2003 ANNUAL REPORT

Basin Environmental Improvement Project Commission

January 2004

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Executive Summary

The Basin Environmental Improvement Project Commission (BEIPC) is a locally based organization responsible for overseeing environmental remediation and natural resource restoration to address heavy metal contamination in the Coeur d'Alene Basin (the Basin). The BEIPC also participates in funding, guiding, and coordinating other general surface water quality improvements in the Basin. Creation of the BEIPC was among five key objectives established by Idaho Governor Dirk Kempthorne and Idaho Department of Environmental Quality (DEQ) Director Steve Allred in 1999 to address environmental concerns in the Basin. The Basin is defined as the watershed of the Coeur d'Alene Lake within the counties of Shoshone, Kootenai, and Benewah, as well as the Coeur d'Alene Tribal Reservation within Idaho.

During its first full year of operation, the BEIPC focused much of its efforts on organizing and planning its activities and then strategically identifying both Superfund and Clean Water Act (CWA) funds to implement a number of key on-the-ground projects designed to:

- Reduce human health exposures in residential and recreational areas;
- Stabilize streambanks;
- Mitigate Upper Basin source areas;
- Test and select appropriate water treatment technology; and
- Monitor water quality in Coeur d'Alene Lake.

On behalf of the BEIPC, DEQ served in 2003 as the fiscal agent to administer the funds and entered into subgrant contracts with various implementing entities, including the South Fork Sewer District, Coeur d'Alene Tribe, Kootenai-Shoshone Soil and Water Conservation District, and the U.S. Geological Service. Key landmarks and achievements of the BEIPC and supporting governments during 2003 were:

Organization and Planning

- ✓ Finalized and entered into a Memorandum of Understanding (MOU) that brought full representation to the BEIPC, including the Coeur d'Alene Tribe, the state of Washington, the federal government, the state of Idaho, and a representative from each of Kootenai, Shoshone, and Benewah Counties. The BEIPC also finalized a formal set of working protocols and selected its chair.
- ✓ In February 2003, developed and implemented a one-year workplan for 2003 (Appendix A), incorporating priority human health action items identified in the U.S. Environmental Protection Agency (EPA) Record of Decision (ROD) and implemented by EPA and DEQ.
- ✓ Developed a second-year workplan for the 2004 field season (Appendix C) that envisions expenditure of more than $8 million on the ground in active remediation to reduce human health risks. In addition, the plan calls for over $1.2 million of investment in remedial planning and monitoring.

- ✓ Developed and populated technical and citizen advisory committees to assure both technical advisement and ample opportunity for public input into BEIPC decisions.
- ✓ Developed a five-year vision (Appendix B) in August 2003 for work focused on implementing the human health remedy and initiation of the ecological remedy. The plan addresses such topics as: construction of repositories for material removed in the cleanup program; human health exposures in residential and recreational areas and long-term efforts needed to preserve these remedies (or institutional controls); mine and mill sites; information needs; basin-wide environmental monitoring; and continuation of Coeur d'Alene Lake monitoring.

Remediation and Water Quality Improvement Projects

- ✓ Completed sampling at 847 residential properties as part of the human health remedy. Over 80% of residents who were contacted have agreed to participate in this voluntary yard remediation program. A total of $342,000 was invested in local services, supplies, and salaries in Shoshone County and an additional $42,000 in Kootenai County.
- ✓ Remediated more than 90 residential properties and rights-of-way as part of the human health remedy. Approximately $879,000 was invested in Shoshone County through salaries, supplies, and services for this work, and over $148,000 in Kootenai, Bonner and Spokane Counties.
- ✓ Completed remediation design for the boat launch area east of Rose Lake and the Highway 3/Trail Crossing site to be completed in time for the 2004 recreational season.
- ✓ With city's support, implemented demonstration project in the city of Mullan to examine innovative measures to address inflow and infiltration to reduce metal loading to wastewater treatment plant. Preliminary results are very encouraging, and the project may be applicable to other Silver Valley communities in the future. Expenditures through the end of 2003 were $560,900.
- ✓ Monitored the Bunker Hill land transfer between the state of Idaho and EPA, via a lease/option agreement with the Eagle Crest Development Corporation and the city of Kellogg.
- ✓ Finalized a three-year $675,000 monitoring program for Coeur d'Alene Lake. Work began in October 2003 to further assess water quality trends and mass balance in Coeur d'Alene Lake. The U.S. Geological Service (USGS) and Coeur d'Alene Tribe are conducting this work, with oversight by the Tribe.

BEIPC Overview

In fall 1999, Idaho Governor Dirk Kempthorne and Idaho Department of Environmental Quality (DEQ) Director Steve Allred identified five major objectives to address environmental concerns in the Coeur d'Alene Basin. Chief among the objectives was establishment of a locally based commission to serve as the implementing organization for cleanup efforts in the Basin. This objective was achieved with creation of the Basin Environmental Improvement Project Commission (BEIPC).

The BEIPC was created by the Basin Environmental Improvement Act[1] enacted by the Idaho Legislature in 2001 to coordinate environmental remediation and natural resource restoration in the Coeur d'Alene Basin. The Basin is defined as the watershed of the Coeur d'Alene Lake within the counties of Shoshone, Kootenai, and Benewah, as well as the Coeur d'Alene Tribal Reservation within Idaho.

The Basin is considered to be Operable Unit 3 of the Bunker Hill Mining and Metallurgical Complex Superfund Facility, originally listed on the National Priorities List in 1983. Operable Units 1 and 2 are the populated and industrial areas in what is known as the "Bunker Hill Box." Phase I remediation is nearly complete under the 1991 and 1992 Records of Decision for these areas. The U.S. Environmental Protection Agency (EPA) and the state of Idaho are the implementing agencies for Operable Units 1 and 2.

Authorization

Idaho legislation creating the BEIPC assigns specific powers and duties to the panel, including establishment of annual priorities and budgets, direction and coordination of work plan implementation, and appointment of an executive director. Under state law, the BEIPC has the authority of a board of commissioners of a flood control and a drainage district, including authorization to fund projects, obtain property, and enter into contracts and agreements.

Powers and Duties

The BEIPC is specifically charged with implementing the U.S. Environmental Protection Agency's Record of Decision (ROD), a 30-year, $350 million plan finalized in September 2002 and designed to advance the cleanup of metals contamination in the Bunker Hill Mining and Metallurgial Complex Superfund Facility Operable Unit 3 (the Basin).

In addition, the BEIPC may address or contribute to:

- Phase II of the Bunker Hill Comprehensive Cleanup Plan;
- Coeur d'Alene Lake Management Plan; and
- Heavy metal contamination cleanup efforts at mining sites in the North Fork of the Coeur d'Alene River.

[1] Idaho Code, Title 39 (Health and Safety), Chapter 81 (Basin Environmental Improvement Act).

