

# **Coeur d'Alene Basin 2004 Recommended Work Plan**

Prepared by:

**Coeur d'Alene Basin Environmental Improvement Project Commission's Technical Leadership Group (TLG)**

Prepared for:

**The Coeur d'Alene Basin Environmental Improvement Project Commission Board**

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## **1. SUMMARY**

The five-year plan for 2004-2008 was adopted by the Basin Commission in August 2003. Since then the TLG, in coordination with other Commission stakeholders, has used the five-year plan as a starting point to determine what projects/concepts should be implemented or advanced in 2004. In addition, since Clean Water Act (CWA) funds specifically earmarked "...to conduct and promote coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys and studies relating to causes, effects, extent, prevention, reduction, and elimination of (water) pollution" are available for next year's work, specific project proposals meeting these funding source objectives were developed by agencies represented on the TLG. Table 1-1 summarizes the scope and objectives of the selected recommended work and the lead agencies identified. It is anticipated that the lead agencies will be responsible for planning, developing designs, coordinating with other agencies, and following TLG operating procedures for communication among the TLG, CCC, and Basin Commission Board Members.

As stated in the five-year plan, "annual work plans will recommend specific actions within this plan with a suggested source of funds and estimated budgets." This 2004 work plan is the first of such annual plans.

### **1.1 Process of Development of the 2004 Work Plan**

Since the adoption of the 5-Year Plan (August 27, 2003), the Basin Commission's Technical Leadership Group (TLG) has been collaboratively developing information now contained in this proposed 2004 work plan. During this time the TLG also coordinated their work activities with the Basin Commission's CCC. The process and schedule that resulted in this document are summarized as follows:

**September 2003-** During the TLG's weekly conference call (September 4, 2003) the group decided to focus on two types of proposals; 1) those that could best fit CWA funding constraints and 2) those more suited for Superfund/CERCLA funding.

Two meetings were then convened to initiate discussions to determine how best to prepare these

proposals and select candidates for the Commission's consideration. At that time it was also determined that the TLG would 1) use the five-year plan as a starting point to begin project proposal development, 2) divide into two groups; one focusing on CWA proposal development, and one addressing superfund project proposals, and 3) formally request it's membership to submit project proposals for CWA funding. In addition, EPA volunteered to prepare a draft outlined of proposed 2004 Superfund work. The TLG also decided to finish the revision of a draft project prioritization matrix previously developed by the group during the development of the five-year Plan. The matrix was to be reviewed and revised to better tailor it to be used as a tool to prioritize CWA projects. A deadline of September 26, 2003 was set for submittal of CWA proposals, for a draft outline of proposed Superfund work anticipated for 2004, and comments related to the prioritization matrix. The TLG then provided their proposed path forward and schedule to complete the 1-Year Plan to the CCC.

On September 26, comments from the TLG and CCC on the draft project priority matrix and proposals for CWA funding consideration were received by the TLG Chair. No comments were received on EPA's Proposed Superfund work.

**October 2003-** The CWA proposals were discussed during a TLG conference call on October 2, 2003. The proposals were also posted on the Basin Web site for both the full membership of the TLG, the CCC, and any other interested stakeholders.

Since three of the CWA candidate proposals received focused on water treatment demonstration/pilot projects, the water treatment PFT convened a conference call to review all CWA proposals received. TLG members also suggested that Core Staff as well as the CCC review all proposals and provide comments to the TLG. Oral summaries of these reviews were provided to the TLG during a meeting held on October 21, 2003. During the same meeting TLG members finalized their approach to prioritizing projects, and were briefed on all proposals submitted. Many technical issues were discussed, resulting in six projects being selected by the TLG for recommendation to the Commission. Other projects were not selected at this time; however, final decision on one project (riparian evaluation) was deferred pending provision of more information to the TLG. Issues which led the TLG to defer certain projects included; insufficient technical detail, a concern that some projects would not be able to be permitted barring resolution of many technical concerns, lack of adequate baseline monitoring data, untimely project sequencing, and insufficient ability to predict project results, among others. These projects will not be recommended now; however, they may be discussed and further refined using the TLG Project Focus Teams.

