

2011 ANNUAL REPORT



Basin Environmental Improvement Project Commission

February 2012

Table of Contents

Executive Summary	1 - 2
BEIPC Overview	2 - 3
Program Management	3 - 4
Public Outreach and Citizen Involvement	4 - 6
Calendar Year 2011 Work Accomplishments	7 - 27
Part 1 - Work Performed Through Federal Superfund or Other Cleanup Programs:	
Blood Lead Screening in Children	
Basin Property Remediation Program	
Repository Development and Management	
Recreational Use Activities	
Upper Basin Remedies	
Lower Basin Remedies	
Basin Environmental Monitoring	
Part 2 - Other BEIPC Activities and Responsibilities:	
Lake Management Activities	
Funding for the Environmental Cleanup, Flood Control and Infrastructure Revitalization	
Communications and Public Involvement	
Natural Resource Damage Restoration	
Challenges Ahead	27 - 28

Executive Summary

The Basin Environmental Improvement Project Commission (BEIPC) is a locally based organization responsible for overseeing environmental cleanup to address heavy metal contamination, natural resource restoration and water quality in the Coeur d'Alene Basin (Basin). The BEIPC also participates in guiding and coordinating infrastructure upgrades and improvements to protect the environmental cleanup remedy and enhance living conditions in the communities of the Basin. The Basin is defined as the watersheds of the Coeur d'Alene (CDA) RIVER, Coeur d'Alene Lake and the Spokane River within the Idaho Counties of Shoshone, Kootenai, and Benewah, as well as the Coeur d'Alene Tribal Reservation within Idaho.

During Calendar Year 2011, the BEIPC coordinated and monitored accomplishments by various implementing entities for environmental cleanup and natural resource restoration work included in the BEIPC 2011 Annual Work Plan and the five-year operating plan. It also developed a 2012 Annual Work Plan and an updated five-year plan. The environmental cleanup work was performed through the federal Comprehensive, Environmental

Response, Compensation and Liability Act (CERCLA/Superfund) Program, the State of Idaho environmental cleanup program, and actions by the Coeur d'Alene Work Trust formed under the ASARCO Bankruptcy settlement. Natural resource damage restoration work was performed by the Coeur d'Alene Basin Natural Resource Trustees including the Coeur d'Alene Tribe, State of Idaho, Department of Interior through the U.S. Fish and Wildlife Service (USFWS) and Bureau of Land Management (BLM) and Department of Agriculture through the U.S. Forest Service (USFS). The BEIPC continued to work on a consolidated approach to flood control and levee management in the South Fork CDA River and Pine Creek working with the U.S. Environmental Protection Agency (EPA), State of Idaho, local government agencies, and the Idaho Silver Jackets organization, a coalition of federal and state agencies that work together to develop comprehensive and sustainable solutions to Idaho's flood hazard issues. The Panhandle Health District (PHD) continued to manage the Institutional Controls Program (ICP) to control the release and migration of contamination remaining in place after remediation.

BEIPC Overview

Authorization and Duties

The BEIPC was established by the Idaho State Legislature and implemented through a Memorandum of Agreement (MOA) among implementing parties to direct, and/or coordinate environmental remediation, natural resource restoration, and related measures to address water quality and heavy metal contamination in the Basin.

The Basin is considered to be Operable Unit 3 (OU-3) of the Bunker Hill Mining and Metallurgical Complex Superfund Facility, originally listed on the CERCLA National Priorities List in 1983. Operable Units 1 and 2 (OU-1&2) are the populated, industrial, and undeveloped areas in what is known as the "Bunker Hill Box."

The BEIPC's primary purpose is to work with the EPA and Idaho Department of Environmental Quality (IDEQ) to implement the Record of Decision (ROD) for OU-3 throughout the Basin and implement the Upper Basin ROD Amendment for portions of OU-3 and work in OU-2 included in the Amendment designed to advance the cleanup of heavy metals contamination. In addition, the BEIPC is involved in:

- Developing a comprehensive cleanup plan for the Upper Basin based on remedies selected in the Upper Basin ROD Amendment;
- Coeur d'Alene Lake management planning and implementation;
- Heavy metal contamination cleanup efforts at mining sites in the North Fork of the CDA River; and
- Leading multi-agency coordination in addressing potential flooding in the South Fork CDA River and Pine Creek drainages.

Legislation creating the BEIPC authorized appointment of a seven-member board comprised of:

- Four members from Idaho, one representing the state, and one each representing the county commissions from Shoshone, Kootenai, and Benewah Counties, appointed by the Governor of Idaho;
- One representative of the state of Washington appointed by the Governor of Washington;
- One tribal council member of the Coeur d'Alene Tribe appointed by the council of the Coeur d'Alene Tribe; and
- One federal representative of the United States appointed by the President.

Implementing language directed the BEIPC to appoint an Executive Director to manage the activities of the BEIPC. The Executive Director is Terry Harwood.

Current BEIPC Membership

Name	Title	Representing
Jon Cantamessa, Chair	Shoshone County Commissioner	Shoshone County
Jack Buell, Vice-Chair	Benewah County Commissioner	Benewah County
Dan Green	Kootenai County Commissioner	Kootenai County
Chief Allan	Chairman, Tribal Council	Coeur d’Alene Tribe
Grant Pfeifer	Regional Director, Washington Department of Ecology	State of Washington
Toni Hardesty	Director, Idaho Department of Environmental Quality	State of Idaho
Dennis McLerran	Regional Administrator, R-10 EPA	Federal Government

Program Management

The BEIPC operates in accordance with the Idaho statute and the MOA between the governing entities. It is responsible for coordinating the activities of federal, tribal, state and local government agencies implementing the ROD for OU-3 and the Upper Basin ROD Amendment for OU-2 and portions of OU-3 for human health and ecological cleanup activities. It is also involved in the coordination of efforts to protect the cleanup remedies, human health, and the environment from the release and migration of contaminants through the implementation of Institutional Controls in the Basin, implementation of a Drainage Control and Infrastructure Revitalization Plan (DCIRP) for the Upper Basin communities, and development of a coordinated effort for flood control and levee management in the South Fork CDA River and Pine Creek.

The BEIPC works with the seven governmental entities and their agencies to establish annual work priorities and operating plans. The Executive Director is involved in assisting the seven governments on various engineering and environmental issues at their request, in implementation of a consolidated infrastructure revitalization plan for the Upper Basin communities, and in development of a coordinated flood control and levee management program for the South Fork CDA River and Pine Creek drainages. To assist the Executive Director in program management, planning, and implementation, volunteer staff “on loan” to the BEIPC from the states of Idaho and Washington, the EPA, and the Coeur d’Alene Tribe coordinate with the Executive Director and provide routine intergovernmental input on technical and policy issues. Other support groups include the Technical Leadership Group (TLG) and the Citizens Coordinating Council (CCC).

Technical Leadership Group (TLG)

The TLG with its Project Focus Teams (PFTs) is the BEIPC primary technical advisory group. It is comprised of federal, state, local and tribal representatives as well as interested private citizens serving on the PFTs who provide expertise in science, engineering, logistics, regulatory aspects, and land management in the Basin. The TLG advises the BEIPC on work planning and implementation while striving toward consensus-based recommendations. In 2011, the Executive Director, PFTs and TLG developed the 2012-2016 Five-Year and Calendar Year 2012 draft work plans and studied and developed project and program proposals to implement the remedy in OU-2 and 3. The TLG is currently composed of representatives from 21 governmental entities.

Public Outreach and Citizen Involvement

Community Involvement

During Calendar Year 2011, the BEIPC held meetings and deliberations open to the public and maintained an up-to-date Basin website at: www.basincommission.com. Meetings were held at various locations within the Basin with locations and dates posted in local newspapers and at the BEIPC office in Kellogg, Idaho. EPA, IDEQ and the BEIPC held a number of community open houses to discuss the ROD Amendment for the Upper Basin. General public comment opportunities are scheduled at each meeting. The BEIPC also participated in public education/outreach efforts including the joint information booth at the North Idaho Fair.