Current BEIPC Membership

Name	Title	Representing
Sherry Krulitz, Chair	Shoshone County Commissioner	Shoshone County
Steve Allred	Director, Idaho DEQ	State of Idaho
Jack Buell	Benewah County Commissioner	Benewah County
Dick Panabaker	Kootenai County Commissioner	Kootenai County
John Iani	U.S. EPA Region 10 Administrator	Federal Government
Chuck Matheson	Vice Chairman, Tribal Council	Coeur d'Alene Tribe
James McCurdy	Professor, Gonzaga University Law School	State of Washington

Membership

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 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 representative of the U. S. appointed by the President.

Following congressional approval of a $2 million appropriation to fund BEIPC activities in fiscal year 2002, the BEIPC was officially activated by Idaho Department of Environmental Quality (DEQ) Director Steve Allred in April 2002. Idaho Governor Dirk Kempthorne appointed Idaho's four charter members and the Tribal Council appointed the Tribe's charter member. The BEIPC held its first two meetings in May and June.

Representation from the state of Washington and federal government was added under a Memorandum of Agreement finalized in August 2002. The first fully populated Commission meeting was held in September 2002.

Funding

Meetings of the BEIPC were well attended by citizens interested in the Basin cleanup effort.

The BEIPC's current activities are federally funded by the Clean Water Act (CWA) and EPA's Superfund Program. CWA funds are year-by-year special congressional appropriations authorized under section 104(b)(b) for investigations, studies, pilot projects, and demonstrations to address water pollution concerns. CWA funds totaled $2 million for 2003. EPA competes nationally and annually for Superfund dollars, with prioritization given to human health-related projects. Superfund dollars totaled $2.5 million for 2003.

The Idaho State Legislature also expects to appropriate $1 million annually for the Basin as part of its 10 percent cost-share contribution toward federal Superfund expenditures (i.e. state match). In addition, DEQ offered $150,000 to help support the BEIPC for office and staff start-up costs. This remains under consideration by the Board. The bulk of the state monies are expected to be placed in a trust fund to cover long-term remedial operation and maintenance costs.

Contracting

The economy of the Basin has benefitted as a result of BEIPC-approved CWA and Superfund work resulting in contracts with local companies.

Through local contracts, 115 jobs were provided for residents of Shoshone County. Positions included 37 in sampling and analysis and 78 in remediation and storm restoration. A total of $1,395,000 was invested in contracts, salaries, and supplies in Shoshone County, and $384,000 in Kootenai County.

Project Management

The BEIPC is responsible for establishing annual priorities and budgets, overseeing and coordinating implementation of work plans, providing fiscal management, and appointing an executive director. To assist in project management, planning, and implementation in 2003, the BEIPC formed an interagency interim core staff "on loan" to the BEIPC from the states of Idaho (Luke Russell, DEQ) and Washington (John Roland, Department of Ecology), the EPA (Sheila Eckman), and the Coeur d'Alene Tribe (Phillip Cernera). These staff routinely coordinated BEIPC activities (meeting logistics, administrative services, protocol development, fiscal strategies, public outreach, etc.), played important roles within other BEIPC forums, and provided routine intergovernmental input on technical and policy issues. The salaried hiring of an executive director is anticipated in 2004. Other groups formed include the TLG and CCC.

Technical Leadership Group (TLG)

The TLG is the BEIPC primary technical advisory group. It is comprised of federal, state, local and tribal representatives who are expected to 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 2003, the TLG adopted protocols, developed and recommended the annual work plan and first five-year work plan, and contributed to implementation of all work on the ground.

Chaired by Phillip Cernera of the Coeur d'Alene Tribe, the TLG is composed of 23 government entities. It is a large body, with a diverse range of backgrounds and experience, and has contributed thousands of professional and volunteer hours to advance Basin work.

TLG Meeting

Citizen Coordinating Council (CCC)

The CCC serves as an information conduit to and from the BEIPC on citizen, community, and special interest issues, and on remedial action concerns. It is comprised of diverse political and geographical representatives. (CCC and public outreach efforts are discussed later in this report.)

Working through an Organization Group, the CCC developed and adopted Organizational Practices and Procedures in 2003, met seven times throughout the year, and established a Small Integration Group to facilitate information gathering and dissemination by geographical area. The CCC is currently chaired by John Snider of the Coeur d'Alene Lakes/Spokane River Property Owners Association. The Vice-Chair is Woody McEvers, City Councilman and local business leader.

CCC Discussion

Project Work Teams

On a project-specific or topic-specific basis, the TLG frequently forms subcommittees referred to as Project Focus Teams (PFTs). These teams are intended to create greater efficiencies at the project-specific level. PFT members come from both the TLG and the CCC. As new issues emerge, additional PFTs may be formed.

Currently, seven PFTs are focusing on the following topics:

- Lower River human health (recreation areas);
- Basin-wide and lake monitoring;
- Water treatment;
- Upper Basin source areas;
- Repositories;
- Human health (residential areas); and
- Stream stabilization.

Details of PFT activities are provided in the 2003 Projects section of this report.

Coeur d'Alene Lake

While Coeur d'Alene Lake is not directly included in the selected remedy for Operable Unit 3, it is anticipated in the EPA ROD that a revised lake management plan will be developed and implemented to control nutrient productivity in the Lake. The state of Idaho and Coeur d'Alene Tribe are working on developing and updating the lake management plan, relying on separate regulatory authorities outside of the Superfund/ BEIPC process.

The original lake management plan was prepared in 1995. The updated plan is expected to strengthen and update implementation of watershed-based environmental management efforts to reduce undesirable inputs of metals and nutrients to the lake. Activities to be defined and updated in the plan are expected to include:

- Best management practices to control erosion from near shore areas of the lake and watersheds that feed the lake;
- Residential and municipal sewer delivery system improvements to reduce nutrient loadings entering the lake from these sources;
- Where necessary, upgrading of municipal water treatment plants to reduce nutrient contributions to the lake;
- Bank stabilization projects to reduce erosion of riverbanks;
- Improved local, state and tribal implementation of management practices and guidelines to support water quality protection;
- A lake monitoring plan;
- Staffing and coordination objectives;
- A list of non-point nutrient source reduction projects;
- Improved watershed protection and recovery actions; and
- Strengthened implementation capacity to achieve plan objectives.

The state of Idaho and Coeur d'Alene Tribe are expected to announce an updated plan and implementation approach in 2004.

During 2003, the Tribe and state provided updates to the BEIPC. The BEIPC anticipates assisting the Tribe and state in coordinating implementation of the updated plan upon completion.

In 2003, the BEIPC approved the following actions in support of the lake:

- Approved an intensive three-year environmental monitoring program to support management planning and committed $675,000 of Clean Water Act funds to this effort;
- Supported implementation of a pilot bank stabilization project to reduce lead bearing sediment into the lake. The pilot project, not yet undertaken, tests construction methods and approaches and may provide nutrient load reductions; and
- Supported advancement of an educational program to improve public awareness of the lake and its needs for continued protection.

