
 - Being expanded to provide additional 700,000 cy capacity
 - Concrete debris used to expand foundation
 - Geotechnical monitoring of expanded cells
- Big Creek-operated by CDA Trust
 - 85,400 cy remaining capacity
- Big Creek Annex-operated by CDA Trust
 - 168,250 cy remaining capacity
- Lower Burke Canyon operated by CDA Trust
 - 1,025,000 cy remaining capacity
- East Mission Flats -operated by CDA Trust
 - 156,100 cy remaining capacity





Waste Consolidation Areas

Two Waste Consolidation Areas

- East Fork Ninemile
 - Receives waste from Tamarack and Dayrock Complex
 - Final cover expected to be completed in 2026

Canyon Complex

- Repository and WCA
- Waste from Silver Valley Natural Resource Trustee Repository cleanup
- Accepting waste from Canyon Creek remedial actions
 - Waste from Hecla Star Complex to be placed beginning of 2024



Lower Basin

Siting of the Lower Basin WCA

- In 2020 EPA began seeking public opinion for WCA
- Needed for Lower Basin Remedial activities
- In 2022 Project Focus Team was formed
- Final site selection is currently under EPA consideration





Upper Basin Remedial Actions

2012 Upper Basin RODA Goals

- Clean up to improve water quality and address human health and environmental risks
- Clean up in the Box to improve water quality of the SFCDR
- Treat additional contaminated water
- Focus on source control actions to address particulate lead
- Protect remedies from flooding





BEIPC 2024 Workplan

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Ninemile Creek Basin

Remediation and Waste Consolidation Areas





Upper Basin Remedial Actions

Canyon Creek Basin

Project areas

- Canyon Creek Investigation and Design
 - Investigations within Lower Canyon Creek Riparian Area, and Canyon Silver (Formosa) Mine, and the Standard-Mammoth Millsite
 - The design of the Standard Mammoth Reach cleanup will be initiated in 2024

• Hecla Star Mine Complex

- Clean up of 22 acres consisting of numerous mine and mill sites, waste rock dumps and impacted riparian area.
- Started in 2023 and will continue into 2024
 - Removal of mine waste, placement of clean fill, reconstruction of Burke road, and installation of culvert.
- Canyon Creek Quarry
 - 23-acre quarry for clean backfill within Canyon Creek Basin
 - Hecla Star Mine Complex cleanup
 - Future Upper Basin remediation work



Upper Basin Remedial Actions

Central Treatment Plant

System Updates

- Sludge Storage has been transferred to new cell in CIA
- Working on system optimization while meeting effluent discharge limits
- Groundwater monitoring utilized to determine effectiveness of system

Removal Efficacy 99% removal Lead 99% removal Zinc 98% removal Phosphorus





Lower Basin Remedial Action Plan

2002 Interim ROD Focus

- Lower Basin Riverbeds and banks
- Lower Basin Floodplains
- Recreational area cleanup

Draft Final Riverbed Management Plan was completed in 2021 to target areas within the river for active remediation and divides riverbed into sediment management areas

2002 Interim ROD Goals

- Reduce human exposure to lead-contaminated soil
- Improve water quality
- Reduce particulate lead and other heavy metals in Basin ecosystem

Feeds into a broader Lower Basin Prioritization Plan that is anticipated to be completed in 2024



Lower Basin Remedial Actions

Riverbeds and Banks Projects

Dudley Reach Scour Hole Pilot Project

- Considered most significant lead loading segment in the river system
- Pilot project to cap/dredge and armor adjacent riverbank
- 30% design completed in 2023 with full design anticipated to be completed in 2026
- Lower Basin WCA must be sited and ready to take sediment prior to project initialization

Cataldo Reach Riverbank Investigation

• Cataldo Reach characterization will continue into 2024 to address contaminated sediment transport





Lower Basin Remedial Actions

Floodplain Projects

Gray's Meadow Remediation and Restoration

- 695 acres agriculture to wetland conversion
- Anticipated to be complete in 2024

Wetland Restoration through Conservation Easement

- Remedial design characterization of 250-acre conservation easement near East Killarney Lake Road
 - Monitoring wells installed
- Potential agriculture-to-wetland conversion through remediation and restoration



ray's Meadow

Basin Environmental Monitoring Program

- Assess long-term trends
 - Surface water
 - Sediment
 - Groundwater
 - Biological resource conditions
- Evaluate
 - Remedial Action Objectives
 - Applicable or Relevant and Appropriate Requirements
 - Preliminary Remediation Goals
- Understand effectiveness and efficiency of remedial actions
- Data for CERCLA five-year review



Upper Basin

Ninemile Creek

- Remedial action effectiveness monitoring plan was finalized in 2021
- Baseline established in 2012
- Surface sampling four times per year
 - Winter storms
 - Peak spring run off
 - Late summer base flow
 - Late fall conditions
- Results are summarized in annual monitoring reports

Canyon Creek

- Remedial action effectiveness monitoring plan was finalized in 2023
- Baseline established in 2015
- Surface sampling four times per year
 - Winter storms
 - Peak spring run off
 - Late summer base flow
 - Late fall conditions
- Results are summarized in annual monitoring reports

Box

- Surface sampling upstream and downstream of Groundwater Collection System
 - Four stations are monitored twice a year
 - Peak spring run off
 - Late summer baseflow