Citizens Coordinating Council (CCC)

The CCC serves as an information conduit to and from the BEIPC on citizen, community, and special interest issues, and on environmental cleanup and restoration concerns. It is comprised of politically and geographically diverse members and was established to provide local citizen review and input on Basin related work to the BEIPC.

CCC Meetings and Communication

CCC meetings were held in January, April, July, and October 2011 in different locations around the Coeur d'Alene Basin. All meetings were open to the public.

At the regular quarterly CCC meetings, members were updated on ongoing BEIPC and TLG activities and asked to provide input on a variety of issues such as repository siting, the Upper Basin ROD Amendment and BEIPC work plans. The CCC informed the BEIPC of its activities by providing meeting minutes and comments to Commissioners prior to BEIPC meetings and by making presentations at BEIPC meetings.

Approximately once a month, CCC members were provided with email and/or U.S. mail updates on relevant activities in the Basin. In April 2011, CCC members elected a new Vice-Chair, Troy Lambert, to replace Vera Williams who moved out of the area. The regular Chair and Vice-Chair elections were held in August with Jerry Boyd being re-elected as Chair and Troy Lambert as Vice-Chair.

Chronology of Selected CCC Activities and Input to the BEIPC in 2011

In addition to receiving updates approximately once a month via email or regular mail about current BEIPC activities, CCC members were involved in the following activities in 2011.

January

- The CCC held a regular quarterly meeting on January 19 in Coeur d'Alene, Idaho. Topics included updates on the Basin Property Remediation Program (BPRP) by IDEQ, EPA updates on the Upper Basin proposed cleanup plan and Upper Basin ROD Amendment, EPA staff changes including the hiring of a new Basin outreach position funded with an EPA grant through the Senior Environmental Employment Program, and Lake Management Plan activities by the CDA Tribe and State of Idaho.

February

- The CCC Chair, Jerry Boyd, presented the results of the January 19 CCC meeting at the February 16 BEIPC board meeting.

March

- The Communications PFT developed an online survey to collect feedback from CCC members and the public about how to improve communications related to citizen involvement in the BEIPC process.

April

- The CCC held a regular quarterly meeting on April 20 in Wallace, Idaho. Topics included updates on the BRPR, Basin flood levee system analysis, road remediation program, remedy protection work, repository operations, EPA updates on the Upper Basin ROD Amendment, CDA Trust work, Lower Basin planning activities, South Fork CDA River stream bank stabilization, and discussion about the Lower Basin Collaborative. In addition, CCC members voted in a new Vice-Chair to replace a vacancy and an overview of CERCLA issues in the Basin was presented by Terry Harwood.

May - June

- The CCC Chair presented the results of the April 20 CCC meeting at the May 18 BEIPC meeting. CCC members were invited to submit nominations for the bi-annual CCC Chair and Vice-Chair elections.

July

- The CCC held a regular quarterly meeting on July 13 in Coeur d'Alene, Idaho. Topics included the BPRP, Chair and Vice-Chair elections, proposed stream bank stabilization activities, discussion of potential updates to the CCC Protocols to include the Lower Basin Collaborative, updates on the ROD Amendment, Hecla settlement, and Lower Basin activities by EPA, Lake Management Plan activities by the Tribe and State, and repository activities by IDEQ.

August-September

- The Vice Chair presented the results of the July 13 CCC meeting at the August 17 BEIPC board meeting. The CCC Chair and Vice-Chair volunteered to help staff the joint fair booth at the North Idaho Fair that was sponsored by the BEIPC, IDEQ, CDA Tribe, EPA and Panhandle Health District (PHD) for public education and outreach.

October

- The CCC held a regular quarterly meeting on October 12 in Wallace, Idaho. Topics included the draft five-year and one-year BEIPC work plans, Upper Basin ROD Amendment and cleanup plan, repositories, the BPRP, Hecla settlement, Lower Basin Collaborative activities, Lake Management Plan activities by the State and Tribe, and a discussion of the Basin Pilot Sampling Program. CCC members reviewed and provided comments on the draft BEIPC Five-Year and 2012 Work Plans.

November-December

- The CCC Chair presented the results of the October 12 CCC meeting at the November 16 BEIPC meeting. The BEIPC approved the changes to the CCC protocols proposed in July and revised in October allowing the Lower Basin Collaborative to be part of the CCC.

Additional Outreach Activities

In addition to the activities of the CCC, the various governmental entities represented by the BEIPC continue to support the TLG and CCC by being involved in the activities of those groups. The governmental entities have been involved in outreach activities including meeting with citizen groups, giving technical presentations, participating in Basin events, holding tours of Basin project areas, maintaining information repositories throughout the Basin, and publishing various information documents to provide updates on Basin activities and to give answers to common environmental cleanup and improvement questions.

As part of the public outreach program, the Executive Director continued to make numerous presentations to local business and community groups concerning activities of the BEIPC and planned cleanup actions and activities required to protect the remedy, human health, and the environment. The Executive Director also hosted a number of field reviews by the media and other interested parties, and was interviewed numerous times by the media for news and television stories. Below are listed a number of the types of briefings and presentations made by the Executive Director in 2011:

- Briefing for newly elected Kootenai County Commissioners on Basin cleanup
- Update presentation to the Idaho Society of Professional Engineers on the Upper Basin ROD amendment
- Presentation to Hayden Rotary on Basin cleanup
- Updates of BEIPC activities at EPA press conferences
- Briefings for Shoshone County Commissioners
- Presentations to environmental and political groups

Calendar Year 2011 Work Accomplishments

Work Performed Through Federal Superfund or Other Cleanup Programs:

Blood Lead Screening in Children

Blood lead testing of children living in the Basin was conducted in July 2011 as part of the PHD Health Intervention Program. The testing program, held annually at fixed locations throughout the Basin, provides testing of children 6 years old and younger in an effort to locate children with elevated blood-lead levels and to offer information to families of those children with elevated blood-lead levels on how to help reduce their children's exposures to lead. The information gathered from this testing program also provides feedback on the effectiveness of the CERCLA/Superfund cleanup work in the Basin. The current program provides a cash incentive of \$20 per child to test children living in the Basin.

Seventy-five (75) children residing in the Basin were tested as part of the program in 2011. This is a drop from 108 in 2010. Families of children who were tested were provided the \$20 incentive.

Parents of children testing high are notified of the results and offered an in-home health consultation to identify ways to reduce exposures to lead. Blood-lead levels equal to or greater than 10 micrograms per deciliter is the level of concern identified by the Centers for Disease Control and this level is used by the PHD to determine the need to offer in-home health consultations. Results of the 2011 blood lead testing program will be presented to the BEIPC at the February 2012 meeting.

The PHD, IDEQ, and EPA continue to try and find ways to increase participation in the blood lead testing program. One of the ideas currently being investigated is to offer passes to local swimming pools for children who participate in the program. The passes would provide kids something that they would enjoy. They would also provide kids a place to play and recreate that is free from lead exposures.

Basin Property Remediation Program (BPRP)

IDEQ remediated a total of 243 property addresses during the 2011 BPRP. This resulted in over 2.8 million square feet of contaminated property being remediated. The waste material was disposed of in Big Creek and East Mission Flats repositories. Work started on May 2, 2011 and continued until December 12, 2011. During the program, an average of 153 truckloads of waste per acre remediated was hauled to the repositories. This season, repository operations costs for the BPRP were about \$2.3 million. The table on the following page contains information on yards remediated and truckloads of waste processed in repositories since 2007 for reference.

