2002 FINAL
UPPER CLARK FORK RIVER BASIN
RESTORATION WORK PLAN
VOLUME I

PREPARED BY:

STATE OF MONTANA
NATURAL RESOURCE DAMAGE PROGRAM
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NOVEMBER 2002

I hereby approve of the project funding recommendations as stated in this document:

_____ _____

Governor Judy Martz Date

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RESPONSE TO COMMENTS

Volume III, *The State of Montana's Responses to Public Comment on the Draft 2002 UCFRB Restoration Work Plan,* provides the State's responses to comments received during the public comment period on the Draft Work Plan that ran from September 9, 2002 to October 11, 2002.

Volumes II and III are available upon request from the Montana Natural Resource Damage Program (406-444-0205).

Acronyms

ADLC	Anaconda-Deer Lodge City County Government
Advisory Council	Upper Clark Fork River Basin Remediation and Restoration Education Advisory Council
AS&R	Anaconda Search and Rescue
ARCO	Atlantic Richfield Company
BSB	Butte-Silver Bow City County Government
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Clark Fork River
DEQ	Montana Department of Environmental Quality
DNRC	Montana Department of Natural Resources
DOI	U.S. Department of Interior
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
GSD	Greenway Service District
LLC	Limited Liability Corporation
MFWP	Montana Fish, Wildlife and Parks
MDT	Montana Department of Transportation
MOA	Memorandum of Agreement
NRDP	Natural Resource Damage Program
RPPC	UCFRB Restoration Plan Procedures and Criteria
ROD	Record of Decision
SBC	Silver Bow Creek
TCF	The Conservation Fund
Tribes	Confederated Salish and Kootenai Tribes
UCFRB	Upper Clark Fork River Basin
USFS	U.S. Forest Service

1.0 EXECUTIVE SUMMARY

1.1 Background

The State of Montana obtained approximately $130 million for restoration of injured natural resources in the Upper Clark Fork River Basin (UCFRB) through a partial settlement of its natural resource damage lawsuit against the Atlantic Richfield Company (ARCO) in 1998. In February 2000, the State released the *UCFRB Restoration Plan Procedures and Criteria* (*RPPC*) that provided the framework for expending these Restoration funds. The document was based on input from the UCFRB Remediation and Restoration Education Advisory Council (Advisory Council)[1] and public comment. Rather than embarking on a prescriptive process, the State elected to establish a grant process whereby various entities could apply for Restoration funds based on procedures and criteria set forth in the *RPPC*. The criteria are aimed at funding the best mix of projects that will restore or replace the natural resources that were injured, and/or services provided by those resources that were lost, due to releases of hazardous substances from ARCO and its predecessor's mining and mineral processing operations in the UCFRB. Using experience gained from the first two grant cycles, the State revised the *RPPC* in March 2002.

The Montana Natural Resource Damage Program (NRDP) administers the UCFRB Restoration Grant process. UCFRB Restoration Grant eligibility requirements include:

Applicant Eligibility: Governmental entities, private entities and individuals are eligible to apply for UCFRB Restoration Grants.

Project Type Eligibility: Three types of projects are eligible for funding:

- Restoration projects that will restore, rehabilitate, replace, or acquire the equivalent of injured natural resources and/or the services lost as a result of releases of hazardous substances by ARCO or its predecessors that were the subject of the Montana v. ARCO lawsuit.

- Planning projects that involve developing future grant proposals.

- Monitoring and research projects that pertain to restoration of natural resources in the UCFRB.

Project Location Eligibility: Only projects that are located in the UCFRB are eligible for funding. Activities associated with research projects do not have to occur within the UCFRB, provided the proposed research project pertains to injured natural resources in the UCFRB.

[1] The Advisory Council consists of ten citizen volunteers representing the public and various interest groups and five government representatives. A list of Advisory Council members is provided in Appendix F.

In December 2000, Governor Racicot approved approximately $7 million for funding eight projects. In December 2001, Governor Martz approved $5.3 million for funding six projects. The State's *Final Pilot Year 2000 UCFRB Restoration Work Plan* and *Final 2001 UCFRB Restoration Work Plan* outline the 2000 and 2001 grant approval processes and detail the projects approved in those years. These documents are available on the Department of Justice website at www.doj.state.mt.us or upon request from the NRDP (406-444-0205).

1.2 Overview of the 2002 Grant Cycle and the *Final 2002 UCFRB Restoration Work Plan*

This *Final 2002 UCFRB Restoration Work Plan* (*Final Work Plan*) describes the NRDP's evaluation of the 2002 Restoration Grant applications, the Trustee's Restoration Council's[2] final funding recommendations, and the Trustee's final funding determination. The *RPPC* sets forth the process the NRDP followed in evaluating applications and recommending funding. The following summarizes the various phases of the application submittal and evaluation process and describes the sections of this *Final Work Plan* that are reflective of these phases.

- In January 2002 the NRDP distributed 2002 grant application materials and conducted educational workshops on the application process.

- In March 2002 the NRDP received five grant applications for a total funding request of $10,283,361.

- In April 2002 the NRDP issued its minimum qualification determinations, which are summarized in Section 2.0, for the five applications. Four projects were judged as meeting all the minimum qualification criteria and one project failed the minimum qualification criteria. The applicant for that project did not appeal the NRDP's decision, thus the project was not evaluated further. The funding request for the four projects meeting minimum qualifications totaled $8,874,067.

- The NRDP evaluated the remaining four projects according to criteria specified in the *RPPC*. Appendix A contains the applicant's project abstracts and Appendix B provides maps for the four projects that met minimum qualifications. Section 3.0 summarizes the projects. Section 4.0 summarizes the detailed Project Criteria Narratives that are contained in Appendix C and constitute the bases for project comparisons and funding recommendations. These evaluations were based on application review guidelines contained in Appendix E that were derived from the criteria set forth in the *RPPC*. Appendix E also contains the multi-year funding policy applicable to this year's grant cycle. Appendix D provides the Budget Summary Tables and the Environmental Impact Checklist provided by the applicants for these four projects.

[2] The Trustee Restoration Council consists of the Governor's Chief of Staff, the Attorney General, the Chairman of the Advisory Council, and the Directors of the State's three natural resource agencies.

- The NRDP compared the remaining four projects on a criterion-specific basis as described in Section 4.0. The NRDP then ranked the projects in order of preference for funding consideration based on these criteria comparisons. Section 5.0 presents these rankings.

- The NRDP presented a *Pre-Draft 2002 Restoration Work Plan* to the UCFRB Advisory Council at its July 10, 2002 meeting. The NRDP recommended all four projects for funding, with some proposed modifications. Based on additional information gathered in the following month, the NRDP revised its modifications in an August 2002 revised *Pre-Draft Work Plan*. At its August 14, 2002 meeting, the Advisory Council voted to recommend the four projects for funding.

- At its August 23, 2002 meeting, the Trustee Restoration Council considered the recommendations of the NRDP and the Advisory Council and heard public comments. They concurred with the NRDP and Advisory Council draft funding recommendations. The NRDP incorporated these draft funding recommendations into the *Draft 2002 UCFRB Restoration Work Plan* (*Draft Work Plan*).

- The NRDP solicited public comment on the *Draft Work Plan* from September 9, 2002 through October 11, 2002. A total of 66 individuals, including those representing 6 entities, submitted either written comments or provided oral comments at a public hearing held in Anaconda on September 24, 2002. The NRDP drafted responses to these comments for consideration by the Advisory Council and the Trustee Restoration Council.

- At its November 13, 2002 meeting, the Advisory Council considered the public comments received and affirmed their earlier funding recommendations. A summary of Advisory Council input is contained in Appendix F. Appendix F also contains input from the U.S. Environmental Protection Agency and U.S. Department of Interior on this year's projects.

- On November 20, 2002, the Trustee Restoration Council considered public comments on the *Draft Work Plan* and the NRDP's draft response to these comments. They affirmed the draft funding recommendations as their final recommendations to the Governor. Section 5.0 contains these recommendations. The following are the four projects and the amounts recommended for funding by the Trustee Restoration Council:

    - Silver Bow Creek Greenway - $4,955,273 ($2,449,940 in 2003 and $2,505,333 in 2004)

    - Drinking Water Infrastructure Replacement Year 2 - $1,168,842

    - Main Street and Bowman Field Water Distribution Upgrades - $749,942

    - Stuart Mill Bay Recreation Area Acquisition - $ 2,000,000

1.3 Public Comments

Public input received before and during the public comment period on specific grant projects and draft funding recommendations is summarized in the Project Criteria Narratives (Appendix C) of the *Final Work Plan*.

Volume II of the *Final Work Plan* contains copies of letters on the projects received before the public comment period on the *Draft Work Plan*. These letters were provided either with the applications or sent separately after application submittal. Volume II is available upon request from the NRDP (406-444-0205).

Volume III, *The State of Montana's Responses to Public Comments on the Draft 2002 UCFRB Restoration Work Plan*, provides copies of the comment letters and public hearing comments received during the public comment period and the NRDP's responses to these comments. This document is available upon request from the NRDP or from the Department of Justice webpage at **www.state.doj.mt.us** under "Legal Services."

2.0 MINIMUM QUALIFICATION DETERMINATIONS

The NRDP initially evaluated the five applications according to the following minimum qualification criteria specified in the *RPPC*:

- The application is completed fully and accurately and contains all necessary information.

- The proposed project would restore, rehabilitate, replace or acquire the equivalent of the injured natural resources that were the subject of Montana v. ARCO.

- The proposed project would be located in the UCFRB. (This requirement does not apply to research projects, provided that the proposed research pertains to restoration of natural resources located in the UCFRB.)

- The applicant has the ability, financial means, and other qualifications necessary to undertake the proposed project.

- That consideration or implementation of the proposed project would not interfere, potentially interfere, overlap, or partially overlap with the State's remaining claims in the Montana v. ARCO natural resource damage lawsuit, or with the State's proposed restoration determination plans for the three sites still involved in that litigation. Those sites are Butte Area One, Smelter Hill Area Uplands and the Upper Clark Fork River. In addition, projects that are proposed for implementation at the Upper Clark Fork River or Butte Priority Soils Operable Units will not be considered prior to the issuance of EPA's Record of Decision (ROD) for the sites.

Of the five projects submitted, the NRDP determined that the "Teddy Bear Placer Project" did not meet minimum qualifications because the application lacked information needed to determine the project's need and public benefits. The applicant did not appeal this determination, thus this project was not further evaluated. The four other projects met minimum qualifications and were fully evaluated for Stage 1 and 2 criteria according to the *RPPC* procedures.

3.0 PROJECT SUMMARIES

Table 1 summarizes the four projects that received full evaluation. The total request for Restoration funds for these projects is $8,986,057, with $6,368,724 requested for 2003 and $2,617,333 requested for 2004. The following summary of each project is provided for assistance in understanding the project evaluations and comparisons contained in Section 4.0. More detailed project abstracts by the applicants are contained in Appendix A and project location maps are contained in Appendix B.

Drinking Water Infrastructure Replacement Year 2 ("Butte Waterline") – Butte-Silver Bow City County Government

Butte-Silver Bow City County proposes to replace approximately 17,000 feet of inadequate water distribution lines in the City of Butte for a total cost of $1,712,059, with $1,168,842 requested in Restoration funds. This is the second year in which Butte-Silver Bow has requested funding for water line replacement. The amount requested is $3,047 more than last year's approved funding request.

Butte's bedrock aquifer is contaminated throughout a seven square mile area of the City and these distribution lines overlay that aquifer. This aquifer is so severely injured that natural recovery will not occur for thousands of years as concluded by the State's 1995 Restoration Determination Plan[3] and by EPA's 1994 Record of Decision.[4] Restoration of the bedrock aquifer is infeasible, thus the aquifer's drinking water and its storage capacity and transport services have been lost for thousands of years. This project constitutes replacement of lost services to thousands of property owners and other members of the public in Butte that could utilize the aquifer if it was not injured. By fixing leaking and corroded water lines, this proposal will enhance the water supply from an uncontaminated source.

Main Street & Bowman Field Water Distribution Upgrades ("Anaconda Waterline") – Anaconda-Deer Lodge City County Government

Anaconda-Deer Lodge County requests $749,942 in Restoration funds for two projects, Main Street waterline replacement ($680,212) and Bowman Field waterline installation ($69,730). The County is replacing a 104-year-old, leaking 10-inch waterline along Main Street. The water distribution system within the City of Anaconda loses approximately 1.75 million gallons of water per day through leaks, with an estimated 5% of the water loss occurring through the Main Street waterline. Repairing these leaks is an alternative that will provide the City of Anaconda with additional water resources instead of developing of a new source of water. Installation of a new waterline to the Bowman Field airport is part of the development plan for the airport. Because of the underlying groundwater contamination associated with the injured Anaconda Area Resources,

[3] *Restoration Determination Plan Upper Clark Fork River Basin*, NRDP, October, 1995.
[4] *Record of Decision, Butte Mine Flooding Operable Unit*, U.S. Environmental Protection Agency, September 1994.

drilling a water well is not as cost effective as installing an 8-inch waterline to the airport from the 16-inch Warm Springs Creek waterline.

The City of Anaconda and Bowman Field are located adjacent to or within the 40 square miles of groundwater contamination associated with the injured Anaconda Area Resources. Groundwater resources are somewhat limited because the upper portion of the alluvial groundwater aquifer east of Anaconda is contaminated with metals associated with past mining activities at levels above drinking water quality standards. The 1995 State of Montana Anaconda Groundwater Injury Assessment Report supports this claim of groundwater contamination east of Anaconda. Also, the 1998 Anaconda Regional Water, Waste, and Soils Operable Unit Record of Decision shows some 30 square miles of contaminated bedrock groundwater to the north and south of the City. Both the Main Street waterline upgrade and the Bowman Field waterline installation are considered replacement projects.

Silver Bow Creek Greenway ("Greenway") – Greenway Service District

The Greenway Service District is requesting $5,067,273 over two years ($2,449,940 in 2003 and $2,617,333 in 2004) to develop a recreational trail corridor and to restore aquatic and riparian resources along miles six and seven (Reaches F and G of Subarea Two) of Silver Bow Creek west of Butte. As in previous years, many of the Greenway activities will be coordinated with remedial actions. That coordination will occur to an even greater extent with this year's proposal, which involves activities that will almost all be conducted jointly with remedial actions. The major coordination components entail an estimated $2.7 million for removal of approximately 336,000 cubic yards of tailings/impacted soils and $1.6 million for enhanced aquatic and revegetation efforts.

In the last two years, the Greenway Service District was awarded $2.9 million in Restoration funds for development of the Greenway trail and restoration of aquatic and riparian resources and services along the first five miles (Reaches A-E of Subarea One) of Silver Bow Creek.

Stuart Mill Bay Acquisition ("Stuart Mill Bay") – The Conservation Fund

The Conservation Fund requests $2 million to acquire the 328 acre Stuart Mill Bay property located along the southeast portion of Georgetown Lake for public ownership, use and management. The purchase would acquire fish and wildlife habitat and public access for fishing, hunting, camping, and other recreational uses. The Stuart Mill Bay property has about two miles of lake frontage and includes 48 acres of wetlands, 90 acres of grasslands, and 190 acres of forestlands. The property has historically been open to public use and informally managed as a dispersed campground, day-use site and fishing access site for decades. The Conservation Fund negotiated a purchase agreement, effective until March 2003, with Mountain Lion LLC to obtain this acreage. Through this acquisition, the Conservation Fund seeks to retain the property's public recreational uses and natural resource and scenic values and prevent subdivision and development of the property.

Table 1
2002 Restoration Projects

APPLICANT	PROJECT	BUDGET	2003 Restoration Fund Request	2004 Restoration Fund Request	Total Amount Requested in Restoration Funds
Butte-Silver Bow Local Government	Drinking Water Infrastructure Replacement Year 2	NRDP - $1,168,842 Other - $543,218 Total - $1,712,059	$1,168,842		$1,168,842
Anaconda-Deer Lodge County	Main Street & Bowman Field Water Distribution Upgrades	NRDP - $749,942 Other - $71,770 Total - $821,712[5]	$ 749,942		$ 749,942
Greenway Service District	Silver Bow Creek Greenway	NRDP - $2,449,940 Other - $0 Total – $5,067,273	$2,449,940	$2,617,333	$5,067,273
The Conservation Fund	Stuart Mill Bay Recreation Area Acquisition	NRDP -$2,000,000 Other -$755,000 Total - $2,755,000	$2,000,000		$2,000,000
TOTAL			$6,368,724	$2,617,333	$8,986,057

[5] Based on a revised budget submitted by ADLC on 8/6/02.

4.0 PROJECT CRITERIA EVALUATIONS AND COMPARISONS

4.1 Project Comparison Methodology

The State has evaluated the four 2002 Restoration grant projects according to the criteria specified in the *RPPC*. These evaluations are set forth in the Project Criteria Narratives (Appendix C). In the *RPPC*, the State established a non-quantitative process in which the projects are ranked against each other. The criteria are not rated in terms of importance or assigned numeric values. While each criterion is important, each criterion as applied to individual projects will vary in its importance depending on the nature of the project and unique issues it raises. There are nine Stage 1 criteria reflecting legal requirements that apply to all projects; nine Stage 2 criteria reflecting State of Montana policies that apply to all projects; two criteria that apply only to land acquisition projects; and two criteria that apply only to monitoring and research projects.

The Project Criteria Narratives are the major basis for comparing projects as they provide the detailed information needed to determine how well one project meets or addresses a particular criterion compared to another project. To help in these evaluations, the NRDP developed Application Review Guidelines (Appendix E) based on the *RPPC*. These Guidelines categorize the likely manner in which restoration projects meet or address a particular criterion. For example, for technical feasibility, projects are categorized as reasonably feasible, uncertain feasibility, or not feasible. These categories provide a framework to assist in evaluating and comparing projects consistently. Reviewers should note that it is the explanatory text provided in the detailed Project Criteria Narrative for each criterion, not the titles provided in this guidance to characterize projects, which forms the basis of judging how well a project addresses a particular criterion. The titles/headers should not be misconstrued to denote a certain level of ranking or adequacy in meeting the *RPPC* criteria.

4.2 Project Criteria Comparisons

This section compares the projects pursuant to each criterion, summarizing the similarities and differences between projects that were determined through a comparison of the Project Criteria Narratives. Since the criterion evaluating the relationship of expected costs vs. benefits takes into consideration all the other criteria, it is evaluated last. None of the four projects proposed have a major research and monitoring component in terms of the project costs; therefore, these criteria were not evaluated.

4.2.1 Stage 1 Criteria Required by Legal Considerations

<u>#1 Technical Feasibility</u>

This criterion evaluates the degree to which a project employs well-known and accepted technologies and the likelihood that a project will achieve its objectives. It considers both the technology and management aspects of the project in judging whether each of the proposed project elements have a reasonable chance of successful completion in an

acceptable period of time. The State will not fund projects considered technologically infeasible or insufficiently planned.

All four projects employ well-known and accepted technologies and are considered to be reasonably feasible. Of them, the Butte and the Anaconda Waterline projects have the highest certainty of technical and administrative feasibility. BSB has successfully conducted similar water main replacement projects, having replaced over 203,000 feet of waterline since 1992. ADLC has completed 34,500 feet of waterline replacement since 1992.

There are uncertainties associated with the revegetation and aquatic enhancement aspects of the Greenway project, but the applicant has appropriately planned to address these uncertainties during the remedial design phase in coordination with the Montana Department of Environmental Quality (DEQ), NRDP, and the Silver Bow Creek Greenway Design Review Committee. Although access of the needed 54 acres is feasible, negotiations with the landowners in Reaches F and G have not been initiated, lending some uncertainty to this project component.

A few critical steps to completing the Stuart Mill Bay acquisition have yet to be completed. The applicant's full appraisal was submitted in late August 2002 and the State's independent appraisal will not be completed until December 2002. A survey is also is needed to verify the property legal description. The Land Board will not consider the project for approval until January 2003. These uncertainties are addressed through funding conditions.

#2 Relationship of Expected Costs to Benefits - See pages 18-19

#3 Cost-Effectiveness

This criterion examines whether a particular project accomplishes its goals in the least costly way possible, with preference given to projects with demonstrated cost-effectiveness. Applicants were to address this criterion through the analysis of alternatives and justification of the selected alternative.

The cost savings associated with Greenway's coordination with remediation are significant (over $2.1 million). The tailings removal, access and aquatic enhancement features are considered cost-effective. Based on results of planting efforts in Reach A, the NRDP recommends changes in the quantity and size of plantings that will accomplish the desired goals at a cost reduction of $112,000. This recommended change enhances the project's cost-effectiveness.

The Butte Waterline project was judged likely to be cost effective. Replacing the leaking water lines in Butte is an economical way to replace lost services of the injured bedrock aquifer. Waterline replacement is also an economical way for ADLC to address its future water supply needs given the significant documented leakage from the system. Although the estimated costs for ADLC's Main Street are high compared to other waterline

projects completed in recent years in the City of Butte or typical of other waterline projects in Montana, ADLC has sufficiently justified their revised cost estimate. The Bowman Field subproject is cost-effective compared to the alternative of installing a water supply well, and the estimated costs are considered reasonable.

The price per acre for the Stuart Mill Bay project appears to be 29% below the fair market value based on the applicant's full appraisal, but this needs to be confirmed via an independent appraisal commissioned by the NRDP that will completed in December 2002. The NRDP considered an alternative that would have involved selling the upland portion of the property and thereby reducing costs, but this alternative proved likely not to be cost-effective.

#4 Environmental Impacts

This criterion evaluates whether and to what degree the proposal will have an adverse impact on environmental resources. None of the projects will cause significant adverse impacts to the environment. In the long term, all four projects are anticipated to benefit natural resources to varying degrees, as highlighted in analyses of other criteria.

The Greenway and the Anaconda and Butte Waterline projects have potential short-term adverse impacts associated with construction that can be mitigated. The applicants for these projects have appropriately planned for necessary mitigation.

For the Greenway and Stuart Mill Bay projects, environmental impacts may occur because of the greater public access these proposals provide. For example, increased public access may increase the spread of noxious weeds. These impacts can be addressed, however, through access controls and management plans. Both applicants recognize the need for and outline the plan for noxious weed management.

#5 Human Health and Safety Impacts

This criterion evaluates whether and to what degree the proposal will have an adverse impact on human health and safety. None of the projects will cause significant adverse impacts to human health and safety. The Greenway, Anaconda Waterline, and Butte Waterline projects have potential impacts related to construction or field activities, but none are deemed significant and mitigative efforts are appropriately planned. The Butte and Anaconda Waterline projects can have beneficial impacts to human health and safety by improving fire protection, reducing road hazards caused by leaking water and ice, and increasing the availability of water otherwise lost to leakage.

The Stuart Mill Bay project will result in lower tax revenue to Anaconda-Deer Lodge City County under public ownership than would be generated if the property were to be subdivided and developed. Anaconda-Deer Lodge City County has indicated that they consider the public benefits of the acquisition to outweigh any potential economic loss to the county. It is unlikely that the project will unfavorably impact nearby private

recreational facilities given its semi-primitive facilities and the desired minimal improvements.

#6 Results of Superfund Response Actions

This criterion examines the relationship between projects and completed, planned, or anticipated Superfund response actions. The State will tend to favor projects that build on response actions rather than those that undo an effective response action.

The Greenway project will complement and enhance remedial actions on Silver Bow Creek. The project is planned to maximize coordination with remedial actions and the NRDP considers this coordination to be very favorable, with its resulting cost savings of at least $2.1 million.

The Butte Waterline, Anaconda Waterline, and Stuart Mill Bay projects are considered consistent with Superfund response actions. They will not interfere with or duplicate the results of these actions.