Lower Basin

Lower Basin

- Remedial action effectiveness monitoring plan is in progress and will continue to be drafted in 2024
- Evaluate progress towards Remedial Action Objectives
 - Biological assessment for fish and wildlife
 - Surface water
 - Suspended sediment



2024 Plan

- Sampling increased in 2023 in response to 2022 NAS report recommendations
 - Better characterize conditions in the Lower Basin and inputs to CDA Lake
- Surface water quality samples collected 12 times per year at seven locations
 - High flow events
 - Fixed frequency-approx. every six weeks
- Sampling increased 60% and will continue through 2026

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Biological Monitoring & CDA Lake

Biological waterfowl research

- Multi-year research to develop tools to observe changes in lead exposure over time
- Development of non-invasive tools utilized to help understand lead exposure
 - Tundra swan's fecal samples
 - Wood duck's eggshells (beginning in 2024)
- Project lead by EPA in collaboration with CDA Tribe, IDFG, USGS and the USFWS

Implementation of 2022 NAS Recommendations

- Inputs into CDA Lake
- Install new instrumentation at or near three USGS monitoring locations
 - Cataldo
 - Rose Lake
 - Harrison
- Use of surrogate continuous monitoring technologies to estimate real-time concentrations of suspended sediment, lead, and phosphorus in the Lower Basin and entering Coeur d'Alene Lake



Operation and Maintenance

Responsibilities for Remedial Actions

Private properties remediated under BPRP

• Individual property owners

Public gravel and paved remediated roads

Local governments with jurisdiction over roads

Remedy protection program

- Governmental jurisdictions or property owner
- Environmental Covenants filed as riders to deeds of remediated property

CDA Work Trust is responsible for their own work

• Except: Road and remedy protection projects, Gray's Meadow after five years, and others

CTP and Ground Water Collection System

• IDEQ

Other remedies under CERCLA

• IDEQ

Remedies on BLM and NFS administered lands within the site and North Fork of CDA River

• BLM, USDA FS

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IDEQ Lake Management Activities

2024 Goals

NAS Recommendation Continue to monitor Water Quality-metals, nutrients and physical

Coordinate with the Science Coordination Team to review and implement NAS recommendations related to date collection and monitoring

Work with Leading Idaho recipients to implement phosphorus reduction projects

Analyze tributary data

Share relevant data gap monitoring results

Coordinate with CDA Tribe Staff to facilitate the Tribe's monitoring of nutrient loads in southern lake tributaries, the St. Marie's and St Joe Rivers

Collaborate on water quality improvement effects in the CDA Basin

Identify opportunities to align nutrient reduction and remedial actions in Lower Basin

Continue to monitor invasive aquatics

Continue to support TCP/YWS and Our Gem Collaborative

Support U of I Bay Watcher program

Support Local Gems program for local businesses

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Coeur d'Alene Tribe Lake Activities

2024 Goals

Continue to monitor Water Quality-metals, nutrients and physical

Continue to model data collected from the Lake, meteorological stations and USGS gage stations

Continue to monitor and treat invasive aquatics

Participate in Lower Basin Project Focus Team to align nutrient reduction and remedial efforts

Continue to support TCP/YWS and Our Gem Collaborative

Support Local Gems program for local businesses

Work with IDEQ to implement the St Joe River Nutrient and Watershed Assessment Project

Continue to request that EPA reviews/evaluates their decision to "defer" a remedy for the Lake

Other Activities and Responsibilities

Flood Control and Infrastructure Revitalization

- BEIPC ED will continue to work with local infrastructure jurisdictions on O & M plan for existing drainage structures in the Upper Basin
- BEIPC ED will work with TLG to develop funding ideas for Basin work not covered in ROD for OU-3 or Upper Basin ROD Amendment

Communications and Public Involvement

- BEIPC will continue to work with Community Involvement Coordinators and Citizens Coordinating Council to carry out public involvement, outreach, and education regarding Basin activities
- BEIPC will participate in Regional Outreach and Educational Committees

State of Washington Activities

- Ecology will continue to monitor previous clean up along the Spokane River
- Results of the 2022-2023 comprehensive sampling effort will made available to interested parties

Restoration Partnership USDA, USFS, USFWS, BLM, CDA Tribe, IDFG and IDEQ

Ongoing Restoration Projects

- Conservation easements along the CDA River (USFWS)
- Native willow plant nursery management (Tribe)
- Wetlands enhancement at Hepton Lake (Tribe)
- Replacement of culturally significant plants in Hangman Creek watershed (Tribe)
- CDA Lake monitoring and modeling (Tribe)
- Gray's Meadow wetlands restoration (IDFG)
- Gene Day Pond Public Access Improvements (IDFG)
- O & M of Schlepp wetland (IDFG)
- North Fork CDA River Conservation Easement (IDFG)
- Cougar Bay Preserve Wetland Enhancement and Stream Restoration (BLM/USFWS)
- Lake Creek Watershed Restoration (Tribe)
- Prichard Creek Conservation Easement and Restoration (Trout Unlimited/Idaho Forest Group/IDEQ)
- Red Ives Creek Restoration (USFS)

Upcoming in 2024

• Trustees will work with selected proponents on funding new restoration projects that were selected for funding





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