Once projects were selected for implementation in 2004, a list was developed identifying project name, objective of project, sponsoring agency, and cost of recommended projects. This list was then used by Basin "core staff" as a point of discussion with each individual Board member. The "core staff" also met with the three counties' Commissioners on October 30, 2003 to provide an update on the content of the 2004 work plan.

The Commission Board received the recommended 2004 work plan as part of their Commission agenda packet on October 28, 2003.

TABLE 1-1, Summary of Activities Proposed for the 2004 Work Plan, and Figure 1-1, Projects in the 1-Year Work Plan for 2004, follow.

**Table 1-1. Summary of Activities Proposed for 2004 Work Plan**

Proposed Activity	Scope	Objective	Lead Planning Agency	Estimated 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/IDEQ	\$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.	IDEQ	\$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.	IDEQ	Funded in 2003
Residential Yard Sampling and Remediation	Remediate contaminated yards in affected communities.	Remediate 200 to 300 properties, and perform sampling to support additional remediations in subsequent years.	IDEQ	\$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.	IDEQ	\$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

<b>Proposed Activity</b>	<b>Scope</b>	<b>Objective</b>	<b>Lead Planning Agency</b>	<b>Estimated Cost</b>
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, IDEQ	\$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
<b>Clean Water Act</b>				
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	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	IDEQ	\$191,000

Proposed Activity	Scope	Objective	Lead Planning Agency	Estimated Cost
	minimize reactor plugging problems.	evaluate the performance of and potential for improvements to the Success bioreactor, with application to other sites in the future.		
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.	IDEQ	\$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
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.	IDEQ/SFSD	\$161,250

<b>Proposed Activity</b>	<b>Scope</b>	<b>Objective</b>	<b>Lead Planning Agency</b>	<b>Estimated Cost</b>
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.	IDEQ	\$35,000 Possibly some part funded from EPA ROD component.