Year	Number of Property Addresses	Area Remediated (Acres)	Waste From BPRP Disposed of in Repositories (Truckloads)	Truckloads Per Acre
2007	373	60	9,240	154
2008	352	57	8,129	143
2009	547	149	18,780	126
2010	311	70	10,725	153
2011	243	64	9,795	153

Eighteen (18) of the remediated sites in 2011 were high risk properties where the exposure risk to the public was elevated because of the presence of small children and/or pregnant women. An enhanced property survey protection program was implemented in 2011 as well. The total cost of the yard remediation work was approximately \$16 million.

Each year, IDEQ consultants collect soil samples and send them in for analysis to determine which properties will require remediation in the future. This sampling is the basis for the following year BPRP. A total of 198 properties were sampled. Most of the sampling (130 or 66% of the total) occurred in the Lower Basin. A consolidated process of sampling/remediation mapping, first used in 2010 for high risk properties, was applied to all of the properties to minimize the delays in construction map development. This resulted in available maps in less than half the time.

Many of the roads in the Basin are constructed of or surfaced with contaminated material. A program is being developed to remediate this source of contamination by ensuring that the roads are surfaced with clean material. To determine which roads are contaminated a sampling and surface condition process has been initiated for unpaved and paved roads. The unpaved roads will be part of the BPRP and the paved roads will be handled with a separate program. The unpaved road sampling program began the first week of September and continued three weeks into November. Maps of county or city-owned unpaved roads targeted for sampling were developed based on city and county information. These maps were reviewed and verified in the field prior to sampling. In total for 2011, 38 of the 55 verified roadbeds were sampled, or approximately 27.8 of 40 miles. Sampling of unpaved roads will be completed in 2012. The total sampling/mapping costs for the 2011 season were approximately \$3 million.

During 2011 a group was formed to develop a BPRP completion plan for OU-3 including the contaminated unpaved road surfaces as barriers. Contaminated paved road surfaces will be included in a separate program. A Discrete Geographic Areas Map was developed by the group that includes areas to be considered for completion of BPRP work and this map was shared with the BEIPC for comment and recommendations. That map has been approved for inclusion into the completion plan. The group will continue to develop the completion plan in 2012 with a goal to present the final plan to the BEIPC in 2012.



Property Remediation in Kingston



Property Remediation in Kingston

Repository Development and Management

Introduction

Two repositories were open to receive remedial action and ICP waste in the 2011 field season. Big Creek Repository (BCR) near the community of Big Creek serves the Upper Basin, and East Mission Flats Repository (EMFR) near Cataldo serves communities in the Lower Basin. A summary of activity at each site is described in the following sections.

The repository site selection process initiated in 2008 culminated in the identification of two new repository sites in the Upper Basin; the Osburn Tailings Impoundment (OTI) and the Star Tailings Impoundment (STI). The progress toward transforming the former tailings impoundments into repositories is described in this section.

Big Creek Repository

During 2011, BCR received 4,867 truckloads from the BPRP and 539 truckloads from the ICP. Final in-place, compacted volume calculated from the truck load count was about 39,000 cubic yards. This material was placed and compacted in accordance with the fill plan outlined in the annual BCR Operations Plan. IDEQ's site management contractor oversaw these activities including operation of the decontamination facility. In 2011, the water quality monitoring program at the site found that BCR operations had not impacted adjacent surface or ground waters.

The majority of the waste soil placed at BCR in 2011 was incorporated into the north side expansion area. The final design report for this new waste placement area was completed in the spring of 2011. The expansion area was cleared of existing vegetation in late April and the first waste soils were placed in June 2011. By the fall of 2011, the initial lift of the expansion was completed and capped with two feet of rock riprap on the initial 2 foot horizontal to 1 foot vertical toe slope. Future waste placement in the expansion area will proceed at a 3 foot horizontal to 1 foot vertical vegetated slope to the final designed top elevation of the repository. The expansion area was developed on state owned property and provides an additional 126,000 cubic yards of capacity including the repository cap. The expansion provides added capacity at a very low cost because the existing repository infrastructure such as access roads, utilities, decontamination facilities and the monitoring well network are already in place.

At the end of the 2011 field season, the BCR contained approximately 494,000 cubic yards of waste soils. The total anticipated capacity is approximately 632,000 cubic yards including the final cap volume. Assuming historical waste disposal needs from the BPRP and ICP, approximately three years of capacity remains. To ensure continued ICP capacity for the Upper Basin until operation of a new upper basin repository begins, careful management of the remaining BCR capacity will be required.

East Mission Flats Repository

EMFR achieved fully operational status starting in 2010. In 2011, the EMFR repository received 4,928 truckloads from the BPRP, 427 truckloads from the ICP, and 25 truckloads from the Railroads' Wallace Yard cleanup project. Final in-place, compacted volume calculated from the truck load count was about 37,000 cubic

yards. Some of the waste soil received at EMFR was used to construct a perimeter berm around a portion of the repository footprint to the east of the decontamination facilities. The berm forms a collection basin to capture rain or snow melt runoff from the surface of the repository. The berm was completed to at least an elevation of 2,140 feet to prevent spring flood waters from entering the footprint of the repository where waste material has been placed. In addition to forming a collection basin, the interior of the berm area creates a fully contained disposal area for waste placement in the spring when flood water can potentially inundate the area surrounding the repository.

All completed exterior slopes of EMFR including the berm constructed in 2011 are graded to a 3 foot horizontal to 1 foot vertical configuration and covered with rock riprap to an elevation of 2,140 and clean soil treated with soil stabilizers and hydroseeded with a native vegetation seed mix placed above that elevation. Temporary exterior slopes on the east end of the berm were treated with straw wattles, soil stabilizers, and hydroseeded. The clean soil and riprap on the completed exterior surfaces is part of the final protective cap.

As in the past, the ICP disposal area will be available at the east end of EMFR to receive ICP waste during the winter closure period. The ICP area will be managed by the IDEQ Project Manager and Operations Contractor during the winter closure period and, prior to spring runoff, all ICP waste will be transported and stockpiled on top of the repository for processing and future placement and compaction.

Quarterly groundwater monitoring was conducted at six monitoring wells located on or near EMFR. Groundwater monitoring program results through July 2011 indicate that disposal activities have not impacted groundwater near the site. Results of sampling conducted in 2011 show decreased concentrations for the constituents of concern when compared to previous years.

In December 2010, two new piezometers were installed near the repository pump house within the waste soil mass in response to a recommendation made by the EPA Office of Inspector General. The piezometers are intended to monitor for the presence of water within and below the soil mass. Piezometer PZ-A was installed to a depth of 17 feet to monitor conditions at the bottom of the waste soil mass. Piezometer PZ-B was installed to a depth of 11 feet to monitor conditions within the soil mass. No water was detected in PZ-B during 2011.

A small quantity of water was detected in PZ-A during 2011, but the quantity of water was so small that the piezometer could not be properly developed and water samples could not be collected in accordance with accepted standard protocols. The piezometers will continue to be monitored carefully in the future for indications of water and potential metals mobilization within the waste materials. This monitoring is in accordance with the 2008 Enhanced Monitoring Plan that was developed by IDEQ and EPA for EMFR.

New Repositories

Two new repository locations were identified as a result of the site selection process. Both proposed repository sites are located on reclaimed mine tailings impoundments. One site is located at the Osburn Tailings Impoundment (OTI) northeast of Osburn and the second site is located at the Star Tailings Impoundment (STI) in Canyon Creek east of Woodland Park. Negotiations for site acquisition have been initiated with the property owners.