2003 Projects

Projects Funded by the Clean Water Act

To assist the BEIPC in implementation of its workplan, the Idaho congressional delegation succeeded in earmarking $2 million in Clean Water Act (CWA) Section 104(b)(3) funds in fiscal year 2003 for BEIPC projects. Under the CWA, these funds are to be used to demonstrate how "*federal, state, and local agencies can cooperatively conduct and promote the coordination and acceleration of, research, investigation, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of pollution.*" Of this total, $669,900 in CWA funds was expended in 2003 on the following projects:

Mullan Inflow/Infiltration Study	$ 560,900
Bank Stabilization Demonstration Project	$ 57,000
Coeur d'Alene Lake Monitoring Program	$ 50,000
Coeur d'Alene Lake Education Program	$ 4,000
Total	**$ 669,900**

Project summaries on the following pages were provided by the TLG through the seven PFT leads.

Sewer Collection Study in Mullan (Inflow and Infiltration)

Wet weather flows to the city of Mullan wastewater treatment plant (WWTP) regularly exceed the plant's capacity, with peak flows frequently reaching 5 - 10 times average flow rates. These extreme peaks are directly attributable to the inflow and infiltration (I/I) into the system as follows:

- leached metals from the tailings used to bed collection system pipes carried by groundwater (infiltration);
- high background levels of metals in area soils (infiltration); and
- surface runoff of leached metals from contaminated sources (inflow).

Ultimately, metals loading is increased, requiring higher treatment efficiency and larger capital improvements at the plant. In addition, hydraulic overloading (due to I/I) reduces the ability to remove nutrients from the waste stream, resulting in higher nutrient discharge concentrations and loads. Nutrient loading to Coeur d'Alene Lake has been identified as a significant management issue.

To test remedial effectiveness in addressing the I/I issue at the Mullan WWTP, an $800,000 pilot project was implemented. Approximately 4,500 feet of main and lateral sewer lines were replaced, using various construction methods to minimize surface disturbance, including conventional construction (for comparison), cured-in-place-pipe (CIPP) and pipe bursting. Construction began in September 15, 2003, and concluded for the season at the end of November. The project was managed by the South Fork Sewer District, with assistance from JUB Engineers of Coeur d'Alene and Randall Construction of Kellogg.

The project is on budget. As a result of savings obtained when some service lines were found to be in better condition than anticipated, funds remain for additional work to be undertaken during the 2004 construction season.

This project is expected to have a significant impact on the existing wastewater collection infrastructure. By rehabilitating the most critical sections of the collection system, I/I is expected to be dramatically decreased. It is unknown at this time whether the decrease in I/I at this project will result in a proportional decrease in metals and nutrient loadings to the Coeur d'Alene River and ultimately to Coeur d'Alene Lake.

Post-construction flow monitoring is scheduled to be conducted in spring 2004 and during significant precipitation events. Post-construction monitoring results will be compared to pre-project monitoring of baseline flows, nutrients and metals to gauge the impacts of the project and the potential to transfer these technologies to other areas in the Basin. A final report on this project is expected in January 2005.

Bank Stabilization Demonstration Project

The BEIPC approved funding to test various river bank treatments on the lower Coeur d'Alene River. The goal of the project is to identify and test methods appropriate for stabilizing failing banks along the lower Coeur d'Alene River consistent with the EPA ROD and lake improvement goals. The broader goal is to support remedial planning aimed at reducing sediment and metals loads to the lake by employing bioengineering techniques along the riverbanks and, in turn, to:

- Stabilize streambanks while minimizing scour and river redirection;
- Restore natural vegetation by incorporating habitat elements without compromising longevity or maintenance or being cost prohibitive; and
- Provide long-term stability to resist current and wave erosional forces.

As a first step, the Kootenai Shoshone Soil and Water Conservation District was contracted to conduct an inventory of bank stabilization projects completed in the lower Coeur d'Alene and St. Joe Rivers. A total of 62 project sites on the lower St. Joe River and 8 project sites on the lower Coeur d'Alene River were identified and documented in the District's report *(Riverbank Stabilization Inventory, April 2003).*

Permitting and design for the project was initiated in 2003, but implementation of the project was put on hold after concerns were raised about the design, appropriateness of the location, performance monitoring needs, and the potential impact upon endangered species. At the recommendation of the Technical Leadership Group, the project focus team will reconvene in an attempt to reach a consensus on project scope, including cost, data collection, design, and location.

Coeur d'Alene Lake Educational Program

The BEIPC approved a two-year, $80,000 program to initiate implementation of an education and outreach program for lakeshore owners and boaters on lake stewardship to control nutrient and sediment loading into the lake.

The program is being developed by Idaho DEQ and the Coeur d'Alene Tribe. The team first compiled existing information on lake education and stewardship produced by various entities. An information booth was presented at the North Idaho Fair. A PowerPoint presentation has been developed and will be given to civic organizations in 2004-05. A map of the lake depicting lake protection information also will be developed for public dissemination.

Coeur d'Alene Lake Monitoring Program

The Commission approved a three-year monitoring program of water quality in Coeur d'Alene Lake. This study will monitor lake water quality to assess or establish an improved baseline for:

- nutrient, sediment, and metal inputs and outputs and trends in the lake;
- improvement/impacts from upstream environmental improvement projects; and
- impacts from further development projects along the lakeshore.

The goal of the lake study is to sample physical, chemical, and biological characteristics in various locations and times to evaluate the interaction of metals, nutrients, lake productivity, and ecological health. The lake data will complement concentration and load data for sediment, metals and nutrients monitored at the lake's two primary inflows, the Coeur d'Alene and St. Joe Rivers, and the lake's outlet, the Spokane River. (The latter monitoring stations are supported by EPA's Basin Environmental Monitoring Program [BEMP] and are not part of the three-year lake study.)

The scope of the lake study program is segregated into the following four data-collection and evaluation activities:

1. Quantities of metals and nutrients.
2. Nutrients and lake productivity.
3. Processing of metals in the lake.
4. Ecological health.

The geographic scope of the study includes the following four habitat types:

1. Deep water zone of lake.
2. Near shore zone in selected bays of lake.
3. Wetland and streamside areas of lake.
4. Mouths of Coeur d'Alene and St. Joe Rivers and Spokane River, downstream of Coeur d'Alene Lake's outlet.

Using $675,000 of CWA funds and additional assistance from the U.S. Geological Survey, U.S. Fish and Wildlife Survey, and Coeur d'Alene Tribe, the three-year monitoring program is expected to cost approximately $986,000.

The monitoring program is being implemented by the U.S. Geological Survey, U.S. Fish and Wildlife Service, Idaho DEQ, and the Coeur d'Alene Tribe. The scientific information attained by the study will be presented to the BEIPC and disseminated to a wide range of audiences.