#7 Recovery Period and Potential for Natural Recovery

This criterion evaluates whether and to what degree a project affects the timeframe for natural recovery of the injured resources to their baseline conditions. Reduction of the recovery period benefits a project's overall ranking. This criterion also evaluates the potential for natural recovery of injured resources. If a resource is expected to recover on its own in a short period of time, a restoration action may not be justified.

The Greenway project will reduce the recovery period for injured aquatic and terrestrial resources by removing tailings from the floodplain in the Ramsay Flats area, by enhancing aquatic habitat, and by revegetating the floodplain. The Greenway access features will also accelerate recovery of injured resources by managing public use, thereby protecting the remediated and restored areas.

The Butte Waterline, Anaconda Waterline, and Stuart Mill Bay projects are all replacement projects that will not affect the timeframe for recovery of injured resources.

#8 Applicable Policies, Rules, and Laws

This criterion evaluates to what degree the proposal is consistent with all applicable policies of state, federal, local and tribal government and in compliance with applicable laws and rules. Consistency with applicable policies, rules, and laws benefits a project's overall ranking. The NRDP concludes that all four projects can be implemented in compliance with applicable laws and rules.

The Greenway, Butte Waterline, and Stuart Mill Bay applications identify the needed permits and plans for obtaining them. The Anaconda Waterline application omitted some possibly needed permits for the Bowman Field subproject, but ADLC should not have

difficulty in obtaining them. The Conservation Fund noted how the choice of the public entity/entities that would own and manage the Stuart Mill Bay property will affect some of the policies, rules, or laws that may apply to this transaction.

The NRDP is not aware of any governmental policies specific to these projects, except for the Greenway. The Greenway is authorized via two county ordinances and addressed in Butte-Silver Bow's Master Plan that creates an open space corridor along a quarter of a mile on each side of Silver Bow Creek. All of the applicants have conducted the needed coordination with local entities or appropriately planned for this coordination.

#9 Resources of Special Interest to the Tribes and Department of Interior

Pursuant to a Memorandum of Agreement (MOA), the State is to address natural resources of special interest to the Confederated Salish and Kootenai Tribes and the U. S. Department of Interior in its restoration planning process. Projects that may cause potential negative impacts to resources of special interest require special consideration according to provisions of the MOA.

The NRDP solicited information from both the Tribes and the DOI regarding these resources or sites that are relevant to proposals. The DOI has provided specific comments (see Appendix F) on all four projects but the Tribes have not. In the last two Restoration grant cycles, the Tribes deferred review of tribal cultural and/or religious sites on proposed projects until detailed plans are available during the project implementation phases. The NRDP can accommodate this tribal review in its grant agreement on funded projects.

The DOI supports the Greenway project, specifically its habitat and resource protection goals. The DOI also supports purchase of the entire Stuart Mill Bay parcel, particularly noting its wildlife and wetlands values. Given both projects' resource values, it is likely that the projects would be considered beneficial to tribal resources.

The DOI indicated that the Anaconda Waterline and Butte Waterline projects would have no negative impacts on DOI property and resources. The DOI noted the need for addressing potential disturbance to wetlands from the Bowman Field subproject. It is unlikely that these two projects will disrupt any resources or sites of special interest to the Tribes.

4.2.2 Stage 2 Criteria Reflecting Montana Policies

#10 Project Location

This criterion evaluates the proximity of the proposal to the injured resources it restores or replaces. The *RPPC* expresses a preference for restoration projects that occur at or near the site of injury. All four projects are within the UCFRB.

The Greenway project is within the injured Silver Bow Creek corridor. The Butte Waterline project overlies the injured Butte Hill groundwater resource. The Main Street portion of the Anaconda Waterline project is adjacent to the injured Anaconda-area groundwater resource; the Bowman Field portion is within the boundaries of this area. The Stuart Mill Bay property is considered proximate to the injured resource areas in the Anaconda area. The property is predominately used by Anaconda and Butte area residents, so the geographic extent of the service benefits would extend throughout much of the UCFRB.

#11 Actual Restoration of Injured Resources

This criterion evaluates whether and to what extent a project actually restores an injured resource. A preference exists for those projects that constitute actual restoration (i.e., they operate directly on the injured resources). For those projects that do not constitute actual restoration, a preference can be given to those that may or will indirectly contribute to restoration of injured natural resources over those that do not so contribute.

The majority of the Greenway project components and costs constitute direct restoration of the injured aquatic and terrestrial resources. The access features that are a minor portion of this year's proposal primarily constitute replacement of lost services but also contribute to restoration by providing for the protection of restored areas. Neither the Butte or Anaconda Waterline projects will restore or contribute to the restoration of injured resources; however, both projects replace services of injured groundwater resources that cannot be restored. These projects constitute compensatory restoration. The Stuart Mill Bay project will not restore or contribute to the restoration of injured resources; it will benefit replacement resources and services.

#12 Relationship between Service Lost and Service Restoration

The criterion examines the connection between the services that a project seeks to address and the services that were lost or impaired. Projects whose focus is to provide the same or similar services as those lost or impaired will be favored over projects whose focus is to provide dissimilar services.

All of the projects have a focus of providing services that are the same or similar to those services that were lost. The Butte and Anaconda Waterline projects provide replacement drinking water services that are closely linked to the injured groundwater resources of the Butte and Anaconda areas. Both projects will enhance the water supply from an unaffected source.

The Stuart Mill Bay and Greenway projects will benefit fish and wildlife habitat and populations and provide recreational services that are similar or equivalent to that of the injured resources and lost services addressed by Montana v. ARCO. Some recreational services provided by the Stuart Mill Bay project would be the same as those lost, such as waterfowl hunting and birdwatching; others would be substantially similar to those lost, such as stream/river fishing vs. lake fishing. The Greenway project will provide some of

the same services that were lost, such as fishing, birdwatching, and wildlife viewing. Although the Greenway will also provide some services that are different than those lost or impaired, such as biking, the project's focus is to provide some of the same or similar services as those lost or impaired.

#13 Public Support

This criterion assesses the level of public support based on information submitted to the State with project applications, during the application review process, or during the public comment period. Copies of these letters received before the public comment period are provided in Volume II of this document. Copies of comments received during the public comment period and the State's responses to them are provided in Volume III of this document.

During the public comment period, the NRDP received 19 comments from 16 individuals and 3 entities generally supporting all four projects. All four projects also received letters of support from one or more local government entities. In addition to these general support comments, the NRDP received comments specific to individual projects that are summarized as follows: The Stuart Mill Bay project has broad public support from numerous and varied entities and the greatest demonstrated public support, with 308 comments of support from 10 entities and 330 individuals. Three individuals commented in opposition to this project. The Greenway has broad public support with 30 comments of support from 9 entities and 20 individuals. Support on the previous two phases of the Greenway has also been broad. Demonstrated public support for the Anaconda Waterline project is moderate, with 13 comments from 8 entities and 5 individuals submitted in support. The Butte Waterline project has moderate demonstrated public support with 7 comments from 3 entities and 4 individuals. One individual commented in opposition to the both waterline projects.

#14 Matching Funds

This criterion evaluates the extent to which a project entails cost sharing. BSB has matching funds of 32% for the Butte Waterline project. The total matching funds for the Anaconda Waterline project are 9%.

The Greenway has no matching funds for this year's proposal. This analysis does not include the estimated costs of at least $2.1 million to be saved through the coordination with remedy.

The matching funds for the Stuart Mill Bay are uncertain at this time as the State has not completed its independent appraisal. If the applicant's full appraisal of $2.8 million is verified by the State's independent appraisal, Mountain Lion LLC will have donated an "in-kind" match of 29%, as the purchase price would be 29% below the appraised value.

#15 Public Access

This criterion evaluates whether a project will affect public access and the positive or negative aspects of any increased or decreased public access associated with the project. Public access is not required of every project, nor is it relevant to all projects.

Both the Stuart Mill Bay and Greenway projects increase public access. The Stuart Mill Bay project would ensure permanent public access to an area historically open to the public for recreational purposes and facilitate public access to the adjacent U.S. Forest Service (USFS) lands. By securing land purchases and/or easements along the Silver Bow Creek corridor, the public will be able to access and recreate in areas previously closed to public use and enjoyment due to mining contamination. Increased public access can increase the spread of noxious weeds. Both project applications recognize this potential impact and appropriately plan for noxious weed management.

Public access is not a component of, nor is it relevant to, the Butte or Anaconda Waterline projects.

#16 Ecosystem Considerations

This criterion examines the relationship between the project and the overall resource conditions of the UCFRB. The State will favor projects that fit within a broad ecosystem concept in that they improve a natural resource problem(s) when viewed on a large scale, are sequenced properly from a watershed management approach, and are likely to address multiple resource problems.

The Greenway project, particularly its tailings removal and aquatic enhancement components, fits well in a broad ecosystem context as it involves improvements to the headwaters of the Clark Fork River. It will also be beneficial to both aquatic and terrestrial resources. The Stuart Mill Bay project is sequenced properly from a watershed perspective and also protects multiple resources. By replacing leaking waterlines, the Anaconda and Butte Waterline projects will provide for the conservation of water resources.

#17 Coordination and Integration

This criterion examines whether, how and to what extent a restoration project is coordinated and integrated with other on-going or planned actions in the UCFRB besides the coordination with Superfund remedial actions addressed under Criterion #6. Restoration projects that can be efficiently coordinated with other actions may achieve cost savings.

The Anaconda Waterline project is coordinated with other projects. The Main Street subproject will coordinate with Montana Department of Transportation's Main Street repaving project and the Bowman Field subproject will be coordinated with Federal Aviation Administration improvements. While this year's Greenway proposal is not

coordinated or integrated with other projects besides the Silver Bow Creek remedial action, the Greenway Service District is planning for such coordination opportunities in future reaches. The Butte Waterline project and Stuart Mill Bay projects are not coordinated or integrated with other ongoing or planned actions in the UCFRB.

#18 Normal Government Functions

As set forth in the *RPPC*, the State, through its restoration program, will not fund activities for which a governmental entity would normally be responsible or that would receive funding in the normal course of events. Restoration funds may be used to augment funds normally available to government agencies to perform a particular project if such cost sharing would result in implementation of a restoration project that would not otherwise occur through normal agency function.

The Greenway and Stuart Mill Bay projects do not involve activities that a governmental entity is obligated by law to conduct or would normally conduct. DEQ and EPA have determined the proposed revegetation, tailings removal, aquatic enhancement, and access components of the Greenway to be beyond the scope of remediation. The Greenway's project administration costs do not cover routine governmental activities. No governmental entity is specifically responsible for acquiring lands in the UCFRB, nor would any governmental entity receive funding for the Stuart Mill Bay acquisition in the normal course of events.

Upgrading drinking water lines is a normal responsibility of local government and is typically funded by a combination of user fees, loans, and grants. Due to the pervasive groundwater contamination underlying the Butte area, its waterline upgrade costs are greater than the typical costs of communities that can use nearby groundwater resources. Butte-Silver Bow City County is contributing 32% in matching funds to the Butte Waterline project, which is aimed at bringing annual maintenance costs within reason for a utility system of Butte's size. Anaconda-Deer Lodge City County is contributing 2.9% in matching funds to the Anaconda Waterline project and has indicated the county is financially unable to fund the project due to the Water Department's outstanding bond obligation. With DOT's contribution on the Main Street subproject and the FAA's contribution on the Bowman Field subproject, matching funds on the Anaconda Waterline project total 9%.

4.2.3 Stage 2 Land Acquisition Criteria

Since the Stuart Mill Bay and Greenway projects involve acquiring public lands or interest in public lands, they were evaluated for the two land acquisition criteria.

#19 Desirability of Public Ownership

This criterion assesses the potential benefits and detriments associated with putting privately owned land, or interests in land, under public ownership. Acquisition projects

that benefit injured natural resources or provide lost services are favored over those that do not.

The benefits of public ownership are considered major for both the Greenway and Stuart Mill Bay projects. Public ownership of or interest in the Greenway corridor lands provides major benefits to injured natural resources and lost services as described under Criterion #2 and other criteria. No significant negative impacts are associated with the Greenway's conversion of 54 acres of private lands into public ownership.

Although the Stuart Mill Bay project will not improve injured resources covered under Montana v. ARCO, it does provide services similar or equivalent to those that were lost and major benefits to replacement natural resources. Even though public ownership will result in less tax revenue than if the property were to be subdivided and developed, Anaconda-Deer Lodge City County has indicated its support of the project, stating that the public access benefits outweigh the potential tax revenue loss.

#20 Price

This criterion evaluates whether the proposed land, easements, or other property interests are being offered for sale at fair market value.

The price for the Greenway parcels has not been finalized. The NRDP considers the $1000 per acre used to budget the acquisition to be a reasonable basis for estimation. Funding for this project is contingent upon NRDP review and approval of land acquisitions and appraisals.

The NRDP cannot judge the reasonableness of the $2 million Stuart Mill Bay acquisition price until the completion of an independent appraisal. If the applicant's full appraisal value of $2.8 million is verified, the purchase price would be 29% below fair market value. Funding for this project is contingent upon NRDP's verification via an independent appraisal that the purchase price of $2 million is at or below fair market value.

#21 Relationship of Expected Costs to Benefits

This criterion evaluates the degree to which project costs are commensurate with project benefits. While it is possible to quantify most costs, quantifying benefits is more difficult. Thus, application of this criterion is not a straight cost/benefit analysis. Because this criterion involves a weighting of all public benefits expected to be derived from a project against all costs associated with the project, it is addressed last and is essentially a summation of results of all other criteria.

The NRDP judged benefits to outweigh costs for all four projects.

The NRDP believes the Greenway project offers high net benefits. The project will substantially benefit the injured natural resources of Silver Bow Creek and the public's

use and enjoyment of those resources. Removal of over 336,000 cubic yards of tailings will eliminate a potential source of future contamination and significantly enhance the recovery of the area to baseline conditions. The proposed organic matter placement, plantings of floodplain trees and shrubs, and aquatic habitat improvements will also enhance this recovery. Benefits will also be substantial to the public desiring recreational access to the Silver Bow Creek floodplain. In terms of the public and natural resources that will benefit from the four projects, the Greenway offers the greatest benefits but it also costs the most.

The Butte Waterline project is considered to have net benefits. It will cost-effectively benefit and compensate a large segment of the public for some of the lost use of groundwater that Butte has suffered due to its inability to use groundwater in much of the City.

Conservation of leaking water from the Main Street subproject offers net benefits to the City of Anaconda and compensates for past lost use and existence values. Benefits of the Bowman Field subproject are considered to be commensurate with costs. Providing a clean water supply to the airport will directly benefit a limited user group.

The Stuart Mill Bay acquisition purchase price is high because it is based on the property's development values. The NRDP believes the substantial public natural resource and recreational benefits to be derived from the project make it worth the price.

SECTION 5.0 PROJECT RANKING and FUNDING RECOMMENDATIONS

This section provides the Trustee Restoration Council's (TRC) final funding recommendations and any specific funding conditions. These final funding recommendations concur with the NRDP's and the Advisory Council's draft funding recommendations.

This section also contains the NRDP's overall ranking of projects. The project ranking is based on the comparative analysis provided in the previous section of how well the projects meet the *RPPC* criteria. As noted previously, the *RPPC* does not rank criteria in terms of importance, noting that "each criterion as applied to individual projects will vary in its importance depending on the nature of the project and unique issues it raises." A project does not need to meet all of Stage 1 and Stage 2 criteria in order to be considered worth funding. A project may rank poorly compared to others for a particular criterion, but that criterion may be inapplicable or relatively unimportant for that type of project. Or, the merits of a project based on some number of criteria may significantly outweigh any deficiencies noted for a particular criterion or multiple criteria.

Table 2 presents project rankings based on the NRDP's assessment of how the projects compared for the Stage 1 and 2 *RPPC* criteria. In determining its funding recommendations, the TRC did not rank the projects.

Table 2. Project Ranking

Rank	Project
1	Greenway
2	Butte Waterline
3	Anaconda Waterline
4	Stuart Mill Bay

#1 Silver Bow Creek Greenway

The Silver Bow Creek Greenway project is recommended for funding of $4,955,273, which is $112,000 less than the requested $5,067,273. This would be for a period over two years ($2,449,940 in 2003 and $2,505,333 in 2004).

This project will develop a recreational trail corridor and restore aquatic and riparian resources along miles six and seven (Reaches F and G of Subarea Two) of Silver Bow Creek. Two major aspects of this project that support its funding are: 1) the benefits of the restoration measures that will be optimized via coordination with remedy; and 2) the substantial recreational benefits to a large populace that has been unable to use and enjoy these public resources. The removal of 336,000 cubic yards of fluvially-deposited tailings that would otherwise be treated with lime and left in place under remedy will greatly enhance the recovery time to baseline for both aquatic and terrestrial resources.

The tailings removal effort will allow DEQ to design a significantly enhanced floodplain that can meander and access a greater floodplain area, which would not only restore injured resources but also enhance lost recreational services in this area.

Other restoration activities will also accelerate the recovery of injured resources. These include floodplain revegetation, organic matter placement and aquatic habitat enhancements. The project proposes to control public use in the corridor by providing a trail to accommodate users. This effort will assist in protecting restoration and remedial efforts. The project's three main components--tailings removal, streambanks and floodplain ecological enhancements, and trail and access feature development--are reasonably feasible and are cost effective. Delaying the project until remedy is completed would be inefficient and result in a loss of coordination cost savings, which add up to at least $2.1 million.

This funding recommendation incorporates funding reductions totaling $112,000 that are specific to the revegetation efforts. The recommended changes of the NRDP and DEQ's revegetation contractor in the size and quantities of plants from those listed in the application resulted in this budget reduction. Given that the price per acre for the needed land acquisition is not determined yet, recommendations for funding are also contingent upon NRDP review and approval of all land acquisitions and appraisals.

Of the four projects, the Greenway project best meets the majority of the Stage 1 and Stage 2 criteria and provides the greatest level of benefits to injured natural resources and lost services. The project ranks above the other projects for the criteria that give preference to the work in injured areas (coordination with remedy, reduction of recovery period, and actual restoration of injured resources) and also ranks highest for ecological considerations. It has strong public support but no matching funds. Despite its lack of matching funds, the NRDP ranks the Greenway project higher than the other projects due to the greater magnitude of restoration and recreational service benefits the Greenway offers compared to other projects.

#2 Drinking Water Infrastructure Replacement – Year 2

The Butte waterline project is recommended for funding at the requested amount of $1,168,842.

Restoration of Butte's bedrock aquifer that is contaminated throughout a seven-mile area of the city is infeasible. By fixing leaking and corroded water lines, this proposal will enhance the water supply from an uncontaminated source. Leakage from the distribution system has been predicted to be about 14% of the water pumped into the distribution system. This project will replace lost services to thousands of property owners and other members of the public in Butte that could utilize the aquifer if it was not injured. This project is cost-effective and highly feasible due to the successful water main replacement that has been ongoing in Butte since 1992. It has reasonable matching funds of 32%.

#3 Main Street and Bowman Field Water Distribution

The Anaconda waterline project is recommended for funding of $749,942, which is $44,325 less than the initial request of $794,267. The recommended funding for the Main Street subproject is $680,212 and the Bowman Airfield subproject is $69,730.

Conservation of leaking water from Main Street is considered to have net benefits to the City of Anaconda and its residents. Replacement of the Main Street waterline will conserve approximately 5% of the 1.75 million gallons of water loss/day. It will reduce the need to seek additional water supplies and lower water distribution costs since water pumped from wells and then treated will not be lost through leaking pipes. Fixing the leaks will also reduce the property damage and repair costs, offer greater fire protection, and offer the opportunity to conserve more water during drought conditions. The NRDP and ADLC agreed on a $44,325 budget reduction from the initial budget request for this subproject after both parties exchanged supplemental cost analyses. This information exchange and the revisions were triggered by the NRDP's initial evaluation that the estimated costs seemed too high compared to waterline projects implemented in the City of Butte or typical of other waterline projects in Montana.

The Bowman Field subproject will benefit airport users by providing better fire protection, allowing for construction of a restroom facility with a septic system, and enabling future development. Because of the underlying groundwater contamination associated with the injured Anaconda Area Resources, extending the Warm Springs waterline is a more cost-effective alternative than drilling a water well. Providing a clean water supply to Bowman Field will directly benefit a limited user group and is thus considered to offer benefits considered commensurate with project costs.

The Anaconda Waterline project is reasonably feasible, since ADLC has performed similar work in the past. The project has moderate public support and limited matching funds of 9% of the total project costs.

The Butte Waterline and Anaconda Waterline projects are very comparable for many of the criteria since they involve the same activities and constitute replacement of lost services. The Butte Waterline project ranks higher than the Anaconda Waterline project given its better benefit:cost relationship, cost effectiveness, and matching funds. The Anaconda Waterline project has greater demonstrated public support than the Butte Waterline project, but the support was mostly from local government entities and considered secondary to the other criteria above that were more favorable for the Butte Waterline project. Both projects do not do well for the criteria that focus on injured resource benefits, but the NRDP does not consider the projects to be deficient based on these lower rankings for these particular criteria because both projects provide services linked to injured resources that cannot be restored.

Although the Butte and Anaconda Waterline projects involve activities that are considered as a normal government function, the NRDP does not believe that this should be a reason to reject them for funding consideration. Both projects constitute

compensatory restoration for extensive injuries to the bedrock aquifer underlying Butte Hill and the shallow alluvial groundwater surrounding Anaconda that were covered under Montana v. ARCO. Restoration of these injured groundwater resources is technically infeasible, thus prompting these communities to seek augmentation of their supplies from uncontaminated sources. The NRDP agrees that fixing the pervasive leaking lines within both communities represents a cost-effective alternative for such augmentation. The NRDP ranked the Butte project higher than the Anaconda project primarily because of BSB's greater contribution of matching funds (32% compared to 9% from ADLC) and the better benefit:cost relationship of the Butte project, primarily because the Bowman Field subproject will only benefit a limited user group.

#4 Stuart Mill Bay Recreation Area Acquisition

The Stuart Mill Bay project is recommended for funding at the requested $2 million.

Georgetown Lake offers substantial fishery-related recreational services year-round and the Stuart Mill Bay property offers a mix of values unlikely to be found elsewhere in the Basin. The NRDP believes the outstanding value of this acquisition relates to this mix of public values: the substantial wetland area that supports a diversity of birds, waterfowl, and wildlife; the significant trout spawning and rearing habitat of the bay and Stuart Mill Creek; the wildlife values of the upland area; and the substantial and varied lakeshore recreational services this parcel offers. Public acquisition would ensure lakeshore public access and recreation to areas historically used for public access and recreation that might otherwise be developed. The project has strong and broad public support, with 308 comments submitted in support of the project. The public benefits of the acquisition are considered to outweigh the lower tax revenue that will be generated from undeveloped property compared to developed property. While the matching funds are uncertain since the full appraisal has not been reviewed and approved by the NRDP, based on the applicant's full appraisal the landowner would be donating 29% or $800,000 of the property's market value. The acquisition is time-critical given the landowner's communicated intent to develop the property if this public acquisition does not succeed.

The acquisition price is high because it is based on the property's development value. The substantial public natural resource and recreational benefits to be derived from this project make it worth the price. This funding recommendation is conditioned upon the NRDP's verification via an independent appraisal that the purchase price is at or below fair market value and upon verification by a new land survey that the legal boundaries of the property are as they have been represented to the State in the application.

As a replacement project, the Stuart Mill Bay project was similar to the Butte and Anaconda Waterline projects in not being favorable for the criteria that give preference to restoration of injured areas; only the Greenway project met those criteria well. While the Stuart Mill Bay property has net benefits as do the Anaconda and Butte Waterline projects, the NRDP has ranked it below the waterline projects given its high cost per acre. It should be noted that of the four projects, the SMB project had the greatest demonstrated public support.

