
**2005 FINAL
UPPER CLARK FORK RIVER BASIN
RESTORATION WORK PLAN**

PREPARED BY:

**STATE OF MONTANA
NATURAL RESOURCE DAMAGE PROGRAM
1301 EAST LOCKEY
P. O. BOX 201425
HELENA, MT 59620-1425**

DECEMBER 2005

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I hereby approve of this document and the funding decisions indicated herein:


Governor Brian Schweitzer

12/16/2005
Date

TABLE OF CONTENTS

SECTION 1.0: Executive Summary	1
1.1: Background.....	1
1.2: Work Plan Overview	2
SECTION 2.0: Minimum Qualification Determinations	4
SECTION 3.0: Project Summaries, Maps, and Criteria Summary Tables	5
Greenway Service District: Silver Bow Creek Greenway	6
George Grant Chapter of Trout Unlimited: German Gulch Watershed Restoration Project.....	10
Butte-Silver Bow Local Government: Drinking Water Infrastructure Replacement, Years 5 and 6.....	16
Anaconda Deer Lodge City-County: Seventh, East Sixth & East Eighth Street Water Main Improvements	20
Butte-Silver Bow Local Government: Big Butte Property Acquisition	24
Greenway Service District: Duhamé Property Acquisition	28
Butte-Silver Bow Local Government: Butte Water Master Plan.....	32
SECTION 4.0: Overall Project Ranking & Funding Recommendations	36
APPENDIX A: Project Criteria Narratives	A-1
Greenway Service District: Silver Bow Creek Greenway	A-1
George Grant Chapter of Trout Unlimited: German Gulch Watershed Restoration Project... ..	A-12
Butte-Silver Bow Local Government: Drinking Water Infrastructure Replacement, Years 5 and 6.....	A-38
Anaconda Deer Lodge City-County: Seventh, East Sixth & East Eighth Street Water Main Improvements	A-47
Butte-Silver Bow Local Government: Big Butte Property Acquisition	A-54
Greenway Service District: Duhamé Property Acquisition	A-64
Butte-Silver Bow Local Government: Butte Water Master Plan.....	A-72
APPENDIX B: Project Criteria Comparisons	B-1
Project Criteria Comparisons.....	B-1
Stage 1 Criteria Required by Legal Considerations.....	B-1
Stage 2 Criteria Reflecting Montana Policies	B-7
Stage 2 Land Acquisition Criteria.....	B-12
Stage 2 Monitoring and Research Criteria.....	B-13
APPENDIX C: Project Budget Summary Tables	C-1
APPENDIX D: Input from Advisory Council, DOI, and Tribes	D-1
APPENDIX E: Application Review Guidelines	E-1

List of Figures

Figure 1. Silver Bow Creek Greenway project area7
Figure 2. German Gulch project area.....11
Figure 3. Butte Waterline project area.....17
Figure 4. Anaconda Waterline project area21
Figure 5. Big Butte acquisition project area25
Figure 6. Duhamé acquisition project area29

List of Tables

Table 1. 2005 Restoration Grant Requests5
Table 2. Project Ranking.....36
Table 3. Summary of TRC Draft Funding Recommendations43

List of Acronyms

ADLC Anaconda-Deer Lodge City County Government
Advisory Council Upper Clark Fork River Basin Remediation and Restoration
Education Advisory Council
ARCO Atlantic Richfield Company
B-SB 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 and Conservation
DOI U.S. Department of Interior
EPA U.S. Environmental Protection Agency
FWP Montana Fish, Wildlife and Parks
MOA Memorandum of Agreement
NRDP Natural Resource Damage Program
RPPC UCFRB Restoration Plan Procedures and Criteria
ROD Record of Decision
TRC Trustee Restoration Council
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 1999. 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: Four 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.
- Education Projects that pertain to the restoration or replacement of natural resources in the UCFRB.

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

¹ The Advisory Council consists of 12 citizen volunteers representing the public and various interest groups and 5 government representatives. A list of Advisory Council members is provided in Appendix D.

The State has awarded approximately \$29 million for 42 projects since December 2000. Information on these projects can be found on the Department of Justice website at www.doj.state.mt.us under “Montana Lands” or upon request from the NRDP (406-444-0205).

1.2 Work Plan Overview

This *2005 Final UCFRB Restoration Work Plan (Final Work Plan)* describes the State’s evaluation of the 2005 Restoration Grant applications and draft funding recommendations. The *RPPC* sets forth the process the NRDP follows in evaluating applications and recommending funding. The following summarizes the various phases of the application submittal and evaluation process and describes the sections of the *Final Work Plan*.

- In January 2005, the NRDP distributed the 2005 grant application materials and conducted educational workshops on the application process.
- In March 2005, the NRDP received seven grant applications for a total Restoration fund request of \$10,206,516, with \$7,545,076 requested for 2006 and \$2,661,440 requested for 2007. Based on budget corrections and one reduction in budget, the total amount requested for 2006 decreased to \$7,483,120.
- In April 2005, the NRDP issued its minimum qualification determinations for the seven applications. All seven projects were judged as meeting all the minimum qualification criteria, as covered in Section 2.0.
- The NRDP evaluated the seven projects according to criteria specified in the *RPPC*. Section 3.0 contains a project summary, a map, and a criteria summary table for each project. The criteria summary tables are based on the detailed criteria narratives provided in Appendix A. These evaluations were based on application review guidelines contained in Appendix E that were derived from the criteria set forth in the *RPPC*. Appendix C provides the Budget Summary Tables for each project.
- The NRDP received input from the Department of Interior Confederated and the Salish and Kootenai Tribes (Tribes) on this year’s projects that is provided in Appendix D.
- The NRDP compared the seven projects on a criterion-specific basis as provided in Appendix B. The NRDP then ranked the projects in order of preference for funding consideration based on these criteria comparisons. Section 4.0 presents these rankings.
- The NRDP presented the July 2005 *Pre-Draft* to the UCFRB Advisory Council at its July 13, 2005 meeting. At its August 10, 2005 meeting, the Advisory Council voted to recommend the seven projects for funding in the amounts recommended by the NRDP, subject to the NRDP’s recommended funding conditions. Appendix D contains a summary of Advisory Council decisions, minutes from the Advisory Council’s April 2005 Applicant Symposium and follow-up correspondence to the Symposium, and minutes for the Council’s July 13, 2005, August 10, 2005, and November 9, 2005 meetings.

- At its August 30, 2005 meeting, the Trustee Restoration Council considered and concurred with the recommendations of the NRDP and the Advisory Council. The NRDP incorporated the Trustee Restoration Council’s draft funding recommendations into the *2005 Draft UCFRB Restoration Work Plan (Draft Work Plan)*.
- The NRDP solicited public comment on the *Draft Work Plan* from September 8, 2005 through October 7, 2005. A total of 25 individuals, including representatives of 6 entities, submitted formal comments during the public comment period. The State held a public hearing on the *Draft Work Plan*. Fifteen individuals commented at the Butte hearing held on October 4, 2005. The State received ten comment letters before the public comment period closed on October 7, 2005.
- At its November 9, 2005 meeting, the Advisory Council considered public comments on the *Draft Work Plan* and affirmed their earlier funding recommendations for all seven projects, with an amended recommendation specific to the Duhamé project.
- On November 18, 2005, the Trustee Restoration Council considered public comments on the *Draft Work Plan* and the NRDP’s draft response to these comments. The Council affirmed the draft funding recommendations, with an amended recommendation specific to the Duhamé project, as their final recommendations.
- In December 2005, Governor Schweitzer made the final funding decisions for the seven grant projects and approved this document. Following are the seven projects and amounts approved for funding by the Governor.
 - Silver Bow Creek Greenway – Approved for full funding of \$1,845,500 over two years.
 - German Gulch Watershed Restoration – Approved for partial funding of \$876,162.
 - Butte Waterline – Year 5 approved for full funding of \$1,539,269; Year 6 not approved for funding.
 - Anaconda Waterline – Approved for full funding of \$1,738,700.
 - Big Butte Acquisition – Approved for partial funding of \$667,642.
 - Duhamé Acquisition – Approved for full funding of \$1,643,809.
 - Butte Master Plan – Approved for full funding of \$174,634.

Section 4 provides more detail on these funding decisions. These approvals are subject to certain funding conditions that are also set forth in Section 4.

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 A) of this document. *The State of Montana’s Responses to Public Comments on the Draft 2005 UCFRB Restoration Work Plan* (December 2005) provides copies of the comment letters and public hearing comments received during the public comment period and the State’s responses to these comments. This document is available upon request from the NRDP or from the Department of Justice webpage at www.doj.mt.gov under “Montana Lands.”

2.0 MINIMUM QUALIFICATION DETERMINATIONS

The NRDP initially evaluated the seven 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.
- 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 for the sites.

The seven projects met minimum qualifications and were fully evaluated for Stage 1 and 2 criteria according to the *RPPC* procedures.

3.0 PROJECT SUMMARIES, MAPS, and CRITERIA SUMMARY TABLES

Table 1 summarizes the six projects submitted. The total request for Restoration funds for these projects totals \$10,144,560, of which \$7,483,120 is requested for 2006 and \$2,661,440 is requested in 2007. Project summaries, maps and criteria summary tables follow for each project. The criteria summary tables contain a summary of the detailed criteria narratives evaluations contained in Appendix A.

Table 1. 2005 Restoration Project Requests

APPLICANT	PROJECT	PROPOSED BUDGET	TOTAL NRDP REQUEST	
			2006	2007
Anaconda-Deer Lodge County	Seventh, East Sixth & East Eighth Street Water Main Replacements	NRDP – \$1,738,700 Other – \$ 250,500 Total – \$1,989,200	\$1,738,700	
Butte-Silver Bow Local Government (revised 6/05)	Big Butte Property Acquisition	NRDP – \$ 704,682 Other – \$ 93,893 Total – \$ 798,665	\$704,682	
Butte-Silver Bow Local Government	Drinking Water Infrastructure Replacement Year 5 & 6	NRDP – \$3,124,716 Other – \$1,041,572 Total – \$4,166,288	\$1,539,269	\$1,585,447
Butte-Silver Bow Local Government (revised total 4/05)	Butte Water Master Plan	NRDP – \$ 174,634 Other – \$ 93,211 Total – \$ 267,845	\$174,634	
Greenway Service District (revised 6/05)	Duhamé Property Acquisition	NRDP – \$1,643,809 Other – \$ 0 Total – \$1,643,809	\$1,643,809	
George Grant Chapter of Trout Unlimited	German Gulch Watershed Restoration Project	NRDP – \$ 912,519 Other – \$ 180,736 Total – \$1,093,255	\$912,519	
Greenway Service District	Silver Bow Creek Greenway	NRDP – \$1,845,500 Other – \$ 0 Total – \$1,845,500	\$769,507	\$1,075,993
TOTAL		NRDP – \$10,144,560 Other – \$ 1,660,002 Total – \$11,804,562	\$7,483,120	\$2,661,440

Greenway Service District – Silver Bow Creek Greenway-2005

Project Summary

The Greenway Service District (GSD) is requesting \$1,845,500 over two years (\$769,507 in 2006 and \$1,075,993 in 2007) to restore aquatic and riparian resources along miles 9 and 10 and 16-18 of Silver Bow Creek. All of the proposed Greenway activities will be coordinated with remedial actions. The major actions planned are floodplain enhancement plantings and organic matter placement to restore remediated lands. The proposal also involves pursuing land acquisitions/easements of two parcels in the Silver Bow Creek floodplain.

Subarea Two Description and Major Restoration Components – see figure 1

Subarea two (Reaches F-J or miles 6-10) is 5 miles long and extends from the town of Silver Bow to Miles Crossing, which is about one mile east of Durant Canyon. Along miles 9 and 10 (Reaches I and J), the GSD proposes to add organic matter to borrow soils and plant additional trees, shrubs and forbs on remediated lands. Remedial actions will begin in these reaches in late 2006 and be completed in late 2007. The GSD also proposes to acquire the 120-acre Earhart property. The parcel is located in Ramsay Flats along miles 8 and 9 (Reaches H and I).

Subarea Four Description and Major Restoration Components – see figure 1

In 2004, the Montana Department of Environmental Quality (DEQ) began remedial actions in the floodplain of miles 17 and 18 of Subarea four of Silver Bow Creek. Subarea four (Reaches P-V or miles 16-22) is 7 miles long and extends from the Fairmont Bridge to Warm Springs Ponds. Starting in 2005, DEQ plans to remove tailings from a 420-acre area in the floodplain of Reaches Q and R via truck haul to Opportunity Ponds. This area contains about half of the 1.7 million cubic yards of tailings in Subarea four and is located south of Highway 1. Tailings removal along Reaches Q and R² will be completed by the end of 2006; revegetation work will extend into 2007. Tailings on approximately 100 feet of each side of Silver Bow Creek will not be removed until all upstream work is completed, in approximately 2009 or 2010. This will provide a buffer between the creek and the remediated areas until instream remediation work begins. By 2010, a new channel will be constructed throughout the remediated floodplain and tailings in the streamside buffer area will be removed. The GSD proposes to plant vegetation, add organic matter and enhanced seeding in the tailings excavation areas outside of the stream channel to achieve restoration goals. The GSD also proposes land-planning efforts to evaluate acquisition of the Golden Technologies land parcel located in Reaches Q and R.

Past Silver Bow Creek Greenway Grants

In the last four years, the GSD was awarded approximately \$8 million in Restoration funds for development of the Greenway trail and restoration of aquatic and riparian resources and services along the first 8 miles (Reaches A-H) of Silver Bow Creek. To date, only a portion of this money has been spent, mostly on aquatic and floodplain habitat improvements and on the Ramsay Flats tailings removals. This aquatic and floodplain habitat work has occurred with extensive remedial coordination between the GSD, NRDP and DEQ. In 2005, the GSD will begin paving the first three miles of the trail and constructing the Rocker and Whiskey Gulch trail heads all in Subarea one (Reaches A-E, miles 1-5).

² Reach P (mile 16) may also have tailings removed in late 2006 depending on DEQ's schedule. Limited restoration activities, such as enhanced seeding, may be needed out of funds from this grant. However, the majority of work for this grant in Subarea four will be for reaches Q and R.

Summary of RPPC Criteria Evaluation for Silver Bow Creek Greenway-2005
Applicant: Greenway Service District (GSD)

CRITERIA	<p>The overall goal of this project is to restore aquatic and riparian resources along miles 9-10 and 16-18 of Silver Bow Creek. This effort includes revegetation, organic matter placement, land acquisition, planning and monitoring activities. The total requested costs are \$1,845,500 over two years, with \$769,507 in 2006 and \$1,075,993 in 2007.</p> <p>The Governor approved this project for full funding of \$1,845,500 over two years, with two additional funding conditions besides the normal funding conditions that would require NRDP's approval of all land acquisitions and appraisal and compliance with SB 259 weed control requirements that are specific to public acquisitions.</p>
1. Technical Feasibility	<p><u>Reasonably Feasible:</u> The GSD project will employ well-known and accepted technologies that for the most part have already proven successful in past Silver Bow Creek efforts. The success of the project is contingent on coordination with remedial activities. Although some uncertainty exists with some of the ecological enhancements because the GSD will rely on DEQ's and NRDP's contractors for specific designs that will be produced at a later time in coordination with remedial design efforts, the NRDP agrees with this approach because it provides for optimum coordination with remedy. The success of the land acquisition efforts depends on the results of landowner negotiations and other tasks to be conducted as part of the project.</p>
2. Costs: Benefits	<p><u>High Net Benefits:</u> The project will substantially benefit the injured natural resources of Silver Bow Creek by enhancing fish and wildlife habitat and the ecological and recreational services associated with these restored resources. Organic matter placement, plantings in the floodplain, and aquatic enhancements will accelerate recovery of these resources. The constructed wetlands that could result from land acquisition activities would protect and improve water quality, provide fish and wildlife habitat, store floodwaters, and augment surface water during dry periods. The public will be able to access and enjoy a variety of recreational activities in a restored floodplain corridor in a controlled manner that is protective of restored resources. The project provides for optimal coordination with remedy, thereby achieving significant costs savings.</p>
3. Cost-Effectiveness	<p><u>Likely Cost Effective:</u> The GSD considered the no-action alternative and an alternative of delaying the project until Silver Bow Creek remedial efforts are completed in 10 years. The GSD adequately addressed why both of those alternatives are inferior to the selected alternative, mainly due to an increase of recovery time to a baseline condition for aquatic and wildlife injured resources. A multi-year funding request is appropriate for optimal coordination with remedy.</p>
4. Adverse Environmental Impacts	<p><u>No Significant Adverse Impacts:</u> Short term adverse water quality impacts during construction are possible, which the GSD notes will be addressed through best management practices. Long-term beneficial impacts to the environment will result from this project.</p>
5. Human Health and Safety	<p><u>No Significant Adverse Impacts:</u> Only short-term impacts to human health and safety during construction activities are possible with this project and the GSD appropriately plans to mitigate these.</p>
6. Results of Response Actions	<p><u>Positive Coordination:</u> This project positively coordinates with and augments remedial actions by enhancing both aquatic and terrestrial resources that will be essential for both effective remedy and restoration along Silver Bow Creek.</p>
7. Natural Recovery Potential	<p><u>Reduces Recovery Period:</u> The recovery time will be reduced by the proposed additional floodplain enhancements, which will accelerate the recovery of wildlife habitat. Land acquisitions will also accelerate the recovery of injured resources by properly controlling public use, thereby protecting the remediated and restored areas.</p>

Summary of RPPC Criteria Evaluation for Silver Bow Creek Greenway-2005 Applicant: Greenway Service District (GSD)	
8. Applicable Policies and Laws	Consistent/Sufficient Information Provided
9. Resources of Special Interest	<u>Beneficial Impacts</u> : The project is expected to have beneficial impacts to these resources of special interest due to the improved fish and wildlife habitat resulting from the project. The DOI and Tribes support this project.
10. Project Location	<u>Within Basin and Proximate</u> : All 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	<u>Restoration/Other</u> : The majority of the project components and costs constitute actual restoration. Some project components contribute to restoration such as land acquisition/easements along Silver Bow Creek and the Miles Crossing planning effort.
12. Service Loss/Service Restored	<u>Same and Similar</u> : The project will provide some of the same services as those lost due to injuries, including ecological services that restored habitat provides to fish and wildlife and recreational services such as fishing and hiking.
13. Public Support	<u>7 Support Comments</u> : This project had two letters of support from Butte-Silver Bow Council of Commissioners and one from Anaconda Deer-Lodge County. During the public comment period, an additional five comments were received in support of this project.
14. Matching Funds	None
15. Public Access	<u>Increased Access Beneficial</u> : The proposed land acquisition and management activities will allow the public to access and recreate along Silver Bow Creek in a manner protective of restored resources.
16. Ecosystem Considerations	<u>Positive</u> : The project will result in improvements to the headwaters of the Clark Fork River and benefits multiple natural resources.
17. Coordination & Integration	<u>Coordinates/Integrates</u> : The project fits well with the restoration priorities set out in the <i>Draft Silver Bow Creek Watershed Restoration Plan</i> and coordinates with funded educational projects that are using Silver Bow Creek as an outdoor classroom. The project also coordinates with the proposed German Gulch and Duhamé projects.
18. Normal Government Functions	<u>Outside of Normal Government Function</u> : None of the project activities entail those that a governmental entity is obliged by law to conduct or would normally conduct.
19. Desirability of Public Ownership	<u>Restoration Beneficial</u> : Public ownership of or an easement interest in the Greenway corridor lands provides major benefits to injured natural resources and provides replacement of lost services that are considered to outweigh the decreased tax revenues and increase in demand for governmental services anticipated with this project.
20. Price	<u>Uncertain</u> : The price for land parcels or easements would be determined via appraisals conducted as part of the grants process. The GSD has used a reasonable basis to estimate these costs.

George Grant Chapter of Trout Unlimited German Gulch Watershed Restoration

Project Summary

The George Grant Chapter of Trout Unlimited (GGTU) requests funds to improve aquatic, riparian and upland resources, and recreational access in German Gulch, a key tributary of Silver Bow Creek. To accomplish the goals, the applicant proposes to:

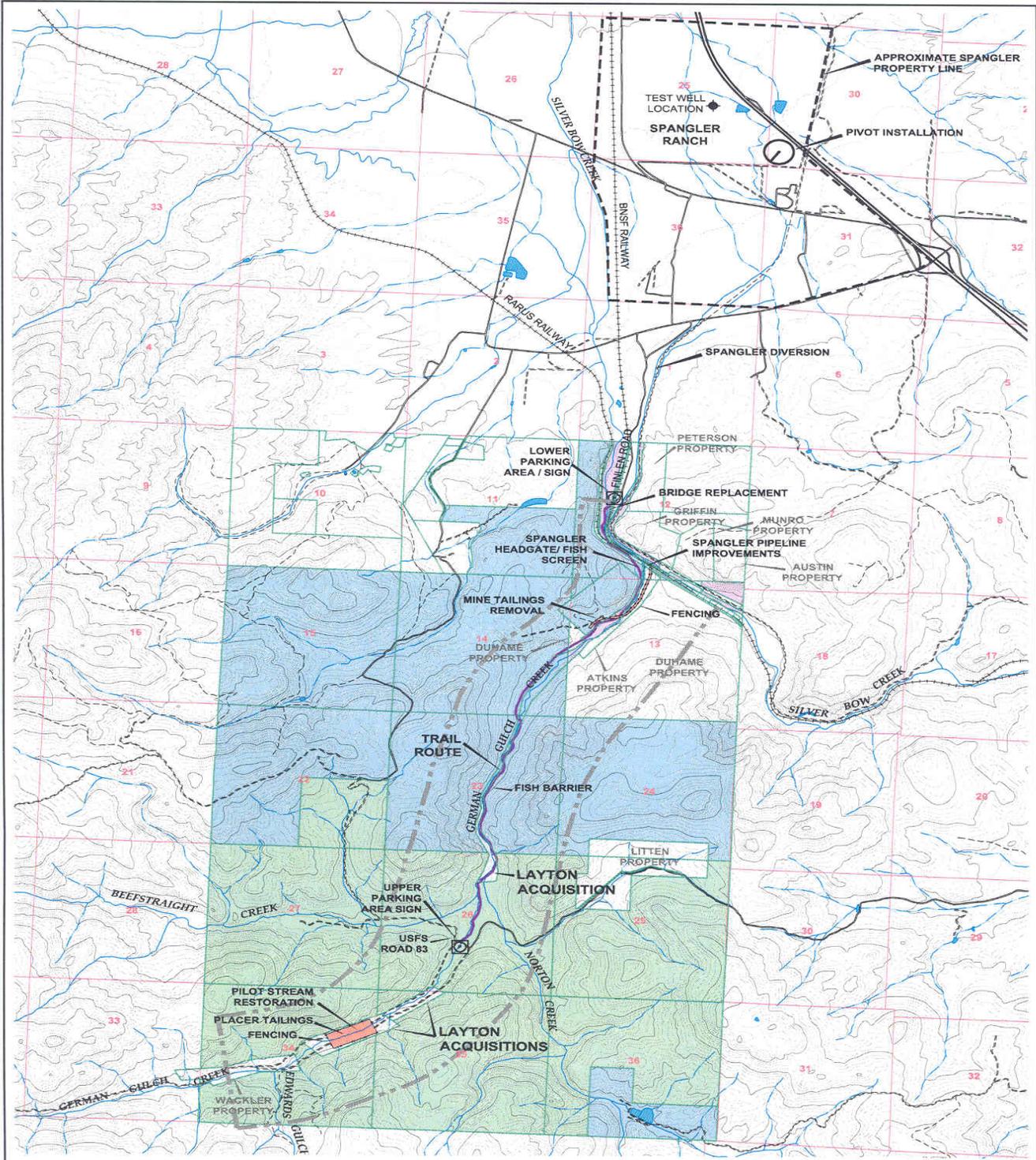
1. Conduct a stream restoration demonstration project on 1,450 feet of German Gulch Creek;
2. Remove 7,200 cubic yards of mine tailings and revegetate the disturbed areas and conduct weed control and planting in upland areas;
3. Construct a 2.5 mile passive recreational trail and replace a bridge;
4. Install a fish barrier, a fish screen, rebuild a headgate and secure a 30-year lease for 2 cfs from Spangler Ranch by:
 - drilling two irrigation wells for Spangler Ranch
 - providing temporary shoring of the Spangler irrigation pipeline
 - developing a plan for the permanent repair of the Spangler pipeline
 - supplying a center pivot irrigation system for the Spangler Ranch;
5. Acquire 82 acres of private land adjacent to the stream corridor; and
6. Conduct a cultural resource inventory and install interpretive signage.