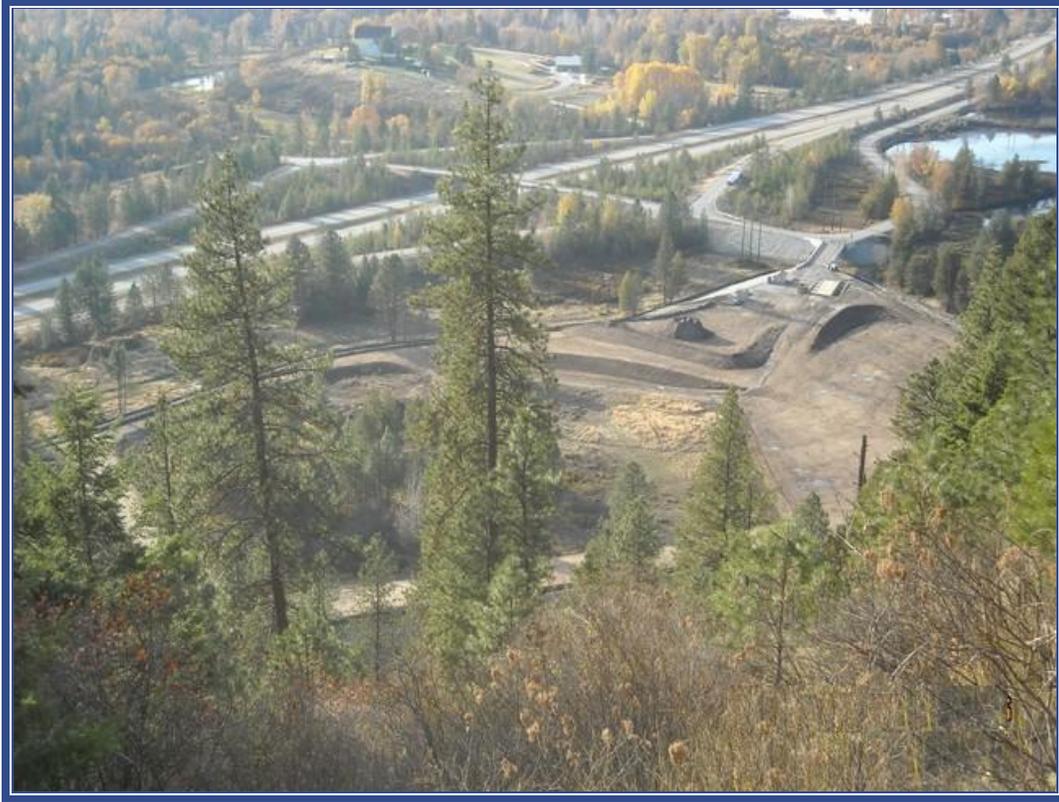
During 2011, a thirty percent repository design report was prepared for the OTI site. The report will be made available for public preview through the BEIPC website in early 2012. At this time a formal public comment

period is not anticipated on the OTI design. Recent prioritization of remediation projects in Canyon Creek necessitates shifting to design of a repository located at the STI site. A formal public comment period on the thirty percent design will be conducted prior to proceeding with additional work on a repository at the OTI site.

Work on the STI design has begun and will continue through the winter and spring of 2012. The public will have an opportunity to review and comment on the STI thirty percent design report before additional work is conducted at the site. Any revisions that occur as a result of public comments will be incorporated into subsequent designs for the site. Schedules for production of design documents beyond the Thirty Percent Design Report have not been developed at this time.



BCR North Expansion (Note the rocked 2:1 toe slope)



EMF Repository (Note the berm around the east end of the site)

Recreational Use Activities

The work of the Recreation Area PFT was moved as a subcommittee under the Lower Basin PFT. This transfer came about since most of the future recreation area work will occur in the Lower Basin. Work on Upper Basin sites will also be accomplished within this revised framework.

Throughout 2011, efforts continued to consider the potential restoration of a recreational site at the Gene Day Pond area in Osburn. If a project were to proceed, it could include the development of an urban fishery which would be managed by the Idaho Department of Fish and Game (IDFG). The U.S. Army Corps of Engineers (USACE) conducted field sampling for heavy metal contamination in and around the Pond in 2009. In September 2009, representatives of local government and federal and state agencies met for a site tour and an initial project scoping meeting. In November 2009, the USACE Real Estate Office completed one of the action items that resulted from this meeting; identification and delineation of property ownership surrounding the Pond. The next step is to develop a preliminary design and budget for the project.

IDEQ is seeking additional funding for sampling to determine existing water quality in the pond and the source of the water. IDEQ is also meeting with local community members and agencies in an effort to obtain additional background information. In 2011, IDEQ received an initial round of funding and is in the process of conducting water and soils sampling, hydrologic characterization, topographical surveying, and wetland delineation. Sources of funding for a preliminary design will be pursued as the project progresses. There is a

significant amount of support for this project from the public and agencies. A workgroup is forming that will include; EPA, BLM, Idaho Department of Parks and Recreation (IDPR), IDFG, PHD, BEIPC, Shoshone County, and other interested parties.

Development of a cast of four characters to accompany PHD's Riley Raccoon cartoon character in a recreational public health messaging campaign is in progress. The campaign is planned to focus on contamination exposure pathways and sources and how parents and children can take measures to prevent getting contaminated. There is also a need to address how to stop the re-introduction of contaminants to the public and their homes by maintaining healthy habits. This cast of characters will be utilized in many ways; some ideas are activity guides, posters, lesson plans, and eventually a Public Service Announcement. Some events and places identified for distribution include: fairs (N. Idaho), schools, daycare centers, areas along the Trail of the Coeur d'Alenes, and retail businesses in the communities.

During 2011, the USFS presented two projects that they have been pursuing along the Lower CDA River, Rainy Hill Campground rehabilitation and Medimont boat launch site rehabilitation, to the TLG for consideration. The USFS is pursuing funds to complete the project work at the Rainy Hill site, but was seeking support from the BEIPC for the Medimont site. The TLG agreed that restoring the Medimont site would be a positive recreational site project and gave approval for a presentation of the proposal at the BEIPC meeting in August. The BEIPC endorsed the project and supported the TLG investigating funding opportunities to assist in implementation.

Upper Basin Remedies

During 2011, EPA continued to work on the revised cleanup plan, ROD Amendment, for the Upper Basin. The Upper Basin ROD Amendment covers a portion of OU-3 including the South Fork of the CDA River and its tributaries downstream to where they combine with the North Fork and some work in the "Bunker Hill Box" where EPA began cleanup in the 1980s. These changes will result in an updated cleanup plan for the Upper Basin to protect public health and the environment. These changes and updated cleanup plan will be documented in the Amendment. The purpose of this effort is to set out a comprehensive cleanup approach across the Upper Basin to protect the environment, particularly water quality; and ensure that the human health remedy is protected for the long-term. EPA is doing this work to reflect improved knowledge of local conditions, as well as to address the recommendations of the National Academy of Sciences (NAS).

There were a number of meetings in 2011 regarding the proposed cleanup plan. These meetings were held to primarily communicate the changes that EPA is contemplating in the cleanup based upon input received during the public comment period for the July 2010 Proposed Plan. Meetings to share information and hear input were held with mayors and other officials in the Upper Basin, local groups, and the Coeur d'Alene Tribe. Information about the proposed cleanup plan changes were also shared at various community group meetings including updates at each of the Upper Basin PFT, TLG, CCC and BEIPC meetings during the year.

2011 ROD Amendment preparation efforts included continued development of the remedy protection program for urban areas and side drainages and development and communication of a number of changes to the July 2010 Proposed Cleanup Plan including:

- Elimination of the stream liner along the South Fork CDA River;

- Providing a more detailed description of the adaptive management approach and process for Post ROD Amendment changes and public input;
- Identification of strong consensus for remedial action at 74 sites based on data and community input including:
 - Key inactive mine/mill sites in areas impacted most (2 key drainages)
 - Sites with potential for large sources of contamination to groundwater/surface water
 - Sites that allow for completion of work in a side drainage to the South Fork CDA River
- Elimination of the Lucky Friday Mine complex from the cleanup plan;
- Identification of 236 Contingent Sites that include active commercial facilities, sites where some actions have been taken, and sites with lower priority in cleaner side drainages;
- Elimination of 42 mine/mill sites from action based on a Pilot Evaluation Project developed and conducted in 2011. EPA would conduct similar work in future years to evaluate other contingent sites;
- Incorporation of Aquatic Benchmarks in the ROD Amendment and Basin Environmental Monitoring Plan (BEMP) to help show progress towards goals;
- Adjustment to proposed stream stabilization work in areas of concern to local officials and the communities.