Funding Cap Considerations

In December 2001 the Trustee Restoration Council set the funding cap for the 2002 Restoration Grant Cycle at $5.5 million with an exception specific to removal of tailings in Silver Bow Creek. The motion adopted by the Council with this exception reads as follows:

> The funding cap for the 2002 Restoration Grant Cycle will be $5.5 million. This cap could be increased, however, up to a maximum of $8 million as part of the TRC's draft funding recommendations on 2002 Restoration Grants if a proposal for removing additional tailings from Silver Bow Creek is recommended for funding by the TRC since such a proposal would be considered a significant time-critical project. Such an increase would be recognized in the *Draft UCFRB Restoration Work Plan* that will be the subject of public comment.

The Silver Bow Creek Greenway proposal that is recommended for funding includes the removal of 336,000 cubic yards of tailings from the Silver Bow Creek floodplain that would otherwise be treated in-place under remedy. That removal will cost $2,743,000 million (with $2,057,579 needed in 2003 and $685,860 needed in 2004). Thus, in considering the funding limit that applies to these funding recommendations, a cap of $8 million was assumed.

In November 2000 the TRC approved a multi-year funding policy that is applicable to this year's grant cycle, since the Greenway is a two-year request, with $2,449,940 and $2,505,333 to be expended in 2003 and 2004, respectively. This funding policy is provided in Appendix E. The relevant provision states:

> When approving a multi-year project, the Trustee should use only the projected expenditures in the first year of the project to determine whether the spending limitation for that year will be exceeded. The Trustee should use the projected expenditures in any subsequent year to determine whether the spending limitation for that subsequent year will be exceeded.

Applying this provision means that the $8 million cap only applies to expenditures that would occur in 2003. The Greenway project funds that are requested for 2004 of $2,505,303 would be deducted from the funding cap for the 2003 Grant Cycle. The Trustee Restoration Council set that cap at $8 million at its November 20, 2002 meeting. Consistent with the multi-year policy, the Greenway project will not be formally reconsidered next year, however, the Trustee has the ability to review the project's process and make necessary budget revisions or discontinue funding.

Tables 3 and 4 provide a summary of the TRC's final funding recommendations based on assuming a cap of $8 million for the 2002 Restoration Grant Cycle and applying the multi-year funding policy to the Greenway project.

Table 3. Summary of TRC Final Funding Recommendations

Project	Requested Restoration Funds	Recommended Restoration Funds
#1 Greenway	$ 5,067,273	$ 4,955,273[6]
#2 Butte Waterline	$ 1,168,842	$ 1,168,842
#3 Anaconda Waterline	$ 749,942[7]	$ 749,942
#4 Stuart Mill Bay	$ 2,000,000	$ 2,000,000
TOTAL	$8,986,057	$8,874,057

Table 4. Funding Cap Analysis

Project	Recommended Restoration Funds for 2003	Recommended Restoration Funds for 2004
#1 Greenway	$2,449,940	$2,505,333
#2 Butte Waterline	$ 1,168,842	
#3 Anaconda Waterline	$ 749,942	
#4 Stuart Mill Bay	$ 2,000,000	
TOTAL	$6,368,724	
Applicable Funding Cap	$8,000,000	$8,000,000

Summary of Funding Conditions:

The following conditions apply to the TRC's final funding recommendations summarized in Table 3:

1. For the Silver Bow Creek Greenway: Funding is conditional on the NRDP's approval of all land acquisitions and appraisals.

2. For the Stuart Mill Bay Acquisition: Funding is conditional on:
(a) the NRDP's verification via an independent appraisal that the purchase price of $2 million is at or below fair market value;

(b) the NRDP's verification by a new land survey that the legal boundaries of the property are as they have been represented to the State in the application process; and

(c) the approval of the acquisition by the State Land Board.

[6] Of the total $4,955,273 recommended for funding, $2,449,940 is for expenditure in 2003 and $2,505,333 is for expenditure in 2004.
[7] This amount is a revised funding request that was submitted on August 6, 2002. The initial request was $794,267.

APPENDIX A

PROJECT ABSTRACTS

YEAR 2002 GRANT PROPOSAL ABSTRACTS

The following are abstracts submitted to the Natural Resource Damage Program for Year 2002 Restoration Grant funds. **These abstracts are verbatim as submitted by applicants**.

Applicant Name: Butte-Silver Bow Local Government

Project Title: Drinking Water Infrastructure Replacement – Year 2

Project Description and Benefits:

Due to the adverse impacts of mining from the Berkeley Pit and the underground mines, the groundwater aquifers in portions of Butte can never be used for drinking. The NRD assessment estimates for lost groundwater resources on the Butte Hill alone exceed 5,000 gallons per minute – about the average amount of water used by all Butte citizens on a typical day (except during sprinkling season). Consequently, to protect human health, use of existing groundwater wells is limited and there are prohibitions on new wells in certain areas.

At the same time, Butte-Silver Bow ratepayers have invested over $40 million in the past decade to restore and replace its drinking water system – a complex infrastructure to import water from across the Continental Divide and from the mountain creeks surrounding Butte. These investments were unconditional and mandatory: There were no alternative sources to develop since the local groundwater is permanently damaged, and neglected improvements by the previous owner had led to federal orders to upgrade the system.

More work is needed. Butte-Silver Bow proposes a fifteen-year program to make essential improvements to the system, particularly the need to replace deteriorated (e.g. leaking, corroded, undersized) distribution lines in the neighborhoods where groundwater use is restricted. The proposed 15-year project would result in a coordinated, annual replacement program to respond to precise areas where deficiencies are creating the most problems.

As Year Two of the project, Butte-Silver Bow requests $1,168,842 in NRD funds in 2002, and pledges $543,218 in matching funds to replace approximately 17,000 feet of distribution lines. Over 15 years, up to 255,000 feet of distribution pipes would be replaced to provide better service to those citizens who cannot use the groundwater. This long-term investment will fulfill essential priorities and also achieve effective coordination with applicable NRDP requirements.

Applicant Name: Anaconda-Deer Lodge County (ADLC)

Project Title: Main Street & Bowman Field Water Distribution Upgrades

Project Description and Benefits:

This project conserves Anaconda's finite water resources, and extends water distribution to

outlying areas with impaired groundwater quality, mitigating lost resources, specifically Bowman Field Airport. Given the age of its water infrastructure and historical lack of improvements by past owners, Anaconda struggles to modernize its system. With groundwater restrictions in surrounding areas due to past natural resource damage, Anaconda's water resources are limited, underscoring the need to promote conservation and minimize leakage.

ADLC has made significant progress in modernizing its water system. In 1994, a new well field and a four-million-gallon storage tank were installed to bolster supply and regulatory compliance. Conjunctively, the utility replaced approximately 34,500 feet of leaking water mains. Original mains date back over 100 years to the Anaconda Company. Today's priority is main replacements to curtail leakage and conserve limited water resources. Anaconda's new supply is already maximized during peak summer demands, yet an estimated 1.75 million gallons per day of distribution leakage persists.

A water service line to Bowman Field is another priority. The airport is part of the *Montana State Aviation System Plan*, and FAA-qualifying improvements are scheduled over the next five years. Water service is ineligible for FAA funding, and must be capitalized by the City-County. An on-site well is not cost-effective, plus much of the property is limited for well development due to past contamination.

Anaconda's goal is an adequate, long-term water supply that meets regulatory standards. The Main Street water main replacement will leverage with the Montana Department of Transportation's re-paving along the corridor. MDT pays paving construction, saving water project cost. Water service at Bowman Field will benefit airport users, and eventually proper sanitary facilities can be installed. With these basic services, ADLC can enhance the utility of its airport facility, and maximize future opportunities for FAA funding.

Applicant Name: Greenway Service District

Project Title: Silver Bow Creek Greenway

Project Description and Benefits to Restoration:

Funding to develop and construct restoration improvements within the Silver Bow Creek Corridor over the same ten-year period established for remedial work, with restoration design submittals and expenditures made to correspond with progress and workplans of ongoing remedial action.

The proposal presents a broad discussion of the 26-mile project and a detailed **two-year funding request** for:

1) The removal of approximately 338,000 cubic yards of additional tailings/impacted soils in the Ramsey Flats area; and

2) Restoration work in Reach F and G of Subarea Two as defined in the Streamside Tailings Operable Unit (SSTOU); and

The project is directly consistent with the stipulations of the SSTOU's Record of Decision and is based on the applicant's preliminary design plan (completed in 1997) to develop a sound strategy for restoration enhancements, protection and beneficial use of the Silver Bow Creek Corridor.

The project will restore and rehabilitate natural resources that suffered severe and widespread injury as a result of area mining and begin to replace those lost or impacted services within the corridor and assure that these restorative components are protected through management of the Silver Bow Creek Greenway. Major goals are to:

- Restore aquatic, riparian/wetland and uplands ecosystems;
  - Implement remediation and restoration activities as one project; and
  - Acquire and provide public access to a passive recreational corridor.

Major tasks include:

- Remove additional tailings to protect the corridor's aquatic and terrestrial resources;
- Design, construct and monitor in-stream habitat structures and streambank enhancements to promote
  the restoration of a self-sustaining fishery;
- Amend soils to accelerate growth, vigor and stability of vegetation;
- Plant additional varieties and quantities of native plant species to enhance and improve aquatic and
  terrestrial ecosystems;
- Develop controlled public access within the corridor to protect the restored landscape and manage passive recreational activities.

Applicant Name: The Conservation Fund

Project Title: Watershed Land Acquisition

Project Description and Benefits:

This project consists of the acquisition of the 328-acre Stuart Mill Bay property on Georgetown Lake and subsequent ownership and management of the property by a public entity for its fish and wildlife habitat, scenic views, public recreation and public access.

Georgetown Lake has an extremely valuable fishery and is one of the basin's most popular recreation destinations. The Stuart Mill Bay property provides many services, and it is used extensively for fishing, camping, boating, wildlife viewing, hunting, cross-country skiing, snowshoeing and access to National Forest lands and other activities. The property also has high scenic and natural resource values with a diverse mix of vegetation and wildlife habitat, which includes more than two miles of lake frontage and a significant area of wetlands.

Moose, bald eagles, waterfowl and other species of wildlife utilize the property. The property encompasses most of the bay, which is an important passageway for spawning rainbow and brook trout.

The Washington Development Corporation (WDC), owner of the property, has provided The Conservation Fund (TCF), a nonprofit organization, the opportunity to purchase the property for public benefit. If funding is approved, The Conservation Fund would purchase the property and transfer it to a public entity. The purchase price to the State is $2,000,000, which is less than the preliminary appraised value of $2,700,000. If the property is not purchased for public benefit, WDC plans to sell it for development, which could cause a loss or impairment of the property's resources and services.

The project would be a significant benefit to the basin, acquiring both unimpaired natural resources and valuable services. Acquisition of this property has garnered tremendous support from the community, which recognizes the public values of the property and the fact that this is probably their only opportunity to place this property in public ownership.

APPENDIX B

PROJECT MAPS

For copies of project maps,
Please contact the
Natural Resource Damage Program
Department of Justice
P. O. Box 201425
Helena, MT 59601

(406) 444-0205

APPENDIX C

PROJECT CRITERIA NARRATIVES

Butte-Silver Bow Local Government
Drinking Water Infrastructure Replacement – Year Two

Project Summary

Butte-Silver Bow City County proposes to replace approximately 17,000 feet of inadequate water distribution lines in the City of Butte for a total cost of $1,712,059, with $1,168,842 requested in Restoration funds. This is the second year in which Butte-Silver Bow has requested funding for water line replacement. The amount requested is $3,047 more than last year's approved funding request.

Butte's bedrock aquifer is contaminated throughout a seven square mile area of the City and these distribution lines overlay that aquifer. This aquifer is so severely injured that natural recovery will not occur for thousands of years as concluded by the State's 1995 Restoration Determination Plan[8] and by EPA's 1994 Record of Decision.[9] Restoration of the bedrock aquifer is infeasible, thus the aquifer's drinking water and its storage capacity and transport services have been lost for thousands of years. This project constitutes replacement of lost services to thousands of property owners and other members of the public in Butte that could utilize the aquifer if it was not injured. By fixing leaking and corroded water lines, this proposal will enhance the water supply from an uncontaminated source.

In its application, Butte-Silver Bow also provides a 20-year plan that indicates the County's intent to continue water main replacement for 15 years and seek an estimated $17 million total in Restoration funds for this effort. This evaluation, however, does not specifically address that plan and if Butte-Silver Bow seeks further funding of projects contemplated by the plan, it will have to do so through a separate application(s).

Stage 1 Criteria

1. Technical Feasibility – Reasonably Feasible

This project involves the replacement of old (early 1900's) leaking and, in many cases undersized, water distribution mains within the City of Butte. Major project tasks include: 1) selecting a consulting engineer to oversee the project for the upcoming construction season; 2) confirming which water mains to replace; 3) producing designs for water main replacements; 4) preparing and releasing bids to select a general contractor for the project; 5) implementing water main construction and performing oversight; 6) preparing record drawings for work completed during the construction season; and 7) updating Butte-Silver Bow City County Government (BSB) records and database.

[8] *Restoration Determination Plan Upper Clark Fork River Basin,* NRDP, October, 1995.
[9] *Record of Decision, Butte Mine Flooding Operable Unit,* U.S. Environmental Protection Agency, September 1994.

The NRDP has a reasonable degree of confidence that technologies proposed for water distribution main replacement can be achieved. The BSB Department of Public Works, Water Utility Division has extensive experience with the replacement of water mains in the community. Deteriorated conditions of the water distribution system led BSB to create procedures for water main replacement when BSB acquired
the water system in 1992. Since 1992, BSB has annually replaced an average of 22,500 feet of water mains. The County has gained valuable insight as to the appropriate volume of replacement that can be accommodated by the water system and by the citizens of the community.

The primary logistical problems to deal with are: 1) the provision of temporary water to affected homes during the construction phase; and 2) traffic congestion and confusion due to street closures. The affected homes must be provided with an alternate source of water during the approximate two-week construction period. This temporary water comes from active water mains in adjacent blocks. Due to the difficulty in providing temporary water service in a large area at once, the County has proposed to replace water mains in small areas throughout the city. The applicant has provided a map, which depicts 18 areas in the City scheduled for replacement. The City will replace an average of 950 feet of water main pipe in each area. The areas selected are based upon locations with the highest current water leakage rates. Field conditions, such as an unexpected increase in chronic leaks elsewhere, could cause a modification to this schedule. The other logistical concern is that the water main renewal process disrupts traffic patterns in the community since water mains underlie the city streets. Construction activities will require street closures during the approximate two-week construction period. Taking into account any inconvenience and annoyance to residents, 17,000 feet of water main replacement has been determined by the applicant as a reasonable quantity of lines for replacement per year.

Overall Technical Feasibility

Successful completion of the main renewal project will require careful monitoring by the BSB staff. Standard construction procedures for water main replacement are being planned for this work and the project team has successfully conducted similar efforts. Water main replacement has been ongoing in Butte since 1992 on a large scale with minimal problems. This project is technically feasible based on the information provided.

2. Relationship of Expected Costs to Expected Benefits – Net Benefits

Costs proposed for implementing this year's water line replacement total $1,712,059 with $1,168,842 (68%) requested in Restoration funds. BSB's share for all costs is $543,218 (32%). Restoration funds would cover 70% of the engineering and construction costs, which total $136,000 and $1,533,774, respectively. BSB is paying all City salaries and wages, which cost $42,286 (2%). To estimate costs for 2002, BSB added a 10% contingency to the average costs in the last three years of water line replacement of $82 per foot resulting in an estimate of about $90 per foot for construction. Based on this last

three years of engineering expenses, engineering costs estimates are $8.00/foot. The estimated total cost per foot is $98.22 for water main replacement.

The applicant has outlined a 15-year project schedule starting in 2002 for replacing water lines system-wide to address the long-term maintenance problems of the system. Butte's system consists of approximately 1,170,000 feet of distribution mains. BSB plans to request about $1.2 million per year in Restoration funds, and provide a direct match of about $0.5 million annually to replace 17,000 feet of line per year. The costs to the Restoration Fund would be approximately $17.5 million over 15 years and BSB would match $8.1 million. This effort would result in 255,000 feet of water line replacement over the 15-year time period which, combined with improvements made between 1992 and 2002, total 39% of the entire water distribution system and about half of the sections in most need of replacement. Although this effort will lag behind the accepted rule-of-thumb for a water line replacement of 1% each year, the project would achieve substantial progress toward getting the community's water infrastructure needs met. BSB indicates that all major leak problems will have been addressed and annual maintenance costs will be within reason for the size of the utility system upon successful implementation of this 15-year replacement project.

The NRDP agrees with the applicant that this project represents an important step in replacing services lost due to injured groundwater resources. The lost compensable value from injuries to the groundwater in Butte is substantial based on the 1995 NRD assessment report[10] with estimates ranging from $44 million to $217 million. The State's 1995 Restoration Determination Plan also affirmed upgrading Butte's antiquated water system as a viable replacement alternative for the injured bedrock aquifer.

The benefits to the Butte residents who lost the use of groundwater include the following:

- reduced rate of leakage which will reduce pumping and treatment costs;
- reduction in the potential for the distribution system becoming contaminated through leaking and failing pipes;
- improved fire protection;
- cost savings due to the reduction in the number of leaks per year that have to be repaired;
- reduction in the potential for property damage and reduction in associated insurance claims from leaky pipes;
- assurance of BSB's continued provision of a reliable source of potable water to its residents meeting current federal and state regulations; and

[10] *Revised Report and Rebuttal: Assessment of Damages to Groundwater and Literature Review of Water Use Values in the Upper Clark Fork River Drainage,* Duffield, October, 1995. Note: this report estimates lost use values for Butte's bedrock and alluvial aquifers.

- the opportunity to conserve more water during drought conditions as a result of reduced leakage.

Because this proposal will cost-effectively benefit and compensate the public for some of the lost use of groundwater that Butte has suffered due to inability to use groundwater in much of the City, the NRDP believes the benefits gained from this replacement proposal outweigh its costs.

3. Cost Effectiveness – Likely Cost Effective

BSB considers that the proposed project is the most economical way to replace lost services from injured groundwater resources. BSB indicates the no action alternative would eliminate one of the few viable means to replace the lost services that groundwater provides. Another alternative considered by the applicant was to vary the level of effort to replace the distribution system. For example, the proposed project could replace the distribution lines at a higher or lower level of effort per year. The applicant states that the proposed level of replacement, 17,000 feet of line per year, is optimum based on BSB experience over the last nine years.

The NRDP's engineering consultant's analysis of last year's proposal indicated both the proposed replacement schedule and cost estimates to be reasonable based on previous water line replacement costs in Butte and other similar municipal projects. Based on the low bid for the approved 2002 project of about $1.6 million, the estimate in this proposal is considered reasonable. Costs to the Restoration Fund would be 68% of the lowest responsive bid.

Another alternative not proposed in this year's application but considered recently as a proposed change in last year's approved project is for BSB employees to do the construction instead of bidding out the work. BSB has done water main replacement in the past with their crews. In considering this change for last year's project, BSB represented they may be able to execute the project more cost effectively in-house than with contractors. The Governor did not approve that proposed change so it was not implemented, thus the NRDP has no documentation to verify the potential cost savings. Without that documentation, the proposed alternative of bidding the work appears the most cost effective and, at this time, BSB is not proposing to change this aspect of its application.

If groundwater of acceptable quality were available from wells, the cost of operating and maintaining the water system would be significantly less. Under current state and federal regulations most ground water supplies require little or no treatment other than disinfection with chlorine or ultraviolet light. Groundwater systems typically do not have to be manned on a full-time basis. This alternative is not available due to the extensive groundwater contamination underlying Butte.

If an alternative surface water supply were available, such as a large reservoir, then accessing that source would be an appropriate replacement for Butte's groundwater loss. However, at this time it is difficult to accept this scenario as a legitimate alternative for uptown Butte until the household-to-household distribution system is repaired.

Leakage from distribution lines has been predicted to be about 14% of the water pumped into the distribution system, at an estimated cost of $55,000 per year. Another annual cost that would be eventually saved by replacing water lines would be the cost of repairing water main leaks. These leaks, in excess of 300 per year, cost BSB about $1000 per leak to fix, or some $300,000 per year. At some point in time, without the proposed water main replacement, the distribution system would become totally unmanageable and unusable due to the excessive leakage and age of piping. Due to these savings and the analysis done by the applicant and NRDP's engineer, the NRDP feels that the selected alternative of replacing pipe and the level of pipe replacement proposed by the BSB of 17,000 feet is cost effective.

4. Environmental Impacts – No Significant Adverse Impacts

Replacing Butte's water mains present no significant adverse impacts to the environment. The project will have potentially adverse impacts to aesthetics from the short-term excavation within the city streets for the installation of the mains. This impact will be mitigated, to the extent possible, by limiting public access to the disturbed areas. Actual construction activity will last about two weeks for each renewal segment. The project will have a potentially beneficial impact on conservation of water, by reducing the estimated 14% water loss from leaking pipes.

5. Human Health and Safety Impacts – Short Term Adverse Impacts with Mitigation

Potentially adverse impacts to the human environment during construction activities include workers safety, dust, noise, temporary loss of water service, restricted access to commercial facilities and disruption of traffic flow. The applicant has planned effective mitigation measures to alleviate these adverse impacts to the greatest extent possible, such as limiting construction to daytime hours. Although this section does not directly address the workers' safety, the section on applicable laws indicates that BSB will follow safety guidelines of the Montana Public Works and Standard Specifications. Also, the 2002 bid package for last year's approved project indicates that worker safety measures will be required.

In addition to bringing clean water to residences, replacing water mains will also benefit the community by reducing impacts on human health and safety by reducing water leaks, which have caused road hazards from leaking water and ice, health hazards due to possible contamination of the water system via leaks, and safety hazards caused by inadequate pressure and flow for fire fighting purposes.

6. Results of Superfund Response Actions – Consistent

The 1994 Record of Decision for the Butte Mine Flooding Operable Unit declared that the bedrock aquifer and parts of the alluvial aquifer on the Butte Hill could never be used for drinking water. BSB has adequately planned to replace water lines in areas where impacts from mine flooding decisions are applicable. This is consistent with remedy in that contaminated groundwater cannot be accessed for residential use.

7. Recovery Period and Potential for Natural Recovery – No Effect on Recovery Period

   This replacement project will not affect the bedrock aquifer's recovery period, which will not occur for thousands to tens of thousands of years.

8. Applicable Policies, Rules and Laws – Consistent/Sufficient Information Provided

   The applicant has provided sufficient information on the applicable requirements needed to complete this project. The following three standard procedures will be implemented:

   - Butte-Silver Bow will submit all design drawings for water main segment replacements to DEQ for review and approval prior to performing the work.

   - Butte-Silver Bow will coordinate all replacement activities with the U.S. EPA to ensure any excavated materials that contain heavy metals in excess of remedial action levels are disposed at the mine waste repository and clean back fill materials are used.

   - Butte-Silver Bow will follow Montana Public Works Specifications in the implementation of the project, including those for ditch width, pipe bury depths, safety measures, and related specifications.

9. Resources of Special Interest to the Tribes and DOI – No Impact

   There are no known tribal cultural resources of special interest to the Tribes or DOI in the vicinity of the project area. The Tribes have not provided specific information regarding resources or sites of special interest to the Tribes for this project. It is unlikely that this project will disrupt any such resources.

Stage 2 Criteria

10. Project Location – Proximate

    The project will be conducted above the injured groundwater area.

11. Actual Restoration of Injured Resources – No Restoration

    This is a replacement project; actual restoration of the bedrock aquifer is infeasible. The State recognized this infeasibility in its 1995 Restoration Determination Plan that selected a replacement alternative for this groundwater injury.