The cost of this proposal is \$1,093,082, with \$912,346 requested in Restoration funds and \$180,736 in matching funds.³ Figure 2 indicates the locations of these proposed activities.

German Gulch enters Silver Bow Creek halfway between Butte and Anaconda. It supports a cold-water fishery of native westslope cutthroat trout and brook trout. The resident westslope cutthroat trout are a nearly genetically pure population that may be a seed stock for the eventual repopulation of this species in Silver Bow Creek. The majority of the proposal area is located adjacent to or in the Mount Haggin Wildlife Management Area (WMA), and all of it is outside the Mt. Haggin injured area.

GGTU has used the results of the two \$25,000 Project Development Grants (PDG) to develop the current restoration proposal for lower German Gulch. The 2002 PDG involved a study to improve channel stability and aquatic habitat in lower German Gulch, an upland vegetation field investigation, a conceptual trail design to provide for public access to lower German Gulch, and investigations of water rights, land ownership, and cultural resources. The 2004 PDG involved characterizing mine tailings areas, conducting a revegetation study, designing a replacement irrigation structure, and evaluating alternatives to increase instream flows.

³ This is a revised budget from that submitted in the March 2005 application based on the NRDP's correction of math errors and clarification of eligible matching funds.



- UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE
- MONTANA DEPARTMENT OF FISH WILDLIFE AND PARKS
- MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
- APPROXIMATE PROJECT BOUNDARY, BIOLOGICAL WEED CONTROL CULTURAL RESOURCE INVENTORY
- TRAIL ROUTE



GERMAN GULCH RESTORATION PROJECT	
DETAIL PROJECT SITE MAP	
GermanGulch-base	DATE: 3/29/05

**Summary of RPPC Criteria Evaluation for German Gulch Watershed Restoration
Applicant: George Grant Chapter of Trout Unlimited**

<p>CRITERIA</p>	<p>The overall goal of this project is to improve aquatic, riparian and upland resources, and recreational access in German Gulch, a key tributary of Silver Bow Creek. The cost of this proposal is \$1,093,082, with \$912,346 requested in Restoration funds and \$180,736 proposed in matching funds. To accomplish the goals, the applicant proposes to complete the following tasks:</p> <ol style="list-style-type: none"> 1. Conduct a stream restoration demonstration project on 1,450 feet of German Gulch Creek; 2. Remove 7,200 cubic yards of mine tailings and conduct weed control and planting in upland areas; 3. Construct a 2.5 mile passive recreational trail and replace a bridge; 4. Install a fish barrier, a fish screen, rebuild a headgate and secure a 30-year lease for 2 cfs from Spangler Ranch by drilling wells and irrigation improvements; 5. Acquire 82 acres of private land adjacent to the stream corridor; and 6. Conduct a cultural resource inventory and install interpretive signage. <p>The Governor approved this project for partial funding of \$876,162, which is \$36,184 less than requested, subject to additional funding conditions that are indicated on a criterion-specific basis below. The reduction results from deleting the \$10,000 in planning costs for a future project that was not supported in the application, from reducing the budget for signage by \$39,300, and an associated \$2,380 in management overhead, combined with a recommended increase of \$15,496 for monitoring. The NRDP’s evaluation is provided on a task-specific basis below for the technical feasibility, cost-effectiveness, and cost:benefit criteria.</p>
<p>Task 1: Stream Restoration Demonstration Project (\$113,238)</p>	<p><u>Reasonably Feasible with NRDP changes/conditions:</u> The success of the stream pilot study depends in part on the selenium releases from the inactive, upgradient Beal Mountain Mine. However, other valuable information is likely to be obtained even if the selenium concentrations increase. Uncertainty also exists about the administrative feasibility of this option, since this reach is located on the proposed Layton acquisition lands as discussed in technical feasibility in Task 5. NRDP proposes to increase monitoring parameters and two additional years monitoring, which increases the grant amount by \$15,496.</p> <p><u>Likely Cost Effective:</u> The pilot study is more cost effective than that of a full stream restoration project and should provide better fish habitat than the no-action alternative.</p> <p><u>Commensurate Benefits:</u> Benefits of the valuable information for future restoration efforts, improved riparian vegetation and channel stability, and possible increase in fish habitat are at least commensurate with its costs.</p>
<p>Task 2: Mine Tailings Removal and Revegetation (\$175,176)</p>	<p><u>Reasonably Feasible:</u> The tailings removal and the weed control are standard land remediation practices. GGTU’s proposed coordination of tailings removal activities with DEQ remedial activities requires approval by DEQ.</p> <p><u>Likely Cost Effective:</u> The proposed action of excavating and removing the waste provides the most permanent long-term solution. Cost savings can be achieved through coordination with DEQ remedial activities.</p> <p><u>Net Benefits:</u> Removal of the tailings and the enhancement of the upland vegetation will remove the potential water quality and human health problems associated with the waste material and facilitate the proposed recreational trails. These benefits exceed the cost of this task.</p>
<p>Task 3: Passive Recreational Trail (\$103,599)</p>	<p><u>Reasonably Feasible with NRDP conditions:</u> Numerous administrative uncertainties exist regarding the bridge and the landowner agreement issues that remain to be resolved. To address these, funding should be contingent upon GGTU resolving legal access issues associated with the bridge, obtaining DEQ’s approval of the proposed bridge design and construction methods, executing a bridge maintenance agreement, and obtaining access permission for the trail, including the trail/railroad crossing and trailhead parking area.</p>

Summary of RPPC Criteria Evaluation for German Gulch Watershed Restoration
Applicant: George Grant Chapter of Trout Unlimited

	<p><u>Likely Cost Effective:</u> The choice of a relatively primitive trail along the proposed route is appropriate. Removal of the existing bridge is needed due to its current poor condition and the bridge’s design. Replacement of the bridge as proposed is necessary and is a likely cost effective alternative to supplying the goal of public access across Silver Bow Creek.</p> <p><u>Net Benefits:</u> The recreational opportunities that would be provided by the trail and bridge in a popular recreational area close to Butte and Anaconda exceed the total cost of the construction.</p>
<p>Task 4: Fish Barrier, Fish Screen, and Water Lease (\$328,292)</p>	<p><u>Uncertain Feasibility:</u> There are no significant uncertainties associated with the fish barrier or fish screen. The ability to drill two wells that will produce 2 cfs and that will not be directly connected to the surface water, as per applicable water right regulatory requirements, is uncertain. The funding of the 30-year water lease should be contingent upon NRDP approval of the lease terms.</p> <p><u>Likely Cost Effective:</u> The proposed alternatives for the fish barrier, fish screen and headgate are the best alternatives to achieve project goals. A more feasible and lower cost alternative for the water lease that would have involved compensating the Spangler Ranch for lost hay production without a replacement groundwater supply was not acceptable to the Spangler Ranch.</p> <p><u>Net Benefits:</u> The German Gulch has an outstanding to high-value fishery resource using FWP’s rating system, including a productive, nearly genetically pure native westslope cutthroat trout fishery. Based on results of the Silver Bow Creek watershed planning effort, it is the tributary that offers the greatest potential to augment restoration of the Silver Bow Creek fishery. The fish barrier will help preserve the native westslope cutthroat trout fishery. The fish screen and water trade would provide the needed flow so that trout can migrate between German Gulch and Silver Bow Creek during low flows, which will assist in providing a native seed stock of nearly genetically pure westslope cutthroat populations to repopulate Silver Bow Creek, and providing cold, clean water to Silver Bow Creek. While there is a financial risk that this water trade would not be completed, the substantial benefits to be gained from the trade make it worth pursuing.</p>
<p>Task 5: 82-acre Land Acquisition (\$50,100)</p>	<p><u>Reasonably Feasible with NRDP conditions:</u> The only significant uncertainty is associated with the possible need for a reappraisal/supplemental appraisal to address a proposed 99-year recreational easement on one of the three parcels. NRDP approval of all land transaction documents and compliance with the provisions of SB 259 regarding weed control is required.</p> <p><u>Likely Cost Effective:</u> The most cost-effective alternative would be an acquisition without the recreational easement. Otherwise, a reappraisal/supplemental appraisal that would be subject of state approval is needed. Under either alternative, it is likely that the budgeted Restoration funds will be adequate to accomplish the desired acquisition.</p> <p><u>High Net Benefits:</u> The recreational opportunities and preservation of riparian areas to be gained by acquiring the parcels significantly exceed the cost and facilitate the stream restoration study and the trail construction.</p>
<p>Task 6: Cultural Resource Inventory & Interpretive signage (\$49,910)</p>	<p><u>Reasonably Feasible with NRDP conditions:</u> The cultural resource inventory and signage are standard practices with no technical uncertainties. To assure that the signage language is an appropriate and legal use of Restoration funds, NRDP review and approval of signage language is needed.</p> <p><u>Likely Cost Effective with NRDP Changes:</u> The cultural resource inventory is cost effective. The NRDP recommends a less expensive, more permanent alternative for signage than that proposed to be funded at \$5,400, which would reduce the budget of this task by \$39,300.</p> <p><u>Commensurate with NRDP Changes:</u> The cultural resource inventory will help facilitate future restoration activities and the signage will educate the public about the area and NRDP’s activities. These benefits are considered commensurate with the revised total costs of \$10,610, as reduced by the NRDP.</p>

Summary of RPPC Criteria Evaluation for German Gulch Watershed Restoration
Applicant: George Grant Chapter of Trout Unlimited

4. Adverse Environmental Impacts	<u>Short-Term Adverse Impacts with Mitigation</u> : GGTU has adequately recognized and planned for potentially short-term adverse impacts that are typically associated with construction activities as well as the potential short-term adverse selenium impacts associated with the pilot study.
5. Human Health and Safety	<u>No Significant Adverse Impacts</u> : The applicant proposes to use safe construction practices in the use of heavy equipment and the proper use of personal protective equipment. There are some concerns about the crossing of the railroad tracks. The proposal will not change human health impacts for any one traveler, but may raise the overall public hazards slightly due to the increase in numbers of people that use the trail.
6. Results of Response Actions	<u>Positive Coordination</u> : The applicant plans to coordinate tailings removal with Silver Bow Creek remediation activities. In addition, the proposed fish screen and water trade (Task #3) efforts would augment Silver Bow Creek remedial efforts aimed at improving aquatic resources.
7. Natural Recovery Potential	<u>Reduces Recovery Period</u> : Augmenting instream flows in German Gulch and re-establishing connectivity between German Gulch and Silver Bow Creek could improve the recovery time frame of injured aquatic resources of Silver Bow Creek.
8. Applicable Policies and Laws	<u>Consistent/Sufficient Information Provided</u> : The proposed pilot stream study, headgate, fish screen, water trade, fish barrier and tailings removal activities will require that all necessary state and federal permits be obtained. The applicant identified and planned for necessary permits.
9. Resources of Special Interest	<u>Likely Beneficial</u> : The DOI and Tribes support this project. The Tribes have commented on GGTU's intended coordination of the cultural resource survey tasks with the Tribes.
10. Project Location	<u>Within Basin and Proximate</u> : The project is located mid-way between Butte and Anaconda and along a small portion of the Silver Bow Creek injured area.
11. Actual Restoration of Injured Resources	<u>May Contribute to Restoration</u> : While this project does not constitute actual restoration of injured resources, it is anticipated that the project will indirectly contribute to restoration of the injured resources of Silver Bow Creek through implementation of the planned improvements of fish passage, enhanced flows between German Gulch and Silver Bow Creek and the proposed stream and floodplain restoration activities.
12. Service Loss/Service Restored	<u>Same/Similar</u> : The natural resource improvements would improve aquatic and terrestrial resources and improve public recreational services that are the same or substantially similar to those covered under the lawsuit.
13. Public Support	<u>16 Support Comments</u> : Letters of support were received from the USFS, FWP (2), Skyline Sportsman Association, Inc., Public Lands/Water Access Association, Inc., Anaconda Sportsman's Club, Clark Fork Coalition, Citizens Technical Environmental Committee, Tri-State Water Quality Council, Native Plant Society, Caring For Creation, and The Divine Mercy Prayer Group. During the public comment period, four additional comments in support of the project were received.
14. Matching Funds	<u>17% Match as revised by NRDP</u> : GGTU's proposal involves 8 different funding sources and matching funds total \$173,702, or 17% of total project costs. The cash match is \$137,841, or 13.5% of total costs; the in-kind match is \$35,861, or 3.5% of the total project costs. All matching funds are confirmed.
15. Public Access	<u>Increased Access Beneficial</u> : Overall, the proposal will increase public access and enhance hunting, hiking, and fishing opportunities in the area. The proposed trail in lower German Gulch and Silver Bow Creek will increase foot traffic. Access to the area will also increase when the proposed Silver Bow Creek Greenway trail has been constructed. GGTU proposes weed control measures to address increased access.

Summary of RPPC Criteria Evaluation for German Gulch Watershed Restoration
Applicant: George Grant Chapter of Trout Unlimited

16. Ecosystem Considerations	<u>Positive:</u> This project fits within a broad ecosystem context by addressing aquatic and upland natural resources. The project seeks to improve the fisheries of a major tributary to Silver Bow Creek in the headwaters of the Upper Clark Fork River. GGTU has appropriately considered upgradient contamination problems.
17. Coordination & Integration	<u>Coordinates/Integrates:</u> This proposal addresses several restoration needs that are ranked as “very high” and “high” in the <i>Draft Silver Bow Creek Watershed Restoration Plan</i> . The project coordinates with the Greenway restoration actions and also with the proposed Duhamé acquisition. In addition, the proposal can help the native fishery better withstand the impacts from upgradient contamination at the Beal mine.
18. Normal Government Functions	<u>Outside/Augments Normal Government Functions:</u> Even though the full project would involve stream, fishery and recreational improvements on lands that are now owned or will be owned by various governmental entities (FWP, DEQ, and the USFS), none of these entities are specifically responsible for these improvements, nor would these agencies receive funding for such activities in the normal course of events. The weed control and environmental assessments tasks are necessitated by or targeted to the proposed restoration activities.
19. Desirability of Public Land Ownership	<u>Restoration Beneficial:</u> The proposed 82-acre acquisition will allow for the construction of the proposed pilot study (Task #1) and trail construction (Task #3) and would protect 1.3 miles of riparian corridor from potentially detrimental land use activities. These benefits outweigh the minor tax revenue decrease and minor increase in demand for governmental services.
20. Price	<u>Uncertain:</u> The NRDP agrees that the property is a key part of the goal of the project, but can only fund the acquisition if it can be purchased at fair market value. A funding recommendation is contingent upon the State’s verification that the purchase price is for fair market value.
21. Overall Scientific Program	<u>Coordinates:</u> The restoration activities and/or monitoring could provide information that is useful to the USFS in remediation at the Beal Mine. Since the extent of selenium contamination is yet unknown, the knowledge gained from the selenium on the fish population in German Gulch due to the stream restoration may be useful elsewhere.
22. Assistance with Restoration Planning	<u>Moderate Benefits:</u> The project will be of moderate benefits to future stream restoration efforts in terms of needed information on the status and condition of natural resources and recovery potential.

Butte-Silver Bow Local Government Drinking Water Infrastructure Replacement – Year Five and Year Six

Project Summary

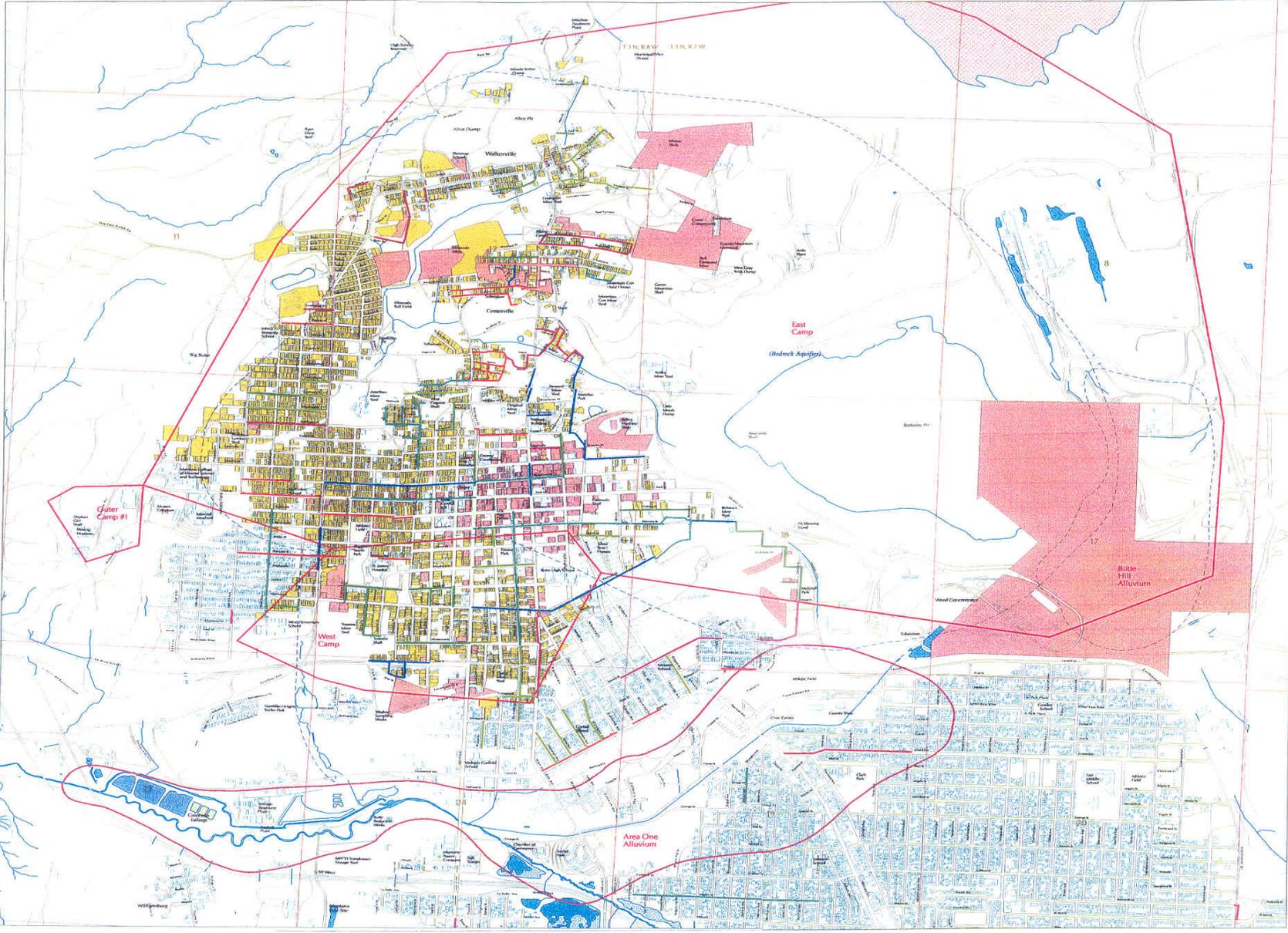
Butte-Silver Bow City-County (B-SB) proposes to replace inadequate water distribution lines in the city of Butte (see figure 3). The proposal is for a multi-year project with the expectation for 2 years (2006 and 2007) of construction funding. In 2006, approximately 17,000 feet of waterline is to be replaced at a cost of \$2,052,359, with \$1,539,269 requested in Restoration funds. In 2007, approximately 17,000 feet of waterline is to be replaced at a cost of \$2,113,929, with \$1,585,447 requested in Restoration funds.

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 and by EPA's 1994 Record of Decision. 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. The State's 1995 Restoration Determination Plan considered upgrading Butte's antiquated water system as a viable restoration alternative for the bedrock groundwater injuries in Butte. Butte is asking for repair of inadequate distribution lines only in the area that has bedrock injury. This proposal will enhance the water supply from an unaffected source, thus compensating the public for some of the lost use of groundwater that Butte has suffered due to the inability to tap clean bedrock groundwater in much of the City.

This proposal totaling \$3,124,716 is for years 5 and 6 of an intended 15-year funding request to the NRDP by B-SB for waterline replacement. The Governor has approved funding for years 1 through 4 totaling \$4,721,513. By applying a 3% rate increase to the year 5 request, the NRDP estimates the total request to the Restoration Fund for the 15-year replacement program would be \$24.4 million.⁴ This evaluation does not address that long-term plan. If B-SB seeks further funding beyond the 2 years of funding under this proposal, it will need to do so through a separate application(s).

⁴ B-SB calculates in the application that the 15-year NRDP contribution would be \$21.7 million; however, this calculation appears to have a math error.