Details of this monitoring plan can be found on the BEIPC Web site at *www.basin.commission.com.*

Projects Funded by Federal Superfund

The BEIPC's work plan also included projects funded through the EPA's Superfund program. The EPA competes nationally for Superfund dollars. Human health-related projects currently are considered most competitive for funding. As a result of delayed federal budget appropriations for the 2003 fiscal year, however, receipt of Superfund monies also was delayed until late in the construction season (late-August). A total of $2,476,000 in Superfund funds was expended in 2003 on the following projects:

Yard Sampling and Remediation	$2,235,000
Big Creek Repository	$ 56,000
Water Treatment	$ 30,000
Upper Basin Mine and Mill Sites	$ 0
Recreational Areas	$ 155,000
Basin Environmental Monitoring	$ 0
Total	**$2,476,000**

Yard Sampling and Remediation

Idaho DEQ led the Basin yard sampling and remediation efforts in 2003. The goal for the year was to sample 700 residential properties to determine if they contained high levels of lead or arsenic and to remediate 80 - 100. Participation in the sampling program is voluntary — over 80% of homeowners who have been contacted have agreed to sampling.

Priority is given to properties with expectant mothers or children under age 6 (high-risk properties). Samples are conducted on various residential areas, including play areas, roadway shoulders, driveways, gardens, and other areas. Results are provided to property owners, and remediation undertaken on the basis of sampling results.

A total of 847 Basin properties were sampled by Moscow-based TerraGraphics environmental engineers, DEQ's contractor, in 2003. The majority of these properties were in the upper Basin (Mullan, Wallace, Silverton, and Osburn).

Basin sampling is expected to be a multi-year effort. The goal is to identify and remediate residential properties first and progress to geographical area remediation including commercial properties and empty lots.

TerraGraphics employed 34 area residents as field samplers and office support staff. Samplers worked in teams of three in Osburn (one team), Mullan/ Wallace (two teams), and other areas (one team). Samples were sent to Silver Valley Labs and EPA's national contract lab for analysis. The final results of this sampling season are expected to be available in spring of 2004. Approximately $1,207,000 was invested in yard sampling in 2003. $342,000 was invested in local services, supplies, and salaries in Shoshone County and an additional $42,000 for Kootenai County.

In implementing the human health remedy, remediation decisions are based on the following sampling results:

- No action is taken if lead levels are less than 700 parts per million (ppm) and arsenic levels are less than 60 ppm.
- Additional sod or gravel is placed if lead levels are between 700 and 999 ppm
- Soil is excavated and replaced in cases where lead levels are 1000 ppm or higher or arsenic is 100 ppm or higher.

DEQ awarded the remediation contract to Randall Contractors of Kellogg as part of a competitive bid process. At year-end, 91 properties had been completed. Twenty-two of these properties, located in Osburn, Wallace/ Silverton and Mullan, are classified as high risk or where young children or pregnant women reside. Approximately $879,000 was invested in Shoshone County through salaries, supplies and services for this work, and over $147,000 in Kootenai, Bonner and Spokane Counties combined.

Both TerraGraphics and Randall completed work for the season by November 15 and plan to resume in the spring as soon as weather allows. DEQ and its contractors have been meeting with public officials and dealing directly with homeowners to ensure property owner satisfaction.

Property undergoing remediation

Property after remediation

Big Creek Repository

For the past 3 - 5 years, EPA and the state of Idaho have been actively seeking a regional repository for the upper Coeur d'Alene Basin. Recent efforts have focused on developing a repository on a reclaimed tailings pond previously owned by the Sunshine Precious Metals Company.

Following lengthy negotiations, DEQ obtained title to the 22-acre Big Creek property in July 2003. The site, now commonly known as the Big Creek Repository, first received Basin remedial action waste in 2002, and is fully operational as the primary Basin repository. DEQ and EPA have co-managed the site for the past two seasons, with technical support and oversight by the U.S. Army Corps of Engineers (USACE).

Waste haulers are responsible for dumping their waste in designated areas and performing appropriate decontamination on the haul vehicles.

Construction has been completed to support disposal of soil from Basin remediation projects including:

- Construction of a permanent decontamination pad and decontamination water capture system;
- Waste placement and compaction;
- Installation of ground water monitoring wells;
- Improvement of haul roads; and
- Installation and maintenance of erosion and sedimentation controls.

Approximately 20,000 cubic yards of materials from the yard remediation program were placed in this repository in 2003. The facility has an estimated total potential capacity of 200,000 - 400,000 cubic yards.

Late in 2003, a repository project focus team (PFT) was formed. Headed by John Lawson of DEQ, the PFT will explore and develop necessary repository space to accommodate future remedial actions in the upper and lower Coeur d'Alene Basin.

Water Treatment: Canyon Creek

A water treatment PFT, headed up by Bill Adams of the EPA, focused on planning for assessing the feasibility of water treatment in the Canyon Creek drainage.

To reduce zinc loads to the South Fork Coeur d'Alene River, EPA's OU3 ROD calls for treatment of up to approximately 60 cubic feet per second (cfs) of Canyon Creek surface water. The ROD assumes a yearly average treatment reduction of 322 pounds per day of dissolved zinc load directly in Canyon Creek, and requires that treatment be demonstrated for creek water near the mouth of the creek. The PFT study plan outlines the initial steps required to demonstrate the treatment process for Canyon Creek.

An initial treatment technologies evaluation was completed in 2003 by EPA. The evaluation included an engineering assessment and provided information necessary for developing a design for water treatment. Active treatment was compared with infiltration basins/ponds to achieve the overall metals removal goals. Depending upon available funding, pilot tests in the field are anticipated in 2004-05. Outcomes of pilot tests will be used to develop full-scale treatment designs.

The Canyon Creek Treatability Study has been divided into the following two phases:

- Phase I will identify and evaluate existing technologies potentially applicable to Canyon Creek conditions, perform limited laboratory treatability testing, and make recommendations for a Phase II effort. Also during Phase I, additional evaluations will be conducted by EPA to determine the feasibility and effectiveness of capturing and treating groundwater in Canyon Creek.
- Phase II is expected to build on the results of Phase I, with the design and implementation of a pilot-scale testing program for a "most favorable" technology designed to meet the Canyon Creek water treatment goals of the selected remedy.

The Phase I plan will identify and concisely evaluate the selected treatment technology against the applicable goals defined in the ROD. To meet the conditions specified in the ROD, the treatment technology anticipated at this time is high density sludge (HDS) lime–stabilization/ coprecipitation in combination with a high-speed ballasted-microsand separation technology.

The consulting engineering firm, URS, under the direction of EPA, has prepared a draft treatability study plan which will be circulated to the broader Water Treatment PFT for review. The schedule calls for the plan to be finalized in January 2004.

The expected cost of the Canyon Creek Technology Evaluation is $75,000.

Upper Basin Mine and Mill Sites

Another Project Focus Team, also headed by Bill Adams of EPA, focused on remediation of Upper Basin mine and mill sites.

The ROD identified a number of sites with potential for human health exposures, primarily from recreational use. The PFT toured these sites and narrowed the list to four sites that appear to represent the greatest risks, either due to potential for human exposure or levels of contamination.