## 2004 One-Year Work Plan

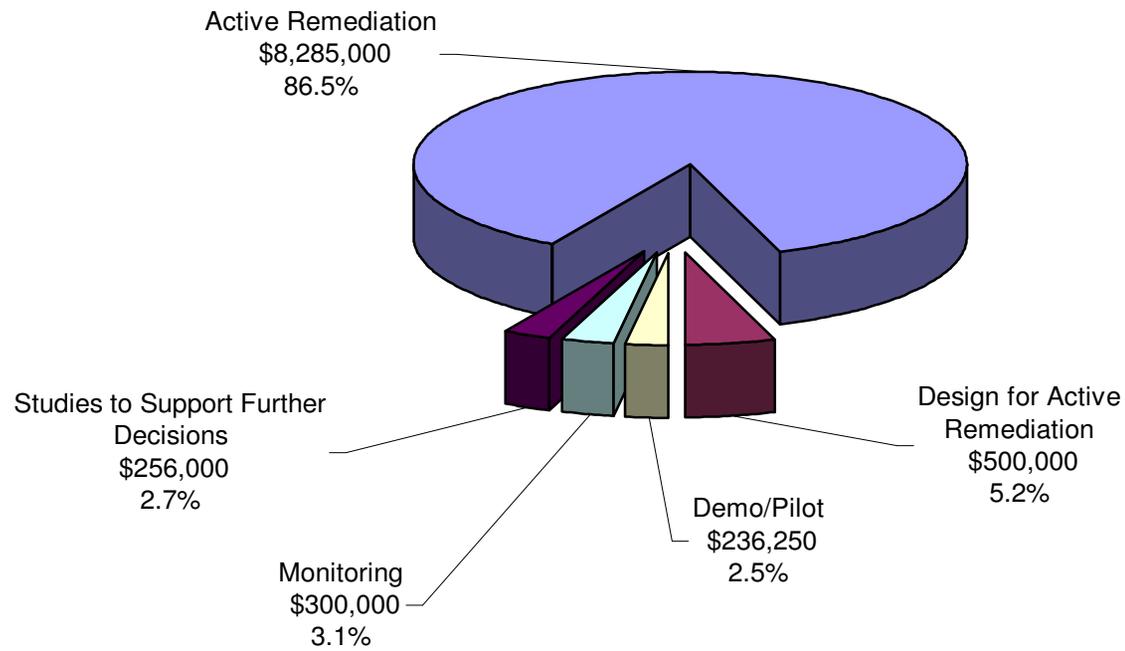


Figure 1. Projects in the 1-Year Work Plan for 2004.

## 2. INTRODUCTION

This 2004 plan describes the proposal recommended by the TLG to the Basin Commission for continuation of remedial activities in the Coeur d'Alene Basin per the OU3 Record of Decision (ROD). The plan also describes proposed actions that the TLG believes are necessary for cost-effective implementation of the other water protection actions which may be funded outside of the CERCLA process.

As defined in the 2004 one-year work plan, the bulk of EPA remedial actions (RA) funds will be allocated for remediation focused on the human health remedy. EPA remedial design (RD) funds will be used to prepare for remediation such as filling data gaps, preliminary design engineering, and technology development. Congressional earmark funding under the Clean water Act (CWA) will be used for "...research, investigation, experiments, training, demonstrations, surveys, and studies related to the causes, effects, extent, prevention, reduction, and elimination of pollution."

As mentioned above the five-year plan outlines projects to be implemented over the next five years; however, it does not sequence these activities. This one-year plan provides the preliminary sequencing and the first project activities that will be needed to complete the work approved in the Five-Year Plan.

### 2.1 Constraints in 1-Year Planning;

As the Commission is aware, the five-year plan was adopted by the Commission; however the vote was 4 in favor and 3 not in favor. The main reason several Commissioners did not endorse the five-year plan include the perception that too little work "on the ground" and too many "studies" were being proposed. The TLG discussed these concerns and believe the five-year plan was the best technical combination of projects, given the fact that EPA is committed to implementing the human health component of the ROD as top priority. In fact, most of the projects proposed were related to human health "work on the ground." Clean Water Act funding constraints also narrowed the scope of ecological projects available for further consideration. These projects had to be demonstration projects and not merely other remedial projects outlined in the ROD. Therefore, the constraints that were placed on developing the five-year plan are the same constraints placed on the TLG in further defining what projects of the five-year plan make sense to implement in 2004.

## 3. THE 2004 RECOMMENDED WORK PLAN

The 2004 work plan provides the Commission with a recommended "game plan" for next years work. The proposal includes work on the following elements:

### Superfund funded activities:

- Development of Repositories for non-remedial materials (contaminated material generated by non-remedial activities like utility work or road repairs) [Clarify @ 3.1.1]
- Big Creek Repository construction and management
- Basin Institutional Controls
- Residential Yard sampling and remediation
- Drinking Water Remediation
- Lower Basin recreation sites remediation
- Canyon Creek Water Treatment Technology Evaluation
- Development of Clean up Standard for riparian or STREAM-side soils
- Basin-wide Environmental Monitoring Plan
- Design for Rex, Constitution, and Golconda
- Continued development of sequencing plan for Implementation of lower basin activities outlined in the ROD
- Posting of informational signage at recreation sites
- Encouraging the USDA Forest Service to conduct remediation on recreation sites within their jurisdiction

### Clean Water Act Funded Activities:

- Upgrade and Monitor the Success Bio-reactor
- Investigate recontamination issues on Meyer Creek
- Revegetation on the East Fork of Pine Creek
- Evaluate metals removal techniques at the Page Sewer Treatment Plant
- Evaluate Ground water/surface water interactions in Canyon Creek (Woodland Park)

Work that was approved as a part of the 2003 one-year plan is not included in the 2004 one year plan, even though some previously approved projects are still underway.