Butte-Silver Bow Drinking Water Infrastructure Replacement Project - Year 5



2005 NRD Grant Application
Appendix A

Legend

- Proposed Water Main Replacements for 2007
- Proposed Water Main Replacements for 2006
- Proposed Water Main Replacements for 2005
- Completed Water Main Replacements for 2004
- Completed Water Main Replacements for 2003
- Completed Water Main Replacements for 2002
- Boundary of Alluvium or Underground Mine workings
- Boundaries From Original Analysis
- Street or Road
- Hydrologic Feature
- Building or Structure
- Section Line
- Parcel-Residence
- Parcel-Commercial Business
- Pond or Containment
- Berkeley Pit

NOVA PROJECTS CONSULTANTS, LLC 1000 20TH AVENUE, SUITE 100 BUTTE, MONTANA 59701
 406.251.1111
 WWW.NOVAPROJECTS.COM

Source for Area One Alluvium: Structural Response Damage Assessment for Butte Area, W.C. Miller & B. B. Smith, 2002.
 GIS Data: Structural Response Assessment by CH2M HILL, for State of Montana.
 Source for Underpinning and Hydrologic System Analysis of East Camp, West Camp and Outer Camp: 2004 Analysis for Structural Response Damage Assessment. Based on settlement report of mine shafts.
 Source for Butte Hill Alluvium: John Kesteven



Summary of RPPC Criteria Evaluation for Butte Waterline Applicant: Butte-Silver Bow City County Government (B-SB) – Year Five and Year Six	
CRITERIA	<p>The overall goal of this two-year project request is to replace 17,000 feet of leaking waterlines in Butte each year. Total project costs for Year 5 (2006) are \$2,052,359, with \$1,539,269 requested in Restoration funds. Total project costs for Year 6 (2007) are \$2,113,929, with \$1,585,447 requested in Restoration funds.</p> <p>The Governor approved Year 5 of this project for funding at the requested amount of \$1,539,269, with no additional funding conditions. Given that this project can be implemented on an annual basis and that the priority of this project over other potential projects in future grant cycles will vary, the \$1,585,447 requested for Year 6 is not approved for funding. It can be subject of a future grant request.</p>
1. Technical Feasibility	<u>Reasonably Feasible:</u> The project will replace 17,000 feet of leaking waterlines using standard engineering and construction practices. B-SB has successfully conducted similar work over the last decade in Butte.
2. Costs:Benefits	<u>Net Benefits:</u> This project replaces services lost due to injured groundwater resources. Benefits include improved fire protection; reduced treatment, repair, and property damage costs that result from reduced leakage; a reduced potential for the distribution system becoming contaminated through leaky and failing pipes; and water conservation. The fact that B-SB had 264 leaks in their system last year indicates a great need for these repairs.
3. Cost-Effectiveness	<u>Likely Cost Effective:</u> The selected alternative of replacing pipe and the level of pipe replacement proposed by B-SB of 17,000 feet is cost effective due to the savings gained from replacing the pipes and the B-SB's successful past work replacing waterlines. Given that this project can be implemented on an annual basis and that the priority of this project over other potential projects in future grant cycles will vary, funding of Year 5 only is recommended.
4. Adverse Environmental Impacts	<u>No Significant Adverse Impacts:</u> B-SB has adequately recognized and planned for potentially short-term adverse impacts that are typically associated with construction activities.
5. Human Health and Safety	<u>No Significant Adverse Impacts:</u> B-SB plans to implement adequate safety measures during construction. The project 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.
6. Results of Response Actions	<u>Consistent:</u> The project will not interfere or duplicate the results of any known EPA Superfund actions.
7. Natural Recovery Potential	<u>No Effect on Recovery Period:</u> This replacement project will not affect the bedrock aquifer's recovery period.
8. Applicable Policies and Laws	<u>Consistent/Sufficient Information Provided:</u> The applicant identified and adequately planned for necessary permits.

Summary of RPPC Criteria Evaluation for Butte Waterline Applicant: Butte-Silver Bow City County Government (B-SB) – Year Five and Year Six	
9. Resources of Special Interest	<u>No Impact</u> : It is unlikely that this project will impact these resources, since work will occur on already constructed and paved streets. The DOI and Tribes support this project. The Tribes have commented on the potential for encountering buried cultural features and/or artifacts during excavation.
10. Project Location	<u>Within Basin and Proximate</u> : The project overlies the injured Butte Hill groundwater resource.
11. Actual Restoration of Injured Resources	<u>No Restoration</u> : The project replaces services of injured groundwater resources that cannot be restored and thus constitutes compensatory restoration.
12. Service Loss/Service Restored	<u>Same</u> : This proposal replaces lost services to thousands of property owners and other members of the public in Butte that could use the bedrock aquifer if it was not injured.
13. Public Support	<u>4 Support Comments; 1 letter of opposition</u> : Two support letters were received from the B-SB Council of Commissioners and Butte Chamber of Commerce. One letter of opposition was received from a Butte resident who is opposed to any use of natural resource damage funds for infrastructure improvements in Butte. During the public comment period, two additional comments were received in support of the project.
14. Matching Funds	<u>25% Match</u> : B-SB will contribute \$475,428 (23%) for construction costs and \$37,661 (2%) for in-kind labor, for a total match of \$513,089.
15. Public Access	Not Applicable
16. Ecosystem Considerations	<u>Positive</u> : By conserving water and reducing power needs for pumping and treating water.
17. Coordination & Integration	<u>Coordinates</u> : With other waterline replacement projects in the Butte area.
18. Normal Government Functions	<u>Augments Normal Government Functions</u> : This project augments normal government function because communities typically rely on a combination of grant funds and user fees to fund such projects and because of the pervasive groundwater contamination underlying Butte.

Anaconda-Deer Lodge County Seventh, East Sixth and East Eighth Water Distribution Upgrade

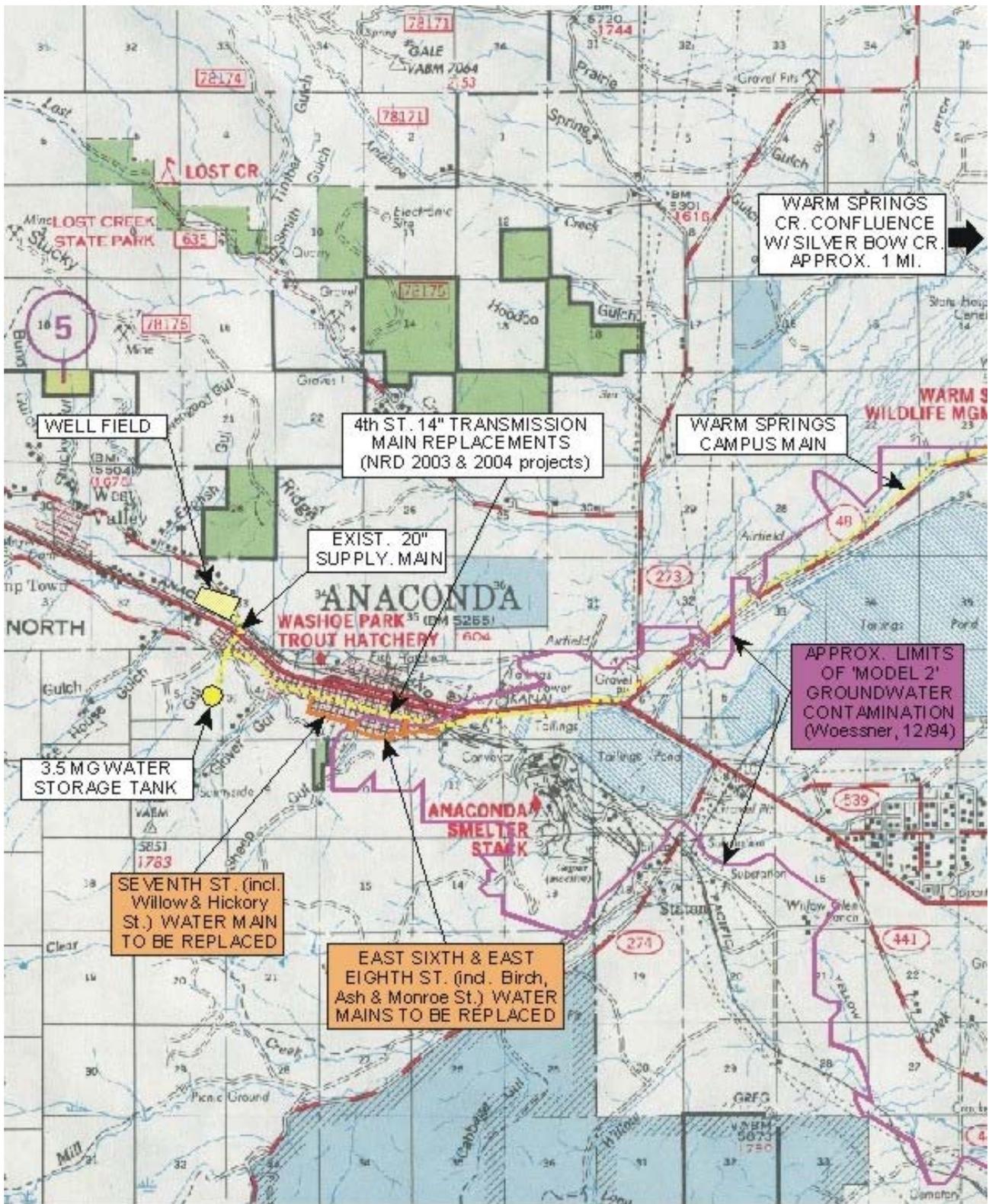
Project Summary

Anaconda-Deer Lodge City County (ADLC) proposes to replace 11,800 feet of leaking, 104-year old waterlines along Seventh, East Sixth and East Eighth streets in the City of Anaconda (see figure 4). The total project costs are \$1,989,200, with \$250,500 in matching funds and \$1,738,700 requested in Restoration funds. Currently, Anaconda's water system is losing 2.2 million gallons of water per day via leaking waterlines, which could be further reduced by 350,000 gallons per day if this project is implemented. Repairing these leaks is an alternative that will provide the city with additional water resources instead of developing a new source of water.

Anaconda is located adjacent or partially within the 40 square miles of groundwater contamination associated with the Anaconda Regional Water, Waste, and Soils Operable Unit. 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 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 indicates some 30 square miles of contaminated bedrock groundwater to the north and south of the City.

This request is the fourth year of what ADLC has indicated will be a multi-year funding request to replace the waterline system, with \$2,968,376 in Restoration funds approved for 18,375 feet of waterline replacement and 2,150 feet of new waterline installation in the past three years. With implementation of this project, 52,910 feet of waterline would remain to be addressed in future projects.⁵ ADLC has identified \$12.5 million of needed water system upgrades in the next seven years, but has not indicated what portion of those costs would be sought in Restoration funds.

⁵ The 2004 Preliminary Engineering Report (PER) for Anaconda's Municipal Water System (prepared for ADLC by HKM Engineering, of Butte, August 2004) indicates 72,910 feet of waterline in need of repair. With the completion of 8,200 feet for West Fourth approved in 2004 and 11,800 feet for this proposed project, 52,910 feet of waterline would remain to be addressed in future projects.



ADLC Seventh, East Sixth & East Eighth Water Main Replacements

FIGURE 1 – PROJECT LOCATION

Summary of RPPC Criteria Evaluation for Anaconda Waterline Applicant: Anaconda Deer Lodge County (ADLC)	
CRITERIA	<p>The overall goal of this project is to replace 11,800 feet of leaking 104-year-old waterlines along 7th, East 6th, and East 8th Streets and save up to 350,000 gallons of water per day. The total project cost is \$1,989,200, with \$1,738,700 requested in Restoration funds.</p> <p>The Governor approved this project for full funding of \$1,738,700, with only the normal funding conditions.</p>
1. Technical Feasibility	<u>Reasonably Feasible</u> : The project will replace 11,800 feet of waterlines, most of which are 8” in diameter, using standard engineering practices, conforming to Montana Public Works Standards and DEQ requirements. ADLC proposes the same level of effort and approach used to complete past waterline projects. ADLC has successfully completed over 45,000 feet of waterline replacement projects since 1994.
2. Costs:Benefits	<u>Net Benefit</u> : ADLC estimates replacement of the 7th, East 6th, and East 8th Streets waterline will save up to 350,000 gallons of water loss per day. The project offers substantial benefits to the Anaconda public by reducing water treatment, property damage and repair costs associated with leaks, reducing the need to seek additional water supplies, offering greater fire protection, and conserving water. Using ADLC’s estimated production/delivery cost of \$1.07 per thousand gallons, a water savings of 350,000 gallons/day would result in about \$138,000 in annual benefits, which far exceeds the annual equivalent cost of the \$1.99 million project of \$23,400 per year. The project constitutes compensatory restoration for extensive injuries to the aquifers surrounding Anaconda.
3. Cost-Effectiveness	<u>Cost Effective</u> : The costs are considered reasonable as they are based on bids from the 2003 and 2004 waterline projects, preliminary draft design plans for the 7th, East 6th, and East 8th Streets waterline project, and ADLC’s consulting engineer’s knowledge and experience. ADLC’s detailed alternatives analyses demonstrated the selected approach was cost-effective.
4. Adverse Environmental Impacts	<u>No Significant Adverse Impacts</u> : Replacing Anaconda’s 7th, East 6th, and East 8th Streets waterline presents no significant adverse impacts to the environment. Water conservation is an environmental benefit that will likely result.
5. Human Health and Safety	<u>No Significant Adverse Impacts</u> : Potentially adverse impacts during construction activities include dust, noise, temporary loss of water service, restricted access to commercial facilities, worker safety, and disruption of traffic flow. The ADLC has proposed mitigation measures to alleviate these adverse impacts. The project can have beneficial impacts to human health and safety by enhancing the reliability of the water service and distribution.
6. Results of Response Actions	<u>Consistent</u> : The project will not interfere or duplicate the results of any known EPA Superfund actions.
7. Natural Recovery Potential	<u>No Effect on the Recovery Period</u> : This replacement project will not affect the groundwater recovery period.
8. Applicable Policies and Laws	<u>Consistent/Sufficient Information Provided</u> : ADLC indicates they will submit the required drawings to DEQ for review, coordinate with DEQ if contaminants are encountered, and follow Montana Public Works Specifications.
9. Resources of Special Interest	<u>No Impact</u> : It is not anticipated this project will have adverse impacts on resources related to the Tribes or DOI. The DOI and Tribes support this project. The Tribes have commented on the potential for encountering buried cultural features and/or artifacts during excavation.

Summary of RPPC Criteria Evaluation for Anaconda Waterline Applicant: Anaconda Deer Lodge County (ADLC)	
10. Project Location	<u>Within Basin and Proximate</u> : The project will occur in Anaconda within and adjacent to injured groundwater resource areas.
11. Actual Restoration of Injured Resources	<u>No Restoration</u> : This project constitutes replacement of lost services because it replaces drinking water lost in the area as a result of contamination where cleanup is infeasible.
12. Service Loss/Service Restored	<u>Same/Similar</u> : This project replaces services lost; injured groundwater resources somewhat limit ADLC's potential sources for water development, thus making conservation of existing sources an effective means of enhancing its water resources.
13. Public Support	<u>7 Support Comments</u> : Five letters of support were received from the ADLC Council of Commissioners, Anaconda Chamber of Commerce, Anaconda Local Development Corporation, Anaconda Public Schools and AFFCO Fabricating. During the public comment period, an additional two comments in support of this project were received.
14. Matching Funds	<u>12.6% Match</u> : ADLC proposes matching funds of \$230,500 in cash and \$20,000 of in-kind services for a total match of \$250,500.
15. Public Access	Not Applicable
16. Ecosystem Considerations	<u>Positive Impacts</u> : An estimated 350,000 gallons of water per day will be conserved, reducing water treatment and energy requirements for pumping and treating. Overall, only 16% of the water losses are being addressed with this request.
17. Coordination & Integration	<u>Integrates</u> : This waterline project is integrated with ADLC's Preliminary Engineering Report, which proposes replacement of waterlines on a priority basis.
18. Normal Government Functions	<u>Augments Normal Government Functions</u> : This project augments normal government function because communities typically rely on a combination of grant funds and user fees to fund such projects and because of the extensive injuries to Anaconda area groundwater resources.

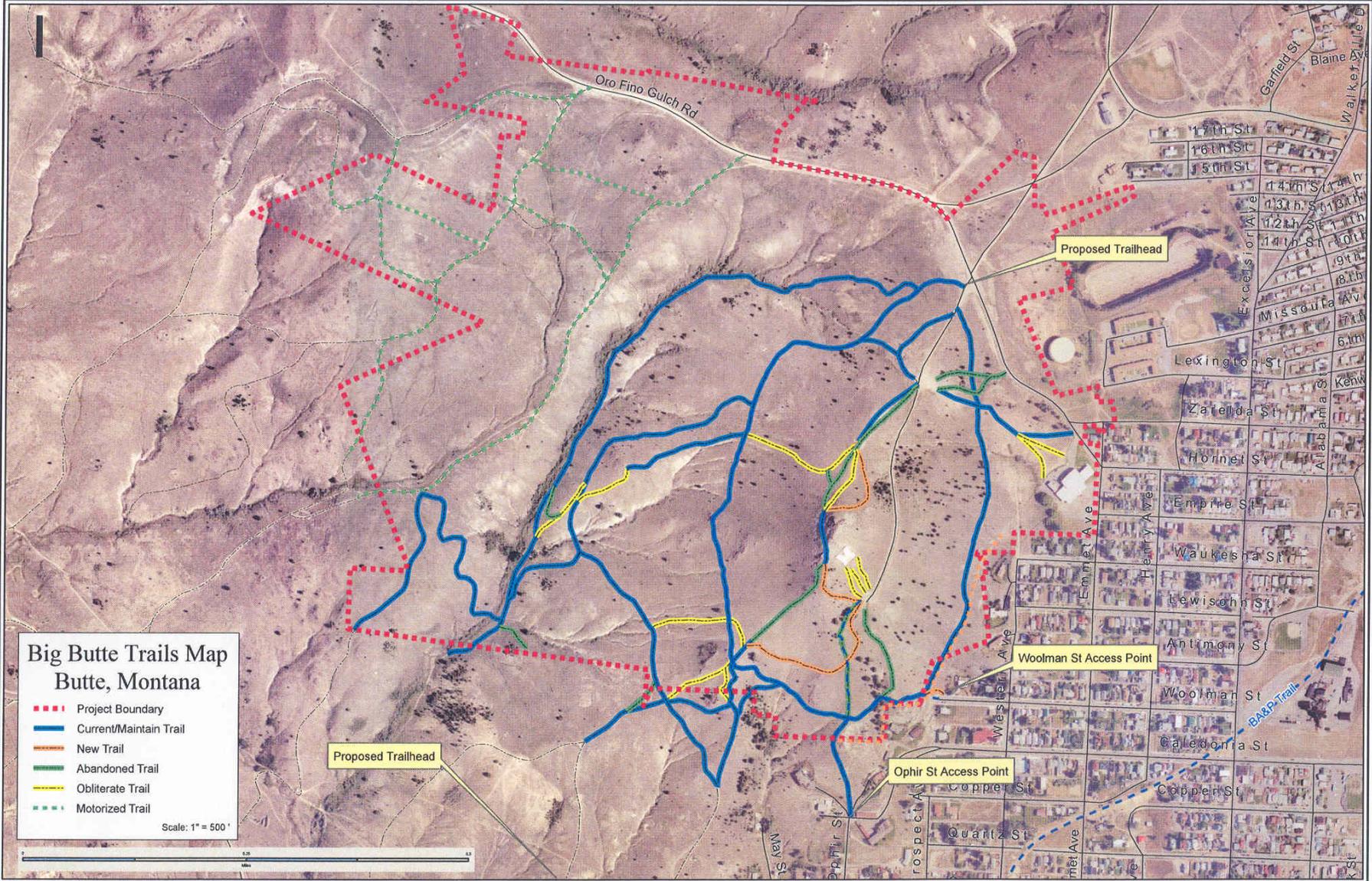
Butte Silver Bow Big Butte Property Acquisition

Project Summary

Butte-Silver Bow (B-SB) requests \$704,682⁶ to acquire the approximately 300-acre Big Butte property located adjacent to Butte's urban corridor for public ownership, use and management and to conduct initial protection measures of fencing, signage, and trail rehabilitation (see figure 5). B-SB proposes contributing \$93,893 in matching funds. Of the \$704,682 requested, \$630,633 is budgeted for the acquisition and \$74,049 for protection measures.

The Big Butte property is comprised of approximately 21 privately owned mining claims and tracts. Historically, these lands have been open to the public and recreational users in Butte have used these areas for a variety of activities. Due to public interest in maintaining access to this area, B-SB sought and received a \$20,200 Project Development Grant in 2004 from the NRDP to pursue purchasing this property. Currently 61% of the targeted Big Butte area (181 acres) is under a buy-sell and/or options agreements, another 22% (66 acres) have verbal commitments and negotiations are progressing on the balance. Through this acquisition, B-SB seeks to secure public access to lands that provide an array of recreational opportunities and to preserve and protect the property's natural resource and scenic values.

⁶ The original application was for \$694,749 but due an omission of three parcels in the appraisal, the amount of the request increased by \$9,932. This amount includes the purchase price for the added parcels, realtor fees, title fees and contingency. The applicant's match also increased by \$700.



Big Butte Trails Map
Butte, Montana

- Project Boundary
 - Current/Maintain Trail
 - New Trail
 - Abandoned Trail
 - Obliterate Trail
 - Motorized Trail
- Scale: 1" = 500'

**Summary of RPPC Criteria Evaluation for Big Butte Property Acquisition
Applicant: Butte-Silver Bow City-County Government (B-SB)**

CRITERIA	<p>The overall goal of this project is to acquire the approximately 300-acre Big Butte Property adjacent to Butte’s urban corridor for public ownership, use, and management and to conduct initial protection measures of fencing, signage, and trail rehabilitation. Total project costs are \$798,575, with \$704,682 requested in Restoration funds. \$630,633 is budgeted for the acquisition and \$74,049 for protection measures.</p> <p>The Governor approved this project for partial funding of \$667,642, which is \$37,040 less than requested, subject to a few additional conditions besides the normal funding conditions: 1) NRDP approval of the operations and management plan to verify its consistency with application; 2) NRDP approval if a reduced number of acres are to be acquired than what is proposed as a result of failure to complete some of the landowner negotiations; 3) verification from the remaining title work that the property is properly appraised without any encumbrances that significantly affect the property and its potential public uses; and 4) compliance with the provisions of SB 259 regarding weed control.</p>
1. Technical Feasibility	<p><u>Reasonably Feasible with NRDP changes/conditions:</u> The objectives of securing public ownership by acquisition and protecting the acquired area through trail work and restrictions and associated user-education efforts have a reasonable likelihood of success. Due to potential contamination problems, parcel 6 should not be included in the acquisition. All areas within the acquisition area will be designated non-motorized except for 73.56 acres west of the Whisky Gulch road, which will be open to motorized use on existing roads and trails. A few uncertainties do exist with this project; the first being B-SB’s ability to provide the needed enforcement on the non-motorized sections. In addition, a risk does exist that the negotiations with multiple landowners may not result in the full acquisition. 61% of the property is under buy/sell agreements and another 22% have verbal commitments. Finally, most of the title work remains to be completed; therefore, it is unknown whether any encumbrances exist that may affect the property value and its potential public uses.</p>
2. Costs:Benefits	<p><u>Net Benefits with NRDP changes:</u> The project will provide the public with a variety of low-impact recreational opportunities; preserve open space and scenic views; protect the area from high impact uses; and provide buffer lands to decrease impacts to wildlife. With the property’s location on the edge of the Butte urban area and its close proximity to Montana Tech, this acquisition can provide immediate benefit to a significant segment of the public. These benefits make the investment in the property and needed protection measures worthwhile, except for parcel #6 as described under criterion #1.</p>
3. Cost-Effectiveness	<p><u>Likely Cost Effective:</u> The NRDP considers the transaction costs as reasonable and the approach of county ownership and management and development of a conservation-oriented management plan as sound. The parcels are priced at or below fair market value.</p>
4. Adverse Environmental Impacts	<p><u>No Significant Adverse Impacts:</u> No significant adverse environmental impacts are projected due to this acquisition and the subsequent protection activities. With the proposed use of conservation-oriented management and weed management plans, B-SB can reduce the likelihood and magnitude of potential impacts from increased public use. Proper trail building and maintenance practices will be used to decrease the potential for erosion.</p>
5. Human Health and Safety	<p>No Adverse Impacts</p>
6. Results of Response Actions	<p><u>Consistent:</u> This property acquisition and associated protection activities will not conflict with any Superfund response actions. Parcel #6 has potential contamination problems, thus the NRDP is not recommending this parcel for purchase.</p>
7. Natural Recovery Potential	<p><u>No Effect on Recovery Period:</u> The acquisition will not affect the timeframe for recovery of injured resources.</p>

**Summary of RPPC Criteria Evaluation for Big Butte Property Acquisition
Applicant: Butte-Silver Bow City-County Government (B-SB)**

8. Applicable Policies and Laws	<u>Consistent/Sufficient Information Provided:</u> B-SB has appropriately planned for needed regulatory changes and development of a conservation-oriented management plan specifying permitted uses and addressing alternatives for high impact users. B-SB indicated in the application that they would be responsible for weed control and abide by state and local weed management requirements.
9. Resources of Special Interest	<u>No Impact:</u> According the B-SB Historic Preservation Officer, there are no known Tribal resources located with the Big Butte Area property boundaries. The DOI and the Tribes support this project. The Tribes have requested that B-SB address the potential for and protection of cultural resources in its management plans.
10. Project Location	<u>Within Basin and Proximate:</u> The proposed Big Butte land acquisition is located on 300 acres next to the Butte’s urban corridor.
11. Actual Restoration of Injured Resources	<u>No Restoration:</u> The acquisition is a replacement project and is not intended to accomplish restoration of an injured natural resource.
12. Service Loss/Service Restored	<u>Similar:</u> This project acquires land for open space and public access for low impact natural resource based recreational opportunities. These services are substantially similar to some of the lost recreational and habitat services addressed under <u>Montana v. ARCO</u> .
13. Public Support	<u>19 Support Comments and a petition with 24 signatures:</u> Letters of support were received from ARCO, Montana Tech and the Butte Chief Executive and Council of Commissioners, Mining City Trail Riders and Sacred Ground. Copies of a petition expressing support for the project signed by 24 individuals were included in the application. During the public comment period, an additional 13 comments in support of the project were received.
14. Matching Funds	<u>7% Match:</u> Matching funds as revised by the NRDP total \$47,775, all of which is in-kind.
15. Public Access	<u>Increased Access Beneficial:</u> The Big Butte area is presently under private ownership; public access is informally allowed by the landowners. The acquisition of these private lands for ownership by B-SB will assure perpetual public access for a variety of low-impact recreational uses and B-SB’s conservation-oriented management plans will mitigate impacts of increased public access.
16. Ecosystem Considerations	<u>Positive:</u> This acquisition fits within a broad ecosystem context because it is aimed at protecting the lands and natural resources in the headwaters area of the UCFRB from potential detrimental impacts associated with development and high-impact uses.
17. Coordination & Integration	<u>Positive:</u> This project falls within the priorities established in the <i>Draft Silver Bow Creek Watershed Restoration Plan</i> . The trails associated with this acquisition will also provide connecting trails between the Greenway Service District Trails as well as the Historic BA&P Trails.
18. Normal Government Functions	<u>Outside Normal Government Functions:</u> No governmental entity is specifically responsible for acquiring lands in the UCFRB, nor does any governmental entity receive funding for such acquisitions in the normal course of events. This is also the case with the proposed protection measures.
LAND ACQUISITION CRITERIA	
19. Desirability of Public Ownership	<u>Replacement Beneficial:</u> The potential benefits of public ownership of this property are summarized under Criterion #2. While public ownership would preclude future development, the associated economic loss is acceptable to B-SB and other public input to date is supportive of the project. B-SB also accepts full responsibility for the increased demand in governmental services associated with this project.
20. Price	<u>Reasonable:</u> Appraisals commissioned by B-SB of the various parcels comprising the acquisition totaled \$576,480 for 298 acres. Reducing the acquisition price by \$37,040 for Parcel 6, which is not recommended for funding, the total purchase price would be \$539,440 based on the fair market value of the parcels totaling 278 acres.