12. Relationship Between Service Loss and Service Restoration – Same

Restoration of the bedrock aquifer is infeasible, thus the aquifer's drinking water and its storage capacity and transport services have been lost forever. This proposal constitutes replacement of lost services to thousands of property owners and other members of the public in Butte that could utilize the aquifer if it was not injured. By fixing leaking and corroded water lines, this proposal will enhance the water supply from an unaffected source. Thus, there is a direct connection between lost services and services this project will replace.

13. Public Support – Moderate

The State received 19 comments from 16 individuals and 3 entities supportive of funding all four projects proposed in the *Draft Work Plan.* In addition to these general comments, the State received 7 comments from 3 entities and 4 individuals specifically supporting the Butte Waterline Project and 1 comment from 1 individual opposing the project. Entities supporting the project include the BSB Council of Commissioners, Anaconda-Deer Lodge County and the Public Lands Access Association.

14. Matching Funds and Cost Sharing – Reasonable

Butte Silver-Bow has matching funds of $543,000 or 32% of the total project costs for this year's proposal. The matching funds consist of $501,000 for construction costs and $42,000 for in-kind labor. BSB indicates its intent to continue this match for the project's 15-year length, for a total match of $8 million. Another cost-share contribution noted by the applicant, but not considered in this analysis, is $41 million dollars already invested by Butte municipal drinking water system ratepayers over the past ten years. These monies were used for constructing a treatment plant for the Big Hole watersupply ($20 million), water line replacement over the last nine years ($11 million) and for other surface water improvements ($10 million).

15. Public Access – Not applicable

Public access is not a component of this project, nor is it relevant to the project.

16. Ecosystem Considerations – Positive

The project will conserve water and reduce power requirements for pumping and treating water.

17. Coordination and Integration - None

This project is not coordinated or integrated with other ongoing or planned actions in the UCFRB besides the remedial actions addressed under Criterion 6.

18. Normal Government Functions – Within but Augments Normal Government Functions

Upgrading drinking water lines is a normal responsibility of local governments that is typically accomplished via funding from grants and ratepayers. But the costs BSB faces to upgrade their system are greater than typical community costs due to pervasive groundwater contamination underlying Butte. In the absence of that injury, Butte would have been able to construct a much simpler and less expensive nearby groundwater system than the existing system that relies on more distant uncontaminated surface water sources, as further documented in the State's 1995 NRD assessment report.[11] BSB ratepayer's costs are significantly higher than other similar communities. For example, the Butte water rates are twice the rates in Great Falls and Anaconda, approximately 25% more than Missoula's, and 20% more than Helena's rates.[12] Another consideration of this criterion is that BSB is contributing 32% of this project that seeks to address the water main leak problems over a 15-year period to bring annual maintenance costs within reason for this size of a utility system. After that, BSB would be funding the routine maintenance costs.

[11] *Revised Report and Rebuttal: Assessment of Damages to Groundwater and Literature Review of Water Use Values in the Upper Clark Fork River Drainage*, Duffield, October, 1995. Note: this report estimates lost use values for Butte's bedrock and alluvial aquifers.

[12] Water Rate Survey, City of Great Falls, April 2001

Anaconda-Deer Lodge County –
Main Street & Bowman Field Water Distribution Upgrades

Project Summary

Anaconda-Deer Lodge County requests $749,942 in Restoration funds for two projects, Main Street waterline replacement ($680,212) and Bowman Field waterline installation ($69,730). Anaconda-Deer Lodge County is replacing a 104-year-old, leaking 10-inch waterline along Main Street. The water distribution system within the City of Anaconda loses approximately 1.75 million gallons of water per day through leaks, with an estimated 5% water loss occurring through the Main Street waterline. Repairing these leaks is an alternative that will provide the City of Anaconda with additional water resources instead of developing a new source of water. Installation of a new waterline to the Bowman Field airport is part of the development plan for the airport. Because of the underlying groundwater contamination associated with the injured Anaconda Area Resources, drilling a water well is not as cost effective as installing an 8-inch waterline to the airport from the 16-inch Warm Springs Creek waterline.

The City of Anaconda and Bowman Field are located adjacent or within the 40 square miles of groundwater contamination associated with the injured Anaconda Area Resources. Groundwater resources are somewhat limited because the upper portion of the alluvial groundwater aquifer east of Anaconda is contaminated with metals associated with past mining activities at levels above drinking water quality standards. The 1995 State of Montana Anaconda Groundwater Injury Assessment Report supports this claim of groundwater contamination east of Anaconda. Also, the 1998 Anaconda Regional Water, Waste, and Soils Operable Unit Record of Decision shows some 30 square miles of contaminated bedrock groundwater to the north and south of the City. Both the Main Street waterline upgrade and the Bowman Field waterline installation are considered replacement projects.

Both projects proposed in this application are reviewed in this evaluation; however, the projects are discussed separately as the Main Street subproject and the Bowman Field subproject.

Stage 1 Criteria

1. Technical Feasibility - Reasonably Feasible for Both Subprojects

These projects involve the replacement of approximately 3,910 feet of waterline within the City of Anaconda and installation of approximately 2,150 feet of waterline to Bowman Field, the Anaconda-Deer Lodge County (ADLC) airport. The Main Street subproject will be completed in conjunction with the Montana Department of Transportation (MDT) through the Urban Highway Pilot Improvement Program and the waterline to Bowman Field is part of a plan drafted for utilizing Federal Aviation Administration (FAA) funds.

ADLC has completed 34,500 feet of waterline replacement since 1992, following the same approaches proposed for these two projects. Both projects require a level of effort similar to previous work completed by ADLC.

The current Main Street waterline is a 10-inch Kalamain pipe that is 104 years old and a "critical link in the ADLC water system." ADLC proposes to complete the Main Street subproject in coordination with a MDT repaving project, where MDT will hire the contractor, via competitive bid, and oversee the repaving portion of the project. ADLC is responsible for the design, construction oversight, and waterline maintenance. Restoration funds will be used for waterline project design, installation of the new waterline, connection to existing water service, and construction oversight.

The new 8-inch waterline to Bowman Field will supply water to the airport for fire protection, allow development of a bathroom facility with a septic system, and provide additional water flow for future development. This new waterline will use water from the 16-inch waterline located along State Highway 48 that supplies Warm Springs Hospital. It will cross Warm Springs Creek in a casing pipe installed with a new access bridge.

The NRDP has a reasonable degree of confidence that both projects can be readily implemented. No innovative approaches will be used on the proposed projects. Design and construction techniques will conform to the Montana Public Works Standards Specifications for Construction, and the Department of Environmental Quality (DEQ) will need to approve of the Main Street subproject.

2. Relationship of Expected Costs to Expected Benefits – Main Street Subproject – Net Benefits; Bowman Field Subproject - Commensurate Benefits and Costs

Total costs for the Main Street and Bowman Field subprojects are projected in the application to be $821,712; ADLC proposes to provide $23,869 total in matching funds for both projects, MDT, through the Urban Highway Pilot Improvement Program, will provide approximately $30,000 for repaving the portion of Main Street affected by the waterline replacement. The FAA will provide $17,901 for installation of the water line sleeve associated with the new bridge across Warm Springs Creek to the airport. The Restoration grant request is for $749,942, or about 91% of the total costs, to cover the Main Street and Bowman Field subprojects. The NRDP recalculated the total project costs since ADLC submitted revised costs for the Bowman Field waterline installation and the NRDP believes the matching fund amount used by the applicant was not accurate (see Criterion #14).

The leaking waterlines in Anaconda lose approximately 1.75 million gallons of water per day. An assessment by Peccia and Associates in 2000 calculated this loss by subtracting the volume of water pumped from the City wells from the volume of water treated at the wastewater plant (water in minus water out). This assessment was completed during winter months to eliminate uses such as yard watering that would normally not be treated at the wastewater treatment plant. The difference represents the estimated amount of water loss through leaking pipes. The assessment concluded that the best place to develop a water supply would be to conserve the water already being treated and piped out through the water

distribution system. The Main Street subproject is expected to reduce water loss by approximately 5% (87,000 gallons/day).

Conservation of the leaking water from the Main Street waterline will directly benefit the City of Anaconda by reducing the need to seek additional water supplies and lowering water distribution costs since water pumped from the wells will not be lost through leaking pipes. In addition, other benefits include:

- increased water pressure for fire protection and users;

- cost savings associated with reduction in repairs;

- reduction in potential for property damage and reduction in associated insurance claims for leaky pipes; and

- an opportunity to conserve more water during drought conditions as a result of reduced leakage.

The water users of Anaconda will also directly benefit from the Main Street subproject. The applicant states that water rates have increased 81% since 1992, a large increase from the "free water" days and that Restoration funds are needed to help defer costs of replacing waterlines and to conserve water. The applicant states, "Current water rates are on par with other Montana communities at 1.4% of the median household income." According to a Water Rate Survey completed by the City of Great Falls in April 2001 Anaconda's water rates are equivalent to the rates paid in Great Falls and less than Butte, Missoula, and Helena rates.

The Bowman Field subproject will benefit airport users by providing better fire protection, allowing for construction of a restroom facility with a septic system, as well as enabling future development. Data from the Airport Layout Plan Narrative Report submitted to the FAA indicates that Bowman Field currently has 20 airplanes housed in 12 private hangars. Bowman Field is classified as a general aviation airport by MDT, meaning it has less then 10,000 operations per year. There are approximately 6,600 operations yearly at the airport. As defined by MDT, an operation is a take-off or a landing. Approximately half of the operations at Bowman Field are from airplanes housed at the airport. A waterline will directly benefit the airport users. The proposed waterline to Bowman Field will provide water to a limited user group compared to the Main Street project. According to the Airport Layout Plan Narrative Report, airport user information indicates that the airport is designed to handle aircraft carrying less then 10 people, mostly smaller single or twin-engine private airplanes. Indirect benefits from increased use of the airport might include benefits to businesses providing services to airport users. The airport is scheduled for improvements during the next several years and providing water to the airport is one of the scheduled improvements.

With ADLC's revised budget described under the cost effectiveness criterion, the NRDP considers the benefits of the Anaconda subproject to outweigh its costs. Given that

the Bowman Field subproject will benefit a limited user group, the NRDP considers the benefits derived to be commensurate with its costs.

3. Cost-Effectiveness – Main Street Waterline Subproject - Cost Effective with ADLC's Revised Budget; Bowman Field Subproject - Cost Effective

Main Street Subproject

Compared to developing additional water resources and reserves to increase the water supply for Anaconda, the replacement of the Main Street waterline should be the most cost effective alternative. ADLC has water development limitations because of the groundwater contamination associated with the Anaconda Operable Unit and the restrictions on certain installations of new well fields in some areas outside the contamination. The groundwater contamination east of Anaconda in the upper portion of the aquifer has limited to some degree the number of sources for Anaconda's additional water resources. Conservation of the existing water supply is an efficient and effective alternative to increase the supply of water to the current and future users. Development of additional water resources and reserves would utilize the existing water distribution system, resulting in continued losses of treated water. The materials proposed should provide the City of Anaconda with a quality waterline serving Main Street users for many years.

The Main Street subproject involves replacing 3,910 feet of waterline for $680,212, which equates to approximately $174 per linear foot of waterline. This unit cost per linear foot of waterline is substantially higher than the Butte waterline project submitted for Restoration funds and past waterline projects described by ADLC in their application. The Butte waterline project costs are approximately $98.22 per linear foot, which includes $90 for construction and contingency and $8.22 per linear foot for engineering costs. Anaconda waterline projects initiated in 1992 involving installation of 34,500 feet of waterline cost approximately $75 per linear foot. NRDP's consultant engineers reviewed the 2001 Butte Silver Bow proposal and concluded that the proposed waterline costs were in line and typical of other waterline projects in the state. Although all of the other projects may not be an equivalent comparison, the difference in costs per foot is much greater for the proposed Main Street subproject than the Butte project, $70 to $80 higher per linear foot, or 90% higher.

ADLC reevaluated their cost estimate,[13] stating the Main Street project has several differences compared to the Butte waterline projects that need to be taken into account: 1) the Main Street subproject is in a largely commercial district including the Anaconda High School; 2) the waterline main is mostly 10-inch compared to a 6-inch line installed in Butte; 3) it crosses numerous other streets including two main streets with traffic lights; 4) it involves subsurface materials that contain larger rocks compared to Butte's decomposed granite; and, 5) traffic and pedestrian controls will be required at a higher level.

[13] May 11, 2002 e-mail from Alden Beard, BETA confirming costs.
June 4, 2002, letter from Morrison-Maierle, Inc. to David Elias, ADLC, concerning project costs.

The NRDP's review of ADLC's revised budget[14] submitted after discussions with ADLC concludes that no one line item is the cause of the higher costs per linear foot. All the line items were within an acceptable range; however, some of the costs selected for the line items are at the high end of the acceptable range. This approach has led to the high cost per linear foot for the Main Street subproject. The revised budget for this subproject is $44,535 less than ADLC's initial budget.

Bowman Field Subproject

At $32 per linear foot, the waterline installation to Bowman Field is cost effective. ADLC increased the size of the waterline initially proposed to provide for future development needs, per ADLC's supplement to their application. The costs per foot for the Bowman Field waterline are low because the waterline is being installed outside the city and costs associated with utilities, maintaining water supply to users, traffic control, pipe bedding material, and repaving the excavation are not necessary. In addition, no services are proposed to be connected to the waterline at this time, reducing the costs further.

The associated costs of the 8-inch waterline are $69,730, compared to $60,765 for installation of a water supply well outside the area of contamination. The well installation costs include piping and pumping costs as well as installation costs associated with drilling a well through a contaminated aquifer. The well would not be able to provide the volume of water that the 8-inch waterline will supply to the airport without the installation of a water storage tank.

Overall Cost Effectiveness Summary

In conclusion, the alternative of replacing the leaking Main Street waterline is cost effective compared to other water development alternatives. Although the estimated costs of this effort seem high – approximately 90% higher than other waterline projects completed in recent years in the City of Butte or typical of waterline projects in Montana – ADLC has sufficiently justified their revised cost estimate. The installation of the waterline to Bowman Field appears to be cost-effective compared to the alternative of installing a water supply well, and the estimated costs seem reasonable.

4. Environmental Impacts – No Significant Adverse Impacts

Replacing Anaconda's Main Street waterline and installing a waterline to Bowman Field presents no significant adverse impacts to the environment. The subprojects will have potentially adverse impacts to aesthetics from the short-term excavation during the installation of the new waterlines. Installation of the waterline to Bowman Field will pass through a wetland corridor along Warm Springs Creek and will require permitting and erosion control measures that protect Warm Springs Creek from surface water runoff. The applicant has recognized these needed measures. The Main Street subproject will also use

[14] 8/6/02 "Revisions to Estimated Costs for ADLC Main Street Waterline Construction" from Alden Beard of BETA.

erosion control to protect stormwater runoff. The applicant states that, if required, the contractors will obtain a construction site stormwater management permit from DEQ.

5. Human Health and Safety Impacts – No Significant Adverse Impacts

Potentially adverse impacts to the human environment during construction activities include dust, noise, temporary loss of water service, restricted access to commercial facilities, worker safety, and disruption of traffic flow. The applicant has proposed mitigation measures to alleviate these adverse impacts to the greatest extent possible. Temporary waterlines and construction site safety measures are proposed for the Main Street subproject. Bringing clean water to residences and businesses by replacement of water mains will also benefit the community by reducing impacts on human health and safety due to enhanced reliability of the water service and distribution, plus increased availability of water otherwise lost to leakage. In addition to bringing clean water to the City of Anaconda and airport users, the services will also improve fire protection pressure and flows. The Bowman Field waterline will be installed within the Anaconda Regional Wastes, Water and Soils Operable Unit and contaminated soil will be encountered. Protective measures similar to those required by EPA for the installation of the Warm Springs Creek waterline will be necessary for the installation of the waterline to Bowman Field. ADLC indicated in supplemental information provided to NRDP that standard work place safety practices will be followed during the completion of these two projects to insure worker and public health and safety.

6. Results of Superfund Response Actions – Consistent

Both projects are consistent with remedy in that contaminated groundwater is not being accessed for use. The Bowman Field waterline installation project will need to reclaim any areas of disturbance because at this time it has not been determined if EPA will require reclamation of this area. These reclamation requirements will be addressed in the county's construction permit for the Bowman Field work that will require EPA approval.

7. Recovery Period and Potential for Natural Recovery – No Effect on the Recovery Period

This replacement project will not affect the groundwater recovery period, which will not occur for thousands to tens of thousands of years.

8. Applicable Policies, Rules and Laws – Consistent/Insufficient Information Provided

The applicant has provided sufficient information on some of the applicable requirements needed to complete these projects. The following standard procedures will be implemented:

- ADLC will submit all design drawings for water main replacement to DEQ for review and approval prior to performing the work.

- ADLC will coordinate with DEQ to ensure that petroleum contamination from underground storage tanks will be investigated prior to construction.

- ADLC will follow Montana Public Works Specifications in the implementation of the projects, including those for ditch width, pipe burial depths, safety measures, and related specifications.

Additional requirements for the installation of the waterline to Bowman Field not listed in the application may include:

- Montana Stream Protection Act,

- Short-term Exemption from Montana's Surface Water Quality Standards,

- Federal Clean Water Act (404 Permit), and

- ADLC permit for installation of the waterline. If required, this permit will need EPA approval of all activities.

If funded, ADLC would be required to evaluate the applicability of these requirements.

9. Resources of Special Interest to the Tribes and DOI - No Impact

It is not anticipated that these projects will have adverse impacts on resources related to the Department of Interior. The Tribes have not provided comments, but it is not believed there will be any adverse impacts to Tribal resources.

Stage 2 Criteria

10. Project Location – Within Basin and Proximate

The Main Street subproject is located within the City of Anaconda, within the UCFRB and directly adjacent to the injured groundwater resource. The Bowman Field subproject is also located within the UCFRB and within the area of the injured groundwater associated with the Anaconda Area Resources.

11. Actual Restoration of Injured Resources – No Restoration

These are service replacement projects; actual restoration of the injured portion of the Anaconda Area groundwater resource is infeasible as recognized in the State's 1995 Restoration Determination Plan. The Bowman Field and Main Street subprojects constitute replacement of lost services because they replace drinking water lost in the area as a result of contamination.

12. Relationship between Service Loss and Service Restoration – Same/Similar

Remediation and restoration of the injured groundwater in the upper portion of the aquifer associated with the Anaconda Area Resources is infeasible as recognized in the State's 1995 Restoration Determination Plan. Thus, ADLC has lost a potential source of water for future development and needs. Optimization and conservation of existing water resources from the current leaking water supply system is an effective means of protecting their water resources. Thus, there is connection between the services lost and the services the Main Street subproject will replace.

A water well installed to supply the water needs at Bowman Field would need to be placed outside or below the injured groundwater area and be constructed to ensure contamination would not impact the well. As discussed under Criterion #3, the proposed waterline is a better water supply option for the airport. This is a direct connection between services lost (groundwater) and the services (water) the Bowman Field subproject would replace.

13. Public Support – Moderate

The State received 19 comments from 16 individuals and 3 entities supportive of funding all four projects proposed in the *Draft Work Plan.* In addition to these general comments, the State received 13 comments from 8 entities and 5 individuals specifically supporting the Anaconda Waterline Project and 1 comment from 1 individual opposing the project. Entities supporting the project include Anaconda-Deer Lodge County, Anaconda Chamber of Commerce, Anaconda Local Development Corporation, Anaconda Airport Board, Montana Department of Transportation, Old Works Golf Course, Inc., Butte-Silver Bow County, and the Public Lands Access Association.

14. Matching Funds and Cost Sharing – Minimal

ADLC has proposed to provide matching funds of $23,869, or 2.9% for both the Main Street and Bowman Field subprojects that total $821,712. These matching funds from ADLC are for project oversight and fiscal management, and for construction location and inspection services. The application includes MDT repaving project costs as matching funds ($229,969); however, MDT is only providing the Main Street subproject with repaving services and NRDP does not believe the entire paving costs for Main Street should be used as matching funds. The repaving aspect of the Main Street subproject is approximately $30,000. ADLC has provided additional information about $17,901 of matching funds provided by the FAA that includes a sleeve in the new bridge across Warm Springs Creek for the water line to Bowman Field. Thus, the total matching funds for this project are approximately $71,770, or 9% of the total project cost of $821,712.

15. Public Access – Not Applicable

Public access is not a component of this project, nor is it relevant to the projects.

16. Ecosystem Considerations – Positive

The applicant states that the subprojects will provide a net benefit to the local ecosystem by conservation of water resources, reduced power requirements for pumping and treating water, and providing the opportunity to install a functional septic system. These statements are correct; however, the overall effect of the requested grant funds is limited since the replacement of the Main Street waterline will only conserve approximately 5% of the 1.75 million gallons of water loss per day in Anaconda. Although the waterline to the airport will provide the water service necessary to install an operating septic system, the application did not specify when a system would be installed.

17. Coordination and Integration – Coordinates/Integrates

Both the Main Street and Bowman Field subprojects coordinate and integrate with other projects and plans for ADLC. The Main Street subproject is coordinated with MDT as part of the Federal Aid Urban Highway Project No. STPU 0205(2). This process advocates the completion of utility work prior to highway resurfacing. MDT's Main Street repaving project is listed in the 2002-2004 Statewide Transportation Improvement Program. The Bowman Field subproject is being coordinated with improvements taking place at the airport and is identified in the Draft Bowman Field Airport Layout Plan Narrative Report (February 2002) being developed for the Federal Aviation Administration.

18. Normal Government Functions – Within but Augments Normal Agency Function

Both subprojects proposed by ADLC in this grant application are part of normal ADLC government functions. Waterline installations and repairs are part of local government responsibilities as they are the owners of the water distribution systems. ADLC indicates they are financially unable to fund either the Main Street or the Bowman Field subprojects because the Water Department currently has an outstanding $4.5 million bond with approximately $2.5 to $3.0 million left to payback. Because of the stated impacts to the groundwater resource associated with the Anaconda Operable Unit surrounding Anaconda and within the boundaries of Bowman Field, ADLC is seeking Restoration funds to assist with normal agency function. ADLC proposes to provide matching funds of $23,869 or 2.9% for this project.

Land Acquisition Criteria – Not Applicable

Monitoring and Research Criteria – Not Applicable

Greenway Service District – Silver Bow Creek Greenway

Project Summary

The Greenway Service District is requesting $5,067,273 over two years ($2,449,940 in 2003 and $2,617,333 in 2004) to develop a recreational trail corridor and to restore aquatic and riparian resources along miles six and seven (Reaches F and G of Subarea Two) of Silver Bow Creek west of Butte. As in previous years, many of the Greenway activities will be coordinated with remedial actions. That coordination will occur to an even greater extent with this year's proposal, which involves activities that will almost all be conducted jointly with remedial actions. The major coordination components entail an estimated $2.7 million for removal of approximately 336,000 cubic yards of tailings/impacted soils and $1.6 million for enhanced aquatic and revegetation efforts.

In the last two years, the Greenway Service District was awarded $2.9 million in Restoration funds for development of the Greenway trail and restoration of aquatic and riparian resources and services along the first five miles (Reaches A-E of Subarea One) of Silver Bow Creek.

Stage 1 Criteria

1. Technical Feasibility – Reasonably Feasible

The NRDP has a reasonable degree of confidence that the technologies proposed for the project can be applied to Silver Bow Creek (SBC). The tasks required to meet the goals and objectives of the project generally employ standard technologies. The following discussion focuses on how the three major components of the plan, namely additional tailings removal and ecological and access features beyond remedial actions, will accomplish the following goals: 1) restoring aquatic, riparian/wetland and uplands ecosystems within the SBC corridor; 2) acquiring and providing public access to a passive recreational corridor within the SBC corridor; and 3) implementing remediation and restoration activities within the SBC corridor as one project.