The four sites have been incorporated into the BEIPC five-year work plan. Proposed work in 2004 includes development of remedial designs at the following sites:

1. The Upper and Lower Constitution - Pine Creek
2. The Golconda - S. Fork
3. The Rex - Nine Mile
4. Sisters Site - Canyon Creek

Work on remedial designs is expected to be funded in 2004 with EPA funds. In anticipation of these funds, the Bureau of Land Management (BLM) has committed $200,000 for the U.S. Army Corps of Engineers to start design and other efforts at the Constitution mill and tailings sites. The BLM has requested an additional $300,000+ in FY2004 funds for continuing efforts for the Constitution and to address dam stability issues at the Rex tailings dam. As soon as additional remedial design dollars are available in FY2004, EPA will begin, or in the case of the Rex, complete the remedial design work.

Based on current EPA budget projections, EPA funding in the next few years for remedial action at mine and mill sites in the Upper Basin seems unlikely. Designs will be finalized, however, and once funds are available, these projects will be ready to implement.

Recreational Areas

A Lower Basin Recreational Area PFT was established to focus on remediation of Lower Basin recreational areas. Led by Anne Dailey of the EPA, the PFT included various members of the TLG. Members of the Citizens Coordinating Council (CCC) also were invited to provide input, and were provided updates as the effort progressed.

The following design objectives were identified by the Recreational Area PFT and CCC group to guide the cleanup of recreational areas:

- Focus on protection of human health, particularly young children.
- Design to minimize long-term operation and maintenance costs.
- Create clean oases for public use (based upon community interests).
- "Reality check" the scale and scope of what can be done (e.g., potable water, septic systems, etc.).
- Build upon existing features to enhance use and reduce risks to human health.
- Provide enough amenities to attract folks to clean "safe" areas; do not create attractive nuisances or beautification-only projects, and
- Design individual recreational sites to be consistent with overall strategy for Basin recreational areas.

The BEIPC approved cleanup actions at two Lower Basin recreational areas to be implemented in 2003-04 — the East of Rose Lake Boat Launch and the Highway 3/Trail of the Coeur d'Alenes Crossing site. The goal for both sites is to reduce human exposure to lead and arsenic-contaminated soil/sediment and build upon an existing recreational facility to create a clean oasis for recreational use.

The Recreational Area PFT and Citizens' Coordinating Council (CCC) group were involved in scoping of the design alternatives, and review of both 30% and 95% designs. A community meeting was held in May 28 to share 30% designs with interested community members.

East of Rose Lake Boat Launch

At the East of Rose Lake Boat Launch, contaminated soil will be capped by installing a paved parking lot to accommodate six vehicle/trailer spaces, six vehicle-only spaces, and a 16-foot boat launch. The parking area will be graded so a majority of the runoff is directed away from river.

A safer and more convenient access off East River Road is planned to replace the existing access from Highway 3. Protective barriers have been placed around the historic pioneer schoolhouse located on the property. The riverbank also will be stabilized near the boat launch to reduce erosion and human exposure to contaminated banks.

This site is jointly owned by the Idaho Department of Fish and Game and the U.S. Forest Service. Under Superfund, EPA will fund actions on IDFG's western part of the property, while the USFS will fund the cleanup on the eastern end of the property. The U.S. Army Corps of Engineers is conducting the design work and will manage the construction activities.

Construction at the East of Rose Lake Boat Launch is expected to cost:

EPA:	$300,000
USFS:	$ 41,000
IF&G:	$ 25,000

Highway 3/Trail Crossing Site

At the Idaho Fish and Game (IDFG) Highway 3/Trail Crossing site, an asphalt barrier and a 20-foot wide vegetated barrier buffer strip will be used to cap the contaminated soil adjacent to parking. IDFG plans to install several picnic tables at the site for trail users.

Construction at the Highway 3/Trail Crossing Site is expected to cost:

EPA:	$ 25,000
IF&G:	$ 7,000 (signs & tables)

Work was initiated late in 2003 at both sites and will be completed in spring 2004, prior to the 2004 recreational season. Construction work is being done by a Shoshone County contractor, DG&S. In 2003, $155,000 was spent for engineering design.

Basin Environmental Monitoring

The Basin Monitoring Project Focus Team, led by Anne Dailey of the EPA, focused on development of the Coeur d'Alene Basin Environmental Monitoring Program (BEMP). Under EPA's OU3 ROD, establishment of a Basin-wide environmental monitoring program is required to obtain data on the mining-related contamination in the river corridor and floodplains of the Basin.

Development of a Basin monitoring plan began in late 2002. In early October 2003, the Monitoring PFT and CCC reviewed and concurred on the substance of a monitoring program that includes the follow key objectives:

- Assess long-term status and trends in surface water, soil/sediment, and biota.
- Evaluate effectiveness of selected remedy.
- Evaluate progress toward cleanup benchmarks.
- Provide data for federally mandated five-year reviews.

The monitoring plan is practical, robust, and cost-effective, and maintains technical rigor by using parameters and sampling frequencies intended to be sensitive to rates of environmental change.

The annual cost of this monitoring program is estimated at $300,000 per year. The plan will evolve over the anticipated 30-year implementation period. EPA is the lead agency on the monitoring project and will establish interagency agreements with the U.S. Geological Survey and U.S. Fish and Wildlife Service to conduct sampling. Data collection will be coordinated with other monitoring programs in the Basin (e.g., Coeur d'Alene Lake, Bunker Hill Operable Units 1 and 2, and site-specific remedial action effectiveness monitoring). A database to store and assure easy access to data is under development.

Public Outreach and Citizen Involvement

To encourage public participation in Basin improvement projects, the BEIPC issues news releases and posts announcements of its upcoming meetings to its Web site. The public is invited, and CCC and general public comment opportunities are scheduled at each meeting.

To coordinate dissemination of information on remedial issues and actions in the Basin and encourage citizen and community input, the BEIPC formed the Citizens Coordinating Council (CCC).

The CCC conducted the following activities in 2003:

Organizational Structure

Working through an Organizing Group, the CCC developed its organizational structure in February. In April, the CCC elected a chair and vice chair and established a Small Integration Group (SIG) to facilitate information gathering and dissemination by geographical area.

SIGs and corresponding representatives are:

- Upper Basin: Kathy Zanetti
- Box, including Kellogg, Smelterville, and Pinehurst: vacant
- Lower Basin and Chain Lakes, including Harrison and the former Reservation: Jana McCurdy
- Coeur d'Alene Lake/Spokane River Property Owners: John Snider
- Benewah County/St. Joe River/St. Maries: vacant
- Post Falls/Coeur d'Alene: Kristy Reed Johnson
- Washington State: Neil Beaver
- Current Reservation Lands: vacant.

The CCC adopted Organizational Practices and Procedures in October 2003. CCC meetings were held in January, February, March, April, May, July, and October. All meetings were open to the public. In addition, the CCC kept the BEIPC informed of its activities with presentations at BEIPC meetings.

Additional Outreach Activities

The following additional public outreach/ communication activities took place in 2003:

- Using CWA grant funds, DEQ and the Coeur d'Alene Tribe staffed a booth at the North Idaho Fair to share information about the Basin Commission and lake stewardship with local residents.
- DEQ created a BEIPC Web site (*www.basincommision.com*). The Web site includes a calendar of public meetings, archives of public information materials including meeting summaries and BEIPC documents, and a discussion forum.