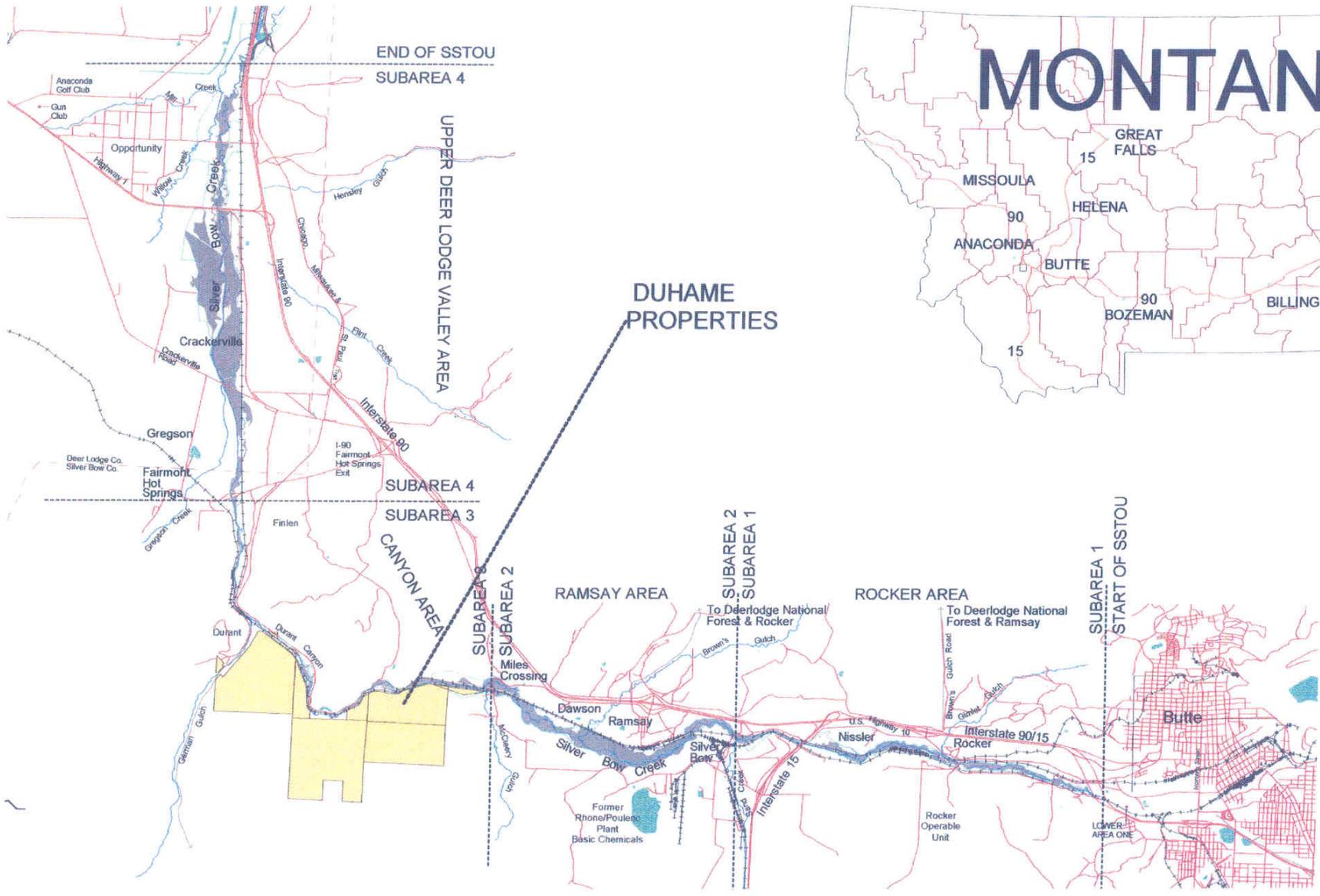
Greenway Service District Duhome Property Acquisition

Project Summary

The Greenway Service District (GSD) requests \$1,643,809⁷ to acquire the 1,745-acre Duhome property located immediately south of Durant Canyon along Silver Bow Creek for public ownership, use, and management (see figure 6). The purchase would acquire wildlife habitat and public non-motorized access for hunting, camping, hiking and other recreational uses. The Duhome property, which has elevations varying from 5,200 to 6,200 feet, provides a variety of landscapes for year-round and critical winter range for wildlife habitat. The property partly borders four miles of the Silver Bow Creek floodplain.

The property also borders the Montana Fish, Wildlife and Parks (FWP) Fleecer and Mount Haggin Wildlife Management Areas (WMA). The GSD and FWP plan to incorporate the Duhome property as an extension of FWP lands if the land is purchased. This request includes \$156,000 for initial fencing, surveying, and weed control efforts. Long-term management and maintenance would be integrated with adjoining state lands if this land were put into public ownership.

⁷ This request is \$71,889 less than the original request due to the applicant's revisions, which are discussed in criterion #1.



Summary of RPPC Criteria Evaluation for Duhome Property Acquisition
Applicant: Greenway Service District (GSD)

CRITERIA	<p>The GSD requests \$1,643,809 to acquire the 1,745-acre Duhome property located near Silver Bow Creek for public ownership, use and management and to conduct initial protection measures. \$1,487,830 is requested for the property acquisition and \$155,979 is requested for five years of maintenance, weed control and a land survey. There are no matching funds.</p> <p>The Governor approved funding of this project at the requested amount of \$1,643,809, which includes \$1,487,830 for land purchase and \$155,979 for five years of land maintenance activities, subject to the Duhome obtaining legal access to the Duhome property from a third party that would provide FWP access to the property in a manner acceptable to it. Other conditions of funding besides the normal funding conditions would be compliance with the provisions of SB 259 regarding weed control for public acquisitions, satisfactory resolution of the indemnification issues, and approvals of the FWP Commission and State Land Board.</p>
1. Technical Feasibility	<p><u>Potentially Feasible:</u> Since the NRDP’s initial evaluation of this project for the July 2005 <i>Pre-Draft Work Plan</i>, most of the uncertainties associated with appraisal and title work have been resolved. Appendix A provides the background about these issues and how they were resolved through the grant evaluation and funding decision process. Title work completed in September 2005 verified that legal access did not exist to the property, and the State’s 10/21/05 appraisal considered the lack of legal access in its valuation of the property. The Governor finds that if the above-described legal access is obtained, an updated appraisal is not necessary and funding would be approved at the requested amount. The GSD has properly outlined and planned for the process required for FWP to own, operate and manage the Duhome property; however, the required approvals by the FWP Commission and State Land Board remain to be obtained. Another issue that needs to be resolved to the State’s satisfaction is the indemnification requirements that are tied to a restrictive covenant on about 270 acres of the property.</p>
2. Costs:Benefits	<p><u>Potential Net Benefits:</u> Public acquisition of the Duhome property offers substantial benefits to wildlife resources and associated public recreational services. The property provides a variety of landscapes for year-round and critical winter range wildlife habitat, scenic views and open space, and a variety of associated recreational opportunities such as such as hunting and wildlife viewing. The Governor finds that if the funding conditions are met, the project will provide net benefits.</p>
3. Cost-Effectiveness	<p><u>Potentially Cost Effective:</u> The Governor finds that if the funding conditions are met, the project will be cost effective.</p>
4. Adverse Environmental Impacts	<p><u>No Significant Adverse Impacts:</u> Purchase of the Duhome property presents no adverse impacts to the environment. The acquisition and proposed protection measures will likely enhance the natural resources of the property and nearby lands by protecting natural resources from potentially detrimental development or land management activities.</p>
5. Human Health/Safety	<p>No Adverse Impacts</p>
6. Results of Response Actions	<p><u>Positive Coordination:</u> Public ownership of the Duhome property would complement the remediation efforts planned for the Silver Bow Creek floodplain corridor along Durant Canyon. Even though there is a 270-acre “no build” restriction on some of the property along the Canyon, public ownership and the protection of the entire parcel would be beneficial to the wildlife and public that will utilize the Canyon.</p>
7. Natural Recovery Potential	<p>No Effect on Recovery Period</p>
8. Applicable Policies/Laws	<p>Consistent/Sufficient Information Provided</p>
9. Resources of Special Interest	<p><u>Potentially Beneficial:</u> The DOI and Tribes support this project. The Tribes have noted the need for a cultural resource review and possible cultural resources survey in the event of surface or subsurface disturbances.</p>

Summary of RPPC Criteria Evaluation for Duhome Property Acquisition
Applicant: Greenway Service District (GSD)

10. Project Location	<u>Within the Basin and Proximate:</u> The 1,745 acres of Duhome lands are mid-way between Butte and Anaconda along four miles of the southern border of Durant Canyon and Silver Bow Creek. Lands in the narrow floodplain of Durant Canyon itself are owned by railroad companies or DEQ.
11. Actual Restoration of Injured Resources	<u>May Contribute to Restoration:</u> Wildlife populations whose range might extend to the nearby-injured areas would benefit from public ownership and the protection from potentially detrimental development and land management uses that this project offers.
12. Service Loss/Service Restored	<u>Same:</u> This project would provide public recreational services that are substantially equivalent to some of the services lost due to natural resource injuries in the UCFRB such as hunting and wildlife viewing.
13. Public Support	<u>43 Support Comments and a petition with 393 signatures:</u> Support letters were received from Trout Unlimited, Butte Silver Bow County, FWP (2 letters), an adjacent landowner, the Duhome family and 13 individuals. 196 individuals signed a petition in support of the project. During the public comment period, an additional 15 comments were submitted in support of the project and an additional 197 names were submitted on a support petition.
14. Matching Funds	None
15. Public Access	<u>Increased Access Beneficial:</u> This project will ensure permanent public access by securing public ownership. The land was previously not open to the public and public ownership will ensure access from nearby public lands via foot travel only since no existing roads go directly to the property. The planned protection measures such as weed control and conservation-oriented management by FWP will mitigate any negative impacts from increased public access.
16. Ecosystem Considerations	<u>Positive:</u> This project fits within a broad ecosystem context because it is aimed at further protecting the lands surrounding Silver Bow Creek, which are the headwaters of the UCFRB.
17. Coordination & Integration	<u>Coordinates/Integrates:</u> The project fits well with the watershed benefit priorities set out in the <i>Draft Silver Bow Creek Watershed Restoration Plan</i> , such as preservation/protection of high quality resources.
18. Normal Government Functions	<u>Outside Normal Government Function:</u> Acquisition of the Duhome 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. FWP will take over funding all needed maintenance after the initial 5 years of grant funding.
19. Desirability of Public Ownership	<u>Replacement Beneficial:</u> The benefits of the acquisition to replacement resources are considered major and outweigh the potential loss of increased tax revenue that would occur with development and the increased demand in governmental services that would result from public acquisition.
20. Price	The Governor approves the project costs set forth above, without requiring an updated appraisal, provided legal access for and satisfactory to FWP is obtained.

Butte-Silver Bow Local Government The Water Master Plan

Project Summary

Butte-Silver Bow City County (B-SB) proposes to prepare a water master plan to identify and prioritize future water system needs. Total project costs are \$267,845, with \$174,634 requested in Restoration funds and \$93,211 in matching funds.⁸ Components of the water master plan include water demands, water supplies and facilities. The master plan is intended to serve as the roadmap for implementing major capital improvements.

Butte's bedrock 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 and by EPA's 1994 Record of Decision. Restoration of the bedrock aquifer is infeasible, thus the aquifer's drinking water storage capacity and transport services have been lost for thousands of years. This proposal constitutes replacement because it is a critical planning element needed to identify the best water replacement alternatives that will enhance the supply and delivery of uncontaminated drinking water to the Butte public. It will thus compensate the public for some of the lost use of groundwater that Butte has suffered due to the inability to tap clean ground water in much of the City.

⁸Due to a math inaccuracy, the total costs for the water master plan is \$35,000 more than the \$232,845 that was estimated in the original proposal. B-SB has agreed to cover this cost, thereby increasing the applicant's match. This evaluation is based on the revised budget.

No map for Butte Master Plan

Summary of RPPC Criteria Evaluation for the Water Master Plan Applicant: Butte-Silver Bow City-County Government (B-SB)	
CRITERIA	<p>The overall goal of this project is to prepare a water master plan to identify and prioritize future water system needs in Butte. Total project costs are \$267,825, with \$174,634 requested in Restoration funds.</p> <p>The Governor approved this project for full funding of \$174,634, with only the normal funding conditions.</p>
1. Technical Feasibility	<u>Reasonably Feasible</u> : The objectives and tasks discussed in the application are technically feasible and the selected approach is likely to achieve the stated objectives. B-SB has the needed experience with the water infrastructure system and will be directing the work of a competitively procured qualified engineering consultant to develop the water plan.
2. Costs:Benefits	<u>Net Benefits</u> : This project will help replace services lost due to injured groundwater resources. Updating B-SB's water master plan will benefit Butte citizens by identifying the water capital improvements necessary to assure that Butte has a reliable and safe drinking water supply.
3. Cost-Effectiveness	<u>Likely Cost Effective</u> : The NRDP believes that completing the water master plan as proposed is likely cost effective because the costs are reasonable and the planning approach is sound. The plan costs are comparable to the costs for similar plans for other major Montana cities.
4. Adverse Environmental Impacts	<u>No Adverse Impacts</u> : This planning project does not present any adverse impacts on the environment.
5. Human Health and Safety	<u>No Adverse Impacts</u> : The project should have a beneficial effect on human health and safety by identifying critical improvements needed to reliably deliver clean drinking water.
6. Results of Response Actions	<u>Consistent</u> : The project will not interfere or duplicate the results of any known EPA Superfund actions.
7. Natural Recovery Potential	<u>No Effect on Recovery Period</u> : This replacement project will not affect the bedrock aquifer's recovery time.
8. Applicable Policies and Laws	<u>Consistent/Insufficient Information Provided</u> : While B-SB did not provide adequate information for this criterion, B-SB has indicated adequate knowledge of the applicable policies, rules and laws necessary for this type of project in other applications.
9. Resources of Special Interest	<u>No Impact</u> : This project will not impact resources of special interest to the Tribes or DOI. The Tribes support the project. The DOI supported the project in written comments but did not vote in support of it.
10. Project Location	<u>Within the Basin and Proximate</u> : The project area that the master plan will evaluate is all in or around the City of Butte, except the Big Hole intake, which is 25 miles south west of Butte. Although the Big Hole intake is outside of the UCFRB, it services users that reside in the UCFRB.
11. Actual Restoration of Injured Resources	<u>No Restoration</u> : The project replaces services of injured groundwater resources that cannot be restored and constitutes compensatory restoration.
12. Service Loss/Service Restored	<u>Same</u> : The proposal replaces lost services to property owners and other members of the public in Butte who could utilize the aquifer if it was not injured.

Summary of RPPC Criteria Evaluation for the Water Master Plan Applicant: Butte-Silver Bow City-County Government (B-SB)	
13. Public Support	<u>4 Support Comments; 1 Letter of Opposition:</u> Two letters of support were received from the B-SB Council of Commissioners and the Butte Chamber of Commerce. One letter of opposition was received from a Butte resident who is opposed to any use of NRD funds for infrastructure improvements in Butte. During the public comment period, an additional two comments were received in support of this project.
14. Matching Funds	<u>35% Match:</u> B-SB will contribute \$60,366 in cash for the plan and \$32,845 for in-kind labor for a total match of \$93,211.
15. Public Access	Not Applicable
16. Ecosystem Considerations	<u>Positive:</u> Since Butte's water system is completely reliant on surface water supplies, a water master plan, which considers water conservation, will have a positive effect.
17. Coordination & Integration	<u>Coordinates/Integrates:</u> The project coordinates with other funded efforts to improve Butte's drinking water system that includes the Basin Reservoir, High Service, and waterline projects.
18. Normal Government Functions	<u>Augments Normal Government Functions:</u> This project augments normal government function because communities typically rely on a combination of grant funds and user fees to fund such projects and because of the pervasive groundwater contamination underlying Butte.

4.0 PROJECT RANKING and FUNDING RECOMMENDATIONS

This section provides the Governor's final funding decisions, along with the final funding recommendations of the Trustee Restoration Council (TRC) and the UCFRB Advisory Council. The Governor's final funding decisions are the same as the funding recommended by the TRC and the Advisory Council, except for on the Duhome project, as described herein.

This section also provides the NRDP's overall ranking of projects and draft funding recommendations. The project ranking is based on the detailed criteria narratives contained in Appendix A and the project criteria comparisons contained in Appendix B. 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 its deficiencies noted for a particular criterion or multiple criteria. The adequacy and quality of an application affects how well the NRDP judges that a project meets certain *RPPC* criteria and, consequently, affects the project's overall ranking as well.

Based on the NRDP's assessment of how the projects compared for the Stage 1 and 2 *RPPC* criteria, which focus on the project's anticipated benefits to the restoration or replacement of injured resources and or/lost services, the NRDP ranks the seven projects in the following order of preference.

Table 2. Project Ranking

Rank	Project
1	Silver Bow Creek Greenway
2	German Gulch
3	Butte Waterline
4	Anaconda Waterline
5	Big Butte Acquisition
6	Duhome Acquisition
7	Butte Master Plan

The following discussion also identifies the NRDP's recommended project-specific funding conditions. Two funding conditions apply to all projects. First, as required by the *RPPC*, funding should be contingent on the NRDP's approval of the final design for various components of the projects. Second, the proportionate share of matching funds recognized by the NRDP in the project-specific criteria narrative will apply to project implementation and adequate documentation of both in-kind and cash matches will be required.

1) Silver Bow Creek Greenway

The Governor approved the Silver Bow Creek Greenway project for full funding of \$1,845,500 over two years, with \$769,507 in 2006 and \$1,075,993 in 2007, subject to two additional funding conditions. The TRC and Advisory Council recommended the project for full funding as approved by the Governor.

The Greenway project offers high net benefits. The project involves ecological enhancements, land acquisition, planning and monitoring activities along miles 9-10 and 16-18 of Silver Bow Creek. It will substantially benefit the injured natural resources of Silver Bow Creek by enhancing fish and wildlife habitat and the ecological and recreational services associated with these restored resources. Organic matter placement, plantings in the floodplain, and aquatic enhancements will accelerate recovery of injured aquatic and terrestrial resources. The constructed wetlands that could result from land acquisition activities would protect and improve water quality, provide fish and wildlife habitat, store floodwaters, and augment surface water during dry periods. The public will be able to access and enjoy a variety of recreational activities in a restored floodplain corridor in a controlled manner that is protective of restored resources. The project provides for optimal coordination with remedy, thereby achieving significant costs savings. It also coordinates with the proposed Duhamel and German Gulch projects. The project had no matching funds and seven support comments.

The NRDP ranked the Greenway project highest of all the seven projects because it will contribute the greatest benefit to restoration of injured resources and associated lost services and achieve significant cost savings through its optimal coordination with remedy. The project is reasonably feasible and likely cost effective because it is based on similar past efforts restoring upstream sections of the Silver Bow Creek corridor and lessons learned from those efforts. 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. While the project has less documented public support and matching funds than the other projects, the NRDP considers the greater magnitude of benefits to injured resources and lost services to be more important than these criteria.

Funding should be contingent on the NRDP's approval of the details of all land acquisitions, including appraisals, and compliance with SB 259 weed control requirements specific to public acquisitions.

2) German Gulch

The Governor approved the German Gulch project for partial funding of \$876,162, which is \$36,184 less than requested,⁹ subject to several additional funding conditions. The TRC and Advisory Council recommended the project for the partial funding as approved by the Governor.

⁹ The \$36,184 reduction results from deleting the \$10,000 in planning costs for future projects that was not supported in the application, reducing the budget for signage by \$39,300 and an associated \$2,380 in management overhead, combined with a recommended increase of \$15,496 for monitoring associated with the pilot study.