A Greenway Design Committee was formed in late 2001 to assist the Greenway Service District (GSD) in evaluating various components of the project. The committee consists of representatives from DEQ, FWP, Trout Unlimited, UCFRB Advisory Council, NRDP, and private sector professionals who are directly involved in consulting with the GSD, NRDP or DEQ. The committee meets approximately bimonthly to discuss the many technical aspects of the Greenway, particularly access and ecological components.

A: Additional Tailings Removal

The GSD proposal requests $2.74 million for removal of 336,000 cubic yards of tailings in Reach G, which are within an area known as Ramsay Flats and are not slated for removal under remedy. Tailings in Ramsay Flats range in depth from approximately two to six feet or more. Under the 1995 SBC Record of Decision (ROD), tailings in approximately

105 acres of the 160-acre Ramsay Flat area would be removed to depth such that only two feet or less remain. The remaining two feet would then be treated in-place with lime amendments. This in-place lime treatment is referred to as Streambank Tailings and Revegetation Studies (STARS). Because lime incorporation can only be accomplished in tailings areas no greater than two feet in depth,[15] all tailings in excess of two feet deep, in the 105-acre part of Ramsay Flats, are slated for removal under remedy. DEQ has indicated that they will competitively bid the entire tailings removal at the Ramsay Flats location if the GSD secures funds (i.e. $2.74M) for this effort. Design for this work is expected to begin in fall of 2002 and actual bidding is expected in spring of 2003. Because of the large quantity of materials to be removed it is proposed that approximately 75% of the tailings slated for STARS could be removed in the 2003 construction season, and the remaining 25% could be removed in 2004.

Studies of in-place lime amendments were conducted on SBC tailings during the early 1990's. The NRDP believes that removal of these tailings is superior to the STARS amendment technology for reasons set forth in various reports.[16] The applicant maintains and the NRDP agrees that removal of these tailings is warranted because it is a permanent solution that takes the contaminants out of the floodplain and significantly improves the ability of and timeframe for the injured resources to reach a baseline condition. This determination is specific to the Ramsay Flats area of Silver Bow Creek and may not be applicable to all tailings areas in the UCFRB.

The advantages for removal of the additional 336,000 cubic yards of tailings/impacted soils not planned for removal in Reach G under the ROD include the ability to:

- design a wider, more natural floodplain;
- design a more-naturally meandering stream channel which can naturally migrate laterally into the adjacent floodplain without eroding tailings;
- adjust stream channel design (plan, profile, channel geometry) which more accurately mimics a natural channel and which provides better aquatic habitat;
- develop larger wetland areas;
- save monies that would be necessary to protect [17] and monitor tailings if left in place;
- specify much wider variety of native plant species, which will enhance wildlife habitat;
- enhance the effectiveness of remedy by removing additional tailings materials from near the stream, which should in turn reduce metals loads to the creek; and

[15] During STARS research investigations, two feet was determined to be the maximum depth that lime can effectively be incorporated.

[16] *Evaluation and Critique of the Streambank Tailings and Revegetation Studies (STARS) Remediation Technology.* NRDP 1995. *Restoration Determination Plan (RDP) Upper Clark Fork River Basin.* NRDP 1995. Also, *Review of Responses to Issues Posed by EPA National Remedy Review Board Regarding Phytostabilization of the Clark Fork River Operable Unit, Milltown Sediments Superfund Site*, Stratus Consulting 2002.

[17] NRDP's consulting aquatic ecologist estimates that $500,000-$600,000 would be necessary to construct levees or buried riprap between the Creek and any treated tailings to keep the stream channel from migrating into these STARS treated areas. This cost was not planned for in the ROD.

- reduce long-term operation and maintenance associated with in-place treatment.

These advantages will enhance the feasibility of achieving restoration in both the stream channel and floodplain. There are no significant uncertainties associated with the technical feasibility of achieving these objectives.

B: Ecological Features

Floodplain Revegetation

The applicant requests $500,000 for revegetation in Reaches F and G beyond what is planned under remedy. The project budget also requests funding of $42,000 over a ten-year period for weed control and monitoring associated with these revegetation efforts. These planned restoration plantings can easily be planned and implemented in conjunction with remedial activities. Although detailed restoration revegetation locations are not included in the plan, the type and quantity of plants that are expected to be required are listed in the application. It is appropriate and more efficient to detail planting locations only after the remedial revegetation efforts and hydrologic planting zones are determined. The applicant will rely on the expertise of DEQ's remedial contractor for designing most revegetation components. The NRDP agrees with the applicant that coordination with the remedial revegetation contractor will be vital for any successful revegetation to take place. The remedial revegetation contractor has assisted the NRDP in review of the revegetation plant quantities proposed. Based on this review it is recommended that, in order to enhance the feasibility of the proposal, the proposed size and quantity of some of the plant species be reduced. With this recommended revegetation change is an associated cost reduction of $112,000, which is noted in Criterion #3.

Organic matter incorporation in the floodplain is a significant restoration component of the grant ($319,000). Based on the recommendation of the DEQ revegetation contractor, a goal of 2% organic matter in soil is proposed. It was assumed that the borrow soils do not contain any organic matter and that the organic matter would be incorporated into the upper 4 inches of soils over approximately 190 disturbed acres. Organic matter placement, which will significantly enhance floodplain vegetation, was successfully applied in Reaches A-C. There are no significant uncertainties associated with the feasibility of conducting these three revegetation components described above.

Enhanced Streambanks

Another ecological component of this proposal involves enhancing remedial streambanks and stream habitat to create improved aquatic habitat along Reaches F and G in 2003 ($172,000) and Reaches H and I (miles 8 & 9) in 2004 ($172,000). The aquatic habitat efforts on Reach H and I are the only components of this year's proposal that are proposed outside of Reaches F and G. The reason for incorporating these efforts in these downstream reaches is to coordinate with remedial actions, which will take place in Reaches H and I during 2004. Other proposed Greenway activities for Reaches H and I will be addressed in future proposals.

The detailed design for streambank construction was not provided because the applicant will rely on coordination with DEQ's fluvial geomorphology contractor for designing the enhanced banks. The objective of enhanced streambanks is to create aquatic habitat features to improve the future fishery in Silver Bow Creek. The applicant proposes to enhance the stream channel with the incorporation of design elements that will create more diverse habitat, including varying the channel width; varying the channel depth; meandering the planform; incorporating variability to the substrate with gravels, sands and fine sediments; changing the substrate shape with logs, and varying the flow velocity for additional habitat. Some of these elements were implemented in Reaches D and E of Subarea One. The proposed additional aquatic components need to be fully coordinated during the remedial design phase to insure success. NRDP's geomorphology consultant will be coordinating these efforts with DEQ's geomorphology contractors. Proposed is an additional $15 per foot to accomplish these goals. This budget estimate was developed and agreed upon by the Design Review Committee stream restoration specialists. The total estimated channel length is 11,500 linear feet in Reaches F and G and an additional 11,500 linear feet in Reaches H and I.

C: Access Features

There are no significant uncertainties associated with the technical feasibility of the access components of this proposal, which are proposed for construction in 2004 for $500,000. The primary access components include a 10-foot hard packed gravel base trail, two bridges, and construction of three railroad bridge underpasses. Also, a small primitive parking area is proposed at Sand Creek. The main trail is approximately two miles in length and will hook up with the paved trail yet to be placed in Subarea One. A one-half mile secondary trail is proposed to hook up the main creek trail with the town of Ramsay.

Detailed design for the trail and bridgework are not in the proposal. However, all preliminary design components are listed in the proposal's detailed cost sheets. The 1998 draft Greenway Design Report details the many Greenway components with design drawings along the entire creek. This 1998 design document provides added certainty that the access features can be reasonably implemented.

It is critical that access features be compatible with the natural fluvial processes of Silver Bow Creek, such as floods and lateral migration of the Creek. The proposed access features will not conflict with these natural processes, nor have any measures been proposed to "harden" the stream channel to protect the proposed access features. The main trail will be located outside or at the edge of the floodplain throughout the corridor, except around stream crossings.

A smaller component ($54,000) of the proposal is providing public access to the SBC corridor by acquiring lands or easements along the Creek. The land in and along Reaches F and G that are designated for access efforts total 54 acres. The GSD has initiated access negotiations with landowners along upstream reaches of the Creek. Although acquiring access to these 54 acres is feasible based on these initial efforts, negotiations with the

landowners in Reaches F and G has not been initiated, lending some uncertainty to this project component.

Overall Technical Feasibility

A key component of the ecological and access features are coordination with the remedial process. Although there are uncertainties associated with the technical and administrative feasibility of the aquatic enhancement efforts, they are not considered significant given the planned effort to work out detailed design in conjunction with remedial efforts. It should be recognized that this coordination requires strict accounting of restoration vs. remedial costs to comply with terms of the 1998 Silver Bow Creek Consent Decree. Given the cost efficiencies and the clear benefits to remedial efforts that can be achieved with such coordination, DEQ remedial staff have indicated their willingness to participate in this cooperative effort.

2. Relationship of Expected Costs to Expected Benefits – High Benefits

Costs proposed for Reaches F and G of Silver Bow Creek are $5,067,273. The approximate breakdown of costs for the $5.1 million is as follows:

- ecological features – $1,650,000 – 33%
- additional tailings removal – $ 2,743,000–54%
- access features – $513,000 – 10%
- land acquisition/easements and administration – $150,000 – 3%

Although the applicant seeks $5.1 million over the next two years, the GSD intends to continue this project along the entire 22-mile creek at an estimated cost of $15 million. This funding will be sought during the next 10 years, while DEQ conducts remedial actions. The GSD intends to use other sources of funding for operation and maintenance costs.

The benefits gained from this project are substantial and outweigh the associated costs. The project will substantially benefit injured natural resources. Tailings removal at Ramsay Flats will eliminate a potential source of future contamination and significantly enhance the recovery of the area to baseline conditions. Organic matter placement, plantings of floodplain trees and shrubs, and aquatic habitat enhancements will accelerate recovery of these resources. Organic matter placement will benefit both remedial and restoration planting efforts by augmenting borrow soil in functioning as plant medium. The restoration planting effort is critical given minimal remedial planting planned in the floodplain.

Benefits will be substantial for the public desiring access to the Silver Bow Creek floodplain. The public benefits of having trail access to the corridor include hiking, walking, fishing, picnicking and other general outdoor activities. Controlling public use in the corridor will assist in protecting restoration and remediation efforts. The project will benefit not only the citizens of Butte and Anaconda, but also citizens of Montana as a whole.

3. Cost-Effectiveness – Cost Effective

The GSD considered two alternatives to the selected proposal – the no-action alternative and an alternative of delaying the project until Silver Bow Creek remedial efforts are completed in 10 years. The applicant adequately addressed why both of those alternatives are inferior to the selected alternative. The no-action alternative would result in significantly less vegetation for recreational and wildlife use and decreased aquatic habitat potential. Also, by not removing tailings in Ramsay Flats, remaining contaminated tailings will continue to injure aquatic and terrestrial resources. The access components of the proposal would also be absent in a no-action scenario, thus making the Creek less accessible to the public. Delaying the project until remedy is completed would be inefficient and delay restoration of injured resources and result in a loss of coordination cost savings, which add up to at least $2.1 million. Also, adding aquatic enhancements in the future would be substantially more impractical and expensive than coordinating them with remedial actions over the next few years. The NRDP provides the following additional analysis of alternatives to the components of the proposal.

Alternatives to Tailings Removal in Ramsay Flats

Removal of tailings in the Ramsay Flats area is fundamental to restoring Silver Bow Creek to a baseline condition. NRDP's 1995 Restoration Determination Plan specified removal of these tailings at Ramsay Flats as the State's preferred alternative. The alternative to removal is in-place lime treatment, which, if successful, would result in a monoculture of several species of grasses. A 2002 analysis by the NRDP's consulting stream ecologist strongly supports the proposed removal of tailings in Subarea Two.[18] Since the State's restoration claim at Silver Bow Creek has been settled and removal of these tailings was a key component of that NRD claim, it is logical that NRD monies be utilized for the removal. Removal of all tailings at Ramsay Flats is cost effective since remedial actions are slated to remove the tailings that are over 2' in depth in this area already. If this proposal is funded, DEQ can simply submit one bid to remove, haul and dispose of all the tailings from Reaches F and G. The cost of implementing STARS in this area would have been approximately $1.6 million. These costs, coupled with $465,000 in remedial design and oversight cost savings will result in a total estimated cost savings of $2.1 million by conducting a joint restoration/remediation action involving full removal.

Ecological and Habitat Improvements – Revegetation Alternatives

It is difficult to assess whether the exact quantity of plants and organic matter listed in the ecological components are cost-effective. At some point, the additional costs associated with increasing revegetation efforts exceed the benefits created by those efforts. But determining that point is difficult, as there are no specialized revegetation formulas for these quantities. The quantities established in this proposal are based on the estimated plants needed for the hydrologic zones expected to be found in the area. Certain plants are designated for different hydrologic zones. For example, wetland plugs will be specified for wetland zones. As discussed under technical feasibility, it is appropriate to defer

[18] See memo on the proposed tailings removal in Subarea Two, *Confluence* Consulting, dated May 24, 2002.

development of the details of the restoration revegetation effort until after the remedy revegetation design is finalized. However, based on revegetation efforts in upstream reaches, there are several changes in the proposed revegetation budget that the NRDP and the remedial revegetation contractor recommend changing at this time. These changes, which are detailed in a memo,[19] are: 1) a decrease in the quantity and container size of Aspen and Cottonwoods; 2) a reduction in the proposed costs for Lodge Pole Pine and willows; and 3) a reduction in the quantity of wetland plugs. These proposed changes would result in a cost reduction of $112,000, so the revegetation costs would be $388,000 instead of $500,000.

Organic matter placement on the 190 acres of disturbed areas will not occur under remedy. The benefits gained to the soil backfill, which does not contain organic matter, will be substantial by providing nutrients, microorganisms and enhancing soil properties for promoting plant growth. Based on the use of organic matter on Silver Bow Creek and other reclamation projects in Western U. S., the proposed quantity and estimated costs for organic matter are considered cost effective.

Vegetative monitoring and weed control are proposed for Reaches F and G over a ten-year period. DEQ's remedial revegetation contractor will manage both these efforts, which will cost a total of $42,000. These efforts will augment the remedial monitoring and weed control efforts.

Because of the planned coordination with the remedial ecological contractor, and due to the proven feasibility of revegetation in Reach A, the NRDP believes, with the suggested changes, the proposed revegetation effort is likely to be cost-effective.

Ecological and Habitat Improvements – Enhanced Streambank Alternatives

Under the Record of Decision for SBC only "remediation streambanks" may be constructed under remedy. The ROD does not set out restoration of streambanks to restore a fishery as a remedial goal. Because of this, it is important to coordinate restoration goals with those of remedy when designing and constructing aquatic habitat in order to reduce the timeframe for aquatic recovery. If these efforts were not accomplished with restoration monies then the alternative is to rely on remedial streambank efforts only, which would result in an increase in time for restoration to occur.

In addition to feasibility, cost effectiveness will be a factor in determining the detailed design of enhanced streambanks in coordination with remedial design efforts. The NRDP's consulting stream ecologist, in coordination with MFWP, GSD and DEQ representatives, has been developing aquatic restoration components for Subarea Two. These added restoration components, and the $15 per-foot unit cost for these, should enhance the recovery of the creek to baseline. The total estimated channel length in Reaches F and G is 11,500 linear feet for a total of $172,500. The same quantity of streambanks and costs per foot is requested for restoration in Reaches H and I during 2004.

The proposal has outlined a stream-monitoring plan for Reaches F and G over a five-year period. Monitoring will include geomorphic assessments and biological sampling.

[19] See memorandum on revegetation changes suggested for GSD 2002 proposal, NRDP, dated May 14th, 2002.

Monitoring, which will cost an estimated $42,000, is an important component of these efforts and the costs are considered reasonable, thus the effort is considered cost effective.

Access Feature Alternatives

The Greenway trail in Reaches F and G, which is proposed to be constructed in 2004, will be a non-paved aggregate base course trail. Due to the uncertainties of the intensity of public use in this area, the NRDP feels that it is cost effective to construct a non-paved trail rather than a paved trail. The Greenway Design Committee also feels that a non-paved trail is justified for Subarea Two. The cost of the trail, $179,000, includes a two mile aggregate base course trail, a one-half mile Ramsay connection trail, culverts and miscellaneous access control and signage.

Two bridges, at $50,000 each, are proposed for Reaches F and G. The applicant has considered railroad crossings and local access to the town of Ramsay when proposing the two bridges. These considerations appear reasonable in order to allow access to both sides of the creek over a two-mile area with a wide floodplain. Railroad bridge underpass construction, which is proposed for $115,000, is necessary in order to limit crossings of dangerous railroad tracks. The one-third acre Sand Creek primitive parking area, which would be located at the beginning of Reach F and proposed at a cost of $16,000, is necessary as a place for trail users to park and thereby help protect restored areas. This access area will be the only Subarea Two access point except for another small one planned five miles downstream at the other end of Subarea Two.

Land Acquisition/Easements and Administration Alternatives

The applicant has earmarked 54 acres in Reaches F and G for acquisition or easements to ensure continuous trail access throughout the corridor and to ensure access or preservation of the unique/desirable areas within Reaches F and G. The applicant has not yet determined the type of acquisition to be pursued, thus it is impossible to judge whether other acquisition alternatives exist that would result in similar benefits for lower costs.

The majority of land parcels (266 acres) in these reaches has been transferred from ARCO to DEQ already, or is owned by ARCO, who has assured the State that trail access will be allowed on their property. In its budget tables, the applicant calculated a 15% contingency cost and 10% design cost based on the predicted costs of these transferred lands. These overhead contingency and design costs that total $56,632 are not needed since the 266 acres have already been transferred. Therefore, if needed, the $56,632 should be earmarked for ecological or additional tailings removal efforts.

To assist in land acquisition and other restoration efforts, the applicant has requested up to $98,000 over two years for NRDP and DEQ contractors and the GSD planner to provide project administration and oversight. The requested funds are for budget purposes and the grant will be billed only for those hours documented through time records toward Silver Bow Creek Greenway project administration and oversight. The applicant has expressed that, due to the growing scope of the Silver Bow Creek Greenway, project administration and oversight activities necessary to implement this project are essential, and fall outside normal agency functions. The requested funds are for approximately $24,000 in 2003 and $74,000

in 2004. Of these amounts, approximately $12,000 per year may be needed for the GSD planner's administration and oversight, which will primarily cover the GSD's activities to coordinate the various agency and contractor personnel implementing the project. The rest of the administration/oversight costs are for the State's consultants. The applicant has not given a specific breakdown of estimated costs needed for the contractor's administration and oversight over the two years.

Overall Cost Effectiveness

Most of the components for this project are cost effective, however, there are several revegetation line items that the NRDP suggest be changed from the present budget. These changes are outlined above and focus on the quantity and size of plants. These recommendations would result in a budget decrease in the ecological and habitat improvement category for 2004 totaling $112,000. This would result in a total request of $4,955,273 over two years ($2,449,940 in 2003 and $2,505,333 in 2004). The recommended amended budget would result in a total of $4,782,773 for Reaches F and G, and $172,500 for stream enhancement only in Reaches H and I.

4. Environmental Impacts – No Significant Adverse Impacts

Development of the Greenway presents no significant adverse impacts to the environment. The applicant provided a thorough evaluation of all environmental impacts and acknowledges the permits necessary for activities in the floodplain. The planned coordination of stream crossings and the trail with remedial actions will minimize the duration of short-term impacts to surface water quality associated with construction activities.

A potential exists for impacts to recently revegetated areas from increased public access to the floodplain. The access management components of the project, however, are likely to reduce these potential impacts. The Greenway trails and trailheads provide access control points and will also serve to minimize motor vehicle travel in the area. The NRDP concurs with the applicant's evaluation that, once constructed, the Greenway will provide and protect beneficial impacts to environmental resources, such as providing aquatic and wildlife habitat, and the public's use of them.

5. Human Health and Safety Impacts – No Significant Adverse Impacts

Dust and noise impacts may occur during construction. The applicant indicates dust impacts will be mitigated. Worker safety considerations will be recognized and planned by contractors as specified in bid documents. The planned coordination with remedial action will shorten the duration of potential impacts. Most construction activities will occur away from residential areas. The NRDP has concerns about pedestrian safety with railroad activity in the corridor. Even though rail use is light, it is imperative that rail safety is fully considered during implementation of the project and the GSD has designed the project to minimize trail and railroad interactions.

6. Results of Superfund Response Actions – Positive Coordination

This project will complement and enhance remedial actions on Silver Bow Creek. Coordination with remedy is imperative to the success of the project. The applicant intends to maximize that coordination through use of the DEQ remediation design and construction contractors on tailings removal, revegetation and aquatic enhancement activities. The positive coordination of the Greenway with remedial actions is also reflected in the Streamside Tailings Operable Unit Record of Decision regarding incorporation of components consistent with recreational corridor land use along Silver Bow Creek.

Recovery Period and Potential for Natural Recovery – Reduces Recovery Period

Removal of tailings in Ramsay Flats would significantly enhance the recovery of both aquatic and terrestrial injuries in and along Silver Bow Creek. With removal of tailings comes also the removal of the continuous threat of metals being released into Silver Bow Creek. Removal of the additional tailings materials will provide substantial benefits to the variety, vigor and success of plantings in the restored area. STARS treatment limits the variety of species that can be established on the treated areas. Also, the long-term effectiveness of STARS is questionable. Removal of the tailings will minimize limitations on plant species selection associated with the STARS treatment, thereby reducing by centuries the recovery of terrestrial resources to baseline.

Organic matter placement in the backfilled materials will also accelerate recovery of vegetation in the floodplain of Reaches F and G. Plantings of floodplain trees and shrubs will improve the quantity and diversity of wildlife habitat. The aquatic enhancements will also accelerate the recovery of fisheries by pool creation and other habitat efforts. Access management will accelerate recovery of all the injured resources by properly controlling public use, thereby protecting the remediated and restored areas.

8. Applicable Policies, Rules and Laws – Consistent/Sufficient Information Provided

The applicant's technical narrative identifies the necessary permits and intent to acquire them. Reasonable assurance is also provided that any easement, deed and/or right-of-way necessary for this proposal will be obtained. Butte-Silver Bow and Anaconda-Deer Lodge city county governments have both passed ordinances authorizing the establishment of the multi-jurisdictional Greenway District and indicated full endorsement of this proposal. Also of note is that in 1995, the City and County of Butte-Silver Bow created an open space corridor, via the County's *Comprehensive Land Use Master Plan*, along a quarter mile on both sides on Silver Bow Creek.

9. Resources of Special Interest to the Tribes and DOI – Beneficial Impact

The project is expected to have a beneficial impact to the interests of both the Tribes and DOI because of improved wildlife and aquatic resources. The DOI has indicated support for the proposal because its major goal is habitat and resource restoration. The DOI also states that the project would have no adverse impact on resources of special interest to the DOI.

The Tribes have not provided specific information regarding resources or sites of special interest to the Tribes in Reaches F and G. In the pilot year proposal, the Tribes deferred review of Tribal cultural and/or religious sites related to this project until detailed plans are available during the project implementation phases. The NRDP can facilitate this Tribal review in its grant agreement with the GSD.

Stage 2 Criteria

10. Project Location – Proximate

All the restoration activities associated with this proposal will be conducted at or near the injured resource areas of Silver Bow Creek.

11. Actual Restoration of Injured Resources – Restoration/Other

The majority of the project components and costs constitute actual restoration. These components are: 1) Tailings removal; 2) planting additional plants and adding organic matter to the cover soils to enhance wildlife habitat; and 3) enhancing the streambanks and stream channel to accelerate development of aquatic habitat.

Other project components that contribute to restoration include: 1) purchase of land or conservation easements along the Silver Bow Creek floodplain; and 2) protection of restored riparian areas through controlled public access. Access features primarily constitute replacement of lost services.