The ROD Amendment is currently scheduled to be completed in early 2012.

To learn more about the ROD Amendment: Additional details including technical memos, a map, materials from past meetings, and community involvement documents may be found at:

<http://yosemite.epa.gov/R10/CLEANUP.NSF/sites/bh+rod+amendment>.

CDA Work Trust Accomplishments:

In early 2011, the EPA identified nine sites in the East Fork of Ninemile (EFNM) Creek for priority cleanup by the Trust. These sites were identified in the 2002 OU-3 ROD. During 2011, work was begun to further characterize these sites and collect pre-design data. This work included collection of surface and subsurface soils samples, borings through waste areas, installation of groundwater monitoring wells, and collection of surface water and groundwater. The following work was conducted in the EFNM Creek:

- Remedial Design Investigation of Interstate and Success Sites – (Interstate-Callahan Mine/Rock Dump, Interstate/Callahan Lower Rock Dump, Interstate Mill Site, Success Mine Rock Dump).
- Remedial Design Investigation of Tamarack Sites (Tamarack Rock Dumps, Tamarack 400 Level, Tamarack No. 5, Tamarack unnamed adit, Tamarack Mill Site).
- Environmental and geotechnical assessment of roads and location of stream crossing near the Success site.
- Investigations at three potential waste consolidation areas for waste material located within EFNM Creek.
- Surface water monitoring in the EFNM.
- Conduct an initial archeological investigation by the CDA Tribe in the EFNM. This included both pre-field research and site survey.
- EFNM infrastructure and landslide repair in order to access sites for investigation. This included both road repairs and several culvert replacements due to wash out from heavy precipitation.

- Detailed land survey of the EFNM Creek Basin and aerial photography.

The Coeur d'Alene Trust also completed cleanup work at the U.S. Bureau of Mines site in Osburn in October 2011. The cleanup involved covering contaminated soils at the site with clean rock and creating a barrier between the contamination and people who may find their way onto the site. The cleanup also includes features that will discourage the use of All-Terrain Vehicles (ATVs) and other vehicles on the site so that the clean materials that are installed remain in place and contaminated materials are not exposed.

The cleanup plan for the site was developed by EPA to eliminate the potential for people to be exposed to high lead and arsenic levels in soils at the site. In the early 1980s, the U.S. Bureau of Mines conducted tests to evaluate the use of mill tailings to fill and reclaim river flood plains at the site. The site, located along the southern bank of the South Fork CDA River at the mouth of Terror Gulch, consisted of test cells that were constructed and filled with mine/mill tailings. Once the tests were completed, the cells were partially graded and covered with gravel. Vehicle use at the site had worn away some of the cover material and exposed the tailings in the test cells.

The CDA Work Trust also performed investigation of the Gem site in Canyon Creek, portions of which are owned by the Trust. The objective of the work was to gather information to evaluate the nature and extent of the subsurface and surface contamination in this area, particularly the nature and extent of any Principal Threat Material that could be of concern for other culvert repair work being conducted in this area by Shoshone County.



Investigation Work at Tamarack & Interstate



Road Repair on the EFNM Road

Lower Basin Remedies

The cleanup described in the 2002 OU-3 ROD for the Lower Basin includes actions for the wetlands and lateral lakes, the river banks, splay areas and river bed. The objectives of remediation in the Lower Basin focus on reducing human health risks, improving wildlife habitat, and reducing particulate lead in the CDA River system.

In April 2006, EPA used Coeur d'Alene Basin Superfund settlement monies to purchase a 396-acre conservation easement with a willing private property owner. The agreement was established to help meet OU-3 ROD goals in establishing safe waterfowl feeding habitat in the Lower Basin as they pertain to metals of concern. Other parties participating in agreement negotiations included the Natural Resource Trustees with the

USFWS leading the effort along with Ducks Unlimited. Remedial action construction in ~300 acres of the easement started in September 2006 and was completed in 2007 using ASARCO Environmental Trust Fund (AETF) monies. Final remediation activities were completed by EPA in 2011, which included final grading, portable pump purchase and delivery, power source installation, wet well and associated piping installation and demolition/abandonment of the old pump and pipe system. The Natural Resource Trustees have begun wetland restoration within the easement. USFWS and Ducks Unlimited are conducting restoration activities, and USFWS is coordinating operation and maintenance of the site over the long-term under the Trustees' 2007 Coeur d'Alene Basin Final Interim Restoration Plan. Restoration activities were initially funded by the AETF and future restoration efforts will be funded by Natural Resource Damage Assessment (NRDA) settlement funds. Basin Environmental Monitoring Program (BEMP) data is already demonstrating remedial and restoration success; in contrast to un-remediated Basin wetlands, mean blood lead concentrations from waterfowl sampled within the easement are below the suggested acute toxicity threshold, and have been shown to increase once waterfowl move from the remediated area to un-remediated areas. Waterfowl use within the easement (since restoration began) also included some of the highest densities of ducks in any Basin wetland monitored under the BEMP and continues to increase as restoration progresses. Through the Superfund remedial action and NRDA restoration activities, contamination is successfully being addressed and this contaminated area is being converted into perpetually protected, high quality feeding habitat for both migratory and resident swans, ducks, and other wetland species. This pilot project represents an important step in addressing the Basin's widespread ecological contamination issues.

There are a significant number of data gaps and uncertainties with respect to the fate and transport of contaminants in the Lower Basin which must be addressed prior to commencement of additional ecological remedial actions in this area. Additional data and sediment transport modeling is needed to better understand the system and make decisions about cleanup actions. During 2011, efforts were underway by EPA to address key uncertainties as discussed below. In addition, past Clean Water Act (CWA) sub grants approved by the BEIPC will help provide site-specific information for remedial decisions. All of the BEIPC studies and demonstration projects are now completed.

EPA began developing an Enhanced Conceptual Site Model (ECSM) for the Lower Basin in 2009 and published it in August 2010 after vetting and receiving comments from the TLG, Lower Basin PFT, and the CCC. In August 2010, EPA published the ECSM and provided it to the BEIPC board and meeting attendees at the August BEIPC meeting. Subsequently, the ECSM was provided to the TLG, Lower Basin PFT and CCC and other interested parties on request. The ECSM refines the current working hypothesis of the Lower Basin with respect to river flows and sediment transport. The ECSM Synopsis is available on the BEIPC website (www.basincommission.com) on the Lower Basin PFT page. The ECSM is comprised of disciplinary Technical Memoranda (TM) as follows:

- ECSM Synopsis
- ECSM Executive Summary
- TM A Overview
- TM C Hydrology
- TM D Hydraulics and Sediment Transport
- TM E Fluvial Geomorphology
- TM F Geochemistry
- TM G Contaminant Sources
- TM H Simulation Modeling