With the proposed budget reduction and funding conditions, the German Gulch project is considered as one of overall net benefit. The German Gulch has an outstanding to high-value fishery resource using FWP's rating system, including a productive, nearly genetically pure native westslope cutthroat trout fishery. Based on results of the Silver Bow Creek watershed planning effort, it is the tributary that offers the greatest potential to augment restoration of the Silver Bow Creek fishery. The improvements to the German Gulch fishery that would be derived from fish barrier, fish screen, and water lease aspects of this project can substantially contribute to restoration of the Silver Bow Creek fishery as well as improvements to the German Gulch fishery. The proposed removal of the tailings and the enhancement of the upland vegetation will remove the potential water quality and human health problems associated with the waste material and facilitate the proposed recreational trails. The trail development and acquisition components will improve recreational access to and use of lower German Gulch, which is a popular recreational area for hunters and anglers. The pilot stream restoration project will provide valuable information for future restoration efforts, improved riparian vegetation and channel stability, and possibly enhance fish populations. The cultural resource inventory will help facilitate future restoration efforts and the interpretive signage, with the proposed budget reductions, will educate the public on the mining history and restoration activities. With the NRDP's budget changes, all efforts are considered as likely to be cost effective. Matching funds are \$173,702, or 17% of total project costs, and 16 support comments were received. The project will augment the remediation and restoration efforts along the Silver Bow Creek corridor and coordinates with the Greenway and Duhamel projects.

There are significant uncertainties, most of an administrative rather than technical nature, with some of the project components. These uncertainties are addressed through the following funding conditions:

- Task 1: Two additional years of monitoring, estimated to cost an additional \$15,496, are recommended for the stream restoration demonstration project to adequately determine the impact of upgradient selenium contamination on downgradient restoration efforts.
- Task 2: Approval by DEQ will be required to coordinate the mine tailings removal with remedy actions and disposal at the Opportunity Ponds.
- Task 3: Funding for the recreational trail components should be contingent upon the applicant resolving legal access issues associated with the bridge, obtaining DEQ's approval of the proposed bridge design and construction methods, executing a bridge maintenance agreement, and obtaining access permission for the trail, trail/railroad crossing and trailhead parking area.
- Task 4: For the water lease to be successful, the proposed groundwater replacement supply wells and change of use in water appropriation must meet state water right laws and rules and the groundwater wells must produce at least 1 cfs to replace the surface water that will be leased in order to establish connectivity with Silver Bow Creek. The State will also need to approve terms of the water lease.
- Task 5: For the land acquisitions, if the 99-year recreational easement is not eliminated, a reappraisal or supplemental appraisal is needed. NRDP approval of all land acquisition

transaction documents and compliance with the provisions of SB 259 regarding weed control of public acquisitions is also required.

- Task 6: To assure that the signage language is an appropriate and legal use of Restoration funds, NRDP review and approval of signage language is needed.

The only uncertainty that is associated with a significant financial risk is that of the proposed water trade. If the proposed water trade proves not to be feasible based on results of well drilling/pump tests, between \$34,000 to \$90,000 will have been invested in a potential water trade that will not come to fruition. The fish screen and water trade would provide the needed flow so that trout can migrate into German Gulch Creek from Silver Bow Creek during low flows, which will assist in providing a native stock of nearly genetically pure westslope cutthroat populations to repopulate Silver Bow Creek, and providing cold clean water during late summer to Silver Bow Creek. Based on initial favorable drilling results and these substantial benefits to be gained from the water trade, the State considers this risk as one worth taking.

The NRDP ranked the Greenway project higher than the German Gulch project because of the Greenway project's greater benefits to injured resources and less uncertainty. While the German Gulch project has more uncertainties than the other projects, the NRDP has ranked it higher than the other projects besides the Greenway because the project's multiple components will collectively derive greater benefits to injured resources and associated services than the other projects. In particular, having connectivity between German Gulch and Silver Bow Creek is critically needed for a fully restored Silver Bow Creek fishery. This need was ranked as a very high priority in the *Draft Silver Bow Creek Watershed Restoration Plan*. Similar to the Greenway, this project addresses needed aquatic, terrestrial, and recreational improvements in a coordinated manner and by doing so, derives greater ecosystem benefits than the other projects.

3) Butte Waterline – Year 5 and Year 6

The Governor approved Year 5 the Butte Waterline project for funding at the requested amount of \$1,539,269, with no additional funding conditions. The Governor did not approve the \$1,585,447 requested for the Year 6. It can be subject of a future grant request. The TRC and Advisory Council recommended the project for funding as approved by the Governor.

Restoration of Butte's bedrock aquifer that is contaminated throughout a six-mile area of the city is infeasible. By fixing the proposed 17,000' of leaking and corroded water lines, this proposal will enhance the water supply from an uncontaminated source. It will reduce treatment, repair and property damage costs associated with leaks, improve fire protection, conserve water, and reduce the potential for the distribution system becoming contaminated through leaky and failing pipes. Though B-SB lacks detailed information on the total water leakage or the leakage attributable to the proposed lines to be replaced, the fact that B-SB had 264 leaks in their system last year indicates a great need for these repairs. The project is cost-effective and reasonably feasible due to the successful water main replacement that has been ongoing in Butte since 1992. It has matching funds of 25%, the highest cash match of all seven projects, four support comments and one opposition letter. Despite the lower benefit:cost ratio than that of previous year's waterline projects due to B-SB's decrease in its proportionate matching fund contribution and to B-SB's predicted increase in replacement costs, the State believes the benefits gained from this

replacement proposal still outweigh the costs. This proposal will benefit and compensate a large public for some of the lost use of groundwater that Butte has suffered due to inability to use bedrock groundwater in much of the City.

Although B-SB applied for two years of funding, the TRC recommends that only one year be funded given that no cost-savings were indicated by funding two years, that the project can be implemented on an annual basis, and that the priority of this project over other potential projects in future grant cycles will vary.

4) Anaconda Waterline

The Governor approved the Anaconda Waterline project for full funding of \$1,738,700, with no additional funding conditions. The TRC and Advisory Council recommended the project for full funding as approved by the Governor.

The Anaconda Waterline is considered to have net benefits to the City of Anaconda and its residents. By fixing the proposed 11,800' of leaking and corroded water lines, this proposal will enhance the water supply from an uncontaminated source. ADLC estimates replacement of the 7th, East 6th, and East 8th Street waterlines will save up to 350,000 gallons of water loss per day, or about 16% of the entire water system losses. Fixing the leaks will reduce water treatment, property damage and repair costs associated with leaks, reduce the need to seek additional water supplies, offer greater fire protection, and offer the opportunity to conserve more water during drought conditions. Using ADLC's estimated production/delivery cost of \$1.07 per thousand gallons, a water savings of 350,000 gallons/day would result in about \$138,000 in annual benefits, which far exceeds the annual equivalent cost of the \$1.99 million project of \$23,400 per year. The Anaconda Waterline project is cost-effective and reasonably feasible, since ADLC has successfully performed similar work in the past. The project has matching funds of 12.6% and seven support comments.

The Butte Waterline and Anaconda Waterline projects are very comparable for many of the *RPPC* criteria since they involve the same activities and constitute replacement of lost services. Both counties have successfully completed waterline projects for a number of years, with B-SB's having performed more replacement and invested proportionately more into system improvements than Anaconda. ADLC provided a more detailed analysis of alternatives that better demonstrated the cost-effectiveness of its project than the analysis provided by B-SB. The NRDP ranked the Butte Waterline project higher than the Anaconda Waterline project because of B-SB's greater local contribution than ADLC based on matching funds (25% B-SB vs. 12.6 % ADLC) and B-SB's higher user fees and proportion of metered users.

These projects do not do well for the criteria that focus on injured resource benefits, but the State does not consider the projects to be deficient based on these lower rankings for these particular criteria because these projects both provide services linked to injured resources that cannot be restored. Although these projects involve activities that are normal government function, the State does not believe that this should be a reason to reject them for funding considerations as explained under criterion #18 (Refer to Appendices A and B).

5) Big Butte Acquisition

The Governor approved the Big Butte project for partial funding of \$667,642, which is \$37,040 less than requested, subject to a few additional funding conditions. The TRC and Advisory Council recommended the project for partial funding as approved by the Governor.

The Big Butte project, as revised by the State, will derive net benefits. It will provide the public with a variety of low-impact recreational opportunities; preserve open space, scenic views and an important local landmark; protect the area from high impact uses; and provide buffer lands to decrease impacts to wildlife. With the property's location on the edge of the Butte urban area and its close proximity to Montana Tech, this acquisition can provide immediate benefit to a significant segment of the public. The price for the acquired parcels is at or below fair market value and the costs of the protection measures is considered reasonable. The approach of county ownership and management and development of a conservation-oriented management plan is appropriate and provides for long-term protection of the acquired lands, provided that B-SB provides the necessary enforcement for the non-motorized areas. The project has in-kind matching funds of \$47,775, or 7% of the total project costs. Twenty-four individuals signed a petition supporting the project, plus 19 support comments were received. The project is considered reasonably feasible with the recommended exclusion of parcel #6 valued at \$37,040 because that parcel may have contamination problems. The uncertainties involving the incomplete landowner negotiations (61% of the property is under buy/sell agreements and another 22% have verbal commitments), title work, and management plans are addressed via the following funding conditions:

- NRDP approval of the operations and management plan to verify its consistency with application;
- NRDP approval if a reduced number of acres are to be acquired than what is proposed as a result of failure to complete some of the landowner negotiations;
- Verification from the remaining title work that the property is properly appraised without any encumbrances that significantly affect the property and its potential public uses; and
- Compliance with the provisions of SB 259 regarding weed control.

The NRDP ranked the Big Butte project below the waterline projects because the waterline projects have less uncertainty and more matching funds.

6) Duhamé Acquisition

The Governor approved funding of the Duhamé project at the requested amount of \$1,643,809, which includes \$1,487,830 for land purchase and \$155,979 for five years of land maintenance activities, subject to the Duhamés obtaining legal access to the Duhamé property from a third party that would provide FWP access to the property in a manner acceptable to it. Other conditions of funding, in addition to the normal funding conditions, would be compliance with the provisions of SB 259 regarding weed control for public acquisitions, resolution of the indemnification clause issue and approval of the FWP Commission and State Land Board. The TRC and Advisory

Council had recommended the project for funding up to \$1,643,809, subject to an updated appraisal based on obtaining legal access. The Governor finds that if the above-described legal access is obtained, an updated appraisal is not necessary.

Public acquisition of the Duhamé property offers substantial benefits to wildlife resources and associated public recreational services. The property provides a variety of landscapes for year-round and critical winter range wildlife habitat, scenic views and open space, and a variety of associated recreational opportunities such as hunting and wildlife viewing. The project would preserve and enhance high-quality forested wildlife habitat and scenic views between Anaconda and Butte open space areas with appropriate long-term management, maintenance and operation activities that would be integrated with operation and maintenance efforts on the adjoining state and national forest lands and would create buffer lands to decrease conflicts between wildlife and developing suburban lands. Although the State already has a restrictive easement which prevents building on about 270 acres of this property along Silver Bow Creek, this project would thus further complement the remediation and restoration efforts occurring in the adjoining Silver Bow Creek floodplain corridor. It would also coordinate with the German Gulch project. The project has no matching funds and 43 support comments and a support petition signed by 393 individuals.

Since the NRDP's initial evaluation of this project for the July 2005 *Pre-Draft Work Plan*, most of the uncertainties associated with appraisal and title work have been resolved. Appendix A provides the background about these issues and how they were resolved through the grants evaluation and funding decision process. The Governor finds that if the funding conditions are met on this project, the project will be cost-effective and derive net benefits.

While the Duhamé acquisition lands are more similar to those lands covered under the lawsuit and will derive greater benefits to replacement and injured natural resources than the Big Butte project, the Big Butte project will benefit a larger group of recreational users. The NRDP ranked the Duhamé project lower than the Big Butte project for this reason and because there are less uncertainties and greater matching funds with the Big Butte project.

7) Butte Master Plan

The Governor approved this project for funding at the requested \$174,634, with only the normal funding conditions. The TRC and Advisory Council recommended the project for full funding as approved by the Governor.

The Butte Master Plan will derive net benefits. Updating B-SB's water master plan will benefit Butte citizens by identifying the water capital improvements necessary to assure that Butte has a reliable and safe drinking water supply. B-SB's 1988 water master plan is so outdated it no longer serves this purpose. Without a water master plan, B-SB would be managing a water system without a roadmap that prioritizes infrastructure needs. A new water master plan would give B-SB the tools needed to cost-effectively manage a city water system. A water master plan could also assist B-SB in applying for various improvements via federal and state grant or loan programs, which require a water master plan for any water funding. The State's 1995 Restoration Determination Plan considered upgrading Butte's water system as a justifiable replacement alternative for bedrock groundwater injuries in Butte. This proposal, which is of similar nature,

represents an important step in compensating the public for some of the lost use of groundwater resources of the Butte’s bedrock aquifer.

There are no significant uncertainties associated with this project. Other major Montana cities are preparing water master plans that are similar in costs to the Butte Master Plan and the proposed approach will adequately address the needs for water planning that were identified in the State’s evaluation of the 2004 High Service Tank project. The project has matching funds of \$93,211, or 35% of total project costs, four support comments, and one letter of opposition.

The NRDP ranked this project below the other projects because of all the projects, it will have the least direct benefits to natural resources and the public’s use and enjoyment of those resources. Moreover, while this planning effort is needed and worthwhile, it is one that augments normal government function to a greater extent than the other projects.

Summary of Funding Decisions

Table 3 provides a summary of the Governor’s funding decisions. The total funding recommendation of \$7,409,723 is about \$1.1 million less than the funding cap of \$8.5 million set by the Trustee Restoration Council in December 2004. Commitment to the 2nd year of the Greenway proposal will reduce the next year’s funding cap by \$1,075,993.

Table 3. Summary of the Governor’s Funding Decisions

Project	Requested Restoration Funds		Recommended Restoration Funds	
	Year 1	Year 2	Year 1	Year 2
Silver Bow Creek Greenway	\$769,507	\$1,075,993	\$769,507	\$1,075,993
German Gulch	\$912,346		\$876,162	
Butte Waterline	\$1,539,269	\$1,585,447	\$1,539,269	\$0
Anaconda Waterline	\$1,738,700		\$1,738,700	
Big Butte	\$704,682		\$667,642	
Duhame Acquisition	\$1,643,809		\$1,643,809	
Butte Master Plan	\$174,634		\$174,634	
TOTAL	\$7,483,120	\$2,661,440	\$7,409,723	\$1,075,993

APPENDIX A
PROJECT CRITERIA
NARRATIVES

Greenway Service District – Silver Bow Creek Greenway-2005

Project Summary

The Greenway Service District (GSD) is requesting \$1,845,500 over two years (\$769,507 in 2006 and \$1,075,993 in 2007) to restore aquatic and riparian resources along miles 9 and 10 and 16-18 of Silver Bow Creek. All of the proposed Greenway activities will be coordinated with remedial actions. The major actions planned are floodplain enhancement plantings and organic matter placement to restore remediated lands. The proposal also involves pursuing land acquisitions/easements of two parcels in the Silver Bow Creek floodplain.

Subarea Two Description and Major Restoration Components – see figure 1

Subarea two (Reaches F-J or miles 6-10) is 5 miles long and extends from the town of Silver Bow to Miles Crossing, which is about one mile east of Durant Canyon. Along miles 9 and 10 (Reaches I and J), the GSD proposes to add organic matter to borrow soils and plant additional trees, shrubs and forbs on remediated lands. Remedial actions will begin in these reaches in late 2006 and be completed in late 2007. The GSD also proposes to acquire the 120-acre Earhart property. The parcel is located in Ramsay Flats along miles 8 and 9 (Reaches H and I).

Subarea Four Description and Major Restoration Components – see figure 1

In 2004, the Montana Department of Environmental Quality (DEQ) began remedial actions in the floodplain of miles 17 and 18 of Subarea four of Silver Bow Creek. Subarea four (Reaches P-V or miles 16-22) is 7 miles long and extends from the Fairmont Bridge to Warm Springs Ponds. Starting in 2005, DEQ plans to remove tailings from a 420-acre area in the floodplain of Reaches Q and R via truck haul to Opportunity Ponds. This area contains about half of the 1.7 million cubic yards of tailings in Subarea four and is located south of Highway 1. Tailings removal along Reaches Q and R¹ will be completed by the end of 2006; revegetation work will extend into 2007. Tailings on approximately 100 feet of each side of Silver Bow Creek will not be removed until all upstream work is completed, in approximately 2009 or 2010. This will provide a buffer between the creek and the remediated areas until instream remediation work begins. By 2010, a new channel will be constructed throughout the remediated floodplain and tailings in the streamside buffer area will be removed. The GSD proposes to plant vegetation, add organic matter and enhanced seeding in the tailings excavation areas outside of the stream channel to achieve restoration goals. The GSD also proposes land-planning efforts to evaluate acquisition of the Golden Technologies land parcel located in Reaches Q and R.

Past Silver Bow Creek Greenway Grants

In the last four years, the GSD was awarded approximately \$8 million in Restoration funds for development of the Greenway trail and restoration of aquatic and riparian resources and services along the first 8 miles (Reaches A-H) of Silver Bow Creek. To date, only a portion of this money has been spent, mostly on aquatic and floodplain habitat improvements and on the Ramsay Flats tailings removals. This aquatic and floodplain habitat work has occurred with

¹ Reach P (mile 16) may also have tailings removed in late 2006 depending on DEQ's schedule. Limited restoration activities, such as enhanced seeding, may be needed out of funds from this grant. However, the majority of work for this grant in Subarea four will be for reaches Q and R.

extensive remedial coordination between the GSD, NRDP and DEQ. In 2005, the GSD will begin paving the first three miles of the trail and constructing the Rocker and Whiskey Gulch trail heads all in Subarea one (Reaches A-E, miles 1-5).

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. The tasks required to meet the goals and objectives of the project generally employ standard technologies. The following discussion focuses on how the proposed ecological enhancements and land acquisition activities will accomplish the following goals: 1) restoring aquatic, riparian/wetland and uplands ecosystems within the Silver Bow Creek corridor; 2) implementing remediation and restoration activities within the Silver Bow Creek corridor as one project; and 3) acquiring and providing public access to a passive recreation corridor within the Silver Bow Creek corridor.

Ecological Features

Floodplain Revegetation and Organic Matter Placement – \$1,380,000

The GSD requests \$440,000 for revegetation beyond what is planned under remedy in Subarea 2 (Reaches I and J) and in Subarea four (Reaches Q and R). These planned restoration plantings of containerized shrubs (mostly willows) and forbs can easily be planned and implemented in conjunction with remedial activities. Although detailed restoration revegetation locations are not included in the application, the estimated amount of money needed per acre is based on the type and quantity of plants that were needed in past years. Preparation of a detailed plan is not possible at this time because hydrologic planting zones are not known yet and planting zones will not be mapped until remedy removes the tailings in each reach. 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 optimum for successful revegetation to take place.

The GSD also requests \$159,000 for enhanced seeding of 420 acres in Subarea four and 146 acres in Subarea two. Adding a more diverse seed mix than what remedy has planned has been successfully accomplished in other reaches of Silver Bow Creek and will be coordinated with remedial seeding. Enhanced seeding provides two growth-forms that are essentially lacking or poorly represented in remedial seed mixes: forbs and woody plants. Some of the major grasses and forb seeds added in the remedial seed mix will be balsamroot, aster, milkvetch, rough fescue and lupine. Some of the shrub seeds added to the remedial seed mix will be chokecherry, golden current, big sagebrush, buffaloberry, and sagewart.

Organic matter incorporation in the floodplain is also a significant restoration component of the grant (\$781,000). Based on a recommendation of the DEQ/NRDP revegetation contractor, a goal of 2% organic matter is proposed for Subarea two (Reaches I and J) borrow soils, which do not contain any organic matter. The organic matter would be incorporated into the upper 4 inches of soils over approximately 146 disturbed acres. In Subarea four, it is assumed that only half the 420 remediated acres need organic matter at a rate of 1% based on the recommendation of the DEQ/NRDP revegetation contractor. Tailings will be removed to the underlying soils that

contain some organic matter, but not uniformly in all areas, which is the reason for the requested lower amounts of organic matter. Unlike in Subarea 2, where underlying soils have no organic matter and backfill is necessary, no backfill is planned for the Subarea four areas. Organic matter placement, which will significantly enhance floodplain vegetation, was successfully applied in Reaches A-F.

Monitoring, Enhanced Streambanks and Wetlands – \$173,000

Another ecological component of this proposal involves enhancing remedial streambanks and stream habitat and creating wetlands to create improved aquatic and wildlife habitat along Reach J. Aquatic habitat enhancements costs proposed for Reach J total \$60,000, which is based on past work and discussions with Fish, Wildlife and Parks (FWP) personnel and NRDP contractors. An additional \$28,000 for streambank willow plantings is also slated for Reach J to enhance riparian habitat. The GSD is also seeking \$84,000 for vegetative and geomorphic monitoring, biological sampling and weed control in restored areas over a ten-year period. These activities will be coordinated with DEQ's remedial monitoring and weed control activities. Detailed designs for these improvements were not provided because the applicant will rely on coordination with DEQ's and NRDP's contractors for specific designs. This approach allows for optimum coordination between remediation and restoration. Aquatic enhancements for Reaches C-F were successfully applied as part of past GSD grants; Reach I enhancement remains to be completed.

Miles Crossing Restoration Investigation – \$50,000

The beginning of Subarea three near Miles Crossing presents many challenges for remedial actions and restoration. The Miles Crossing area contains large and deep tailings deposits, two active rail lines in close proximity to the stream, and one inactive rail line, and the stream alignment has been channelized for almost a mile to accommodate the rail lines. The GSD requests \$50,000 for negotiations with railroad owners, conceptual planning, and estimating costs of various stream relocation alternatives for this complex area. The NRDP agrees that a study for the Miles Crossing area is warranted and necessary before DEQ begins Subarea three designs in mid-2006 in order to implement restoration action in this area. This study will investigate a more appropriate location for a new stream channel along the first mile of Subarea three, which is the area before the creek enters Durant Canyon.

Land Acquisition/Easements

Earhart Land Purchase – \$207,000

The GSD requests \$207,000 (includes 15% for contingency and administration) for purchasing the 120-acre Earhart Property along Reaches H and I of Silver Bow Creek. About 90% of the property is located in the floodplain and covered by tailings. The parcel is located at the confluence of Browns Gulch and Silver Bow Creek. DEQ has expressed concerns related to construction of the wetlands on property not in public ownership primarily because of potential long-term operations, management and protection issues. This area is the only large parcel of land in the first 10 miles of the Silver Bow Creek floodplain that is not yet in public ownership. There is time critical concern about acquiring this parcel. DEQ will complete work in this area by the spring of 2006.

Golden Technologies Land Investigation – \$35,000

The other major parcel of land along the Silver Bow Creek floodplain that is not in public ownership is the Golden Technologies property located in Subarea four along mile 16 of Silver Bow Creek. This parcel covers 264 acres and is separated into two parts by a mile of Silver Bow Creek. The Golden Technologies area west of Silver Bow Creek encompasses 144 acres and is an active mineral placer mining operation. The Golden Technologies area to the east of Silver Bow Creek encompasses 120 acres and is entirely covered with tailings and is not part of the mining operations. The GSD requests \$35,000 to assess the strategy necessary for the acquisition, easements, or trade of other state lands for this important land parcel and complete needed appraisals and survey work. Final disposition of this land is also time critical because remediation will take place on the eastern 120 acres of the property next year.

The GSD seeks to create public recreational access, construct wetlands, and enhance aquatic habitat via these two acquisitions. Both properties will be owned, operated and managed by the GSD. The GSD has purchased land in Subarea one and further acquisition efforts are feasible given past experience. Uncertainty exists about whether these public acquisitions will be accomplished because of unknown factors such as landowner willingness and purchase price that will be determined via the planning efforts.