12. Relationship between Service Loss and Service Restoration – Same and Similar

This project will provide some of the same services that were lost as a result of natural resource injuries. Those services include fishing, hiking, bird watching, wildlife viewing, and open space enjoyment. Although the project will also provide services that are different than the services lost or impaired, such as biking, the project's focus is to provide some of the same or similar services as those lost or impaired.

13. Public Support – Broad

The State received 19 comments from 16 individuals and 3 entities supportive of funding all four projects proposed in the *Draft Work Plan.* In addition to these general comments, the State received 30 comments from 9 entities and 20 individuals specifically supporting the Greenway project. Entities supporting the project include Butte-Silver Bow Council of Commissioners, Anaconda-Deer Lodge County, Project Green of Montana, St. James Healthcare, Jazz Conservatory & Arts Center, the George Grant Chapter of Trout Unlimited, Skyline Sportsmen's Association, Anaconda Sportsmen's Club, and Montana Wildlife Federaation. The project also received strong public support from numerous and varied entities in the past two Restoration Grant cycles. Since the GSD was formed over four years ago to help implement the project, it has received wide public support. The 1998 Design Report, which involved considerable public input, has

been presented to the public a number of times. The public response to this document and the entire Greenway concept has been positive. The EPA submitted a comment letter, noting its concern with the applicant's characterization of STARS.

14. Matching Funds – None

The GSD identifies matching funds that are included in the pilot year proposal and subsequent proposals. For this proposal, there are no matching funds. However, it should be noted that the cost savings obtained by coordinating with the remedy would be at least $2.1 million.

15. Public Access – Increased Access Beneficial

Creating public access in the Silver Bow Creek corridor is fundamental to the Greenway proposal. By securing planned land purchases and or easements along the corridor the public will be able to access and recreate along Silver Bow Creek.

16. Ecosystem Considerations – Positive

This proposal fits within a broad ecosystem context as it involves improvements to the headwaters of the Clark Fork River and benefits multiple natural resources. Creating enhanced riparian and aquatic habitat will not only benefit Silver Bow Creek, but will also benefit the Clark Fork River. By removal of tailings along Reach G, the ever-present threat of tailings reaching downstream areas of SBC and the Clark Fork River will be eliminated.

17. Coordination and Integration – Coordinates/Integrates

The Silver Bow Creek Design Review Committee functions as a coordination entity for State and local agencies and meets regularly to identify coordination opportunities and address coordination needs. Although this year's project is not coordinated with other efforts besides remediation (addressed under Criterion #6), some of the administrative activities proposed for funding this year will involve coordination efforts on future phases of the Greenway. For example, the Greenway Service District is coordinating now with the Montana Department of Transportation on a proposed rest area near the intersection of I-90 and Highway 1.

18. Normal Government Functions – Outside Normal Government Function

None of the project activities entail those that a governmental entity is obligated by law to conduct or would normally conduct. DEQ and EPA have determined the proposed revegetation and aquatic efforts to be beyond the scope of remediation. Although up to $12,000 per year may be expended on the GSD's project administration and oversight, these costs are specific to implementing the project and do not cover activities normally conducted by county staff. The Greenway's project administration costs do not cover routine governmental actions.

Land Acquisition Criteria

19. Desirability of Public Ownership – Restoration Beneficial

Public access is a fundamental objective of this proposal. Public ownership of or an easement interest in the Greenway corridor lands provides major benefits to injured natural resources and provides lost services as previously described. The project will enhance restoration of fish and wildlife habitat along Silver Bow Creek. It will provide additional opportunity for a variety of recreational services in or near the Butte, Anaconda, Opportunity, Rocker and Ramsay communities that were greatly impacted by the natural resource injuries. No significant negative impacts are associated with the Greenway's conversion of 54 acres of private lands into public ownership.

20. Price – Uncertain

The price for land parcels or easements has not been determined; therefore, it is uncertain how they compare to fair market value. The project applicants have based land acquisition costs on the land purchases between the State, ARCO and Silver Bow Creek landowners that have averaged about $1000 per acre. The NRDP considers this to be a reasonable basis for estimation. The GSD intends to coordinate all land acquisition activities with the NRDP. Appraisals will be necessary, and the NRDP's approval of all land acquisitions and appraisals before they are completed should be a condition of funding and can be required in the grant agreement.

The Conservation Fund –
Stuart Mill Bay Acquisition

Project Summary

The Conservation Fund requests $2 million to acquire the 328 acre Stuart Mill Bay property located along the southeast portion of Georgetown Lake for public ownership, use and management. The purchase would acquire fish and wildlife habitat and public access for fishing, hunting, camping, and other recreational uses. The Stuart Mill Bay property has about two miles of lake frontage and includes 48 acres of wetlands, 90 acres of grasslands, and 190 acres of forestlands. The property has historically been open to public use and informally managed as a dispersed campground, day-use site and fishing access site for decades. The Conservation Fund negotiated a purchase agreement, effective until March 2003, with Mountain Lion LLC to obtain this acreage. Through this acquisition, the Conservation Fund seeks to retain the property's public recreational uses and natural resource and scenic values and prevent subdivision and development of the property.

Stage 1 Criteria

Property Description

The following summary of the public natural resource and recreational features of the Stuart Mill Bay (SMB) property is provided at the beginning of the criteria narrative since many of the grant evaluation criteria relate to these attributes.

The SMB property, shown in Appendix B, ranges in elevation from 6400' to 6800' and includes 48 acres of wetlands (15%), 90 acres of grasslands (27%), and 190 acres of forestlands (58%), with about two miles of lake frontage. These lands provide fish and wildlife habitat, scenic views, public recreation and public access. The property encompasses most of the SMB area of Georgetown Lake. A separate parcel of about 40 acres that encompasses Stuart Mill Creek and Stuart Mill Spring splits the SMB acquisition property. The forestland portion of the parcel south of the Georgetown Lake access road excludes four other small parcels that have developed homes. The upland parcel is densely forested with second growth lodgepole pine and douglas fir on steep west and north-facing slopes. As one of the few areas around Georgetown left without hillside or hilltop development, the property provides scenic views with its backdrop of the Anaconda Pintlar Range.[20]

Georgetown Lake supports an outstanding recreational fishery for rainbow trout, brook trout, and kokanee salmon. SMB is an important staging area and passageway for rainbow

[20] The scenic value of this property is recognized in the Georgetown Lake Development District Chapter of Anaconda-Deer Lodge County's Development Permit System 27. In the chapter, "the point west of Stuart Mill Bay, and the view of the Pintlers from the ridgeline above Georgetown Lake" are designated as special visual areas.

and brook trout that spawn in Stuart Mill Creek. Stuart Mill Creek and the North Fork of Flint Creek are the two significant tributary spawning streams to Georgetown Lake. Stuart Mill Creek has excellent water quality for trout spawning due to its origin from a substantial coldwater spring source. Of the two, Stuart Mill Creek is considered to be the better spawning stream given that it has higher water quality and its drainage is substantially less developed than the North Fork of Flint Creek drainage (Hadley 2002). Stuart Mill Creek, the North Fork of Flint Creek, and groundwater are the main sources of water to Georgetown Lake, with the Stuart Mill Creek drainage covering 30% of the lake's total drainage area (Knight et. al. 1977).

Biologists from the Montana Department of Fish, Wildlife and Parks (MFWP) and resource managers characterize SMB as one of the areas of greatest biological diversity and biological activity at Georgetown Lake (Althaus 2002; Hadley 2002; Hook 2002). Its spring-fed spawning stream and wetlands contribute most to this diversity. The wetland portion of the acquisition is the largest and most intact area of wetlands on the lake. It provides habitat for many species of birds and various waterfowl, including bald eagles, osprey, red-necked grebes and great blue heron. The wetlands also provide a source of invertebrate food resources and habitat for juvenile fish. SMB is one of the last areas to freeze and first areas to thaw on Georgetown Lake due to the near constant spring water temperature. The bald eagle concentrations appear to be associated with the late fall migration of coots and the spring migration of rainbow trout in the bay. Moose frequent the bay area and the property is believed to serve as a migration corridor between the bay and upland forestlands. Wildlife species that inhabit the uplands include moose, deer, osprey, eagles, great grey owls and other forest birds, small mammals, plus the occasional elk, black bear, and mountain lion (Semmens 2002). Moose and deer use the upland area for feeding, thermal cover, bedding cover, and uninterrupted movement to wildlife habitat in the adjacent National forestlands.

For decades under the Anaconda Company's ownership, the SMB property has been informally open to public use and the grassland portion of the property has been informally managed as a dispersed campground, day-use and fishing access site. Dennis Washington acquired the property from ARCO in 1985 and sold the property to Mountain Lion LLC in 1999. Both Dennis Washington and Mountain Lion LLC have annually leased the area to Anaconda Search and Rescue (AS&R), which manages the property for public use. Most of the public use and access on the property is on the 90-acre grassy point, which is used for semi-primitive camping, day-use, fishing access (small boat, float-tube, and shore fishing), swimming, birdwatching and wildlife viewing. Improvements made over the years include a two-track access road, two pit toilets, fire rings and a few undeveloped boat-launching areas. Camping is confined to about 25 already-established areas with fire rings. No records are kept of day use and records on overnight use are not detailed or complete. The camping areas are typically full on summer weekends and holidays. SMB gets a lot of day use from fishermen after the opening of general fishing season on July 1st and the majority of users are from the Butte/Anaconda areas (Mavirnac 2002a and 2002b; Althaus 2002). The property provides the most direct access to the bay for float-tube fishing, which is a very popular recreational activity in the bay due to its shallow water, abundant aquatic vegetation and substantial hatches of aquatic insects. Limited waterfowl and moose hunting occur on the

property and the upland portion of the property provides access for hunting on adjacent National forestlands. Refer to Attachment A for more details on recreational use.

Georgetown Lake is a popular year-round recreational area that offers year-round fishing. While no data are available on the angler days associated specifically with the SMB property, data provided by MFWP indicates that of the large lakes in the state, it is the most heavily fished lake on a per acre basis (TCF 2002). According to the area biologist working in the Basin for 15 years, Georgetown Lake and the surrounding lands have the highest year-round recreational use of any area in the UCFRB (Hook 2002). The applicant cites 1999 MFWP angler use data showing that Georgetown Lake received 10,000 non-resident angler use days and 53,000 resident angler use days with estimated angler expenditures of $3,500,000 into the local economy (TCF 2002).

1. Technical Feasibility - Reasonably Feasible

   The Conservation Fund (TCF) seeks to acquire and transfer into public ownership the SMB property to conserve the natural resources and public recreational services the property provides and to prevent subdivision and development of the property. TCF has successfully completed similar land acquisitions nationwide, including acquisition of 15,000 acres in Montana, and has demonstrated its expertise in conducting such transactions in its implementation steps outlined in the application. TCF has also completed most of the major steps in accomplishing this transaction. Those steps include negotiating a purchase agreement with Mountain Lion LLC and completing a preliminary property inspection, title review and title commitment, a Phase I hazardous materials assessment, and a mineral rights review.

   A few of the critical steps associated with implementing this land transaction have yet to be completed, including the State's verification via an independent appraisal that the $2 million purchase price is at or below the fair market value. Another step to complete is a new land survey to verify that the property to be conveyed to the State is as proposed in the application. This survey will be completed in late 2002 or early 2003.

   In its application, TCF proposed that the receiving entity be determined based on input received during the UCFRB grant funding evaluation and selection process. TCF approached Anaconda-Deer Lodge County, the U.S. Forest Service (USFS), AS&R, and MFWP about owning and managing the property. While all four entities indicated their support, only AS&R and MFWP indicted their willingness to consider owning/managing the property. TCF recommended MFWP as the most qualified public entity to receive both the title and assume primary management responsibility, with the potential for MFWP to enter into management agreements with other entities. The NRDP concurred with this recommendation. MFWP has initiated its agency land acquisition approval procedures in order to accept title to the property. MFWP completed its environmental assessment of the acquisition in November 2002. The MFWP Commission approved the acquisition at its November 14, 2002 meeting. The State Land Board will consider the acquisition for approval at their January 2003 meeting. The Land Board's approval can be required as a funding condition.

Another uncertainty is the long-term funding of operation and maintenance of the area. TCF has committed limited funds of $2,500 per year for the first two years, so other funding sources for maintenance will need to be obtained.

In TCF's application, the future management plan and types of improvements associated with future public use of the property are left open to public input. Based on input TCF received in advancing this proposal, they recommend the property be managed similarly to its current condition with some minor improvements to the existing semi-primitive campground. The suggested campground improvements would entail grading and graveling the current two-track dirt road, graveling/armoring boat launching areas, replacing two pit toilets with sealed vault concrete toilets, and placing a few picnic tables and fire grills and signage on the site. Other than funding for these improvements, there are no significant uncertainties associated with the process of determining the desired management plan and type of improvements.

MFWP also completed an outline of a proposed management plan in November 2002. MFWP management will be similar to what has historically occurred in the past. The list of suggested improvements provided in the outline is very similar to those suggested in the application and outlined above, with development of a small parking area added. When funding for site improvements is obtained, MFWP will go through its routine environmental assessment and public comment process with any proposed improvements. The outline also includes a list of proposed regulations to be implemented at SMB. Year-round public access would be allowed, however, the main road would not be plowed in the winter. Accommodations for winter parking could be developed near the entrance area. Wheeled motorized vehicles will be restricted to the main established road.

In summary, the major uncertainties involving the appraisal, survey, and Land Board approval can be addressed via funding conditions. Future funding for site improvements and routine operation and maintenance is uncertain but this does not directly affect the feasibility of the proposed land transaction.

2. Relationship of Expected Costs to Expected Benefits – Net Benefits

Direct costs to the Restoration Fund to acquire the entire 328 acres would be $2 million. This includes the $1.85 million negotiated purchase price between Mountain Lion LLC and TCF and $150,000 for TCF's overhead and direct costs. This request does not cover operation and maintenance costs associated with public use and management of the property, which are estimated at $2,500 per year. TCF has agreed to provide $5,000 over a two-year period to cover the initial operation and maintenance costs. An additional estimated $39,700 would be needed to make the suggested site improvements to the existing semi-primitive campground. Indirect costs involving the loss of some tax revenues that would result from subdivision and development of the property are recognized but not estimated in this criteria evaluation (See Criterion #4).

This acquisition will preserve public recreational access at a popular lakeshore recreational area and protect the property's fish and wildlife resources and scenic values from future development that might be detrimental to natural resources or diminish the area's scenic views. As indicated by the applicant, "the quantitative results this project will achieve include the perpetual protection of and public access to 328 acres of fish and wildlife habitat, more than two miles of Georgetown Lake frontage and a popular semi-primitive camping area and recreation site."

It is difficult to quantify these benefits so as to allow for comparison to direct costs. While literature-derived values have been generated for recreational services (e.g. dollar value per angler-day) and such valuation was even conducted as part of the State's compensable claim in Montana v. ARCO, use statistics are unavailable for the Stuart Mill Bay property. We do know that the economic value of the recreational opportunities at Georgetown Lake is substantial, such as the estimated angler expenditures of $3,500,000 into the local economy in 1999 (TCF 2002).

It is also difficult to predict the extent of detrimental impacts to fish and wildlife resources that might result from future development. Georgetown Lake is nutrient rich (Trabert 1993). Development could degrade the lake's water quality by increasing the input of sediment and nutrients to the lake. Higher nutrients resulting in increased aquatic plant growth can cause lower dissolved oxygen levels, which are harmful to the fishery. Dense development could also result in loss of wildlife habitat and wildlife-human conflicts. But both types of impacts will vary in severity depending on the nature of the development (e.g., low vs. high density development). Development would likely vary across the different portions of the property. For example, the grassland area would likely have dense housing whereas the wetland area cannot be developed due to high groundwater. It's possible that some level of development could occur on the property without significant environmental impacts, but public access would most likely be lost.

Georgetown Lake offers substantial fishery-related recreational services year-round and this property offers a mix of values unlikely to be found elsewhere in the Basin. The NRDP believes the outstanding value of this acquisition relates to this mix of public values: the substantial wetland area that supports a diversity of birds, waterfowl, and wildlife; the significant trout spawning and rearing habitat of the bay and Stuart Mill Creek; the wildlife values of the upland area; and the substantial and varied lakeshore recreational services this parcel offers. Those services include lakeshore fishing, swimming, boating, bird watching and wildlife viewing, and semi-primitive camping. The property provides the most direct access for float tube fishing in the bay, which is very popular given the bay's optimum conditions for this type of fishing.

Public acquisition would ensure lakeshore public access and recreation to areas historically used for public access and recreation that might otherwise be developed. This access is dwindling as the lakeshore areas historically owned by the Anaconda Company and informally available to and used extensively by the public are being subdivided, developed, and closed to public use.

The NRDP considers the lakeshore wetland and grassland areas to be of substantial natural resource and recreational benefits. The exceptional values of the lakeshore areas have already been described and are well supported. The upland forestlands do not receive the intensive recreational use as the lakeshore areas, but they do provide an access point to adjacent National forestlands. The upland area provides available vegetation for food, winter thermal cover, security habitat and bedding areas for moose, deer and other wildlife that migrate between the lakeshore wetland area and these forestlands. Input from MFWP indicates that keeping the upland area intact and undisturbed in perpetuity is important to maintain the integrity of the Stuart Mill Bay ecosystem (Semmens 2002). Acquisition of the upland area would also preclude potentially detrimental development upgradient of Stuart Mill Spring and Creek, which are both valuable to the fisheries and the associated fishing recreational services of Georgetown Lake.

The acquisition purchase price is high because it is based on the property's development values (see Criterion #3). The NRDP believes that the substantial public natural resource and recreational benefits to be derived from this project that are summarized above make it worth the price.

3. Cost-Effectiveness – Likely Cost Effective

The analysis of cost effectiveness evaluates whether a particular project accomplishes its goals in the least costly way possible, or whether there is a better alternative. This project seeks to conserve SMB's fish and wildlife resources, and public access and use, and to prevent subdivision and development of the property. The applicant identifies two alternatives: the no action alternative or a partial purchase alternative of purchasing the lakefront property of only 48 acres of wetlands and 90 acres of grasslands. TCF concludes that the no-action alternative would not accomplish the project goals and objectives. The partial purchase is not considered feasible, as Mountain Lion LLC is unwilling to entertain a partial purchase proposal. TCF also considers the partial purchase less desirable in terms of protecting natural resources and providing public access because some portions of the property might then have development that would: diminish the property's scenic views; increase sediment and nutrient loading to Georgetown Lake and thereby degrade aquatic resources; reduce the acreage available for public access and enjoyment; and degrade wildlife habitat. TCF has indicated that, while it is not adverse to considering other options, they can only guarantee the option negotiated with Mountain Lion LLC of a purchase of the entire property, which is their preferred option.

In considering the value of this proposal compared to the no-action alternative, the NRDP evaluated the existing public access and recreational opportunities and use, which are shown on the SMB property map in Appendix B. The USFS maintains 5 developed boat launches that can accommodate large boats, 5 fishing access sites with launch areas for small boats, 1 picnic area that provides a small boat launch, and 3 developed campgrounds at Georgetown Lake. Mountain Lion LLC currently allows public use in the Stuart Mill Bay, Jericho Lane, Jericho Bay, and Badger Bay (upper and lower) portions of the lake. These areas offer dispersed, semi-primitive camping with limited facilities. Until the late 1980's AS&R also

leased the Snowfence and Sandy Beach areas, which are now being subdivided and developed. Area resource managers all indicate that the users of these areas are mostly from the Anaconda/Butte areas and prefer the dispersed, semi-primitive camping conditions over the developed campgrounds that cost more (Attachment A). The NRDP agrees with the applicant that under the no action alternative, the project goals would not be accomplished because: 1) Mountain Lion LLC intends to develop the Badger Bay and Jericho Lane and Bay areas; 2) SMB offers an alternative type of recreational experience than other areas available for public use; and 3) SMB provides significant fisheries resources and recreational fishing services.

The NRDP pursued the option of the partial purchase with Mountain Lion LLC and confirmed that the company is only willing to sell the entire property (Crowley 2002). Mountain Lion LLC intends to subdivide and develop the SMB property if this public acquisition is not approved for funding (IBID).

Part of the cost-effectiveness evaluation considers the price per acre of this purchase. If the applicant's appraised price is verified via the State's independent appraisal, the price per acre to the State of $6,100 per acre would be below the appraised fair market value. The NRDP can set forth conditions to assure that the purchase price to the State would be at or below the appraised fair market value (refer to Criterion #14 for more details). This preliminary appraised value of $8,537/acre reflects the "highest and best use" of the property for recreational home development. This price per acre generally exceeds the current values associated with wetland/riparian habitat types in the Upper Clark Fork River Basin (Hook 2002). For example, the forestlands in the nearby 32,000 acre Watershed Land Acquisition that have high quality fish and wildlife habitat, including critical big game winter range and wetland areas, appraised at $700/acre for the MFWP parcels and $750/acre for the USFS parcels in 2001. But these nearby (as close as one mile to upland SMB parcel) acquisitions do not have the lakeshore recreational attributes of the SMB property. A 1997 appraisal for the Thompson Chain of Lakes Land Exchange used comparable sales between 1995 and 1997 for lakeshore areas that averaged $5,340 per acre, which is more comparable to the SMB (Jacobson 1997).[21] Small (less than 2 acre) lakeview lots close to but not on Georgetown Lake are being advertised for about $25,000/acre[22] and lakefront lots are over $90,000 per acre (Crowley 2002). The price of small, subdivided lots is offered for a perspective only, since these lots are not comparable to the larger SBC acquisition. A full appraisal approved by the State's independent review appraisal is likely to offer the best analysis of how the SMB property compares to similar lakeshore properties. TCF provided the full appraisal to the NRDP in late August of 2002; therefore, the State's review could not be completed before issuance of the *Draft Work Plan*.

From a broader cost-effectiveness perspective, the question to consider is whether other UCFRB land acquisition alternatives exist to this specific acquisition that might provide similar benefits to natural resources and the public's use of them at lower costs. Such an

[21] The comparable sales consisted of 8 large-acre waterfront sites that varied in acreage from 120 to 320 acres, had lake frontage ranging from 2600' to 7563', and had price per acres that varied from $1,625/acre to $13,167 acre. The average acreage of the 8 sales was 243 acres and the average price per acre was $5,340.
[22] Missoulian classified ads on June 22, 2002.

evaluation is difficult given that a prioritization of potential land acquisitions in the UCFRB has not been conducted and because of the nature of how land acquisition opportunities normally come about. Those opportunities depend on the availability of a willing seller of the desired parcel and often times the sales are time critical (i.e. the land will be offered for public acquisition only for a limited time after which time it goes on the open market or the land is on the open market already and may be sold privately before public funding can be obtained). For example, this acquisition would have greater resource benefits if it were to include the parcel that bisects the wetlands and the grasslands areas and includes the Stuart Mill Creek and spring, but this parcel is owned by another entity than Mountain Lion LLC that is not interested in selling the property.

In a broader perspective Georgetown Lake offers substantial fishery-related recreational services and this property offers a mix of values not found elsewhere in the Basin. Acquiring this property is also likely to be the last opportunity to preserve the public access and recreational use to areas historically owned by the Anaconda Company and open to the public at Georgetown Lake.