## 3.1 Superfund Activities

### 3.1.1 Repositories

In 2003 EPA entered into agreements with the IDEQ to: 1) continue repository siting and design activities throughout the Coeur d'Alene Basin; and 2) prepare and operate the Big Creek Repository during the 2004 field season.

The primary goal of the first effort is to identify an additional repository site (> 25,000 cubic yards) that could be used in 2004 to support the cleanup program. An ancillary goal is to work with local communities to identify a location that can be used to support the needs of the Basin Institutional Controls Program. It is anticipated that more repository capacity will be needed

after 2005. Knowing the technical, economic, legal, and social issues necessary to resolve before a repository is "on-line", the TLG recommends that efforts continue to be funded to have an additional repository or landfill to support the institutional controls program ready to receive wastes by 2005. It is the intent of the TLG to use these funds to better define the scope of work necessary to build additional facilities. IDEQ has taken the lead in the development of a white paper to transmit to the TLG for their review. It has also been decided that a repository PFT needs to be convened to review and explain the entire history behind the current technical information at hand. This will be an attempt to provide all interested TLG members and stakeholders with the same background information. This will be the "kick-off" of what will become a much broader-based discussion on the topic. Issues to be resolved are provided in the five-year plan.

The goal of the second effort is to continue to upgrade and operate the Big Creek repository during the 2004 field season. As the Commission is aware, the old Sunshine tailings pond has been acquired by the State of Idaho who intends to utilize the site as a repository. Upgrading and managing this facility is a critical component to continue clean up activities. A technical memorandum will be prepared this year that describes the criteria used for selecting the site as a repository and the operating guidelines for the facility. IDEQ and USEPA are currently in the lead for this work.

### 3.1.2 Institutional Controls

The TLG continues to view the development of an institutional controls program (ICP) as a priority to help protect the remedy and public health, support construction projects, and facilitate commerce. Funding provided in 2003 will continue to be used to finalize the ICP action plan for the ROD. Issues left to resolve include, but are not limited to; the geographic extent in which the ICP will be implemented, where ICP landfills will be located, and how governmental entities will coordinate the ICP. Active communication and planning between the public and local, state, and federal governments will continue to establish the Basin ICP. IDEQ will continue to lead this effort.

### 3.1.3 Residential Yard Remediation

The TLG continues to support completing the human health remedy for residential areas throughout the Basin. As mentioned earlier, this goal was set forth in the ROD. This 2004 work plan anticipates testing 700-800 yards to determine metals concentrations. Those yards which exceed the standard will be eligible for remediation. This data will be included in a database and will continue to support decisions on which properties are remediated the following year. It is estimated that 200-250 yards will be remediated in 2004. IDEQ will continue to lead this effort. IDEQ has a local firm under contract to advance this sampling and remediation work as soon as weather permits in the spring of 2004.

In addition, it is recommended that funds be used to provide improved drinking water for 5-10

residential homes on metals-contaminated wells. In all likelihood homes that currently have wells in which the water exceeds standards for human drinking will be connected to the closest municipal water supply.

#### 3.1.4 Recreational Sites Remediation

The ROD outlined thirty-one recreational sites which potentially would be remediated. It also recognized that other sites may be evaluated for clean up based on factors such as risk of exposure, location, and use. The Recreational Project Focus Team comprised of TLG and CCC members developed design/selection principles for addressing the Lower Basin recreational sites. These criteria were used to identify sites for inclusion in the five-year plan and the one-year plan. Two sites (East of Rose Creek/West of Rose Lake and Highway 3/Trail of the Coeur d'Alenes crossing) will be remediated as part of the Commission's 2003 work plan.

The five year plan identified six Lower Basin recreational sites from those identified in the ROD. The 2004 work plan recommends the remediation and improvements to the Thompson Lake Boat Launch to make it safer and more attractive to users.