Overall Technical Feasibility

A key component of the ecological features are coordination with the remedial process. Any uncertainties associated with the technical and administrative feasibility are not significant since similar efforts have been successfully implemented along the first 6 miles of Silver Bow Creek. 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 this coordination, DEQ remedial staff has indicated their support to continue participating in this cooperative effort.

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

The total proposed for this grant is \$1,845,500 over a two-year period. Besides the \$50,000 requested for Subarea three planning, about 60% of the costs are proposed for Subarea two and 40% for Subarea four. The approximate breakdown of costs for the \$1.8 million is as follows:

- Organic matter placement – 781,000 (42%)
- Transplants of shrubs and forbs – \$440,000 (24%)
- Earhart property purchase – \$207,000 (11%)
- Enhanced seeding – \$159,000 (9%)
- Golden Technology – \$35,000 (2%)

- Miles Crossing planning – \$50,000 (3%)
- Other (monitoring, weed control, Reach J stream enhancements) – \$173,000 (9%)

The GSD intends to continue this project along the entire 22-mile creek at an estimated total cost of \$17 million. If this proposal were funded for \$1.8 million, the total allocated to the Greenway project from the NRD fund would be \$10 million. The remaining \$7 million estimated as needed to complete the project would be sought during years 2008-2011 while DEQ conducts remedial actions in Subareas three and four. The proposed approach allows for optimal coordination with remediation, thereby providing significant cost savings.

The benefits gained from this project are substantial and significantly outweigh the associated costs. The project will substantially benefit injured natural resources by enhancing fish and wildlife habitat. Organic matter placement, plantings of floodplain vegetation, 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 and remaining soils in functioning as adequate plant medium. The restoration planting effort is critical given minimal remedial planting planned in the floodplain.

Purchasing or creating easements for public access on the Earhart and Golden Technologies land parcels will provide the potential for construction of wetlands, restoring the natural resources in those parcels as well as facilitating recreational services associated with the wetlands, such as waterfowl viewing. The created wetlands will protect and improve water quality, provide fish and wildlife habitat, store floodwaters, and augment surface water during dry periods.

Benefits will be substantial for the public desiring access to the Silver Bow Creek floodplain. The public benefits of having a restored corridor include hiking, walking, fishing, picnicking and other general outdoor activities. Controlling public use in the corridor, which the GSD plans to do as outlined in previous grants, will help protect 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 – Likely Cost Effective

This criterion considers whether this project accomplishes its goals the least costly way possible, or whether there is a better alternative. 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 GSD 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, decreased aquatic habitat potential, and increased recovery time to a baseline condition. Also, by not securing an easement or purchase of the two large land parcels remaining in private ownership along the Silver Bow Creek corridor, complete restoration of these areas may not be achieved. All of the proposed activities are timed to allow for optimum coordination between remediation and restoration efforts. Delaying the project until remedy is completed would be inefficient, delaying restoration of injured resources and resulting in a loss of coordination cost savings. The NRDP provides the following additional analysis of alternatives to the components of the proposal.

Ecological Enhancements

For the revegetation efforts, the only other realistic alternative would be to vary the level of such efforts, such as changing the quantity or type of plantings or changing the percentage of organic matter to be applied. The GSD's proposed budget for and approaches to revegetation are based on similar past efforts and the GSD has appropriately incorporated lessons learned from those past efforts. For example, the GSD estimated the quantity and type of plants based on the anticipated hydrologic zones to be found in the area and similar planting efforts in previous reaches of Silver Bow Creek but then adjusted the proposed timing and frequency of plantings from that of past efforts. Planting for each reach will be done over a two or three year period instead of in a one-year period to address a concern of plant mortality in drought years. Also, most plantings will occur in the spring when climatic conditions are more favorable for vegetation success than in the fall when frost conditions are prevalent and have been shown to lessen plant survival.

Addition of organic matter will provide nutrients, microorganisms and enhance soil properties for promoting plant growth. The GSD's proposed organic matter additions are appropriately based on past similar efforts and are critically needed to substantially enhance wildlife habitat over 500 acres of floodplain.

The proposed streambank and wetland improvements are similarly based past similar efforts, with adjustments for reach-specific conditions and lessons learned from past efforts.

The NRDP believes the costs for all the ecological enhancements to be reasonable because they are based on recent similar work that has been competitively bid. The NRDP considers the proposed enhancements to be cost-effective given the reasonableness of the costs, combined with the sound approaches that are based on past similar efforts and coordination with the remedial ecological contractor.

The proposed ecological planning effort for the Miles Crossing area will consider the many complex factors to take into consideration to determine the optimum strategy for creek placement in this area before remedial designs are completed in 2006. This effort will ensure that remedial and restoration goals are met in the most cost-effective and coordinated manner feasible.

Land Acquisition/Easements and Planning Alternatives

The GSD appropriately plans to pursue either conservation easements on or public acquisition of the Earhart and Golden Triangle properties. The budgets for the Earhart acquisition (\$207,000) and Golden Triangle land planning efforts (\$35,000) are appropriately based on similar past efforts along the Silver Bow Creek Greenway.

No other alternatives exist to that proposed which would accomplish the intended goal of completing public ownership and management of the entire Silver Bow Creek floodplain. Pursuit of conservation easement/acquisitions of these two parcels is warranted because under private ownership, the restoration potential of these properties cannot be reached and associated recreational opportunities would be diminished. For example, a possibility exists, that the landowner would continue placer dredging on the Golden Triangle property after remediation, which would be detrimental to any restoration goals. These acquisition efforts need to be

initiated in 2006 to allow for optimal coordination with remedy. For these reasons, the NRDP consider these land acquisition components of the Greenway likely to be cost-effective.

Multi-Year vs. One-Year Submittals

The GSD's seeks a two-year funding commitment in order to optimally coordinate restoration activities with remediation activities. Due to the grant cycle's annual evaluation and funding decision schedule, the GSD must apply in 2005 for actions that would coordinate with DEQ's planning for remedial actions in 2006 and 2007. The Trustee's Multi-Year Funding Policy² provides the option for the GSD to submit this proposal as a multi-year request. The NRDP agrees with the GSD's justification for this multi-year request because if only one year of funding is considered, then some of the restoration activities planned to be coordinated with remediation would be delayed and cost savings from that coordination would be reduced. The NRDP thus agrees that a multi-year funding request is the appropriate choice in this situation.

4. Environmental Impacts – Short-Term Adverse Impacts after Mitigation

The project does not pose any significant adverse impacts to the environment. The applicant provided a thorough evaluation of all environmental impacts and acknowledges the permits that may be necessary for activities in the floodplain. The GSD appropriately notes the potential for short-term water quality impacts during construction. The GSD plans for the mitigation of these impacts through best management practices. The planned coordination of wetland creation with remedial actions will minimize the duration of short-term impacts to surface water quality associated with construction activities.

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

The GSD notes that limited effects on the demand for government services are expected. The Butte Silver Bow and Anaconda-Deer Lodge City/County governments have created the Greenway Service District to manage the Silver Bow Creek Greenway. Both counties support the project and are willing to accept the additional demands.

A potential exists for short-term impacts to human health and safety during construction activities. The GSD appropriately plans to mitigate these potential impacts through implementation of standard safety and traffic control plans.

While there are no trail components to this year's Greenway request, the planning components will facilitate future trail components. The NRDP has concerns about pedestrian safety with railroad activity in the corridor associated with the trail components of the Greenway. Even though rail use is light, it is imperative that rail safety is fully considered during the implementation of the project. 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. This will be maximized through the

² NRDP Funding Policy for Multi-Year Projects, approved by the Trustee Restoration Council, November 4, 2000.

GSD's planned use of the DEQ remediation design and construction contractors on organic matter placement, 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.

7. Recovery Period and Potential for Natural Recovery – Reduces Recovery Period

Organic matter placement will accelerate recovery of vegetation in the floodplain along Reaches I, J, Q and R. Plantings of floodplain trees, shrubs and forbs and additional seeds will improve the quantity and diversity of wildlife habitat. Access management and land acquisitions 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. Also of note is that in 1995, the City and County of Butte-Silver Bow designated an open space corridor in the County's *Comprehensive Land Use Master Plan* along a quarter mile on both sides of Silver Bow Creek.

State law relating to weed control is set forth in MCA Section 7-22-2101 et seq. This law places certain weed control responsibilities on state agencies and municipalities. (See MCA Section 7-22-2151.) Additional responsibilities were added by Senate Bill 259, which became law after the submittal of this year's grant applications. This law requires certain weed control planning and implementation activities specific to purchases of real property using public funds or the receipt of real property by non-federal public entities. This law sets forth the following requirements that are applicable to this project:

- 1) That the property be inspected by the county weed management district prior to purchase of the property. SB 259 provides that the costs associated with the inspection be borne by the seller.
- 2) That a noxious weed management agreement be developed and incorporated into the purchase agreement. The purpose of this agreement is to ensure compliance with the district weed management program.

Compliance with the provisions of SB 259 should be a condition of funding for the land acquisition activities.

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 and Tribes support this proposal.

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) revegetation and enhanced seeding along the floodplain and streambanks of Silver Bow Creek; 2) organic material additions to 546 acres of the Silver Bow Creek floodplain; and 3) the creation of wetlands and aquatic enhancements along the injured areas of Silver Bow Creek.

Other project components that contribute to restoration include: 1) purchase of land or conservation easements along the Silver Bow Creek floodplain; and 2) planning for restoration alternatives in the first mile or so of Subarea three at the Miles Crossing area.

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 ecological services such as aquatic and wildlife habitat and recreational services such as fishing, hiking, bird watching, wildlife viewing, and open space enjoyment.

13. Public Support – 7 Support Comments

The NRDP received a total of seven comments in support of this project including two letters of support in the application from Butte-Silver Bow Council of Commissioners and from Anaconda Deer-Lodge County.

14. Matching Funds – None

The GSD does not propose matching funds for this proposal. However, it should be noted that the cost savings obtained by coordinating with remedy should be substantial.

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. Any necessary weed control for these areas will likely be addressed by future remedial and GSD maintenance activities.

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 should also benefit the

Clark Fork River by enhancing water quality and aquatic resources if Silver Bow Creek and the Clark Fork River are someday reconnected, by-passing Warm Springs Ponds. By-passing of the Warm Springs treatment ponds is likely for at least some of Silver Bow Creek's flow once water quality meets aquatic standards. The time frame for this to occur is uncertain; however, it is likely to be at least decades away.

17. Coordination and Integration – Coordinates/Integrates

The project fits well with watershed benefit priorities set out in the *Draft December 2004 Silver Bow Creek Watershed Restoration Plan* (SBCWRP). This draft plan ranks the restoration importance of 56 different restoration needs in the Silver Bow Creek watershed. It ranks acquisition or easement of lands along the Silver Bow Creek corridor as #6 and classified this restoration need as one of very high restoration importance. Another restoration need that is ranked very high, (#10), is the Greenway trail itself and restoration actions needed to secure the trail system along the corridor.

Two other restoration needs, which ranked as high, are encompassed in this application. Restoration need #15 addresses enhancement of fish habitat along the Silver Bow Creek. Restoration need #22 addresses enhancement of riparian vegetation and wetlands creation along the Silver Bow Creek corridor.

This project coordinates with currently funded education projects that will use the Silver Bow Creek corridor for classroom activities.

18. Normal Government Functions – Outside of 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.

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 replacement of 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 known significant negative impacts are associated with the Greenway's proposed conversion of the Earhart or Golden Technologies lands into public ownership. Since the GSD does not pay taxes, there will be a tax revenue decrease under public ownership compared to existing private ownership, plus tax revenues would be higher under a development scenario. The current taxes on the Golden Technologies lands about \$3,400. The GSD notes, however, that greenways have increased nearby property values and enhanced revenues to local businesses. With the acquisition of these lands, Anaconda-Deer Lodge and Butte-Silver Bow counties and the GSD will experience increased costs for policing and maintaining these lands. As noted under

criterion #5, the counties and GSD are willing to accept these increased costs in demand for governmental services associated with acquisition of these properties. The NRDP considers the protection of remedy and restoration gained by placing these lands in public ownership to outweigh this negative impact.

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 estimated land acquisition costs on past land acquisition costs in Subarea one, which the NRDP considers to be reasonable.

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 be required in the grant agreement.

George Grant Chapter of Trout Unlimited German Gulch Watershed Restoration

Project Summary

The George Grant Chapter of Trout Unlimited (GGTU) requests funds to improve aquatic, riparian and upland resources, and recreational access in German Gulch, a key tributary of Silver Bow Creek. To accomplish the goals, the applicant proposes to:

1. Conduct a stream restoration demonstration project on 1,450 feet of German Gulch Creek;
2. Remove 7,200 cubic yards of mine tailings and revegetate the disturbed areas and conduct weed control and planting in upland areas;
3. Construct a 2.5 mile passive recreational trail and replace a bridge;
4. Install a fish barrier, a fish screen, rebuild a headgate and secure a 30-year lease for 2 cfs from Spangler Ranch by:
 - drilling two irrigation wells for Spangler Ranch
 - providing temporary shoring of the Spangler irrigation pipeline
 - developing a plan for the permanent repair of the Spangler pipeline
 - supplying a center pivot irrigation system for the Spangler Ranch;
5. Acquire 82 acres of private land adjacent to the stream corridor; and
6. Conduct a cultural resource inventory and install interpretive signage.

The cost of this proposal is \$1,093,082, with \$912,346 requested in Restoration funds and \$180,736 in matching funds.³

German Gulch enters Silver Bow Creek halfway between Butte and Anaconda. It supports a cold-water fishery of native westslope cutthroat trout and brook trout. The resident westslope cutthroat trout are a nearly genetically pure population that may be a seed stock for the eventual repopulation of this species in Silver Bow Creek. The majority of the proposal area is located adjacent to or in the Mount Haggin Wildlife Management Area (WMA), and all of it is outside the Mt. Haggin injured area.

GGTU has used the results of the two \$25,000 Project Development Grants (PDG) to develop the current restoration proposal for lower German Gulch. The 2002 PDG involved a study to improve channel stability and aquatic habitat in lower German Gulch, an upland vegetation field investigation, a conceptual trail design to provide for public access to lower German Gulch, and investigations of water rights, land ownership, and cultural resources. The 2004 PDG involved characterizing mine tailings areas, conducting a revegetation study, designing a replacement irrigation structure, and evaluating alternatives to increase instream flows.

As part of this proposal, GGTU requests \$10,000 to plan future actions. These future actions, which are indicated as line items in GGTU's budget table with no costs, would involve further

³ This is a revised budget from that submitted in the March 2005 application based on the NRDP's correction of math errors and clarification of eligible matching funds.

upland vegetation improvements, permanent repair/replacement of Spangler Ranch pipeline, and installation of grade control structures to reduce head cutting in the stream. These activities and the \$10,000 requested to plan them will not be considered in the NRDP's evaluation of this year's proposal due to lack of any further information on these future proposals, except as a line item in the budget. The NRDP does not recommend approval of this future-planning request.

Stage 1 Criteria

This evaluation involves determining to what degree the project employs well known, and accepted technologies and the likelihood it will achieve its goals. GGTU identifies six project goals: improve westslope cutthroat trout habitat and improve channel stability; improve upland habitat, and provide access to natural and cultural resources; steward German Gulch as a priority tributary to Silver Bow Creek; purchase private patented mining claims; and cultural resource identification and protection.

The following is a summary of associated tasks presented by GGTU in the application to accomplish these goals and the NRDP's evaluation of their technical feasibility. Figure 2 indicates the proposed locations for grant activities. Given the varied activities proposed, the NRDP has evaluated each task separately for the technical feasibility, cost effectiveness, and benefit:cost evaluation criteria.

An activity and cost that is part of every task below is GGTU's project management, accounting, and oversight costs. GGTU estimated those costs as 10% of total Restoration fund request, or \$82,031⁴ total. Based on other NRDP-funded projects, 10% is a reasonable basis for estimating project management costs.

Task #1: Conduct a stream restoration demonstration project on 1,450 feet of German Gulch Creek (Restoration funds requested \$113,238)⁵

Technical Feasibility – Reasonably Feasible with NRDP changes

GGTU proposes to improve westslope cutthroat habitat and production, improve channel stability, and conduct floodplain restoration, along a 1,450 foot degraded stream reach as a pilot effort to guide future restoration efforts. These proposed activities include: increased pool density through installation of boulders, addition of woody debris channel, channel improvements, excavation of excess bedding material and monitoring. The floodplain improvements will include transporting placer materials away from the streambed and planting the area with several different site-specific seed mixes and woody plant species.

Stream restoration activities in lower German Gulch are complicated by the selenium contamination from the inactive Beal Mountain Mine upstream of the project area. Selenium can affect the fish gills, liver, heart and kidney function as well as egg development, causing

⁴ This number was changed by NRDP from \$82,047.20 originally requested due to mathematical errors.

⁵ NRDP modified this amount from the \$113,210 originally requested in the application due to a mathematical error.

deformities and impairing reproductive success.⁶ There are concerns that restoration activities may cause selenium to further accumulate in streambed sediments. In order to ensure that selected restoration methods are successful while not causing accumulation of selenium levels in stream sediments, GGTU has proposed a pilot stream restoration demonstration project on an impacted reach of the stream, with aquatic life and sediment monitoring to assess the restoration activities' impact on selenium levels in aquatic life and sediments, and the activities' impact on fish population.

The success of the stream pilot study will partly depend upon the ability of the remedial activities at the Beal Mountain Mine to effectively address the selenium contamination. If the selenium concentrations in the stream stay the same or increase, the fish habitat and fish production may not increase. Selenium that is bound in soil can be relatively stable and is likely being flushed downstream during each spring run off at levels that appear to be relatively non-threatening to westslope cutthroat populations.⁷ Over time, through flushing, the selenium contamination should be depleted to naturally occurring levels if the contamination does not continue to enter the system from upstream.

The selenium concentration near the source of the problem, which is located within the waste rock on the Beal Mountain Mine, is at this time trending downward, but it is too early to predict if the trend will continue.⁸ Future plans for the completion of the reclamation of the site have been postponed for 4 or 5 years, though other interim activities will be conducted. The uncertainties involved in the future selenium concentrations cause uncertainties about the results of the pilot project.

However, the plan to improve channel stability and conduct floodplain restoration does not depend on selenium concentrations. These activities will be valuable by increasing vegetative cover and preventing further stream sedimentation. Other valuable information is likely to be obtained even if the selenium concentrations increase, such as the knowledge of the locations of selenium sinks and insight into how to adjust future restoration projects to possibly avoid creating the sink features.

The NRDP considers the selection of the stream reach to be appropriate for accomplishing the indicated goals. It exhibits all the physical and biological features present through lower German Gulch and is a severely degraded reach. It is appropriately located, is upgradient of the existing water diversion and proposed fish barrier and downgradient of the source of selenium contamination. Uncertainty exists about the administrative feasibility of this option, since this reach is located on the proposed Layton acquisition lands. This uncertainty is discussed in Task #5.

In order to quantify the results of the pilot project, GGTU proposes a two-year monitoring plan. The results of the two years of monitoring may not be conclusive enough to determine whether

⁶ "Symptoms and implications of selenium toxicity in fish: The Belews Lake case example," *Aquatic Toxicology* 57: 39-49, Lemly, 2002.

⁷ GGTU German Gulch Application Review by Maxim Technologies, dated May 16, 2005.

⁸ E-mail to Tom Mostad of NRDP from Ray TeSoro, Regional Mining Geologist, USDA-Forest Service, Northern Region, dated May 17, 2005.

the pilot study was successful despite the possible drop in selenium concentrations. It should be assumed that selenium will enter the system and it may remain in the system at high levels for many years.⁹ Since selenium could accumulate in the fine-grained sediments, even a lower concentration of selenium than those recently observed instream could still threaten the fish population. As a result, two years is not enough time to judge whether there is an increase in the fish population.¹⁰

Based on input from its consultant and FWP,¹¹ the NRDP considers the proposed 2-year monitoring period as too short to judge the success of the results of the monitoring and thus recommends an increase in the monitoring for two additional years to a total of four years of post construction monitoring. The NRDP also recommends that vegetation and surface water (during spring runoff) be monitored along with the other parameters GGTU has proposed. The increase of two additional years of monitoring would increase the budget by \$15,496 and a total amount of \$128,734 for this goal.

In sum, the pilot project will likely improve channel stability and riparian vegetation. With the NRDP's recommended additional monitoring, the pilot project is also likely to achieve its goal of obtaining useful information to guide future fishery restoration efforts. Whether or not it achieves fishery improvements is uncertain given the identified unknowns concerning selenium pollution. In addition, GGTU has committed to postpone any further instream restoration activities until impacts from the Beal Mine have been mitigated, if the pilot study area is accumulating selenium.

Cost Effectiveness – Likely Cost Effective

The alternatives that are relevant to this analysis are: 1) the proposed pilot stream demonstration project; 2) the full stream restoration; and 3) the no-action alternative.

GGTU's adequately justifies why conducting a pilot project is preferred to conducting a full restoration project, due to the uncertainties associated with upgradient selenium contamination as described under technical feasibility. A significant amount of funds could be wasted if the entire stream were to be reconstructed and the selenium inhibited the fish survival.

GGTU also adequately identified multiple options to address revegetation of placer tailings in the floodplain, including removal and capping and justifies the selected revegetation alternative.

A risk exists that the pilot project could actually cause an increase in selenium in the sediments. In that case, the no-action alternative would be preferable. However, presuming that the upstream source of the selenium can be eventually controlled and that the selenium bound in soils were flushed out of the system each spring, then the placement of increased pool density, increase density of large woody debris, the creation of meanders and stabilization of the channel will have long-term positive effects. The pilot project will also provide the needed information to adequately design and implement a full restoration effort that will be the least destructive to

⁹ GGTU German Gulch Application Review by Maxim Technologies, dated May 16, 2005.

¹⁰ GGTU German Gulch Application Review by Maxim Technologies, dated May 16, 2005.

¹¹ Tom Mostad phone communication with Ron Spoon, FWP Fisheries Biologist, April 18, 2005.

the system in terms of selenium contamination problems, which would not be accomplished under the no-action alternative.

The pilot study is more cost effective than that of the full stream restoration project and should, in the long-term, provide better fish habitat than the no-action alternative. Thus, NRDP considers the selected alternative as likely to be cost-effective.

Relationship of Expected Costs to Expected Benefits – Commensurate

GGTU requests \$113,238 in Restoration funds and offers \$15,000 (12%) in matching funds for this task; however, the total for this task would be \$128,734 with NRDP's recommended \$15,496 increase in monitoring, as discussed under technical feasibility. The breakdown of these costs is:

- final design, data analysis, and permitting (\$6,820)
- stream restoration (\$43,164)
- monitoring (\$37,240) (includes \$15,496 increase recommended by NRDP)
- floodplain restoration (\$34,338)
- ten percent contingency (\$7,172)

Placer mining is a very destructive activity and involves drastic changes to the stream area, which in turn often require more difficult and expensive construction challenges. The proposed cost of \$33/lineal foot of stream is similar to other stream restoration projects with similar problems.¹² In addition, the construction activities will be bid out to the lowest qualified contractor, which could result in a lower cost than that proposed.

GGTU seeks to improve westslope cutthroat trout habitat and production and improve channel stability in lower German Gulch via this pilot project. Since restoration of the stream will depend upon how the selenium in the system reacts to the restoration activities and on upgradient efforts to control or reduce selenium entering the stream system, this project may or may not accomplish this goal. It will derive critical information needed for future restoration efforts that could result in substantial fishery benefits to both German Gulch and Silver Bow Creek, given the presence of a nearly genetically pure population of westslope cutthroat trout in German Gulch that may be used as a seed stock for the eventual repopulation of this species in Silver Bow Creek. It will also result in significant improvements to riparian vegetation and channel stability in a degraded stream reach. These floodplain restoration improvements may be even more beneficial than the stream restoration activities.¹³ Taking all of these factors into account, the NRDP considers the benefits of the pilot project to be at least commensurate with its costs.