Given these limits to comparison of alternative land acquisitions and that the only available option is to purchase all Mountain Lion LLC's property in Stuart Mill Bay, the NRDP considered an alternative of purchasing the entire property but then subsequently selling the majority of the 190-acre upland portion subject to limited public access provisions and development restrictions. This would have been accomplished via restrictive covenants, a conservation easement(s) and/or recreational access easement(s) that would assure public access to adjoining National forestlands through the SMB upland property and restrict the type and density of development to limit potential detrimental impacts to the property's fish and wildlife resources. The funds from that subsequent sale could then be returned to the Restoration Fund for other restoration or replacement projects in the Basin. The NRDP proposed this alternative in its July 2002 *Pre-Draft*, but also noted therein that there were "significant uncertainties with this alternative that would require further research, discussion, and negotiation and there are inherent costs and obligations involved with holding both conservation and access easements." The NRDP conducted further research into this option and concluded that it would be difficult to arrive at an acceptable proposal that would generate enough money to make the resale alternative cost-effective. The difficulties and transaction costs associated in pursuing this alternative outweighed its financial benefits. The contractual documents that would effect this land acquisition will not preclude a future resale option, however, such a resale would need to be the subject of an environmental and public review process and any proceeds would need to be returned to the Restoration Fund.

In conclusion, the NRDP did not find an alternative that would accomplish similar benefits of public access, recreation, and resource protection as the proposed alternative but at lower costs than the proposed alternative.

4. Environmental Impacts – No Significant Adverse Impacts

The applicant notes increased recreational use of the property could displace wildlife species and degrade some of their habitat. Under the intended scenario of maintaining the property

as semi-primitive with only minor facility improvements and locating the heavy use areas away from the valuable wildlife habitat, the potential impacts are not considered significant. The applicant recognizes the need for noxious weed management so that impacts to native vegetation from weeds associated with public use can be minimized.

The potential exists for substantially increased impacts to environmental resources if the property were subdivided and developed in a detrimental manner. Whether or not development would occur in this manner is unknown, although input from MFWP indicates even limited development could jeopardize the integrity of the Stuart Mill Bay ecosystem (Semmens 2002).

5. Human Health and Safety Impacts – No Significant Adverse Impacts

The project applicant notes potentially adverse impacts to human health and safety as: 1) reduced tax revenue, 2) nuisances to adjacent landowners, and 3) competition with private recreation sites. Annual tax revenues in the past 3 years have averaged $310 based on the classification of the property as agricultural. If MFWP were to acquire the property, most likely the tax revenue would be similar or greater to this average because MFWP is required by law to pay the same amount as would be generated under private ownership (87-1-603 MCA). The greater potential impact would be the lower tax revenues generated from public ownership than from subdivided and developed land. Potential future loss is difficult to estimate but could be substantial. To give a perspective on that, consider the 2001 taxes for two Georgetown lakefront parcels:[23] An 0.95 acre of lakefront property land valued at $30,983 generated taxes in 2001 of $449. A 1.1-acre lakefront parcel with a home valued at $227,098 generated taxes of $3,337 in 2001. Other factors to consider in assessing potential impacts to the tax base are: that tax revenues are based on current uses and not potential uses; that there are additional taxpayer costs associated with providing public services to subdivided developments; and that revenues tied to recreational use can offset potential tax revenue losses. Anaconda-Deer Lodge County's letter of support included in the application indicates the county believes the public benefits outweigh any economic loss to the county.

Given the intended continued use of the property for dispersed, semi-primitive camping and input from current site managers that those using the SMB are purposely seeking a less-developed experience than offered by the private and USFS campgrounds, the project would probably not adversely impact nearby private recreational facilities.

6. Results of Superfund Response Actions – Consistent

This project will not duplicate or interfere with results of a completed, planned, or anticipated Superfund response action.

7. Recovery Period and Potential for Natural Recovery – No Effect

This acquisition of unimpaired resources will not affect the timeframe for recovery of injured resources.

[23] Information obtained from Montana Department of Revenue and ADLC County Treasurer records.

8. Applicable Policies, Rules and Laws – Consistent/Sufficient Information Provided

The applicant notes how the choice of the public entity that would own and manage the property will affect some of the policies, rules, or laws that may apply to this transaction. For example, if MFWP were to be the chosen entity, MFWP would have to follow MFWP land acquisition procedures, laws, and rules. The applicant appropriately identified the permits that might be needed with desired site improvements and conducted the needed coordination with local entities. TCF has completed or appropriately planned for the needed land transaction legal documents. TCF has conducted the appropriate coordination with local governmental entities.

9. Resources of Special Interest to the Tribes and DOI - Beneficial

As noted in its letter contained in Appendix F, the DOI supports purchase of the entire SMB parcel, particularly noting its wildlife and wetlands values. The Tribes have not provided information regarding resources or sites of special interest to the Tribes for this project. Given the project's resource values, it is likely that the project would be considered beneficial to tribal resources.

Stage 2 Criteria

10. Project Location – Within the Basin and Proximate

The lands proposed for acquisition are about 15 miles from injured areas surrounding the Anaconda Smelter. Georgetown Lake is the headwaters of Flint Creek, which is a tributary to the Clark Fork River. Historically, the SMB property and other Anaconda Company parcels were predominately used by Anaconda and Butte area residents (Althaus 2002; Mavirnac 2002a). Camping records for the past 3 years indicate the SMB property gets most of its use from Anaconda and Butte residents (56%), next from Missoula and Hamilton residents (21%) and 10% from other MT communities and other out-of-state residents (Mavirnac 2002b). Unpublished and general data collected by MFWP indicates that people from Butte, Anaconda, Drummond, Deer Lodge and Philipsburg utilize almost half of the angler days on Georgetown Lake (Althaus 2002; Mavirnac 2002a). Thus, the geographical extent of this project's service benefits would extend throughout much of the UCFRB.

11. Actual Restoration of Injured Resources – No Restoration

This project involves the acquisition of unimpaired resources and does not involve the direct restoration of injured resources addressed by Montana v. ARCO.

12. Relationship between Service Loss and Service Restoration – Same or Similar

The purchase would acquire fish and wildlife habitat and public access for fishing, boating, hunting, birdwatching, wildlife viewing, camping, and other land and water

based recreational uses. The project benefits fish and wildlife habitat (e.g. trout habitat and wetlands) and populations (waterfowl, trout, moose, eagles) that are equivalent to the injured resources addressed by Montana v. ARCO. The fishing opportunities preserved would be associated with lake fishing rather than the stream fishing opportunities that were lost in the UCFRB. Thus, the project provides some recreational services that are the same as and some recreational services that are substantially similar to the lost recreational services addressed by Montana v. ARCO.

13. Public Support – Broad

The State received 19 comments from 16 individuals and 3 entities supportive of funding all four projects proposed in the *Draft Work Plan.* In addition to these general comments, the State received 308 comments from 10 entities and 330 individuals specifically supporting the Stuart Mill Bay project and 4 comments from 3 individuals opposing the project. Entities supporting the project include Anaconda Deer-Lodge County, Skyline Sportsmen's Association, Georgetown Lake Volunteer Fire Department, George Grant Chapter of Trout Unlimited, Anaconda Sportsman's Club, the Public Land/Water Access Association, Inc., Anaconda Chamber of Commerce, Montana Wetlands Legacy, Montana River Action, and Montana Wildlife Federation.

14. Matching Funds and Cost Sharing – Uncertain

Using results of a May 2001 preliminary appraisal that valued the property at $2.7 million, TCF and Mountain Lion LLC negotiated a purchase price of $1.85 million. The purchase price to the State, which includes TCF's overhead and direct costs, is $2 million. A full appraisal commissioned by the applicant and provided in late August of 2002 appraised the property at $2.8 million. The NRDP commissioned an independent appraisal that will be completed in December 2002. If the applicant's appraised value is verified by the NRDP's independent appraisal, Mountain Lion LLC will have donated $800,000 toward the project, or 29% of the fair market value. Since the actual appraised value is still uncertain at this time, the percentage of matching funds is still uncertain. If the appraised value provided by the State's appraiser is over $2.8 million, the purchase price to the State will still be $2 million and the percentage match would increase. If the appraised value is less than $2.8 million but more than $2 million, the State's purchase price would still be $2 million and the percentage match would decrease. If the appraised value is less than $2 million, then the NRDP will consult with the applicant and the Trustee Restoration Council regarding resolution of the purchase price to the State.

15. Public Access – Increased Access Beneficial

This project enhances and ensures permanent public access by purchasing an area historically open to the public for recreational purposes on a temporary lease basis. The desired continued public use of the area in a manner similar to current use will not be detrimental to environmental resources (See Criterion #4). The alternative of subdivision and development would likely reduce or eliminate public access.

16. Ecosystem Considerations - Positive

This project is sequenced properly from a watershed perspective because it is aimed at protecting the headwaters of the Flint Creek drainage. It also protects multiple resources: wetland and upland forested habitat that support waterfowl, eagles, moose, and other wildlife and a significant spawning tributary for trout.

17. Coordination and Integration – None

There are no ongoing or planned actions being coordinated or integrated with this project.

18. Normal Government Functions – Outside Normal Government Functions

Acquisition of the SMB property is not a responsibility of any government agency or an action that would be funded in the normal course of events of any governmental agency. MFWP is involved in land acquisitions through the Habitat Montana Program and through other funding sources such as grant funds. However, MFWP is not specifically responsible for acquiring lands in the UCFRB, nor does it receive funding for such acquisitions in the normal course of events. This acquisition is not on the MFWP Region 2's prioritized list of the Habitat Montana projects, primarily because it does not have the habitat types and resource values that are currently the focus of that program. It is unlikely the State could acquire this property through its normal agency funding, and certainly not within the time frame of the negotiated purchase agreement.

Land Acquisition Criteria

19. Desirability of Public Ownership - Replacement Beneficial

The potential benefits of public ownership are summarized under Criterion #2 and the potential detriments are summarized under Critierion #5. Although the project will not improve injured resources covered under Montana v. ARCO, it does provide services equivalent to those that were lost. Given this comparability, and since Anaconda-Deer Lodge County supports the project and other public input to date is supportive of the project, the NRDP considers this project as one for which public ownership is overall beneficial.

20. Price - Uncertain

A preliminary summary appraisal conducted in May 2001 valued the property at $2.7 million. A full appraisal commissioned by the applicant and completed in late August 2002 valued the property at $2.8 million. This appraised value equates to about $8,537 per acre but the actual appraised price per acre varies for the three different resource areas. Costs to the Restoration Fund based on a purchase price of $2 million would average about $6100/acre. The NRDP has commissioned an independent appraisal that will be completed in December 2002. (See discussion under Criterion #14 for further details.)

The May 2001 preliminary appraisal is based on the determination of the "highest and best use" of a potential recreational subdivision (home sites with lake frontage and home sites with lake view). Based on that appraisal, which was conducted strictly for the purposes of negotiation between TCF and Mountain Lion LLC, the parties agreed to a purchase price of $1.85 million. TCF's purchase price offer to the State is $2 million, which includes the negotiated purchase price, plus TCF's overhead (4% of the fair market value or $108,000) and TCF's direct expenses of $42,000 to cover appraisal fees, legal services, and other transaction costs. A funding recommendation is conditional upon the State's verification via an independent appraisal that the purchase price of $2 million is at or below fair market value.

Attachment A

Supplemental Information on Georgetown Lake Public Access and Use

TCF summarizes the numbers of existing facilities at Georgetown Lake but provides information specific only to the usage of the SMB property in the application. The NRDP was able to obtain some additional information summarized below, but detailed use data is lacking, particularly for day use. A map of the SMB parcel and surrounding features described herein is provided in Appendix B.

The USFS maintains 5 boat launches that can accommodate large boats, 5 fishing access sites that can be used to launch small boats, 1 picnic area that provides a small boat launch, and 3 developed campgrounds at Georgetown Lake. The Lodgepole campground located across Highway 1 on the east side of the lake has 31 camp units and typically does not fill up. Its highest monthly percentage occupancy during the summer of 2001 was 23% (USFS, 2002). The Philipsburg Bay and Piney campgrounds on the northwestern lakeshore have 69 and 48 units, respectively, and are usually full on summer holidays and weekends in July and August. The highest monthly percentage occupancy during the summer of 2001 for these two campgrounds was 57% and 85%, respectively. The USFS does not plan to expand any of these facilities at this time, but does have plans to renovate the Lodgepole campground in 2005 (Spauer 2002).

The private, developed campground/trailer park on Denton's Point has 75 campsites with 48 electrical hook-ups. There are private boat launches at Stuart's Landing and Denton's Point. The Georgetown Lake Lodge leases the property for the marina at Denton's Point from the USFS and that marina is open for public use.

Mountain Lion LLC currently allows public use in the Stuart Mill Bay, Jericho Lane, Jericho Bay, and Badger Bay (upper and lower) portions of the lake. AS&R leases these sites and collects fees from overnight campers ($4/night) but does not keep records that lend themselves to calculating minimum, average, and maximum camp occupancy during the summer, nor do they track day-use. All of these areas offer dispersed, semi-primitive camping with minimal facilities (two-track roads, outhouses, and fire rings). The Jericho Bay/Lane area consists of about 230 acres with about 10 campsites at Jericho Lane and about 30 campsites at Jericho Bay; the Badger Bay (also referred to as Piney Point) area is about 150 acres with about 120 – 130 campsites; SMB consists of 328 acres and accommodates about 25 campsites (Mavirnac 2002). Of the three areas, Badger Bay gets the highest number of users and large group use, Jericho Bay gets the greatest concentration of camping use and fills up most of the time during the summer, and SMB gets the highest day use. The campsites along the lakeshore at SMB are typically filled on summer weekends and holidays (Mavirnac 2002a; Althaus 2002). Records for SMB for the past three summers indicate that about 56% of the campers are from the Butte/Anaconda area, 12% from the Missoula area; 21% from other Montana communities and 10% from out of state (Mavirnac 2002b). In contrast, about 35% of the USFS campground users were out-of-state residents in the past 4 summers (USFS 2002). Many of the campers at all these three sites stay for multiple days.

Up until the late 1980's, Mountain Lion LLC leased the Sandy Beach and Snowfence areas to AS&R for public recreational use. These areas are now being subdivided and developed. Other areas of Georgetown Lake that were informally used as recreation areas during ownership of the Anaconda Company and Dennis Washington /Mountain Lion LLC include parcels at Rainbow and Piney Points that now have residential/recreational homes.

In comparing the Mountain Lion LLC properties that are minimally developed to the developed campgrounds, area recreational managers all indicate that the users of the Mountain Lion LLC areas prefer the dispersed, semi-primitive camping areas over the developed areas that cost more (Mavirnac 2002a; Hadley 2002; Althaus 2002).

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APPENDIX D

PROJECT BUDGET SUMMARIES AND IMPACT CHECKLIST

For copies of the Project Budget Summaries
And Impact Checklists,
Please contact the
Natural Resource Damage Program
Department of Justice
P. O. Box 201425
Helena, MT 59601
(406) 444-0205

APPENDIX E

APPLICATION REVIEW GUIDELINES

UCFRB RESTORATION GRANTS

APPLICATION REVIEW GUIDELINES[24]

Introduction

The March 2002 *UCFRB Restoration Plan Procedures and Criteria* (*RPPC*) provides the framework for expending Restoration funds and describes the criteria to be used to evaluate Restoration Grant Projects. To help in these evaluations, the NRDP developed the following Application Review Guidelines based on the *RPPC*. These Guidelines categorize the likely manner in which restoration projects meet or address a particular criterion. For example, for technical feasibility, projects are categorized as reasonably feasible, uncertain feasibility, or not feasible. These categories provide a framework to assist in evaluating and comparing projects consistently. Reviewers should note that it is the explanatory text for each criterion provided in the detailed Project Criteria Narratives, not the titles provided in this guidance to categorize projects, that forms the basis of judging how well a project addresses a particular criterion. The titles/headers should not be misconstrued to denote a certain level of ranking or adequacy in meeting the *RPPC* criteria.

STAGE 1 CRITERIA REQUIRED BY LEGAL CONSIDERATIONS

1. TECHNICAL FEASIBILITY

General Considerations: Reviewers should bear in mind that the ultimate question to be answered under this criterion is: To what degree is the project likely to achieve its objectives? As per DOI regulations, "Are the technology and management skills necessary to implement the project well known and does each element of the plan have a reasonable chance of successful completion in an acceptable period of time?" To evaluate both the technology aspects and management aspects, the application asks for a scope of work as well as information regarding successful application of the selected technology to similar sites. We are not just evaluating whether a particular technology has been successfully applied in the past, but also whether it will work as applied to this particular project as planned by the applicant.

Reasonably Feasible: The following descriptions apply to a project that is "Reasonably Feasible."

- The project employs well-known and accepted technology in design, engineering and implementation components of the project, and/or;

- The project applicant demonstrates that any innovative technologies proposed in the project are reasonably likely to achieve their stated objectives.

[24] These review guidelines are provided in Appendix E of the *Draft 2002 UCFRB Restoration Work Plan*; included in this appendix is a copy of the multi-year funding policy

- Any uncertainties/issues requiring future resolution associated with the project are insignificant.

- There is a reasonable degree of confidence that the technologies proposed to be utilized in the project (whether well-known and accepted or experimental or innovative) can be applied to the project site to achieve their stated objectives.

- The project applicant demonstrates management skills necessary to implement the technologies at the project site in an acceptable period of time.

Based on these findings, the project is "Reasonably Feasible," and is therefore reasonably likely to achieve its objectives.

Uncertain Feasibility: If any of the following descriptions apply to a project that otherwise satisfies the description of a "Reasonably Feasible" project, then the project is of "Uncertain Feasibility."

- It is uncertain whether any innovative or experimental technologies proposed in the project are likely to achieve their stated objectives.

- There are many or significant uncertainties associated with the project that require future resolution.

- It is uncertain whether the technologies proposed to be utilized in the project (whether well- known and accepted or experimental or innovative) can be applied to the project site to achieve their stated objectives.

- It is uncertain whether the project applicant demonstrates management skills necessary to implement the technologies at the project site in an acceptable period of time.

Based on these findings, the project is of "Uncertain Feasibility," and therefore the likelihood of the project achieving its objectives is uncertain.

Not Feasible: The conclusion that a project is "Not Feasible" may be based on one or more of several possible findings, including:

- Technologies (or a technology) proposed in the project are (is) not likely to achieve their (its) stated objectives.

- The project applicant does not demonstrate management skills necessary to implement the technologies (technology) at the project site in an acceptable period of time.

Based on these findings, the State concludes that the project is "Not Feasible," and therefore not likely to achieve its objectives.

2. RELATIONSHIP OF EXPECTED COSTS TO EXPECTED BENEFITS

General Consideration: Pursuant to this criterion, reviewers should evaluate to what extent a project's costs are commensurate with the benefits it provides. All costs and benefits, both direct and indirect, should be considered in this evaluation. Costs include monetary and other costs associated with the project. Because some project benefits and costs may be hard to quantify, reviewers should not attempt to assign a monetary value to all costs and benefits.

Note: Because this criterion involves a weighting of all public natural resource and service benefits expected to be derived from a project against all costs associated with the project, it is suggested that reviewers undertake this evaluation only after completing all other Stage 1 and Stage 2 criteria evaluations. If the project is part of a larger project, reviewers should evaluate the costs/benefits from the perspective of the benefits the project achieves by itself and its costs, as well as the benefits of the larger project and its costs. This criterion will ultimately be used to relatively compare projects. At this stage, however, the evaluation is confined to assessing the degree to which the project's costs are commensurate with the project's benefits.

High Net Benefits: Project benefits significantly outweigh/exceed costs associated with the project.

Net Benefits: Project benefits outweigh/exceed costs associated with the project.

Commensurate Benefits and Costs: Project benefits are generally commensurate with, or proportionally equal to, costs associated with the project.

Net Costs: Project costs outweigh/exceed benefits to be gained from the project.

High Net Costs: Project costs significantly outweigh/exceed benefits to be gained from the project.

3. COST-EFFECTIVENESS

General Consideration: The analysis of cost effectiveness evaluates whether a particular project accomplishes its goals the least costly way possible, or whether there is a better alternative. For example, if the project replaces a service, is this the most cost-effective way to replace that service? In our application guidelines, we asked applicants to provide:

1. a description of alternatives to the proposed project that were considered, including the no-action alternative;

2. a comparison of the benefits and costs of each alternative (to the extent possible); and,

3. justification for the selection of the preferred alternative.

Note: Whereas the previous criterion compared all of the costs and benefits associated with the project as proposed by the applicant, this criterion requires reviewers to compare the project as proposed with alternative methods of accomplishing the same or substantially similar goals. Reviewers should not limit this evaluation to the alternatives discussed by applicants. If the applicant does not discuss an obvious alternative, reviewers should consider that alternative in reaching their conclusions on cost-effectiveness.

Cost Effective: The applicant provides a complete and thorough analysis and the selected alternative is most cost-effective.

Likely Cost Effective: Although the applicant only provided a limited analysis of alternatives, the State concludes that the selected alternative is likely to be cost-effective.

Not Cost Effective: A suitable alternative exists that will produce the same or similar level of benefits, but at significantly lower costs.

Uncertain: Insufficient information is available to conclude that the selected alternative is likely to be cost-effective.

4. ENVIRONMENTAL IMPACTS

General Consideration: To what degree will the project adversely impact the environment? Reviewers will evaluate to what degree the applicant has properly identified and addressed any potential short-term or long-term adverse impacts that significantly affect the quality of the human environment. For Montana Environmental Policy Act (MEPA) compliance, we will need to assure that all adverse environmental impacts and reasonable alternatives have been adequately characterized and considered during decision-making. If this assurance is uncertain, we may conduct some further evaluation or seek supplemental information.

Note: In the application, we divided our information requests to applicants regarding the impacts to the human environment into "environmental impacts" and "human health and safety" components. In this section, reviewers should consider applicant responses in the "environmental impacts" section as set forth in the application. In the following section, reviewers should consider applicant responses in the "human health and safety" section as set forth in the application. For assistance with MEPA terminology, please refer to Attachment A.

No Adverse Impacts: Without mitigation, the project presents no potential adverse impacts, either significant or minor, to the environment.

No Significant Adverse Impacts: Without mitigation, the project presents no potential significant adverse impacts to the environment. The project involves the potential for some minor adverse environmental impacts that do not rise to the level of significance.

Short-Term Adverse Impacts with Mitigation: The project presents potential significant short-term adverse environmental impacts. Mitigation measures, however, are included in the project that reduce otherwise significant adverse environmental impacts to below the level of significance. Mitigation that reduces significant adverse environmental impacts to below the level of significance results in a finding of no significant adverse impacts.

Long-Term Adverse Impacts with Mitigation: The project presents potential significant long-term adverse environmental impacts. Mitigation measures, however, are included in the project that reduce otherwise significant adverse environmental impacts to below the level of significance. Mitigation that reduces significant adverse environmental impacts to below the level of significance results in a finding of no significant adverse impacts.

Significant Adverse Impacts with Insufficient Mitigation: The project presents potential significant adverse environmental impacts, either short-term or long-term, and includes no (or insufficient) mitigation measures to reduce the otherwise significant impacts to below the level of significance.

5. HUMAN HEALTH AND SAFETY IMPACTS

General Consideration: To what degree will the project have an adverse impact on human health and safety? If this is uncertain, further evaluation may be conducted or supplemental information may be gathered.

No Adverse Impacts: Without mitigation, the project presents no potential adverse impacts, either significant or minor, to human health and safety.

No Significant Adverse Impacts: Without mitigation, the project presents no potential significant adverse impacts to human health and safety. The project involves the potential for some minor adverse human health and safety impacts that do not rise to the level of significance.

Short-Term Adverse Impacts with Mitigation:. The project presents potential significant short-term adverse human health and safety impacts. Mitigation measures, however, are included in the project that reduce otherwise significant adverse human health and safety impacts to below the level of significance. Mitigation that reduces significant adverse human health and safety impacts to below the level of significance results in a finding of no significant adverse impacts.

Long-Term Adverse Impacts with Mitigation: The project presents potential significant long-term adverse human health and safety impacts. Mitigation measures, however, are included in the project that reduce otherwise significant adverse human health and safety impacts to below the level of significance. Mitigation that reduces significant adverse human health and safety impacts to below the level of significance results in a finding of no significant adverse impacts.