Chronology of Citizen Input through the Citizens Coordinating Council to the Technical Leadership Group and the BEIPC in 2003

January	Representatives from each of the active Project Focus Teams reported their preliminary one-year workplan recommendations to the CCC. TLG reviewed comments.
February	Citizens reviewed the 2003 workplan. CCC information presented to BEIPC at board meeting.
March	Lake Management Plan comments were accepted.
April	TLG updated CCC. Human Health project focus team meeting held. Human Health recreation tour conducted. Basin Environmental Monitoring Plan project focus team meeting held. Lake project focus team meeting held.
May	Citizen input received on preliminary five-year plan. Streambank stabilization project focus team meeting held. Technology project focus team meeting held. Comments on Streambank project focus team proposal accepted. Informational community meeting of recreational sites in Lower Basin conducted. Hillside Remediation Work Group meeting held. CCC information presented to BEIPC at board meeting.
June	Citizens reviewed draft five-year workplan. Human health/residential conference call conducted. CCC information presented to BEIPC at board meeting.
July	Human health/recreation project focus team field trip conducted. Basin Environmental Monitoring Plan meeting held.
August	Selected basin sites toured; public invited. CCC information presented to BEIPC at board meeting.
September	Call issued for Clean Water Act Proposals; CCC notified. Water Treatment project focus team meeting held. Bull trout meeting held. Streambank permit released for public comment.
October	Water Treatment PFT meeting notice sent to interested CCC members. Clean Water Act proposals and CERCLA workplan discussed at CCC meeting. CCC comments on the Clean Water Act proposals and CERCLA workplan shared with TLG. Comments on Basin Environmental Monitoring Plan due.

November CCC information presented to BEIPC at board meeting.
Basin Information Forum conducted.

December Repository project focus team meeting held; public invited.
BEIPC special meeting conference call conducted.

Challenges Ahead

The BEIPC has made substantial progress over the past year, yet it is still in its formative stages. Staffing and fiscal capacity, which were not yet resolved in 2003, are major factors in the building of the organization. Important operations and staffing decisions to guide the organization forward are expected in 2004.

How to secure and fund staff in a sustainable fashion is a topic of fundamental interest, as is assuring continued active support and participation of the government entities. Retaining an Executive Director is an active goal leading into 2004.

An appropriate balance of oversight and direct implementation of cleanup actions also must be achieved. Fundamental to the success of the Basin cleanup effort is a commitment to long-term funding to implement ROD objectives, lake protection actions, and operations. Beyond the funding of cleanup work through Superfund, the BEIPC has benefitted directly from congressionally appropriated CWA grant dollars intended directly to support the BEIPC cleanup mandate. Assuring sustainable funding intended to advance cleanup as planned represents a significant challenge ahead.

A New Approach to Cleanup

The BEIPC is a novel approach to guiding environmental cleanup of a complex EPA Superfund effort. It is also not without controversy. This new organization merged several differing perspectives and jurisdictions, all with the mandate of advancing cleanup. The tension between interests now has been focused into the BEIPC and its operations. Every layer of the organization faces the challenges of developing a foundation for balance, cooperation, and progress.

During the first year of operations, the BEIPC distinguished itself clearly from the conventional Superfund cleanup process by the assemblage of large and broad representation through its technical and citizen advisory committees (TLG and CCC). These committees extend beyond conventional interaction and outreach. The process has created a high degree of interaction and has resulted in a dynamic interplay among government entities, citizens, and special interests having a broad knowledge and experience base.

This increased level of participation does not come without cost. Such committees demand a considerable commitment of human resources. The goal of reaching consensus is a tall order for such a large and diverse assemblage. Adequate resources must be committed and planned to sustain and improve effectiveness.

Technical Advisement

Maintaining a clear distinction between technical or scientifically based recommendations and more sociological or so-called “political” factors has emerged as another challenge for BEIPC as a whole and an important mandate for the TLG. The TLG’s mission is to provide sound technical advice to the BEIPC. To avoid inadvertent or inappropriate influences on technical recommendations to the BEIPC, the TLG is working to further refine its protocols and operations. In turn, to assure that administrative decisions are based on a foundation of science and engineering, the

BEIPC is committed to the TLG remaining a technical advisory group.

While the TLG strives to reach consensus-based recommendations, it is not always possible to achieve that objective. Tensions revealed procedural deficiencies and highlighted the need for the group to improve communications and procedures for reporting opposing positions. The group has taken several steps toward this end, including agreeing to clearer, more open and timely dialogue and positions prior to making recommendations to the BEIPC. Similarly, the BEIPC chair has assisted by requiring that all technical issues be communicated to the BEIPC and public at least 14 days before BEIPC meetings.

Organizational Structure

The BEIPC is operating as envisioned by the Idaho statute and memorandum of agreement between governing entities, but start-up complications have emerged. Until the state statute was amended by the Idaho Legislature in 2003, county and federal seats were unable to formally vote on BEIPC motions.

Community Involvement

The BEIPC took several steps during 2003 to assure its meetings were open to the public. Meetings were held at various locations within the Basin and an agenda was announced as far in advance as possible. The BEIPC recognizes that phone-in meeting are less than ideal and is committed to minimizing these occurrences.

The BEIPC relies heavily on its technical and citizen advisory committees. These groups must continue to refine and improve operations and overall effectiveness.

Constructive, patient and respectful working relationships at all levels of this organization will produce a greater potential for consensus-based outcomes, resulting in better decisions and cleanup.

Appendix A: 2003 Work Plan and Project Status

Scope	Relationship to Basin Improvement	2003 Budget Request
Human Health Residential Areas Beginning in areas with the most data, such as Osburn, sample enough properties to remediate approximately 200 residential yards and other properties with the highest potential exposure to children and pregnant women. *EPA/DEQ*	One-year effort that is part of ongoing remediation of residential areas identified in the ROD.	Estimated at about $6,000,000 from the EPA Superfund Remedial Action Request (200 properties @ an average cost of $30,000 per property including gathering access agreements, sampling, analysis, database development and construction).
Human Health Recreational Areas Evaluate, design, and implement remedial actions at IDFG boat ramp east of Rose Lake, IDFG Blackrock Gulch Beach, IDFG RM 135 Long Beach/Springston area adjacent to Thompson Lake boat ramp, and area along the north side of Mission Slough. *USACE, with input from IDFG and others*	One-year effort that is part of ongoing remediation of recreational areas identified in the ROD.	Estimated at about $550,000 from EPA Superfund Remedial Action Request ($79,000 to $192,000 per area depending on type of action taken).
Stream Bank Stabilization Two alternatives are included. Majority alternative: Conduct evaluation of existing projects and records followed by the selection of demonstration site location(s), designs, and monitoring criteria for the demonstration project(s) with a goal of beginning construction, or at a minimum design and contracting, in 2003. Minority alternative: Conduct evaluation of existing projects, select locations and designs of four projects and complete construction in 2003.	One-year of the five-year demonstration project designed to prepare for larger-scale bank stabilization identified in the ROD.	Over five years, $445,000 from Clean Water Act Grant. Majority Alt: Estimated at about $187,500 in 2003. Minority Alternative: Estimated at about $365,000 in 2003, with the remaining $80,000 set aside for monitoring in years 2-5.
Upper Basin Source Areas Remediate one source area. *EPA*	On-going remediation of source areas identified in the ROD.	$500,000 (estimate) from EPA Superfund Remedial Action Request