¹² EPA's Placer Mining Guidance Document, 1991.

¹³ Phone Conversation with Ron Spoon, FWP Fisheries Biologist, April 18, 2005.

Task #2: Remove 7,200 cubic yards of mine tailings and revegetate the disturbed areas and conduct weed control and planting in upland areas (Restoration funds requested \$175,176)

Technical Feasibility – Reasonably Feasible

GGTU proposes the removal and off-site disposal of mine tailings, the revegetation of the two acre disturbed area, the use of chemical and biological weed control, and the fencing of the disturbed area to accomplish the goal of improving upland habitat. The only significant uncertainties for this task are specific to the tailings removal. An uncertainty exists regarding GGTU's intentions to remove the tailings in coordination with DEQ's planned tailings removal activities along Silver Bow Creek at the confluence with German Gulch scheduled to occur in 2007 and whether ARCO is willing to accept the tailings material at the Opportunity Ponds. DEQ's agreement to conduct the removal and transport the wastes is needed.¹⁴

The NRDP recommends a funding condition that these requirements be met. The other aspects of the proposal tied to revegetation will enhance the likelihood of the project's success. The use of chemical weed control for the proposed use in the disturbed areas is well accepted and fencing will allow the revegetation to establish without potential negative effects of grazing. The use of biological weed control, in this case weed-eating insects, is on the rise, even though depending on the type of insect and the weed to be controlled, the success can be somewhat uncertain. FWP has successfully used insects to control leafy spurge on portions of the adjacent FWP Wildlife Management Areas (WMA).¹⁵ Overall, the insects have the potential to supply a long-term suppression of weedy species that chemicals cannot provide.

Cost Effectiveness – Likely Cost Effective

GGTU's revegetation consultant provided a limited analysis of alternatives for addressing the mine tailings¹⁶ that the NRDP further analyzed as part of its cost-effectiveness evaluation. The alternatives to the proposed tailings removal and off-site disposal are: 1) no-action alternative; 2) capping in-place of the tailings; and 3) consolidation and capping of the wastes on site.

The no-action alternative does not accomplish the goal of improving the upland habitat and native plant community and the tailings will continue to be a potential human health and environmental problem.

Capping the wastes in-place would involve locating, hauling and placing clean soil over the wastes to reduce the human and environmental exposure. A rough cost estimate is \$100,000, assuming approximately 5,000 cubic yards at \$20.00 per yard. The problem with this option is maintaining the integrity of the soil cap with a large surface area. With the proposed trail over the capped area, hikers as well as small mammals will likely penetrate the soil through time and

¹⁴ Telephone communication between Joel Chavez of DEQ and Tom Mostad of NRDP on 3/30/05.

¹⁵ Information provided in a 6/17/05 phone conversation between Kriss Douglass of MFWP and Carol Fox of NRDP.

¹⁶ German Gulch Vegetation, Assessment for Restoration, prepared by Rich Producers of Bighorn Environmental, April 2003.

expose the tailings to the environment. Capping the waste in-place is less desirable and less effective, though it would probably be less expensive.

Another option would be to consolidate the 7,000 cubic feet of waste into a one-acre repository approximately 5 feet deep on average that has a compacted soil base with 18 inches of soil. By consolidating the waste, the amount of cover soil can be reduced to half of the amount of the capping in-place option. There are technically viable areas in the vicinity of German Gulch that would be a suitable location for this type of repository. The selection of the precise location would depend upon subsurface investigation and landowner cooperation, which would add cost and time to this alternative. The less desirable effects of this type of alternative are that it does not remove the threat of potential recontamination in the future that a complete removal of the material offsite offers. Using costs from DEQ's abandoned mine site and considering the remote location of these tailings, the cost of this project would be similar to the \$175,000 cost of the proposed alternative. However, further engineering and design would be needed with this alternative, which would increase the cost. The results of the engineering might indicate that the waste needs to be capped with a geosynthetic material, which would further increase costs.

The proposed action of excavating the wastes and removing them from the site provides the most permanent long-term solution. It eliminates any need to inspect, repair, or possibly maintain a capping system to ensure the waste remains isolated from the environment and the potential cost of conducting these activities. Though the applicant provided a limited analysis of alternatives, the selected alternative is likely to be cost-effective. If the needed approvals/remedy coordination cannot be accomplished a new grant proposal would be needed.

Relationship of Expected Costs to Expected Benefits – Net Benefits

Costs enhancement of upland habitat totaling \$175,176, can be broken down as follows:

- Removal: \$94,496
- Site Reclamation: \$33,050
- Permitting: \$12,000
- Weed Control: \$6,000
- Fencing: \$15,675
- 10% Contingency: \$13,955

The proposed removal and off-site disposal of mine tailings will enhance upland habitat as well as contribute to other goals of the project. The tailings material has a low pH level and has high metal values. These values are higher than action levels on many abandoned mine sites and indicate that the material is at least phytotoxic and probably also a danger to human health and the environment. Removal of the materials and revegetation of the disturbed area will promote native grass and remove the potential water quality and human health problems. Removal is also warranted given the intent to construct the trail (Task #3) through the tailings area. If the removal of the tailings could be done through DEQ and could be done in consort with the remediation of Silver Bow Creek, the result would mean complete removal of the tailings material from the site with some cost savings resulting from the coordination. The removal is highly beneficial to the long-term success of the project versus the potential maintenance of an

on-site repository. The cost of \$175,176 is similar to other CERCLA removal actions that involve an on-site repository, but the proposed activities offer greater benefits due to the complete removal of the contamination from the site and those benefits outweigh the costs associated with the project.

Task #3: Construct a 2.5-mile passive recreational trail and replace a bridge (Restoration funds requested \$103,599)

Technical Feasibility – Reasonably Feasible with NRDP conditions

To accomplish its goal of providing non-motorized public access to natural and cultural resources, GGTU proposes to construct a passive trail, to remove, design and replace a bridge over Silver Bow Creek, to place trail signs and to construct two parking areas. GGTU is also requesting funding for related land acquisition efforts covered under Task #5.

The construction of a trail, parking lot and a bridge for purposes of enhancing recreational opportunities is reasonably feasible from a technological standpoint. However, the administrative feasibility of these items is dependent upon several other unresolved issues. The trail placement, as proposed, depends upon the successful land acquisition that is described in Task #5. Without it, the trail would need to be re-routed or have public access granted from the present owner. The placement of the parking lots, one near the Finlen Bridge at the lower end of the trail, and the other near the conjunction of Road 83 and German Gulch, are dependent upon coordination/consultation with, and approval by, the landowners. The lower parking area is proposed to be on Burlington Northern Railroad or DEQ property; the upper area is proposed to be on National Forest. The Beaverhead-Deerlodge National Forest has sent a letter of support of the proposed project and stated that the trail and trailhead would be subject to their environmental review process.¹⁷ There is no confirmed support from either Burlington Northern or DEQ for a parking area on their property.

The removal, design and reconstruction of the Finlen Bridge has several unresolved issues: legal public access on the road to the bridge, the ability to restrict access across the bridge after reconstruction, the coordination with DEQ in its design and construction, and future maintenance. The applicant has proposed to construct the bridge and restrict access to foot/horse traffic, though some light truck traffic would be allowed for Rarus Railway, FWP, Spangler Ranch, and Bonneville Power Administration for maintenance purposes of their property/facilities. Legally, motorized vehicles are restricted shortly beyond the bridge on the south side of Silver Bow Creek due to FWP WMA regulations. The NRDP is unsure of the ability to restrict access across the bridge since the road leading to the bridge may be a public road.

The bridge is in such disrepair that removal of the bridge, which has two rock-filled piers located in Silver Bow Creek, is highly desirable from a restoration point of view. There is a reasonable degree of confidence that the proposed railcar design and construction for a new bridge can be implemented with little problems if GGTU obtains the approval of DEQ, which owns the land on either side of the bridge.

¹⁷ Steve Egeline, USFS, letter dated February 25, 2005.

While GGTU has committed to the long-term maintenance of the proposed trail, uncertainty exists about what entity/entities would assume future maintenance responsibilities for the bridge. GGTU has entered talks with the Greenway Service District in an attempt to become a possible partner in the Greenway's Master Plan, which would include agreements with Rarus and BN on access and maintenance issues. Maintenance of the bridge by Butte-Silver Bow County may also be an option. To address the indicated administrative uncertainties, the funding of these items should be contingent upon GGTU verifying legal access for the public to the bridge and the right to restrict access across the bridge. This may be accomplished through a public process that would involve Butte-Silver Bow County. Funding should also be contingent upon GGTU obtaining an agreement addressing future maintenance obligations for the bridge and DEQ's approval of the proposed bridge design and construction methods.

Cost Effectiveness – Likely Cost Effective

The alternatives to the proposed trail design and route for increasing public foot traffic in the German Gulch drainage are the no-action alternative and other possible routes or designs that may save some cost. Though recreationists can access the area on the existing road, the bridge crossing is dangerous and there is no continuous road/trail from Silver Bow Creek to Forest Service Road 83. As part of the 2002 PDG effort, GGTU considered various trail designs and routes in consultation with the USFS and FWP. That process resulted in the proposed relatively primitive trail with minor improvements that will be constructed to meet USFS Trail 2 classification specifications.¹⁸ The choice of relatively primitive trail is appropriate to allow for increased use with minimal impacts to fish and wildlife. While there are numerous trail options, the selected route would use the existing two-track road, which reduces the amount of trail that will be required compared to other route choices. By utilizing the existing trail that parallels the stream, the proposed action will likely be cost effective.

Removal of the existing bridge is needed due its current poor condition and the bridge's design, which has two piers in the stream that inhibit flow. The no-action alternative for bridge replacement will not accomplish the goal for foot traffic and light truck traffic to cross Silver Bow Creek nor will the no action alternative remove the cause of inhibited flow. Replacement of the bridge as proposed is necessary due to the steep banks and because Silver Bow Creek is too fast to ford most of the year. Removal and replacement of the bridge is a likely cost effective alternative to supplying the goal of public access across Silver Bow Creek.

Relationship of Expected Costs to Expected Benefits – Net Benefits

The total cost of this task for \$103,598 can be broken down as follows:

- Trail Construction (\$28,750)
- Remove and rebuild bridge (\$29,200)
- Trail signs (6) (\$2,000)
- Parking Access (\$9,000)

¹⁸ German Gulch Trail Conceptual Design and Cost Estimate, prepared for GGTU by Pioneer Technical Services, dated January 2004.

- Engineering Oversight and design (\$22,753)
- Mobilization, bonding and insurance of a contractor (\$6,895)
- Suitability/Environmental Assessment of the trail route (\$5,000)

This task will improve recreational access to and use of lower German Gulch. The German Gulch watershed is a popular recreational area for hunters and anglers.¹⁹ With its location halfway between Butte and Anaconda, it is close to populations that have been impacted the most by injured resources. The expansion of the Silver Bow Creek Greenway through Durant Canyon will result in an increased use of the German Gulch area for fishing, hiking, biking and other recreation. These recreationists will benefit from enhanced access to German Gulch. The NRDP believes this task will derive significant benefits to the public's use and enjoyment of natural resources at a reasonable cost.

Task #4: Install a fish barrier, a fish screen, rebuild a headgate and secure a 30-year lease for 2 cfs from Spangler Ranch (Restoration Funds requested \$328,292)²⁰

Technical Feasibility – Uncertain Feasibility

GGTU seeks to restore the ecosystem of the German Gulch watershed, with specific emphasis on preserving its important westslope cutthroat trout fishery and re-establishing connectivity between German Gulch and Silver Bow Creek. To accomplish this goal, GGTU plans to construct and install a fish barrier and a fish screen and to secure a 30-year lease for 2 cubic feet per second (cfs) of water.

The proposed fish barrier is considered ideal in terms of its natural features as a barrier location²¹ and there are no technology uncertainties associated its feasibility. The land ownership of the proposed fish barrier is believed to be on existing FWP land but this has not been verified. A possibility exists it may be located on lower Layton parcel that is proposed for acquisition (Task 5). Given that the Mt. Haggin WMA covers over one mile on both sides of German Gulch in the vicinity of the proposed barrier, a suitable location for the barrier likely exists on either the existing state land and proposed lands to be transferred to FWP.

The proposed design and construction of a fish screen involves technologies that have been used elsewhere with success. However, there are uncertainties with the necessary flow associated with the fish screen. Current fish screen designs require an undefined amount of water to pass by the headgate to pipe the fish away from the flow going through the screen. Although the additional water needed for the by-pass flow and the route of the pipe is not addressed in the application, the proposed design of the headgate and screen should be able to address these concerns based on input from FWP.²²

¹⁹ The popularity of German Gulch to recreationists was verified through focus groups meetings that were conducted in developing the NRDP's December 2004 *Draft Silver Bow Creek Watershed Restoration Plan*.

²⁰ NRDP modified this amount from \$328,477, due to mathematical error.

²¹ Phone conversation with Ron Spoon, FWP Fisheries Biologist, April 18, 2004.

²² Ibid.

GGTU states that the Spangler Ranch has water rights to capture and divert for irrigation the entire flow from German Gulch during low flow conditions. To negotiate a water agreement with the Spangler Ranch, GGTU proposes to:

1. Replace the existing headgate with a more fish friendly design.
2. Install a fish screen just below the replaced headgate.
3. Provide temporary shoring on a section of Spangler's irrigation pipeline that is structurally unstable and in danger of failing.
4. Provide a design and cost analysis to permanently repair this failing pipeline reach.
5. Secure a 30-year water lease that guarantees approximately 2 cfs of water in the German Gulch channel during low water conditions. This water will be replaced by installing two irrigation wells on the Spangler property. The lease agreement will also contain an operation and maintenance fund to supply long-term power for the wells.
6. Replace a current hand line irrigation system with a center pivot on the lower Spangler field.

The goal to achieve year-round connectivity by obtaining 2 cfs as proposed has two significant uncertainties, one of a technology nature and the other of a regulatory nature. The proposal is to drill two wells on Spangler's Ranch, pump the 2 cfs expected from those wells in exchange for the Spangler Ranch agreeing to let an equal amount of water bypass their irrigation diversion and flow into Silver Bow Creek, thus providing year-long connectivity. A possibility exists that 2 cfs may not be able to be pumped from two wells and the goal of 2 cfs would not be achieved. A Groundwater Occurrence and Availability Study funded by a 2004 PDG indicates this possibility is low, however. In that study, a single 296 foot deep test boring's estimated yield was approximately 500 gpm (1.1 cfs) to 600 gpm (1.3 cfs), which indicates that two wells would probably yield enough to supply 2 cfs or more.

It is important to note that the amount of water leased from the Spangler Ranch will be equal to the amount of the water production from the wells. If a quantity of less than 2 cfs is obtained, some small modifications may be necessary to the several hundred feet of channel from the headgate to Silver Bow Creek to ensure fish passage. Since the effectiveness of the task is dependant upon at least 1 cfs being obtained from the wells, the approval of the water lease is also dependant upon this factor. If no water lease is undertaken, the corresponding conditions of the water lease, such as the funding for the irrigation improvements and the long-term electrical pump costs, would not be approved.

The second uncertainty is tied to compliance with all applicable water right regulatory requirements. Pursuant to 85-2-336 MCA, the UCFRB is closed to any new permits to appropriate water. The closure does allow an exception for permits to appropriate groundwater, provided a hydrologic investigation demonstrates that the source of groundwater is not a part of or substantially or directly connected to surface water. GGTU proposes to conduct the required investigation via the proposed pump test. If these tests reveal that a connection between the wells and surface water exists, then a permit for the wells would not be given. GGTU must also successfully validate that the Spangler Ranch water rights based on historic use are sufficient for the proposed lease and meet the criteria for a authorization to change a water appropriation

specified in 85-2-402 MCA. Funding is contingent on meeting these requirements and a successful authorization for change. Based on GGTU's preliminary water rights evaluation,²³ it is likely that the Spangler right is sufficient for the proposed lease and that the change use criterion can be met.

Tied into both of these risks is the possibility that between \$34,000 and \$90,000²⁴ will have been spent on this effort without accomplishing a water trade, if a suitable groundwater source that is not connected to surface water is not found. This type of risk is typical of restoration projects that involve phases of development. However, permitting of the wells is perceived as likely because of the distance of the wells from the creek and the predicted depth of the wells.²⁵

GGTU has indicated in its application its knowledge of the applicable water rights requirements and intent to comply with them. A funding condition is needed that provides for the NRDP's review and approval of the water lease agreement between GGTU and landowner to verify that the lease agreement validates the terms of the water trade as they are presented in the proposal.

Cost Effectiveness – Likely Cost Effective

For purposes of this criterion analysis, the fish barrier alternatives will be considered separately from the fish screen/water trade alternatives. The fish barrier can be implemented and derive benefits independently of the fish screen and water trade. The fish screen and water trade, however, are both needed to reestablish connectivity and thus are evaluated as a package.

Fish Barrier Alternatives

The no-action alternative would not provide the protection to the nearly pure strain of westslope cutthroat trout that is proposed. Another alternative would be to delay the construction for a few years. The current remediation and restoration of the Silver Bow Creek will eventually improve the conditions of the stream. This improvement could lead to the migration of rainbow trout into to the drainage and potential hybridization of westslope cutthroat trout. Delaying the construction could probably wait a few years, but based on input from FWP, it is best to be conservative in timing the barrier ahead of remediation efforts for both ecological and cost reasons.²⁶

The location of a fish barrier is very important. Since a fish barrier is a permanent structure that is placed in the stream, the location needs to be in a location that does not have substantial lateral migration. The selected location fits that description because of its bedrock control, which naturally confines the stream to that location. Another location that has bedrock control similar to the selected alternative could be a viable option.

²³ Water Rights Analysis, Spangler Ranch Water Rights on German Gulch, prepared by Stan Bradshaw of TU.

²⁴ NRDP calculated these costs assuming: 1) in the best case, only one well is drilled and the landowner reimburses the state for the pump equipment, or 2) in the worst case, two wells are drilled and only 50% of the pump equipment cost would be obtained via salvage by the state.

²⁵ Josh Vincent of WET, GGTU contractor, in a phone conversation with Tom Mostad of NRDP, June 29, 2005.

²⁶ Phone conversation with Ron Spoon, FWP Fisheries Biologist, April 18, 2004.

Fish Screen/Water Trade alternatives

Based on information GGTU provided in the application and in a supplemental alternative analysis,²⁷ the following are alternatives to re-establish flow connectivity between German Gulch and Silver Bow Creek:

1. Move the Spangler diversion point from German Gulch to Silver Bow Creek
2. Water lease/Compensation for Lost Production
3. Water Lease/Development an alternate ground water source (GGTU's proposed alternative)
4. Acquisition of other senior water rights
5. No action
6. Delayed action

The no-action alternative would not achieve the goal of connecting German Gulch stream to Silver Bow Creek, nor would it enhance the fish habitat of Silver Bow Creek.

To achieve maximum benefit of restoring the Silver Bow Creek fishery, connectivity should be reestablished by the time remediation will be completed in the project area, which is expected to be in 2007 and/or 2008. Implementation of the proposed project activities would fit with the proposed remediation schedule, as the proposed activities would likely be completed by 2007. Since establishing connectivity later may increase the timeframe for restoring the Silver Bow Creek trout fishery, the delayed action alternative is not considered favorable.

Moving the diversion point to Silver Bow Creek would supply the needed connectivity. While cost information and water rights research is needed to explore this option, it could possibly result in a greater instream flow and water quality benefit to Silver Bow Creek than the proposed alternative. However, the landowner will not consider this option because of the poor water quality of Silver Bow Creek compared to that of German Gulch. It is anticipated that eventually the water in Silver Bow Creek will improve as a result of remediation and restoration activities to the point where this may be a viable option.

The second alternative involves obtaining a lease agreement that would compensate the Spangler Ranch for the lost hay production associated with a 2 cfs instream flow use instead. Based on calculations provided by GGTU, \$227,926 would be the appropriate compensation to replace the loss of 2 cfs of water.²⁸ Adding in the Restoration fund costs of the fish screen (\$29,530), the total cost of this alternative is \$257,456. The landowner rejected this alternative for several reasons. The tax implications of receiving a direct payment would reduce the amount of capital the Spangler Ranch would have to offset the water loss. In addition, the loss of 2 cfs of irrigation water without a replacement supply could be detrimental to his farm practices during the times of low stream flow when 2 cfs could be a significant percentage of the available irrigation water.

²⁷ Alternatives Analysis Addendum, Proposed Water Lease – Spangler Ranch Diversion, prepared by Josh Vincent of WET, dated 6/9/05.

²⁸ Ibid.

The third alternative, which is GGTU's proposed alternative that is described under technical feasibility, basically involves an agreement to make specified irrigation improvements worth \$275,374 in exchange for a lease of approximately 2 cfs of water from German Gulch for 30 years. Adding in the Restoration fund costs of the fish screen, the total costs of this alternative are \$304,904, which is \$47,448, or 18% more than alternative 2. Alternative 3 has a significant amount of oversight and uncertainties that alternative 2 would not have. Oversight would involve the development of two wells, pump tests, and the construction of a pivot irrigation system. The uncertainties, which are identified under technical feasibility, lend greater risk to successful project completion than would exist under alternative 2. For these reasons, the NRDP prefers alternative 2 to alternative 3.

The fourth alternative addresses the potential of leasing other water rights besides the Spangler Ranch. There are other senior water rights upstream of Spangler diversion that may supply the needed water to gain the connectivity, including a 1.6 cfs right that would be acquired with purchase of the Layton parcels (Task #5). However, because these the historical use of these senior rights appear to be largely non-consumptive, and because their original point of diversion is above the Spangler headgate, ownership or leasing of these rights does not seem likely to eliminate the ability of the Spangler Ranch to divert all of German Gulch flow during low flow when its water right exceeds the flow in stream under provisions of Montana law (§85-2-402(2) MCA). Thus, this alternative would not accomplish the desired goal of connectivity.

The most viable options at this time are alternative 2 and alternative 3. Alternative 2 is less complicated, less costly, and has fewer uncertainties associated with its feasibility than alternative 3. Both would be equally effective in providing the desired connectivity, but are not equally effective in providing for landowner acceptance. The landowner's acceptance is key to implementation of any alternative, except for the no-action alternative. The only alternative amenable to the Spangler Ranch is alternative 3.

The total costs of \$304,904 for the fish screen and water trade is calculated to be \$26.11 per cfs for 92 days a year for 30 years, which is the critical time of needed flows.²⁹ This amount is within the range of the costs for other instream flow water leases that have been completed for converting irrigation flows to instream flows.³⁰ However, compensation for every water lease is unique due to the unique water resources of each drainage; therefore, comparing the price of water in one watershed to another watershed is not always valid. A more valid analysis of whether the proposed alternative is cost effective would be to consider the reasonableness of the \$47,448 additional cost of alternative 3 over alternative 2. This difference represents the additional costs associated with alternative 3 that exceed the sum of the direct costs of the fish screen and economic value of 2 cfs of irrigation. If annual payments were made, \$47,448 would generate about \$2700 per year at a real interest rate of 4% over 30 years. The NRDP considers this reasonable compensation to the landowner for his willingness and contributions to executing the 30-year lease and assistance in maintaining the fish screen over 30 years. GGTU has agreed to pursue having the landowner include a first right of refusal of the 2 cfs water lease in the water lease agreement, which would make the cost of the proposed alternative even more reasonable.