The five year plan also outlined the need for informational signage on at least nine recreational sites. The 2004 work plan recommends providing access controls and information signage at all nine sites outlined in the five year plan. Duplicate signs like those currently posted at selected locations in the Lower Basin are in storage and could be readily installed. The EPA is the lead agency for this work.

#### 3.1.5 Canyon Creek Technology Development

The five year plan calls for water treatment technology assessments and pilot tests in Canyon Creek (the major zinc loader to the S.F. Coeur d'Alene River). This work was funded by EPA in 2003 and has commenced. The 2004 work plan recommends the continuation of this assessment. It is anticipated that once the assessment is complete, pilot projects can then be developed and implemented to reduce metal loads being released from Canyon Creek.

#### 3.1.6 Development of Riverine Soils Clean Up Standard

The five year plan identifies the need to continue the development of a clean up goal for lead in riparian soil for use in remedial action planning, design and implementation. US Fish and Wildlife has begun this process through an interagency funding agreement with EPA. During 2004 the TLG recommends that this work continue, at no additional cost to the Commission.

#### 3.1.7 Basin wide Environmental Monitoring Plan (BEMP)

As defined in the five year plan a BEMP is necessary for successful implementation and evaluation of remedies. EPA in collaboration with the TLG, CCC, and Basin stakeholders has developed this monitoring plan and is in the process of finalizing it. Additional information

concerning the BEMP is being provided separately to the Basin Commissioners for the November 12, 2003 meeting.

The objectives of the Plan include:

- Assessing long-term status and trends of surface water, soil, sediment, and biological resource conditions in the Basin,
- Evaluating the effectiveness of selected remedies,
- Evaluating the progress toward cleanup benchmarks,
- Providing data for CERCLA-required five-year reviews of the progress on remedy implementation, and
- Improving understanding of Basin process and variability to in turn improve the effectiveness and efficiency of subsequent remedial action implementation

Funds requested will initiate the first year of Specific data necessary to achieve the above stated objectives will be collected starting this fall/winter at sentinel (sampled eight times annually with analysis for the complete suite of metals) and benchmark stations (sampled once a year at low flow for dissolved metals). Since no ecological remediation has been funded in the Basin so far, the BEMP will be initiated with EPA pipeline monies (does not require state match). When ecological remedial projects are funded, subsequent BEMP monitoring will be funded with remedial action monies (and will accordingly require state match). The USEPA with USGS, USFWS, and the IDEQ will jointly execute this work.

### 3.1.8 Mill Sites Remediation

Four sites were identified in the five year plan as priorities and have been selected for work in 2004. The proposed work includes finalization of remedial designs for the following sites;

- The Upper and Lower Constitution
- The Golconda
- The Rex
- Sisters Site

This work will be funded in 2004 with EPA pipeline funds. Based on current EPA budget projections EPA funding does not seem likely in the next few years for remedial action at mine and mill sites in the upper Basin. However, designs will be finalized and once funds are available these projects will be ready to implement.

The BLM has committed \$200,000 for the USACE to start the design and other efforts at the Constitution mill and tailings sites in anticipation that EPA funding will also be available for site design and work. BLM has requested FY2004 funds for continuing efforts for the Constitution and the dam stability issues at the Rex tailings dam. BLM has funding requests for more than \$300,000 for these efforts.

The BLM is continuing its efforts and monitoring four pilot water treatment bioreactors at Constitution, Motherlode, Sidney, and We Like. To supplement its monitoring efforts, BLM has a cooperative agreement with the University of Idaho to evaluate the systems and treatment processes. BLM is also continuing its Pine Creek stabilization and rock dump stabilization and revegetation efforts at several sites. The USDA Forest Service is continuing its removal work at the Paragon mill site, and will be preparing for removals related to the Idora mill sites.