- TM I Geospatial Data Management
- TM J Data Gaps and Other Uncertainties

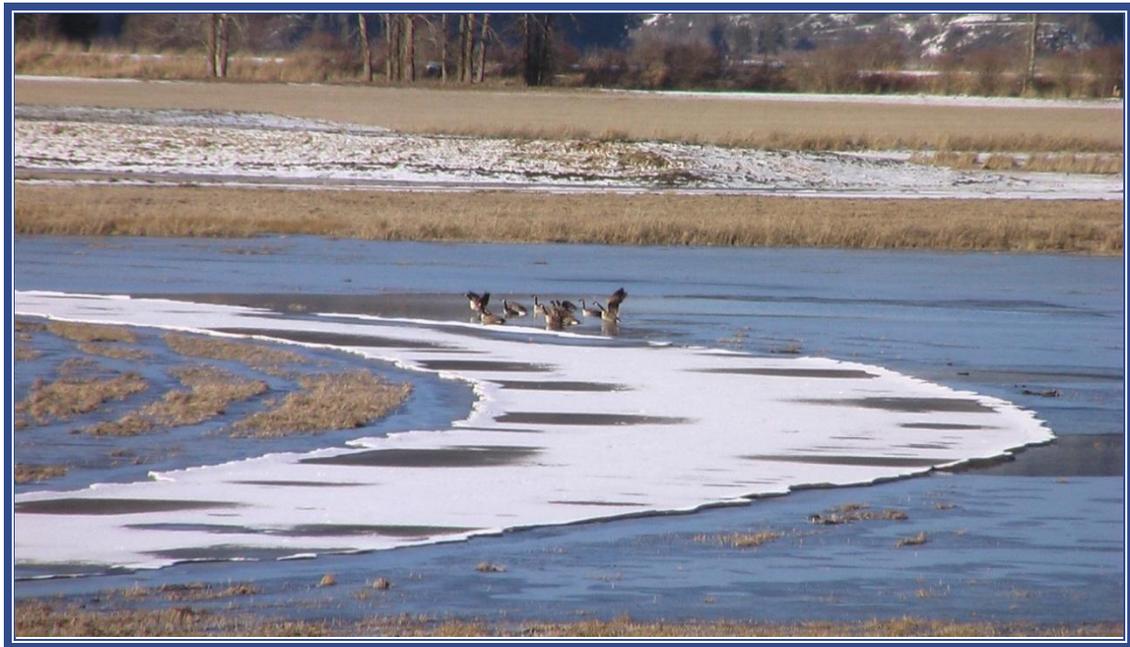
While the ECSM provides a valuable synthesis of the existing information on the topics important in CDA River behavior and sediment transport, it also identifies significant data gaps that need to be filled to more fully understand the Lower Basin system. Key data gathering will be essential to support both hydraulic and sediment transport modeling and will be relied upon in conjunction with modeling by EPA to evaluate and select cleanup actions to address contaminated sediment transport and deposition in the lower basin. As appropriate, cleanup actions will continue to be identified that have a low likelihood of recontamination and/or those that will assist in future decision making.

The EPA continued to collect key data during 2011 that is critical to understanding sediment transport and some of which is essential for development of the sediment transport model. Key data collected included shallow water body and river bathymetry to stitch together with the 2009 LIDAR data to provide a current digital terrain model of the Lower Basin. Continued suspended and depositional sediment samples were collected during the year. In addition, bed grain size and heavy metal concentrations were analyzed along the river bed to enhance understanding of the grain size and contaminant distribution along the river channel. These data will be presented to the Lower Basin PFT early in 2012 and subsequently shared with the citizens and the BEIPC.

In 2011, the Lower Basin PFT held two meetings in February and April which were focused on modeling workshops and sediment data presentation. Approximately ten percent of the flows in the Lower Basin are unged. The modeling workshops focused on the HECHMS Model, a One-Dimensional Hydrologic Model that is being used to account for the unged flows. Additional modeling workshops are planned for 2012 and will be conducted through the Lower Basin PFT. The newly forming citizens group, the Lower Basin Collaborative, has asked EPA to provide technical information and user friendly modeling workshops in 2012 as well. Schedules for the 2012 workshops are still being developed and will be distributed to the BEIPC subgroups after finalization.



Lower Basin Bathymetry Data Collection



Geese on the Restored Wetland

Basin Environmental Monitoring

Basin Environmental Monitoring Plan (BEMP)

Over the last couple of years, EPA has been working to consolidate the Bunker Hill Superfund Site/CDA Basin three primary monitoring plans into one plan for the entire Basin. Historically there have been three CDA Basin environmental monitoring programs/plans: OU-3 BEMP (2004), OU-2 EMP (2006), and OU-3 RA Effectiveness Monitoring Program (2007). Working with the TLG and PFT, EPA has been working to integrate the existing plans into a consolidated CDA Basin environmental monitoring plan to: 1) optimize the current monitoring under the various programs; and 2) enhance the overall program operation/effectiveness with respect to changes/adaptive management, laboratory coordination, field sampling, data management, and reporting efforts. This process has utilized existing quantitative and qualitative tools to evaluate and optimize the current program. In addition, the approach includes the opportunity for input and coordination with stakeholders on the approach, data, locations, and evaluation process. This overall effort is also consistent with the efforts underway to develop a Comprehensive Ecological Cleanup Plan through the ROD Amendment. As in the current BEMP, the monitoring will include surface water, sediment, groundwater, and biological resources monitoring at key locations in the Basin.

The major goal of the revised BEMP is to monitor and evaluate the progress of the remedy in terms of improving ecosystem conditions. Consistent with that goal, the BEMP will provide data relative to the following Basin-wide monitoring objectives:

- Assess long-term status and trends of surface water, sediment, groundwater and biological resource conditions in the Basin using rigorous statistical analysis.
- Evaluate progress toward meeting remedial action objectives (RAOs), applicable or relevant and appropriate requirements (ARARs), and preliminary remediation goals (PRGs).
- Improve the understanding of Basin environmental processes and variability to improve the effectiveness and efficiency of remedial actions.
- Provide data for CERCLA - required Five-Year Reviews of remedy performance.

During 2011, significant progress was made on the consolidation of the three plans and completion of the statistical analysis of all pre-2002 and post-2002 data collected under the BEMP program. In addition, sampling under the existing OU-2 EMP and OU-3 RA effectiveness monitoring continued under the existing plans. In late 2011, EPA began steps to finalize the comprehensive BEMP for implementation in spring 2012. While this will become a final document, the overall goal of the BEMP will be continued revision of QAPPs/FSPs that reflect the focus for the ongoing and upcoming cleanup work. This basically means focusing OU-2 and RA effectiveness monitoring on key areas where work is either planned or has been conducted.

EPA will continue 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 is transitioning to the new WQX data management system and the site environmental monitoring data will be accessible at a new website: www.bunkerhilldata.org. The biological monitoring data and annual monitoring reports are also accessible at EPA's web page under Technical Documents at: <http://yosemite.epa.gov/R10/CLEANUP.NSF/sites/cda>. If needed, EPA will assist interested stake holders in accessing the information.

Other BEIPC Activities and Responsibilities:

Lake Management Activities

The original CDA Lake Management Plan (LMP) was prepared by the CDA Tribe, Clean Lakes Coordinating Council and Idaho Division (Department) of Environmental Quality and accepted by the CDA Tribe, Kootenai and Shoshone Counties in 1996. In February 2004, the BEIPC voted to coordinate and be involved in implementing the LMP and any future modifications to the plan. The amended LMP was finalized in 2009 and coordination with the BEIPC was outlined in Section 4.5.1 of the LMP. LMP related accomplishments in 2011 consisted of the following:

- 1) Tribe and IDEQ LMP staff continued to be involved in the CDA River and Lake Tributaries Watershed Advisory Group (WAG), and the St. Joe/St. Maries Rivers WAG. These WAGs will be performing a 5-year review of Idaho State Total Maximum Daily Loads (TMDLs) for these water bodies.
- 2) Tribe and IDEQ LMP staff produced a draft 2009 water quality monitoring report for CDA Lake and provided it to the TLG for review.
- 3) Lake monitoring continues for Tribe and IDEQ staff. With a full-time science staff now onboard for IDEQ, eight sampling stations are being monitored in the Lake.
- 4) LMP Coordinators worked with the BEIPC Executive Director to provide LMP activity updates to the TLG, CCC, and BEIPC during quarterly meetings. LMP staff also provided LMP activity language to be included in this 2011 BEIPC Accomplishment Report, the 2012 BEIPC annual work plan, and the 2012-2016 BEIPC 5-year work plan.
- 5) For the second year, LMP staff participated in staffing a water quality educational booth at the North Idaho Fair in August, jointly with the EPA and BEIPC.
- 6) IDEQ and the Tribe contracted with the Lake*A*Syst coordinator for the Bonner Soil & Water Conservation District, to develop a Lake*A*Syst manual specific to the Coeur d'Alene Lake basin. Lake*A*Syst is a voluntary program to encourage citizens to learn about home, land and water-management practices posing threats to water quality, and Best Management Practices that can be applied to lessen land-use impacts. Lake*A*Syst is a program currently being used in watersheds of Pend Oreille Lake, Priest Lake, and Hauser Lake. LMP staff will begin to implement this program in the Coeur d'Alene Lake watershed in 2012.
- 7) LMP staff conducted a 2-hour Scientific Workshop for area citizens at the Coeur d'Alene Public Library on May 4, 2011.
- 8) In June, LMP staff conducted training with 10 staff members at Camp Cross on the CDA Lake's western shore (Loffs Bay). A presentation on water quality basics was given, and camp staff was trained on: making water clarity measurements with a Secchi disc, collecting water samples and then measuring for pH and dissolved oxygen, collecting aquatic insects along the lakeshore and basic identification, and doing rake tosses for collection and identification of rooted aquatic plants. Camp staff was given equipment and supplies to conduct this water quality sampling with summer campers.

- 9) LMP staff attended and gave presentations at the annual conference of the North American Lake Management Society (NALMs) in Spokane during the last week of October.
- 10) Tribal staff presented on a variety of lake related topics (i.e. nutrient management, metals concentrations in lake bed sediments, ELCOM/CAEDYM modeling efforts, aquatic vegetation and nuisance species, and fisheries) to the National Science Foundation in late October.
- 11) Throughout 2011, Staff provided updates on LMP activities to a variety of community groups (i.e. environmental organizations, homeowner/lakeshore property owners associations, chambers of commerce, etc.)
- 12) Tribe and IDEQ staff conducted water quality sampling in the St. Maries/St. Joe River watersheds as part of the 3-Year Nutrient Source Inventory that was developed in the early spring of 2010.
- 13) IDEQ conducted rooted aquatic surveys by rake toss and SCUBA within six Lake bays during the summer of 2011. The bays were: Sun Up, Windy, Aberdeen, 16 to 1, Cave, and Powderhorn. An important issue to note is that isolated, but dense stands of Eurasian Watermilfoil were found in Windy Bay. At this time, staff believes that the milfoil has been identified as a hybrid between the native Northern watermilfoil and the invasive Eurasian watermilfoil. This appears to be the first documented occurrence of a non-native watermilfoil within western shore bays just north of Tribal jurisdiction waters. Small amounts of milfoil were also discovered in 16 to 1 and Aberdeen bays. These observations suggested a northward migration from the heavily invested southern waters. Avista Power Company and the Tribe developed a Dye Study Plan in order to assess wind fetch effects on herbicide treatment.
- 14) The Tribe completed diver suction removal along the inner banks of the St. Joe and St. Maries Rivers from July through August 2011. The Tribe estimated that approximately 12 acres of sparse and patchy to dense milfoil growth was removed by this operation, which included two suction boats and diver teams. The Tribe also placed bottom barriers at areas along the western shoreline of Coeur d'Alene Lake where milfoil was found during the 2010 diver survey.

IDEQ and Tribal staff conducted further river bank inventory/erosion surveys on the St. Joe River. Staff will utilize this information and work with the Natural Resource Conservation Service (NRCS), Avista, the Counties, and local landowners to prioritize and implement river bank stabilization projects.
- 15) LMP staff continues to work with the University of Idaho Extension on the advisory group for a voluntary water quality monitoring program (IDAH20) that continues to be implemented Panhandle-wide.
- 16) LMP staff provided review and comment to land use applications throughout the Basin where there can be potential impacts to Lake or tributary water quality.

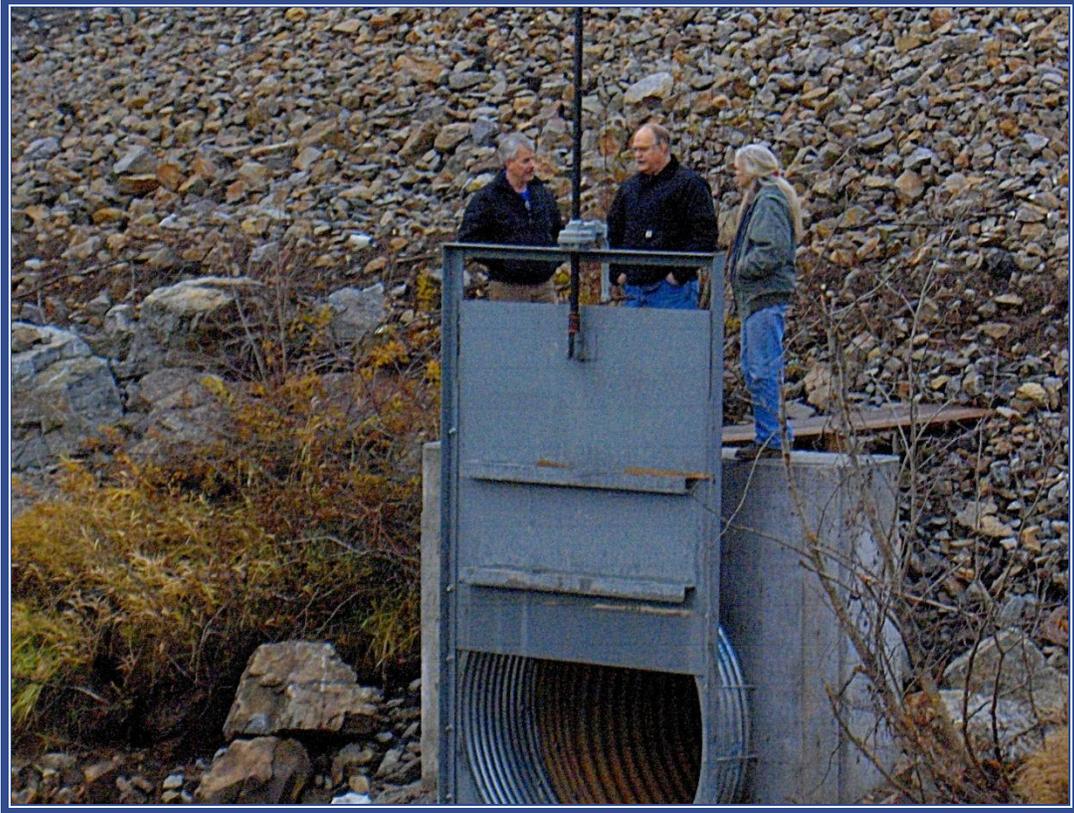
This continued level of coordination with BEIPC forums maximizes opportunities for information exchange and advice, while recognizing that IDEQ and the Tribe retain their respective decision making authorities.

Funding for the Environmental Cleanup, Flood Control and Infrastructure Revitalization

Funding for the BPRP in 2011 was provided by the EPA and the State of Idaho on private, state, county and local government lands. The Federal Land Management agencies provided funding for human health and ecological system cleanup actions on federally managed lands. In 2011, funding for and implementation of ecological remedies in the Upper Basin portion of OU-3 was provided by the Coeur d'Alene Work Trust. The BEIPC through the office of the Executive Director continued to seek funding for an analysis of flood control needs and the existing levee system in the South Fork CDA River and Pine Creek. Funding for the infrastructure revitalization activities continues to be addressed in the DCIRP process; a number of the priority drainage control projects in the DCIRP are now planned to be funded as remedy protection projects in the Upper Basin ROD amendment.