Significant Adverse Impacts with Insufficient Mitigation: The project presents potential significant adverse human health and safety impacts, either short-term or long-term, and includes no (or insufficient) mitigation measures to reduce the otherwise significant impacts to below the level of significance.

6. RESULTS OF SUPERFUND RESPONSE ACTIONS

(Readily Available Information)

General Consideration: This criterion considers the results, either existing or anticipated, of completed, planned, or anticipated (if there is a reasonable measure of confidence in the anticipated action) UCFRB Superfund response actions. To what degree would the project be consistent with, augment or, alternately, interfere with or duplicate the results of such actions, including Superfund investigations and evaluations?

Note: A finding of inconsistency with response actions will usually, but not always, mean that the action is inappropriate or unjustifiable. As stated in the *RPPC*, the State will tend to favor projects that augment response actions rather than undo a response action. If, however, the State considers a response action to be ineffective and non-beneficial, then interference or inconsistency with the response action may positively improve restoration of natural resources to baseline. This should be assessed on a case-by-case basis. If necessary, reviewers should utilize the form attached as Attachment B to record any additional information pursuant to this criterion not included in the application and required for complete evaluation of the project.

Positive Coordination: The project coordinates with and augments the results of an effective Superfund action(s).

Consistent: The project may or may not augment the results of an effective Superfund response action(s), but it will not interfere with or duplicate the results of such an action(s).

Inconsistent but Potentially Beneficial: The project would interfere with or duplicate the results of an ineffective Superfund action(s).

Inconsistent: The project would interfere with or duplicate the results of an effective Superfund action(s).

7. RECOVERY PERIOD AND POTENTIAL FOR NATURAL RECOVERY

(Readily Available Information)

Note: If necessary, reviewers should utilize the form attached as Attachment B to record any additional information pursuant to this criterion not included in the application and required for complete evaluation of the project.

General Consideration: Will the proposed restoration project affect the time frame for recovery of the injured resource and if so, to what degree? In addition to information presented by the project applicant, reviewers should rely on the 1995 Restoration Determination Plan and backup injury assessment reports to estimate natural recovery potential for injured resources addressed by the project. For projects that involve actual restoration of natural resources and, consequently, services, this criterion aims at determining just how well the project enhances the recovery period – does it significantly hasten that recovery? This criterion also evaluates the potential for natural recovery of an injured resource. If a resource is expected, on its own, to recover in a short period of time, a restoration action may not be justified.

Note: Given that the State recovered damages for past lost value of natural resources and services, it is not critical that all replacement projects consider the potential for recovery of the injured resource or services being replaced. This consideration may be relevant, however, when comparing replacement projects and relatively weighing the necessity of replacing one service or resource over another. For example, one project may replace services that will recover naturally in one year, while another project replaces services that will not recover naturally for 500 years. Depending on the service or natural resource replaced, the State may favor one of these projects over the other, based on the fact that the services or natural resources replaced will naturally recover in a short period of time for one project and not the other. For this reason, reviewers should consider recovery potential in the context of replacement projects.

Reduces the Recovery Period: The project enhances recovery potential of the injured resource and/or services provided there by reducing the time in which they will recover to baseline.

Note: This is a qualitative evaluation that should be assessed on a scale ranging from slight enhancement to complete restoration/replacement to baseline.

May Reduce the Recovery Period: It is possible but not certain that the project may reduce the time in which the injured resources and/or services provided thereby will recover to baseline.

No Effect on Recovery Period: The project most likely will not change the time frame for recovery.

Increases Recovery Period: The project diminishes recovery potential of the injured resource and/or services provided thereby by lengthening the time in which they will recover to baseline.

8. APPLICABLE POLICIES, RULES AND LAWS

(Readily Available Information)

General Consideration: To what degree is the project consistent with all applicable policies of state, federal, local and tribal government, including the *RPPC*, and in compliance with applicable laws and rules, including the consent decree?

The application requested information from applicants regarding four sub-issues: (1) permits obtained and any other permits required to complete the project, including pertinent dates; (2) deeds, easements or right-of-way agreements required to complete the project; (3) communication and coordination with local entities; and, (4) the effect, and consistency/ inconsistency with other laws, rules, policies, or consent decree requirements. The State may supplement applicant's information to the extent necessary to assess consistency with applicable policies and compliance with applicable laws and rules.

Note: For this criterion, applicants for projects over $10,000 were only required to submit readily available information. Applicants for projects of $10,000 or under were not required to address this criterion. Thus, the State may need to supplement information to evaluate this criterion. If necessary, reviewers should utilize the form attached as Attachment B to record any additional information pursuant to this criterion not included in the application and required for complete evaluation of the project.

Consistent/Sufficient Information Provided: The applicant has provided sufficient information to make the following determinations:

- All permits necessary to complete the project on schedule are identified and obtained, or reasonable assurance is provided that they will be obtained.

- All deeds and easements or rights-of-way necessary to complete the project on schedule are identified and obtained, or reasonable assurance is provided that they will be obtained.

- As necessary, the applicant has demonstrated that communication and coordination with local entities has occurred, or reasonable assurance is provided that such communication and coordination will occur.

- The applicant has demonstrated measures taken to comply with, and that the project is otherwise consistent with, other laws, rules, policies, or consent decree requirements.

Consistent/Insufficient Information Provided: Based on information provided by applicant and supplemented by the State on Attachment B, it has been demonstrated that the project is consistent as described above.

Inconsistent: After supplemental information has been obtained by the State (if necessary), the State concludes that the project may not be implemented consistent with policies of state,

federal, local and tribal government, including the *RPPC*, or in compliance with applicable laws and rules, including the consent decree.

9. RESOURCES OF SPECIAL INTEREST TO THE TRIBES AND DOI

(Readily Available)

General Consideration: Are any of the following located in the vicinity of the proposal? This criterion will require NRDP consultation with Tribes and DOI. For affirmative response, indicate whether the project may have a positive or negative impact on Tribal cultural resources or Tribal religious sites (as defined in the MOA) and/or natural resources of special environmental, recreational, commercial, cultural, historical, or religious significance to the Tribes or DOI. Projects of potential negative impact require special consideration according to the provisions of the MOA. If necessary, reviewers should utilize the form attached as Attachment B to record any additional information pursuant to this criterion not included in the application and required for complete evaluation of the project.

Beneficial Impact: Project will have or may have beneficial impacts on these special sites/resources.

No Impact: Project has no adverse impacts on these special sites/resources.

Minor Adverse Impact: Project has potential minor adverse impacts on these special sites/resources but protective measures have been integrated or can be easily integrated without significant project changes.

Major Adverse Impact: The project has potential major adverse impacts on these special sites/resources that will require further consideration under terms of the MOA.

STAGE 2 CRITERIA REFLECTING MONTANA POLICIES

10. PROJECT LOCATION

General Consideration: This criterion requires evaluation of the geographic proximity of the project to the injured resources it proposes to restore or replace. The *RPPC* and application instructions express a preference for restoration (or replacement) projects that occur at or near the site of injury, with the exception of Big Blackfoot River native trout restoration or replacement activities (see specific instructions below). There is no absolute scale of distance to determine proximity. Rather, proximity may be judged independently for each project, depending on a number of factors including the natural resource injury addressed and the geographic extent of benefits that may accrue from the project.

Specific instructions regarding Big Blackfoot River native trout restoration or replacement activities: The RPPC requires projects to be in the UCFRB. For projects on the Big

Blackfoot River watershed that an applicant states are intended to restore native trout that cannot, from an economic or practical standpoint, be restored in the UCFRB, categorize the project into the "Big Blackfoot Exception" below. Analyses conducted pursuant to other criteria will determine whether the project will actually accomplish what it says it will. So for the purposes of the "Big Blackfoot Exception" only, rely on applicant's statement for this criterion.

Within Basin and Proximate: All or most of the restoration or replacement activities associated with this project will be conducted at or reasonably near the site of natural resource injury to be addressed through the project.

Within Basin and Proximate/Other: Some of the restoration or replacement activities associated with this project will be conducted at, or reasonably near, the site of natural resource injury to be addressed through the project. Some of the restoration or replacement activities associated with this project will be conducted at other locations away from the site of natural resource injury to be addressed through the project.

Within Basin: All or most of the restoration or replacement activities associated with this project will be conducted at a location that is within the UCFRB but away from the site of natural resource injury to be addressed through the project.

Big Blackfoot Exception: Applicant states that this project proposes native trout restoration or replacement activities located in the Big Blackfoot River watershed which cannot, due to practical or economic considerations, be conducted within other areas of the UCFRB.

Not Applicable: The project is a research or monitoring project.

11. ACTUAL RESTORATION OF INJURED RESOURCES

General Consideration: The *RPPC* states that actual restoration of the resources that are injured should be given priority. This criterion requires evaluation of whether, and to what extent, the project will restore injured natural resources that were the subject of the Montana v. ARCO lawsuit.

Note: The term "restore" under this criterion is used in its specific meaning, i.e., actions are designed to return injured resources and services provided thereby to baseline conditions or accelerate the natural recovery process.

Restoration: All aspects of the project are intended to accomplish restoration of an injured natural resource.

Restoration/Other: Some aspects of the project are intended to accomplish restoration of an injured natural resource.

Contributes to Restoration: Although the project is not intended to directly accomplish restoration of an injured natural resource, some aspects of the project contribute to the restoration of an injured natural resource.

May Contribute to Restoration: Although the project is not intended to directly accomplish restoration of an injured natural resource, some aspects of the project may contribute to the restoration of an injured natural resource.

No Restoration: The project is not intended to accomplish restoration of an injured natural resource, nor is it likely to contribute to restoration of an injured natural resource.

12. RELATIONSHIP BETWEEN SERVICE LOSS AND SERVICE RESTORATION

General Consideration: The *RPPC* states that proposed restoration projects (general sense) that closely link the services that are the project's focus with the service flows that have been impaired, will be favored over projects that do not. To address this criterion, reviewers should examine the connection between the services that a project seeks to provide or augment and the services lost or impaired as a result of natural resource injuries.

Note: Complex projects may involve a combination of the following categories. Reviewers should note which aspects of each project fall into each of the categories.

Same: The services restored or augmented by the project are the same or substantially equivalent to services lost or impaired due to natural resource injury.

Similar: The services restored, augmented, or replaced by the project are not the same or equivalent to, but are similar to those lost or impaired due to natural resource injury.

Dissimilar: There is no connection between the services lost or impaired and the services provided or augmented by the project.

13. PUBLIC SUPPORT

General Consideration: What is the extent of public support for the project demonstrated in the application?

Note: The evaluation conducted pursuant to these instructions is based exclusively on information available at the time of the evaluation, which is primarily the letters of support provided in an application. Subsequently, public support may be demonstrated throughout the funding selection process (e.g. at the pre-draft and draft review stages). This evaluation will need to be updated at each stage in the funding selection process. Public comment may demonstrate further support, opposition, or a mixture of support and opposition.

Broad: Documentation indicates strong and broad public support from numerous and varied persons and entities.

Moderate: Documentation indicates support from more than a few but not numerous persons and entities.

Limited: Documentation indicates public support from a few persons and entities.

None: No public support is documented.

14. MATCHING FUNDS

General Consideration: To what extent does the project entail cost sharing? The State will calculate matching funds by determining the percentage of the total project costs for activities under the project's scope of work to be funded by other sources besides Restoration funds. For projects that are part of a larger project for which future funding will be sought, the State will only consider the matching funds dedicated to the phase of the project that is to be funded by Restoration funds. For land acquisition projects, the State will accept as matching funds payments or donations that make up the difference between the funding request and the appraised value.

Note: If necessary, reviewers will need to consult matching fund entities to determine the likelihood of matching funds. The State's determination of matching funds will not always match the applicant's determination.

High: Confirmed or likely cost share of 50% or greater.

Reasonable: Confirmed or likely cost share of between 25% and 50%.

Limited: Confirmed or likely cost share of between 10% and 25%.

Minimal/None: Cost share < 10%.

15. PUBLIC ACCESS

General Consideration: This criterion evaluates whether a project will affect public access and the positive or negative aspects of any increased or decreased public access associated with the project. Public access is not required of every project, nor is it relevant to all projects.

Increased Access Beneficial: The benefits from the new or enhanced public access created by the project outweigh the adverse impacts associated with this increased access.

Increased Access Detrimental: The adverse impacts associated with new or enhanced public access created by the project outweigh the benefits associated with increased access.

No Access Beneficial: While public access is relevant and could have been a project component, increased access would have been detrimental to the restoration of injured or replacement natural resources in the long-term.

Not Relevant: Public access is not a component of the project, nor is it relevant to the project.

16. ECOSYSTEM CONSIDERATIONS

General Consideration: This criterion examines the relationship between the project and the overall resource conditions of the UCFRB. The State will favor projects that fit within a broad ecosystem concept in that they improve a natural resource problem(s) when viewed on a large scale, are sequenced properly from a watershed management approach, and are likely to address multiple resource problems.

Positive: The project positively fits within a broad ecosystem concept in that it improves a natural resource problem when viewed on a large scale, and/or is sequenced properly from a watershed management approach, and/or addresses multiple resource problems.

Negative: The project does not fit within or is inconsistent with a broad ecosystem concept and this makes it less likely to be effective in the long-term. The project is one that should wait from an ecosystem standpoint until certain environmental conditions occur. For example, problems in the upper portion of a watershed may need to be corrected first before work is conducted downstream.

Not Relevant: The project is a service project for which ecosystem considerations are not relevant.

17. COORDINATION AND INTEGRATION

General Consideration: How well is the project planned to integrate with other ongoing or planned actions in the UCFRB? This criterion addresses coordination with other projects besides remedial actions, which is addressed under Criterion #6. Restoration projects that can be efficiently coordinated with other actions may achieve cost savings.

Coordinates/Integrates: The project coordinates and achieves efficiencies not otherwise possible through coordination with other actions (besides remedial actions).

None: The project does not coordinate/integrate with other actions.

Conflicts: Project may interfere with significant, beneficial on-going or planned actions or is one with missed coordination opportunities.

18. NORMAL GOVERNMENT FUNCTIONS

(Readily Available Information)

General Consideration: The *RPPC* states those activities, for which a governmental agency would normally be responsible or that would receive funding in the normal course of events,

(absent the UCFRB Restoration Fund) will not be funded. The Restoration Fund may be used, however, to augment funds normally available to government agencies to perform a particular project if such cost sharing would result in implementation of a restoration project that would not otherwise occur through normal agency function. For this criterion, reviewers should determine whether the project is intended to accomplish activities that would otherwise not occur through normal agency function.

Note: If necessary, reviewers should utilize the form attached as Attachment B to record any additional information pursuant to this criterion not included in the application and required for complete evaluation of the project.

Outside Normal Government Functions: The project does not involve activities normally conducted by government agencies or obligations of governmental entities under law for which they receive funding or for which they are responsible for securing funding.

Within but Augments Government Functions: The project involves activities that are normally conducted by governmental agencies, but it augments such activities beyond a level required by law and for which funding is presently insufficient to implement the project. This category would apply to activities for which government agencies typically seek funds outside of their normal operating funds, such as supplemental grant funds.

Replaces Normal Government Functions: The project involves activities that are typically funded through a government's normal operating funds or obligations of governmental entities under law.

STAGE 2 CRITERIA – LAND ACQUISITION PROPOSALS ONLY

19. DESIRABILITY OF PUBLIC OWNERSHIP

General Consideration: This criterion assesses the potential benefits and detriments associated with putting privately owned land, or interests in land, under public ownership. Although the State has established a policy that favors actions that actually improve the condition of injured resources and services, land acquisition may be an appropriate replacement alternative.

Restoration Beneficial: The benefits of the acquisition to restoration of injured natural resources and services are considered major and the detrimental aspects of public ownership, if any, are considered minor.

Replacement Beneficial: The benefits of the acquisition to replacement natural resources and services are considered major and the detrimental aspects of public ownership, if any, are considered minor.

Detrimental: The detrimental aspects of putting privately owned lands into public ownership outweigh the benefits derived to public natural resources and services derived from the project.

20. PRICE

General Consideration: To what extent is the land/interest being offered for sale at fair market value?

Reasonable: Documentation indicates property is being acquired at or below fair market value.

High: Documentation indicates property is being acquired above market value.

Uncertain: ***Insufficient information is available at this time for comparison to fair market value.***

STAGE 2 RESEARCH AND MONITORING CRITERIA

These criteria apply to any research activity, whether or not it constitutes the entire project or a portion of the project. These criteria also apply to projects for which monitoring is a significant focus of the project, but not to projects that simply have a monitoring component tied to judging the project's effectiveness. Through minimum qualification determinations, we have already established that the proposed research or monitoring project pertains to restoration of injured natural resources in the UCFRB. These two criteria are designed to distinguish the level of benefits these projects will have on restoration of injured natural resources.

21. OVERALL SCIENTIFIC PROGRAM

General Consideration: To what extent is the monitoring or research project coordinated or integrated with other scientific work in the UCFRB?

Coordinates: The project will augment and not duplicate past and on-going scientific work, focussing on existing data gaps. The applicant has also demonstrated thorough knowledge of and coordination with other scientific work in the Basin.

Does not Coordinate: The project does not involve any coordination or integration with other scientific work in the Basin or may be duplicative.

Uncertain: Insufficient information has been provided to determine the level of coordination/ integration with other scientific work in the UCFRB.

22. ASSISTANCE WITH RESTORATION PLANNING

General Consideration: To what extent will this project assist with future restoration efforts?

Major Benefits: The project will be of major benefit to future restoration efforts in terms of needed information on the status and condition of natural resources and recovery potential/ constraints or assistance with restoration project planning, selection, implementation, and monitoring.

Moderate Benefits: The project will be of moderate benefit to future restoration efforts in terms of needed information on the status and condition of natural resources and recovery potential/ constraints or assistance with restoration project planning, selection, implementation, and monitoring.

Minor Benefits: The project will be of minor benefit to future restoration efforts in terms of needed information on the status and condition of natural resources and recovery potential/ constraints or assistance with restoration project planning, selection, implementation, and monitoring.

ATTACHMENT A

MEPA Terminology

The Montana Environmental Policy Act ("MEPA"), Mont. Code Ann. § 75-1-101 through § 75-1-324, requires state agencies to carry out the policies in part 1 of MEPA through the use of a systematic, interdisciplinary analysis of state actions that have an impact on the human environment. To this end, MEPA has two central requirements: agencies must consider the effects of pending decisions on the environment and on people prior to making each decision; and, agencies must ensure that the public is informed of and participates in the decision-making process. Through the "Environmental Impacts" and "Human Health and Safety" analyses, reviewers accomplish this first important requirement of MEPA. This appendix provides basic information regarding MEPA with which reviewers should be familiar before undertaking their analyses of "Environmental Impacts" and "Human Health and Safety" criteria statements.

1. Terminology used in the *RPPC*: short-term, long-term, direct and indirect adverse impacts.

The *RPPC* states that **short-term**, **long-term**, **direct** and **indirect** adverse impacts will be evaluated. "Short-term" and "long-term" adverse impacts are not specifically discussed in MEPA. These terms, however, should be used by reviewers to subjectively categorize the duration of adverse impacts potentially presented by a project.

The Montana EQC guide to MEPA provides the following definitions of "direct" and "secondary" (rather than indirect) impacts.

- **Direct impacts** are those that occur at the same time and place as the action that triggers the event.
- **Secondary impacts** are those that occur at a different location and/or later time than the action that triggers the effect.

2. MEPA evaluations apply to the "human environment."

Reviewers should be aware that the MEPA analysis of adverse impacts applies to the "**human environment**." The MEPA definition of the term "human environment" includes, but is not limited to "biological, physical, social, economic, cultural, and aesthetic factors that interrelate to form the environment. . . . [E]conomic and social impacts do not by themselves require an EIS . . ." but when an EIS is prepared, "economic and social impacts and their relationship to biological, physical, cultural and aesthetic impacts must be discussed." MEPA Model Rule II (12).

3. What is a "significant" adverse impact, and what is a "minor" adverse impact?

The determination of the "**significance**" of an adverse impact on the human environment involves the consideration of several factors, as set forth in MEPA Model Rule IV. The standard set forth in this rule is somewhat subjective, and reviewers should be

familiar with the rule to make a determination of the significance of adverse environmental impacts. Additionally, there is a library-full of caselaw (speaking metaphorically) on what constitutes a "significant adverse environmental impact." Questionable or borderline determinations should be referred for a legal opinion.

MEPA Model Rule IV sets forth the following criteria for determining the significance of an impact on the quality of the human environment:

(a) the severity, duration, geographic extent, and frequency of occurrence of the impact;
(b) the probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
(c) growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts;
(d) the quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources or values;
(e) the importance to the state and to society of each environmental resource or value that would be affected;
(f) any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
(g) potential conflict with local, state or federal laws, requirements or formal plans.

"**Minor**" adverse environmental impacts are adverse environmental impacts that do not rise to the level of significance.

4. "Mitigation" under MEPA.

Mitigation reduces or prevents the undesirable impacts of an action. Mitigation measures must be enforceable. MEPA Model Rules II(14) and V(2)(h) define mitigation as: avoiding an impact by not taking certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of an action and its implementation; rectifying an impact by repairing, rehabilitating, or restoring the affected environment; or, reducing or eliminating an impact over time by preservation and maintenance operations during the life of an action or the time period thereafter that an impact continues. Examples of mitigation include designs, enforceable controls, or stipulations to reduce the otherwise significant impacts to below the level of significance.

ATTACHMENT B

Supplemental Information Form
(to be utilized by reviewers)

Results of Superfund Response Actions – Supplemental Information

Recovery Period and Potential for Natural Recovery – Supplemental Information

Applicable Policies, Rules and Laws – Supplemental Information

- Additional permits necessary to complete the project on schedule.
- Additional deeds, easements or rights-of-way necessary to complete the project on schedule.
- Additional communication and coordination with local entities necessary to complete the project on schedule.
- Additional measures necessary for compliance and consistency with other laws, rules, policies, or consent decree requirements.

Resources of Special Interest to the Tribes and DOI – Supplemental Information

Funding Policy for Multi-Year Projects[25]

1) The Trustee shall have the flexibility to approve full or partial funding of multi-year projects. Projects would fall into one of two categories:

Category 1 – Multi-year projects that would be approved with the expectation that they will be funded to their completion or, at least, for a certain number of years. A project in this category would not be formally reconsidered for approval in subsequent years; however, the Trustee would annually evaluate the project's funding needs and approve each subsequent year's budget for the project. As part of this evaluation, the Trustee could decide to discontinue funding.

Category 2 – Multi-year projects that would be approved for the first year's funding with the expectation that they will be resubmitted for approval in a subsequent year. A project in this category would be generally one whose future scope or priority over other projects is uncertain. (It's possible that some projects under this category might need more than one year's funding to demonstrate effectiveness.)

2) When approving a multi-year project, the Trustee should use only the projected expenditures in the first year of the project to determine whether the spending limitation for that year will be exceeded. The Trustee should use the projected expenditures in any subsequent year to determine whether the spending limitation for that subsequent year will be exceeded.

3) The Trustee shall limit the amount of multi-year projects that the State commits to pay in the future by assuring that total spending limit in any future year will not exceed the funding limit set for that year. Subject of public review, the Trustee may set future year spending limits on an annual basis.

[25] This policy was approved by the Trustee Restoration Council on November 14, 2000

APPENDIX F

ADVISORY COUNCIL, DEPARTMENT OF INTERIOR, ENVIRONMENTAL PROTECTION AGENCY, AND CONFEDERATED SALISH AND KOOTENAI TRIBES INPUT

For copies of the above
Please contact the
Natural Resource Damage Program
Department of Justice
P. O. Box 201425
Helena, MT 59601
(406) 444-0205