Scope	Relationship to Basin Improvement	2003 Budget Request
Rex Mine & Mill Site Complete design and remediate Rex Mine and Mill Site. *EPA or BLM*	One-year effort when funding is available.	No estimate of cost. Possibly funded through EPA Superfund Remedial Action Request
Water Treatment: Mullan I/I Demonstrate and Monitor various techniques for reducing Inflow and Infiltration (I&I) into the Mullan wastewater treatment plant. *DEQ/South Fork Sewer District*	One-year demonstration that may be applied to reduction in load to South Fork from Page to WWTP.	$800,000 from Clean Water Act Grant.
Water Treatment: Canyon Creek Assess existing technology and prepare workplan for bench and/or pilot studies to test technology and develop site-specific design and implementation data. *EPA/URS*	First step in selecting water treatment technology for use in the Basin.	$100,000 from EPA "Pipeline" Budget.
Lake Coeur d'Alene Monitoring *USGS, CdA TRIBE, USFWS, and DEQ*	First year of long-term monitoring of response to upstream actions and around Lakeshore to inform the ROD and LMP.	$225,000/yr. for 3 years of CWA grant; $100,000/yr. from USGS; $50,000/yr. from CdA Tribe; $26,000 from USFWS; $95,000 from EPA's Basin-wide long-term monitoring program.
Lake Education and Information Develop and distribute materials designed to empower users of the Coeur d'Alene Lake to change practices by understanding how their actions affect water quality. *Cd'A Tribe and State of Idaho*	Component of the Lake Management Plan.	$40,000 per year for two years.

Apendix B: 2004-08 Five-Year Plan

Table 1:
Summary of Activities Proposed for Implementation of the ROD for 2004-08 Planning Period

Proposed Activity/Lead	Scope	Objective
Repositories *DEQ and EPA*	Utilize Big Creek Repository for yard soils. Bring on-line, as needed, repositories to support cleanup. Bring on-line repository capacity for the Institutional Controls Program (ICP). Plan, secure properties and be ready for remediation in Upper and Lower Basin anticipated within 5-10 years.	Provide disposal capacity for yard waste soil and ICP long-term needs. Meet demand for disposal of contaminated soils from construction activities and remediation. Prepare for demand from remedial actions anticipated in years 5-10 throughout Basin.
Basin Institutional Controls Program (ICP) *DEQ*	Develop a Basin-wide ICP and begin operation.	Protect soil remedy and public health, support construction projects and facilitate commerce.
Residential Properties *DEQ*	Complete soil remedy.	Protect human health in a way that minimizes community disruption.
Recreational Areas *EPA working with land management agencies*	Complete remediation on at least two IDFG sites and recommend that USFS conduct remediation and improve management at four sites. Install informational signage on at least nine sites. Encourage development of Lower Basin recreational management plan. Continue evaluation of candidate sites for remediation or information.	Provide safe recreational opportunities along the Coeur d'Alene River.
Mine and Mill Sites *EPA, DEQ, with BLM in Pine Creek*	Design and begin remediation of Constitution tailings piles. Design remedial action and complete work at Rex site. Design remedial action for Golconda tailings. Remediate Sisters waste rock pile.	Be prepared for remediation of priority mine and mill sites that are used for recreation and contribute human health risks as well as water quality impacts. Conduct remedial actions to the extent funds are available.

Proposed Activity/Lead	Scope	Objective
Upper Basin Remedy *EPA and DEQ. Collaboration with BLM in Pine Creek. USFWS has lead in soil cleanup standard.*	Evaluate approaches and technologies for water treatment at Canyon Creek, which shall include at least one field pilot project. Remediate mine wastes along Denver Creek tributary to Pine Creek. Monitor previous remediation in East Fork of NineMile, and water treatment pilots. Preliminary design of flow structure between Ninemile and South Fork. Monitor existing growth media plots, assess biostabilization methods and develop media for capping waste material. Plan and prioritize remedial actions for other source areas. Develop lead clean-up goal for soil.	Prepare for water treatment at the mouth of Canyon Creek as the way to achieve the greatest reduction of zinc load in the South Fork above the Box. Improve fisheries in the 3.5 mile reach of Pine Creek. Incorporate lessons learned from previous and current work into designs for water quality improvements and fisheries improvement. Apply cost-effective solutions to capping waste material. Prepare for remediation in future planning periods.
Lower Basin Remedy *EPA, DEQ, USFWS, and CdA Tribe*	Pilot project for conversion of agriculture land into waterfowl habitat. Pilot project on soil amendment to reduce bioavailability of lead. Design wetland remediation approach. Design splay remediation approach. Design splay remediation approach. Numerical modeling of River processes and sediment. Collect data on riverbank conditions and metal concentrations. Monitor bank stabilization pilot projects and evaluate effectiveness. Develop lead cleanup goal for soil. Incorporate findings from AVISTA studies into remediation strategies.	Generate data, information and understanding to inform fundamental questions about the movement of lead in the River system to allow sound decisions on the sequence of remedial actions in the Lower Basin. Develop cost-effective methods for reducing lead exposure to waterfowl. Develop designs for remediation of wetlands and splay areas. Advance understanding of the flow and transport processes through the Lower Basin. Prepare for remediation of within the River system.

Proposed Activity/Lead	Scope	Objective
Basin Wide Environmental Monitoring *EPA working with other agencies including DEQ, USFWS, and USGS.*	Initiate long-term monitoring and make data available.	Assess effectiveness of remedial actions and trends in overall ecological improvement due to remediation and natural attenuation.
Lake Coeur d'Alene Study *CdA Tribe, USGS, and USFWS*	Continue implementing the study plan previously approved.	Improve the understanding of biological baseline and fate transport processes in the Lake.
Lake Coeur d'Alene Management Plan *DEQ and CdA Tribe*	After the Lake Management Plan is released by the State of Idaho and the Coeur d'Alene Tribe, the scope of actions in the TLG plans will be determined per direction of the Basin Commission.	Maintain steady improvement of Lake water quality and ensure stability of metals in bottom sediments.