State of Idaho officials and involved federal agencies met in Seattle, Washington to establish a process to coordinate CERCLA remedial actions with flood control and emergency management needs. The Executive Director and the Idaho Silver Jackets organization which includes the USACE, Federal Emergency Management Agency (FEMA), Idaho Bureau of Homeland Security, Idaho Department of Water Resources, and the National Weather Service continued to look for ways they can help local jurisdictions develop an approach to dealing with potential flooding problems and levee management in the Upper Basin. In 2011, the USACE received funding to evaluate existing data to begin the process of determining flood control and levee needs in the South Fork CDA River from work previously completed by the EPA, IDEQ and the BEIPC.

A major highway culvert failed in January on Rose Creek in the Lower Basin. The culvert included an outlet flood control gate that prevented the CDA River, running in flood stage with contaminant laded sediment, from backwashing up the creek into the community of Rose Lake. The Idaho Department of Transportation installed a new culvert and repaired the highway, but was unable to connect the old gate to the new culvert. Flooding from a rain-on-snow event during January and high spring runoff resulted in the River backwashing through the culvert and flooding the Rose Lake community. During summer and fall, the BEIPC and IDEQ worked together to design and install a new gate using IDEQ funding. The Rose Lake Water Association is responsible for operation and maintenance of the gate. The project protects the community from flooding and existing and future BPRP remedies in the community from recontamination from heavy metals laden sediments carried by flood waters.



Rose Creek Flood Control Gate

Communications and Public Involvement

The Communications PFT continued its efforts to strengthen public involvement in BEIPC activities and communication in 2011 between the CDA Basin community, the BEIPC, and agencies involved in the cleanup. The CCC was the focus organization to help implement this process.

The Communications PFT worked on the following activities during the year:

- Provided assistance to BEIPC groups and staff on communication products such as presentations, information sessions, news articles, displays ads, etc.
- Publicized BEIPC/CCC meetings through distribution of informational flyers, public TV, community calendar pages, newspaper articles, and electronic media.
- Utilized radio advertising in promoting CCC meetings and a Basin Information Forum.
- Distributed BEIPC/CCC promotional materials at the Silver Valley Chamber's Business Expo.
- Participated in a joint presentation to the North Idaho Retired Educators Association about the BEIPC/CCC process and cleanup activities.

- Posted an electronic copy of the CCC survey questionnaire on the BEIPC website and discussed converting the survey to another format utilizing other online survey tools.
- Participated in BEIPC public education/outreach efforts at the North Idaho Fair in a joint booth with other agencies and Basin related groups.
- Assisted in the development of a new logo design for use in publicity of the joint fair booth (i.e. banner, newspaper ad, T-shirts, name tags, etc.).
- Discussed opportunities for future communication resources such as video training, public service announcements, community workshop training sessions, etc.
- Continued working on recreation education to strengthen communication and education about taking precautions and playing safe when visiting recreational areas where contamination may be a concern within the Lower CDA Basin.
 - *The Communications PFT will be a member of the work group forming for the potential restoration of a recreational site at the Gene Day Pond area in Osburn.*
 - *The PFT is assisting with the development of four characters to accompany “Riley Raccoon” in a public health messaging campaign to educate families who recreate in the Lower Basin.*



Joint Display and Info Booth at North Idaho Fair

Natural Resource Damage Restoration

The CDA Basin Natural Resource Trustees have implemented several restoration projects within the Basin. The Trustees include the USFS, BLM, USFWS, the State of Idaho, and the CDA Tribe. The purpose of the

Trustees' restoration projects is to partially compensate the public for losses associated with identified natural resource injuries due to the release of hazardous substances as a result of mining and mining related activities in the Basin. The Trustees completed or are working on a number of projects throughout the Basin and upon request, provided updates to the BEIPC at quarterly meetings. In 2011, projects included monitoring in Moon Creek and Pine Creek Basin, wetland restoration in the Lower CDA River Basin, and stream bank stabilization and riparian planting in the East Fork of Pine Creek. These projects were planned and authorized through the Coeur d'Alene Basin Interim Restoration Plan that was approved in 2007.

In the summer of 2011, the U.S. District Court of Idaho signed an order finalizing settlement between Hecla Mining Company and the United States, Coeur d'Alene Tribe, and the State of Idaho. The settlement resolves one of the largest cases ever filed under CERCLA/Superfund statute. Under the settlement agreement Hecla will pay approximately \$65.9 million plus interest to the CDA Basin Natural Resource Trustees for environmental damage and restoration claims stemming from releases of wastes from Hecla's past mining operations. During the Fall/Winter of 2011, the Natural Resource Trustees established a Restoration Team that will begin developing a comprehensive plan to guide restoration of injured natural resources in the Coeur d'Alene Basin. Some specifics on work that was conducted in 2011 include, but are not limited to:

- Pine Creek Restoration- monitoring of 16,000 riparian plantings that were installed in 2010 and trench planting of an additional 5,000 nursery plants in 2011. In addition, rootwads and trees were installed at various locations to improve bank stability and provide fish habitat.
- Schlepp Conservation Easement Restoration- ongoing monitoring of wetland plant growth, vegetative weed management, wild rice plantings, and water level management. In 2011, remediation in the west field was completed under the direction of EPA.
- Moon Creek- ongoing monitoring (fish sampling and habitat quantity and quality) was conducted throughout 2011.

Throughout 2011, the Trustees continued to coordinate with the BEIPC through Project Focus Teams and BEIPC quarterly meetings.

Challenges Ahead

As in past years, the cleanup effort in 2011 was mostly focused on human health risks resulting from contaminated residential and commercial properties with some work performed on ecological problems by the CDA Work Trust. Property remediation in the Box has been certified complete with about 3,200 properties involved; remediation of paved road surfaces in the Box will begin in 2012. About 3,000 properties have been remediated in the Basin and EPA and IDEQ expect to complete most of the property cleanup in the Basin from Harrison to Mullan over the next three years; paved and unpaved road surface remediation will begin in 2012. While human health remains a priority, EPA has begun efforts on cleanup work in fish and wildlife habitat areas, surface and ground water, and inactive mine and mill sites working with the BEIPC, IDEQ, the CDA Work Trust, other cooperating agencies and stakeholders. To accomplish this work, the existing RODs for the Basin and the remaining work in OU-2 of the Bunker Hill Box are being addressed with the Upper Basin ROD Amendment preparation started in 2009 and to be completed in early 2012.

Besides the ROD Amendment work for the Upper Basin, the Lower Basin PFT is continuing work on Lower Basin ecological issues and project planning. Because the Coeur d'Alene River system contains millions of tons of contaminated sediments, a portion of which is moving downstream every year, recontamination from

annual flooding is a major focus for the PFT. An example of this problem was the 2011 flooding in the Rose Lake Community.

Other major challenges include: managing the Institutional Controls Program (ICP); developing additional waste repositories for disposal of remedial action and ICP wastes; implementing the ROD Amendment for the Upper Basin; assisting the community in implementing an infrastructure revitalization and storm water drainage control program; developing a solution to major flooding issues in Lower Pine Creek and the South Fork of the CDA River; and continued coordination with the CDA Tribe and State's efforts to implement the 2009 Lake Management Plan.

With the ASARCO bankruptcy settlement and the Hecla settlement, a large amount of funding is available for environmental remediation and natural resource restoration actions. Careful action through the implementation of the Upper Basin ROD Amendment and any additional needed amendments plus diligent work on the part of the Natural Resource Trustees is necessary to ensure that the available funds are expended in a judicious manner. Assuring sustainable funding intended to advance cleanup as planned in the RODs and amendments, along with operation and maintenance of the implemented remedies and restoration of injured natural resources still represents a significant challenge in the future.



CDA River 2011 Spring Flood Event in Lower Basin