### 3.1.9 Continued Sequencing of Lower Basin Work

As outlined in the five year plan, many issues and uncertainties pertaining to the prioritization of remedial actions in the Lower Basin have been raised over the past years. As will be further explained in Section 3.2.2, the TLG has recommended that a "Lower Basin Forum" be held to provide the basis for a common understanding from which the TLG can then move forward with implementation of work in the Lower Basin. Once the TLG has determined a comprehensive path forward, projects will then be proposed, prioritized, selected, and recommended for implementation. Depending on the specifics of future proposals (more geared towards ROD implementation related versus water quality projects) they would either be considered for Superfund or CWA funding.

### 3.2 Clean Water Act Activities

As defined under the Clean Water Act, Congressional earmark funding may be available for "...research, investigation, experiments, training, demonstrations, surveys, and studies related to the causes, effects, extent, prevention, reduction, and elimination of pollution." Twelve CWA Proposals were submitted. Six were selected and include the following:

#### 3.2.1 Upper Basin:

- a) Nine-mile Creek, Success bio-reactor upgrade and water quality monitoring

The five year plan recommends a plan be developed to monitor the effectiveness of the remediation done at the Success site in the East Fork of Nine-Mile Creek. It also recommends that further evaluation of ongoing water treatment projects occur.

Combining a proposal submitted by Washington Department of Ecology (Ecology) with one submitted by IDEQ, the TLG recommends the following actions be conducted in 2004 at the Success site:

- 1) Refinement of Biological Reactive cell previously installed at the Site. During the summer of 2003, several problems occurred within the bio-reactor. Flow rates decreased within the cell which reduced the cells capacity to treat sufficient amounts of water. As a result modifications must be made to improve the effectiveness of this remedy. The long-term usefulness of Apatite II and other

media will also be evaluated as part of this continued effort.

2) Additional water quality monitoring at this site; This work is being recommended to 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.

#### b) Meyer Creek Flood Control Evaluation

It is anticipated that many yards will be remediated in the City of Osborne next construction season. This work may cost as much as two million dollars. As such recontamination of those properties is of concern. It is believed that Meyer Creek (which is diverted within an old culvert as it passes beneath the City) has great potential to overflow during flood conditions (much like what occurred when Milo Creek flooded. The objective of the proposed work for 2004 is to evaluate the potential recontamination threat which exists in Osborne. The recommended proposal specifically outlines the need to map, inspect, and assess the condition of existing Meyers Creek diversion structures. If flooding is then deemed a real threat, a proposal will be developed to remedy this problem.

#### c) East Fork of Pine Creek Revegetation Demonstration Project

Pine Creek has been identified in the ROD as a priority stream for ecological remediation. Implementation of the remedy called for in the ROD anticipates significant improvement of 3.5 miles of the resident fishery. EPA and BLM are the lead agencies for remediation in Pine Creek. BLM, EPA, Shoshone County, and others have already done a significant amount of stream and mine site stabilization within the proposed project area as well as road and culvert maintenance on both public and private lands within this stream reach. BLM proposed additional work for the TLG to consider. The proposal was selected by the TLG and is recommended to be implemented in 2004.

This work calls for the revegetation of the flood plain and riparian zone within a three-mile reach of the East Fork of Pine Creek. The proposed work would begin near the upstream end of major sediment sources and channel instability. It would extend downstream through a 3-mile long stream reach that, since the floods of 1996, has had all streamside tailings piles removed, numerous blown-out road sections repaired and armored, and extensive grading to encourage floodplain and channel recovery. The East Fork remains however, a rocky and high-energy site; natural vegetative and channel recovery- without the proposed planting- is expected to be very slow.

Several planting technologies, including the use of an excavator-mounted “expandable stinger” successfully used by the State of Idaho in the South Fork of the Coeur d’Alene,

would be implemented in this reach. Success and relative costs will be monitored, evaluated, and documented in a written report.

If successful and cost-effective, these types of revegetation techniques could be transferred to other areas (i.e., Nine-Mile, Canyon, and elsewhere) which have impacted/reduced plant communities.