Appendix C: 2004 Work Plan

Proposed Activity	Scope	Objective	Lead Agency	Est. Cost
Superfund				
Big Creek Repository Construction and Management	Construct improvements to the Big Creek Repository.	Provide repository capacity for all cleanup activities that are to be conducted in 2004.	EPA/ DEQ	$350,000 Funded in 2003
Development of Repositories for non-Remedial Materials (ICP Materials)	Siting and design of additional repositories to support the ICP. This includes public involvement and information dissemination.	Provide repository by 2005 for non-remedial materials. These are materials that are generated by non-cleanup activities such as utility construction and repair, building construction, or property owner work in areas subject to the ICP.	DEQ	$200,000
Basin Institutional Controls Program (ICP)	Develop a plan for implementing a plan to control and manage activities that have potential to release hazardous substances into areas that have been remediated.	By December 2003, have an action plan for implementing an ICP.	DEQ	Funded in 2003
Residential Yard Sampling and Remediation	Remediate contaminated yards in affected communities.	Remediate 200 - 300 properties, and perform sampling to support additional remediations in subsequent years.	DEQ	$7,500,000
Drinking Water Upgrades	Upgrade drinking water facilities where drinking water is contaminated by heavy metals.	Provide 5 to 10 drinking water connections to affected properties.	DEQ	$225,000
Completion of Remediation at Thompson Lake Boat Launches	Complete barrier and access control installation work at Thomson Lake Boat Launches	Provide one additional safe recreational area.	EPA	$150,000

Proposed Activity	Scope	Objective	Lead Agency	Est. Cost
Recommendations to USFS for Remediation and Access Controls at Four Sites	Develop recommendations for removals, barrier construction and access controls at four Forest Service recreational sites along the Lower Coeur d'Alene River.	Provide four additional safe recreation areas.	USFS	N/A
Informational Signage on at Least Nine Recreational Sites	Install informational signage at nine or more additional lower river recreational sites.	Provide nine additional safe recreation areas.	EPA	Minimal
Canyon Creek Technology Evaluation	Conduct preliminary work on a pilot project.	Evaluate technologies to enable selection of which to test with pilot-scale projects in 2005.	EPA	$75,000
Development of Clean-Up Standard for Streamside Soils	Continue development of ecological lead cleanup goals for soil.	Determine cleanup goals for future actions in the Upper and Lower Basin.	USFWS	Funded in 2003
Basin-wide Environmental Monitoring	Implement and conduct initial monitoring work according to the Basin-wide Environmental Monitoring Plan (BEMP)	Initiate required monitoring components to measure the effectiveness of remedial activities.	EPA with USGS, USFWS, DEQ	$300,000
Design for Rex, Constitution, and Golconda	Prepare design and construction documents for remedial action projects at the Rex, Constitution, and Golconda sites.	Have construction documents ready to implement these projects as funds become available in subsequent years.	EPA	$300,000
Continued Development of Sequencing Plan for Lower Basin ROD Activities	Assist the TLG in reaching a common understanding of which issues are important in the Lower Basin, and in how these issues are related.	Provide the basis for a common ground from which the TLG can move forward with implementation recommendations for work in the Lower Basin.	To be determined	To be determined

Proposed Activity	Scope	Objective	Lead Agency	Est. Cost
Clean Water Act				
Upgrade and Monitor the Success Bioreactor	Develop, implement, and report on an intensive one-year water quality study of East Fork Ninemile Creek; and investigate the long-term usefulness of Apatite II and other media at the Success bioreactor to minimize reactor plugging problems.	Provide or contribute to the establishment of a valid conceptual model for this stream reach, with particular emphasis on zones near the Interstate and Success sites; and to evaluate the performance of and potential for improvements to the Success bioreactor, with application to other sites in the future.	DEQ	$191,000
Investigate Recontamination Issues at Meyer Creek	Map, inspect, and assess condition of existing Meyer Creek diversion structures in Osburn.	Provide the basis for moving forward with improvements to prevent failure of this diversion and consequent recontamination of remediated properties. This will protect against the kind of recontamination that occurred when the Milo Creek diversion failed earlier.	DEQ	$30,000
Revegetation on East Fork Pine Creek	Apply revegetation techniques on three miles of the East Fork Pine Creek that appear to have been successful elsewhere.	Demonstrate effectiveness and comparative costs of three techniques that show promise for revegetation of similar stream reaches in Pine Creek, Canyon Creek, Nine Mile Creek, and elsewhere.	BLM	$60,000

Proposed Activity	Scope	Objective	Lead Agency	Est. Cost
Evaluation of Metals Removal Technologies at Page Sewage Treatment Plant	Construct pilot-scale water treatment facilities at the Page Sewage Treatment Plant using two proprietary technologies.	Demonstrate the relative efficacy and costs of two emerging technologies that show promise in removing metals and phosphorus from the wastewater treatment plant effluent. These technologies show promise as a means for this and other local plants to meet NPDES permit requirements at affordable costs to ratepayers, and, potentially, as a means to treat metals contaminated water at mine sites.	DEQ/SFSD	$161,250
Evaluate Groundwater Surface Water Interactions at Canyon Creek	Review existing hydrogeologic information to evaluate the interception of groundwater to reduce the impact of heavy metal contamination to the Canyon Creek surface water hydrologic system.	Begin work to determine if treatment of groundwater in Canyon Creek is less expensive than treatment of the same water as surface water further down the South Fork of the Coeur d'Alene River. Evaluate potential effects of high-pH water disposal in infiltration basins.	DEQ	$35,000 Possibly some part funded from EPA ROD component.

Appendix D: BEIPC 2003 Financial Summary Data

	Project Expenditures in 2003	Contracts within Kootenai Co.	Contracts within Shoshone Co.	Number of Jobs Provided to Local Hires
SUPERFUND				
Yard Sampling & Remediation	$2,234,614 (TOTAL) $1,207,000 (TG) $1,027,614 (RC)	$97,356 (TOTAL) $42,164 (TG) $55,192 (RC)	$1,221,659 (TOTAL) $342,496 (TG) $879,163 (RC)	114 (TOTAL) 34 (TG) 3 (SVL) 55 (RC) 22 (Stew)
Big Creek Repository	$418,283 (TOTAL, EPA)	$0	$124,718 (contractors, EPA)	$0
Canyon Creek Water Treatment	$30,000 (EPA)	$0	$0	0
Upper Basin Mine and Mill Sites	$0 (EPA)	$0	$0	0
Recreation Sites	$155,000 (design, EPA)	$0	$62,000	6
Basin Environmental Monitoring	$0	$0	$0	0
TOTAL Superfund	**$2,837,901**	**$97,356**	**$1,408,377**	**120**
CWA				
Mullan I/I	$560,900 (TOTAL, DEQ) $485,000 (RC)	$284,857 (TOTAL) $169,186 (RC) $115,671 (JUB)	$173,056 (RC) 0 (JUB)	0(RC) 0(JUB)
Bank Stabilization Demo/Inventory	$56,939 TOTAL $53, 519 (TG) $3,420 (KSSWCD)	$0	$350 (TG)	<1 (TG)
Lake Monitoring	$50,000			
Lake Education	$4,000	$4,000	$0	<1
TOTAL CWA	**$671,839**	**$286,527**	**$173,406**	**1**
TOTAL: SUPERFUND AND CWA	**$3,509,740**	**$383,883**	**$1,581,783**	**121**

Local Hires: Not necessarily 12-month positions

Key:

TG	TerraGraphics
RC	Randall Contracting
SVL	SVL Analytical
Stew	Stewart Contracting
KSSWCD	Kootenai Shoshone Soil and Water Conservation District
JUB	JUB Engineers

Appendix E: 2004 One-Year Work Plan