#### d) Page Pond Sewer Treatment Plant Water Treatment Demonstration Project

Although not identified in the five-year plan for active remediation, a proposal was submitted by the South Fork Sewer District wherein the defined scope is to construct a pilot-scale water treatment facility at the Page Sewer Treatment Plant using two proprietary technologies. The TLG recommends the funding of such a demonstration project to demonstrate the relative efficacy and costs of two emerging technologies that show promise in removing metals and phosphorous from the wastewater treatment plant effluent. It is hoped that these technologies will prove effective as a means of meeting NPDES permit requirements at affordable costs to ratepayers, and potentially, as a means to treat metals contaminated water at other sewage treatment plants and mine sites.

#### e) Woodland Park Ground Water/Surface Water Evaluation

As defined in the ROD, Canyon Creek is a major loader of zinc into the S.F. Coeur d'Alene River. To date the ROD outlines a remedy which seeks to treat the surface water of Canyon Creek into perpetuity. In an effort to explore alternate/supplemental approaches to reducing metals in Canyon Creek a proposal to review existing hydrogeologic information to evaluate the interception of groundwater to reduce the impact of heavy metals contamination to the Creeks surface water hydrologic system is recommended for 2004. The objectives will be to determine if treating groundwater in Canyon Creek is less expensive, and can achieve the same objectives, as treatment of the same water expressed as surface water further down the South Fork of the Coeur d'Alene River. This work will also evaluate potential effects of high-pH water disposal in infiltration basins. EPA is exploring the possibility of funding this work with pipeline monies and integrating the evaluation into the ongoing water treatment treatability work. A decision will be made by EPA in February as to whether funds are available to conduct this work.

### 3.2.2 Lower Basin

As mentioned in the five year plan, "many of the uncertainties pertaining to the prioritization of remedial actions in the Lower Basin have been raised over the past years." Furthermore the TLG believed that a better understanding of the complex and dynamic system in the Lower Basin and sound answers to these questions were necessary before a sequence of remedial actions could be recommended. During the selection process of CWA proposals it became evident that this

opinion remains. This was also made evident by the inability of the TLG to resolve all permitting issues related to proposed bank stabilization work previously adopted by the Commission as part of the 2003 work plan. As a result all proposals which were to be conducted in the lower Basin were deferred back to the TLG's PFT's for further refinement. These proposals included; a) a bank stability evaluation, b) an evaluation of existing stable banks, c) a sediment transport model, d) a boat wake evaluation, and e) development of a riparian vegetation evaluation system.

It is the desire of the TLG to convene a "Lower Basin Forum" to develop a work plan for its approach to reaching consensus and resolving Lower Basin Issues. This work plan would comprehensively identify and prioritize questions to be answered, approaches to obtain the answers, monitoring needs, permitting needs, a schedule, and a cost estimation to achieve these goals. The TLG will further advance these discussions over the winter of 2003-2004. Until this plan is developed no additional lower river projects will be submitted by the TLG. The TLG does, however, plan to continue to move forward with design and permitting of the two stream stabilization projects approved by the Commission as part of the 2003 work plan.

### 3.2.3 Lake Management Plan

Once the TLG had determined which CWA proposals they would recommend for implementation in 2004 it became evident that funds would still be available to conduct additional work (of the \$1.8 million allocated, the TLG's combined proposal selection cost was approximately \$500,000). Given the desire to utilize the entire funding allocation the TLG decided to solicit addition proposals for near-term consideration. It was also determined that the new proposal solicitation should focus on projects which meet the funding constraints and further advance Lake Management Plan objectives (i.e., nutrient reduction throughout the Coeur d'Alene Basin).

Although the LMP has not been revised and finalized TLG members felt that moving ahead with projects which reduce nutrients into the Basin was timely regardless of the status of the current LMP. A deadline for proposal submittal has been set for December 15, 2003. These project proposals will be reviewed, prioritized, and those selected for recommendation to the Commission will be submitted for consideration during the February 2004 Board Meeting. This time-frame will still allow the Commission to adopt any new proposal prior to the deadline for the CWA grant request.