²⁹ Although costs are based on 92 days, the lease will be for a year-round flow.

³⁰ Information provided by Montana River Action, "Water Leasing for Instream Flows," from www.montanariveraction.org/water_leasing.html and by GGTU in application (p.45).

Relationship of Expected Costs to Expected Benefits – Net Benefits

GGTU requests \$328,293 in Restoration funds and offers \$81,841 in matching funds, or 20% of the total costs of this task. The matching funds are for 54% of the total fish barrier costs and a 35% of the total fish screen costs. The costs of this task are broken down in the table below:

Goal # 4 Tasks	Restoration Funds	Matching Funds
Install Fish Barrier	\$ 23,389	\$27,000
Drilling of the irrigation Wells	\$ 67,186	
Well Pump and Motor	\$ 45,040	
30-Year Electrical Cost	\$ 94,467	
Design Headgate & Diversion	\$ 29,530	
Full Design of Pipeline Repair	\$ 19,220	
Temporary Shoring of Pipeline	\$ 8,000	
Install Pivot irrigation system	\$ 41,461	
Fish Screen on Headgate		\$54,841
Total	\$328,293	\$81,841

German Gulch has an outstanding to high-value fishery resource rating, using FWP’s rating system, including a productive nearly genetically pure native westslope cutthroat trout fishery. Based on results of the Silver Bow Creek watershed planning effort, it is the tributary that offers the greatest potential to augment restoration of the Silver Bow Creek fishery. The installation of a fish barrier will inhibit any migration of rainbow trout up German Gulch and prevent cross breeding with the westslope cutthroat trout, thus preserving the nearly pure strain of westslope cutthroat trout in the drainage. The fish screen will help to prevent the loss the westslope cutthroat trout fry, which could be as much as 10,000 fry per year, into the Spangler irrigation system.³¹ The proposed trade of 2 cfs of water would supply the connectivity of German Gulch with Silver Bow during low flows and would be a source of cold, clean water year-round. All of these activities would greatly enhance the fishery of Silver Bow Creek at the same time as preserving the German Gulch fishery. Given these substantial benefits, the reasonableness of costs, and the 20% contribution in matching funds, the NRDP considers this task as one that will derive net benefits.

GGTU’s proposal indicates their intent to apply for additional funds for the permanent repair/replacement of several hundred feet of the irrigation pipeline near the mouth of German Gulch. Since the application did not include details or costs for this permanent replacement, the NRDP did not consider it in its evaluation and has judged the water trade favorable based on what is strictly requested in this proposal. Future proposals for the replacement of the pipeline would be evaluated on their own merits and would require additional benefits beyond those considered in this evaluation to the natural resources of the area.

³¹ Phone conversation between Ron Spoon, FWP fisheries biologist with FWP, with Carol Fox and Tom Mostad of NRDP on April 18, 2005.

Task #5: Purchase of Private Mining Claims (Restoration Funds requested \$50,100)

Technical Feasibility – Reasonably Feasible with NRDP conditions

GGTU proposes to acquire 82 acres of private lands adjacent to the stream corridor in order to provide recreational opportunities and to prevent future negative impacts such as mining or potentially detrimental development of the properties. The acquisition would include the Moore #72 (40 acres) and Ford #75 (16 acres) claims, which would be transferred to the USFS, and the Ford #76 (26 acres) claim would be transferred to FWP (see figure 2). The Layton family owns all three parcels. The transfer to the USFS would not occur until after implementation of the pilot project. The proposed stream pilot project lies within the Moore #72 claim (Task 1). The proposed trail is located on the Ford #76 claim (Task 3).

The Moore #72 and the Ford #75 claims are in similar condition. Both show evidence of drastic placer mining activities, with much of the area covered with unvegetated placer piles. The area does have some lodgepole pine with some small patches of willows but grass is scarce. The stream is mostly straight with unvegetated banks through these reaches. In contrast, the Ford #76 claim, which borders both Norton Creek and German Gulch, is in good condition. The upper portion of the claim has an expansive floodplain with a little evidence of placer mining activity and has a significant amount of willows and grass.

GGTU has or will conduct most of the needed title, appraisal, and landowner negotiations to accomplish this goal. The FWP and USFS have indicated in their letters of support for this project that they are willing to receive these lands (though the USFS will accept transfer after implementation of the pilot project). The only significant uncertainty associated with accomplishing this task is that associated with the need for a reappraisal or supplemental appraisal to address a proposed 99-year recreational easement to the current landowners of the Ford #76 claim, as further explained under the cost-effectiveness criterion. FWP will also need to complete an environmental assessment and management plan and obtain approval of the FWP Commission for FWP's proposed portion of this acquisition. The USFS will need to comply with its NEPA and public participation requirements.

Funding is contingent upon completion of title work that verifies the transactions are as represented in the application and the NRDP's approval of any reappraisal and land acquisition transaction documents.

Cost Effectiveness – Likely Cost Effective

The acquisition alternatives are complicated by GGTU's negotiation of a 99-year recreational easement with the Laytons for the Ford #76 parcel, after completion of the 1/6/05 property appraisal. Since the easement would encumber the property, and also because the three parcels were not separately appraised, a reappraisal or supplemental appraisal is needed that would consider the effects of this encumbrance on the fair market valuation.³² Due to these circumstances, there are three alternatives for this task:

³² In a 5/17/2005 letter to Carol Fox of the NRDP, Kraig Kosena, who appraised the Layton property, confirmed that a discount of the land value due to the inclusion of a recreational easement would be appropriate.

1. no-action;
2. acquisition of the 82 acres with no recreational easement; or
3. acquisition of the 82 acres with the recreational easement and needed reappraisals/supplemental appraisals.

The no-action alternative does not accomplish the goal of providing recreational opportunities to the public and protecting natural resources from potentially detrimental future land uses. It may also prevent implementation of the proposed pilot study and trail.

The most cost-effective alternative would be to eliminate the recreational easement; however, GGTU has indicated its preference to keep the recreational easement provision due to landowner preferences. If GGTU wishes to keep the recreational easement provision, then GGTU will need to commission the needed reappraisals/supplemental appraisals that would be subject of state approval. While the purchase price to the State under the reappraisal option is uncertain, based on information provided in the 1/6/2005 appraisal about the value of the upper vs. lower Layton parcels and GGTU’s confirmed matching funds for this task, it is likely that the budgeted Restoration funds will be adequate to accomplish this desired acquisition.

Relationship of Expected Costs to Expected Benefits – High Net Benefits

GGTU requests \$50,100 total in Restoration funds to acquire the three Layton parcels, with \$49,000 in matching funds, or 49% of total costs. A breakdown of costs is as follows:

Item	Restoration Funds	Matching Funds
Purchase 82 acres @ 1,000 per acre	\$41,000	\$41,000 (cash)
Title transfer and survey costs	\$ 5,000	
GGTU Land Transfer fee	\$ 4,100	
Lifetime TU memberships (8) for Laytons		\$8,000 (in-kind)
Total	\$50,100	\$49,000

The NRDP considers the proposed land transaction costs to be reasonable, particularly given the \$41,000 confirmed cash match for land costs.

The 82-acre acquisition lands offer significant recreational benefits given their location mid-way between Butte and Anaconda and the popularity of the German Gulch for fishing, hunting, and other recreational activities. Furthermore, as a public land adjoining the Silver Bow Creek Greenway corridor, German Gulch will be an integral part of an overall restoration effort that includes the Greenway. Aside from historic habitat damage caused by placer mining activities, the majority of German Gulch consists of high quality fish and wildlife habitat on public land, with minimal development. The acquisition will also facilitate the pilot stream restoration project (Task 1) and trail improvements (Task 3) that the NRDP considers favorable for funding. If the reappraisal of Moore #72 and Ford #75 parcels indicates the acquisition would be significantly below the fair market value, as it would appear to be the case given the significant

matching fund contribution, the benefits of the proposed acquisition will significantly exceed the costs.

Task #6: Conduct a Cultural Resource Inventory and Install Interpretive Signage
(Restoration funds requested \$49,910)

Technical Feasibility – Reasonably Feasible

GGTU seeks to identify and protect cultural resources by completing a full cultural resource inventory, evaluation, and report for the German Gulch area and by installing interpretive signage. Previous investigations conducted in the vicinity of German Gulch Creek covered areas near the upper and lower ends of the drainage. A large portion of land where GGTU's proposed trail and stream restoration activities will be conducted has not been studied. The inventory will provide guidance as to areas where restoration activities may have potential impacts to cultural resources and provide information for interpretive signage.

GGTU indicates the signage would educate the visiting public about some of the historic mining activities in the watershed and how they are related to the current restoration activities of the NRDP, and the role of replacement and restoration projects in the NRDP. GGTU also indicates the signage would highlight and help protect cultural resources. The use of signage to highlight cultural resources would not be a legal use of Restoration funds unless that signage is somehow required as a mitigation effort tied to proposed restoration activities or is included on signage focusing predominantly on restoration. To assure that the signage is an appropriate use for Restoration funds, NRDP review and approval of signage language should be a funding condition. There are no other significant uncertainties associated with the feasibility of the proposed cultural resource inventory and installation of interpretive signage to accomplish their intended goals.

Cost Effectiveness – Cultural resource inventory – Likely Cost Effective; Signage – Likely Cost Effective with NRDP Conditions

The proposed cost of \$5,210 for the cultural resource inventory is similar to the cost of other studies completed for abandoned mines within the state. The proposed cost of \$44,700 is for two 12 ft² signs and six smaller signs. The signage is proposed to be resin-encased paper, which has a 10-year life; however, other types of signs are much cheaper. DEQ paid approximately \$2,600 for a bronze placard in Butte,³³ which probably has more longevity than that of the proposed signage. A price quote for one cast bronze 24" x 36" (6 ft.²) placard is approximately \$1,700 (uninstalled); two signs would be \$3,400.³⁴ Depending upon the chosen installation, it probably could be installed for approximately \$1,000 a piece, for a total of \$5,400. Though these signs are smaller and not as numerous as that proposed, the NRDP believes they would adequately serve the purpose of educating the public on the mining history and restoration activities. The NRDP thus recommends a less expensive, more permanent alternative of two signs funded at \$5,400 to accomplish the desired educational goals be selected over the proposed alternative, which would reduce the budget by \$39,300.

³³ Dale Herbort of DEQ, phone conversation with Tom Mostad of NRDP, May 24, 2005.

³⁴ Joe Gabig of International Bronze Ltd., email to Tom Mostad of NRDP, May 24, 2005.

Relationship of Expected Costs to Expected Benefits – Cultural resource inventory – Commensurate Benefits; Signage – Commensurate Benefits with NRDP Conditions

The total cost for task #6 of \$49,910 can be broken down as follows:

- Cultural Resource Inventory: \$5,210
- Sign Data Compilation (project archaeologist): \$2,200
- 2 Orientation Signs: \$19,000
- 6 Smaller Signs: \$16,000
- Sign Installation: \$7,500

The proposed cultural resource inventory will identify significant cultural resources in the watershed, which will help facilitate future restoration activities, including those of the proposed pilot project, and educate the public on the historical significance of this project. The inventory will also assist with the implementation of proposed tailings removal, recreational improvements, and stream flow enhancements (Tasks 2, 3 and 4, respectively). These benefits are considered commensurate with the costs of this inventory.

As explained under the cost effectiveness criterion, the NRDP believes that the high costs of the proposed signage outweigh its potential educational benefits and that a lower cost signage will still obtain the proposed benefits. With the proposed \$39,300 budget reduction for signage, the NRDP recommends funding of this task for \$10,610 total.

Summary of all six Tasks

Based on the feasibility, cost effectiveness, and the benefit:cost relationship criteria of the proposed six tasks, the NRDP considers all to be favorable for funding except for the \$10,000 for 2006 grant preparation, \$39,300 for signage and \$2,380 for the reduction in management costs, due to the other reductions. This favorable funding recommendation for the other tasks are tied to the many funding conditions the NRDP considers necessary to address numerous uncertainties associated with successful project completion. As one of these conditions, the NRDP recommends an additional two years of monitoring costs for the pilot study, which would increase costs by \$15,496.

A risk exists that the proposed water trade may not be feasible based on results of well drilling/pump tests. If that proves to be the case, approximately \$34,000 to \$90,000 will have been invested in potential water trade that will not come to fruition. Based on initial favorable drilling results and the substantial benefits to be gained for the water trade, the NRDP considers this risk as one worth taking.

The recommended NRDP changes to the proposal reduces the amount of NRDP funds from \$912,346 to \$876,162; reduces the amount of matching funds from \$180,736 to \$173,702 (see criteria #14); which in turn reduces the total budget from \$1,093,082 to \$1,049,864. This corresponds to reduction in NRDP funds of \$36,184 and an overall reduction of \$43,218 in the total project cost.

4. Environmental Impacts – Short-Term Adverse Impacts with Mitigation

No long-term adverse environmental impacts are projected, but some aspects involve construction activities that will cause short-term environmental impacts. The pilot stream reconstruction, tailings removal, bridge construction, and trail building activities will cause ground disturbance and could cause some short-term negative water quality effects from turbidity. However, best management practices should be in place to limit short-term negative water quality effects. Revegetation and storm water sediment controls can control some of the negative effects of these activities.

The pilot stream restoration project could result in selenium becoming entrained and spread downstream with the fine-grained sediments.³⁵ Mitigating this impact can be accomplished by limiting the amount of construction that will occur in the active stream channel and by conducting storm water control measures, which are often a part of the DEQ permitting requirements. In addition, since the reconstructed channel will be placed in areas away from the current stream flow and are therefore likely to have lower selenium values, any sediment from the newly constructed channel will not likely cause a problem. Short-term adverse selenium impacts are probable, however, with proper mitigation their effects can be minimized and GGTU appropriately plans for this mitigation through the permitting process.

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

No adverse impacts to human health and safety are projected due to the nature of this grant as long as safe construction practices are used in the use of heavy equipment and the proper use of personal protective equipment is followed when removing the tailings material and constructing the bridge and the trail. The proposal will reduce the safety hazards associated with the current dilapidated bridge. There are some concerns about the crossing of the railroad tracks near where the proposed trail is located adjacent to Silver Bow Creek. Currently the existing trail/road leads across both sets of tracks (BN & Rarus) and foot and vehicular traffic has passed over them for many years. The proposal will not change human health impacts for any one traveler, but may raise the overall public hazards slightly due to the increase in numbers of people that use the trail. NRDP recommends trail signage at this point to notify users of the active rail.

6. Results of Response Actions – Positive Coordination

GGTU intends to coordinate grant activities with Silver Bow Creek remediation activities as needed. Remedial actions at the German Gulch and Silver Bow Creek confluence are expected in 2007 or 2008. This coordination could achieve cost savings. Joel Chavez, DEQ project manager for the remediation, has indicated that coordination with remediation is possible if GGTU can receive DEQ's approval to conduct the construction of the removal of the wastes.³⁶

Another positive aspect of coordination of this project with remedial actions pertains to replacing the irrigation headgate structure near the confluence of Silver Bow Creek with a fish-friendly structure that includes a fish screen. The new headgate will include delivery of a 2 cfs flow so

³⁵ GGTU German Gulch Application Review by Maxim Technologies, dated May 16, 2005.

³⁶ Telephone communication between Joel Chavez of DEQ and Tom Mostad of NRDP on 3/30/05.

that trout can migrate between German Gulch Creek and Silver Bow Creek during low flows. The year-long stream flows will assist in providing a native seed stock of nearly genetically pure westslope cutthroat trout populations to repopulate Silver Bow Creek, and providing cold, clean water during late summer to Silver Bow Creek.

7. Recovery Period and Potential for Natural Recovery – Reduces Recovery Period

Augmenting instream flows in German Gulch and re-establishing connectivity between German Gulch and Silver Bow Creek could improve the recovery time frame of injured aquatic resources of Silver Bow Creek, once the remediation of Silver Bow Creek has been completed and the water quality has improved.

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

The proposed pilot stream study, headgate, fish screen, water trade, fish barrier and tailings removal activities will require that all necessary state and federal permits be obtained. GGTU acknowledged that the following permits will be needed: a) Montana Natural Resource Streambed and Land Preservation Act 310 permits; b) Short Term Exemption from Montana's Surface Water Quality Standards 318 authorization; c) Federal Clean Water Act 404 permits; and d) Storm Water Permits. GGTU also recognized the requirements of the applicable water rights laws and regulations, as discussed under criteria #1.

GGTU proposes in Task #5 to acquire private land that has a substantial quantity of weeds. State law relating to weed control is set forth in MCA sec. 7-22-2101 et seq. This law places certain weed control responsibilities on state agencies and municipalities (see MCA 7-22-2151). Additional responsibilities were added by SB 259, which became law after the submittal of this year's grant applications. This law requires certain weed control planning and implementation activities specific to purchases of real property using public funds or the receipt of real property by non-federal public entities. This law sets forth the following requirements that are applicable to this project:

- 1) That the property be inspected by the county weed management district prior to purchase of the property. SB 259 provides that the costs associated with the inspection be borne by the seller.
- 2) That a noxious weed management agreement be developed and incorporated into the purchase agreement. The purpose of this agreement is to ensure compliance with the district weed management program.

Compliance with the provisions of SB 259 should be a condition of funding for the land acquisition activities. The project budget includes funding for weed control in the next five years.

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

The project is likely to have a beneficial impact to the interests of both the Tribes and DOI because of improved wildlife and aquatic resources, particularly the benefits to supporting a fishery of genetically pure westslope cutthroat trout. The DOI and Tribes support this proposal. The Tribes have commented on GGTU's intended coordination of the cultural resource survey tasks with the Tribes (Appendix D).

Stage 2 Criteria

10. Project Location – Within Basin and Proximate

The efforts associated with this grant will take place in the German Gulch drainage, except for the trail and bridge components along a small portion of Silver Bow Creek, which will provide access to the German Gulch drainage. This project area is located about halfway between Butte and Anaconda, close to the injured resource areas and populations impacted by injured resources.

11. Actual Restoration of Injured Resources – May contribute to restoration

The project area is predominantly outside the injured areas covered under Montana v. ARCO (except for a small portion of Silver Bow Creek). The entire project area is outside the Mt. Haggin injured area. Although this project does not constitute actual restoration of injured resources, it is anticipated that the project will indirectly contribute to restoration of the injured resources of Silver Bow Creek through implementation of the planned improvements of fish passage, enhanced flows from German Gulch to Silver Bow Creek and the proposed stream and floodplain restoration activities in Upper German Gulch.

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

When implemented, the natural resource improvements would improve aquatic and terrestrial resources and also improve public recreational services in German Gulch that are the same or substantially similar to the public recreational lost services addressed under Montana v. ARCO, such as fishing, wildlife viewing, and hunting.

13. Public Support – 16 Support Comments

The NRDP received 16 comments in support of this project including 12 letters of support from the Beaverhead-Deerlodge Forest, two letters from FWP, Skyline Sportsman Association, In., Public Lands/Water Access Association, Inc., Anaconda Sportsman's Club, Clark Fork Coalition, Citizens Technical Environmental Committee, Tri-State Water Quality Council, Native Plant Society, Caring For Creation, and The Divine Mercy Prayer Group.

14. Matching Funds – 17% Match as revised by NRDP

Restoration Request	\$ 876,162
GGTU (In-kind)	\$ 7,200
WET In-kind)	\$ 14,421
Zeitgeist (In-kind)	\$ 6,240
Future Fisheries	\$ 15,000
FWP (Beal)	\$ 27,000
FRIMA (USFWS)	\$ 54,841
MT FW Conservation Trust	\$ 41,000
Lifetime TU Memberships (In-kind)	\$ 8,000
Total Project Cost	\$1,049,864

GGTU’s proposal, as revised by the NRDP, involves 8 different funding sources and matching funds total \$173,702, which is approximately 17% of the total funds requested. The cash portion of the matching total \$137,841, or 13% of total costs. The in-kind matching funds total \$35,861, of 3% of the total project costs. All of the matching funds have been confirmed for this project.

The NRDP disallowed an additional \$7,035 proposed as matching funds by GGTU because the work associated with this funding had been completed well before the grant submittal date.³⁷

15. Public Access – Increased Access Beneficial

Overall, the proposal will increase public access and enhance hunting, hiking, and fishing opportunities in the area. The proposed trail in lower German Gulch and Silver Bow Creek should increase foot traffic, especially in the area between the Layton’s property and where the existing trail/two track ends. When the proposed Silver Bow Creek Greenway trail has been constructed, access to the area will also increase.

Evidence of ATV and 4-wheel drive use within the FWP WMA in lower German Gulch is present and the proposed restrictions will likely decrease the unauthorized motorized traffic in the area. However, the increased foot traffic from the lower gulch, which has a substantial amount of weeds, to the upper area, could spread the weed problem. To counter the potential problem, GGTU proposes to initiate a 5-year biological control program.

16. Ecosystem Considerations – Positive

This project fits within a broad ecosystem context, as it is a “landscape” proposal that involves addressing aquatic and upland natural resources. The project seeks to improve the fisheries of a major tributary to Silver Bow Creek in the headwaters of the Upper Clark Fork River. The resident westslope cutthroat trout are a nearly genetically pure population that may be used as a seed stock for the eventual re-population of this species in Silver Bow Creek. Efforts to improve the connectivity of German Gulch and Silver Bow Creek will enhance the UCFRB aquatic

³⁷ NRDP has disallowed invoices as in-kind matching funds from Confluence Consulting, Inc. for \$6,644.31 and Beard Environmental & Technical Assistance, LLC (BETA) for \$390.50.

ecosystem. GGTU plans to appropriately consider upgradient conditions at the Beal Mine in planning restoration of the lower reaches of German Gulch, as further detailed under criterion #17.

17. Coordination and Integration – Coordinates/Integrates

This proposal plans restoration activities that can help the native fishery better withstand the impacts from upgradient contaminant problems at the Beal mine. The current status of mine cleanup is that selenium has been trending downward, but it is too early to predict if that trend will continue. The USFS will be working on some remediation efforts toward closure, such as completing the waste rock reclamation, continuing road rehabilitation, and other dirt moving type jobs. The USFS will not initiate a final water treatment system until they have a better handle on the changing conditions in leach pad chemistry, in the waste rock, and other source areas and this may take several years depending upon the monitoring results. In addition, the Forest Service plans to continue reclamation efforts, which should have a positive impact on the selenium values, especially the work on the waste rock dump.³⁸

Reclamation of the Beal Mine could affect the downstream restoration efforts if the selenium concentrations in the stream increase or do not diminish with time. GGTU has committed to postpone any further in-stream restoration activities until impacts from the Beal Mine have been mitigated, if the pilot study area is accumulating selenium.

Several restoration needs for German Gulch Creek ranked “Very High” and “High” in the Draft Silver Bow Watershed Restoration Plan.³⁹ The westslope cutthroat trout population needs, preservation and protection, the lease of irrigation water were ranked as having very high restoration importance in the draft plan. Items such as land acquisition and trail access to German Gulch were ranked as high in the restoration importance in the draft plan.

Improvements to German Gulch fishery can substantially contribute to Greenway restoration activities along the Silver Bow floodplain corridor. The project also coordinates with the proposed Duhamé acquisition.

18. Normal Government Functions – Outside Normal Government Functions (all components except weed control and environmental assessment activities that augment normal government functions)

Except for the proposed weed control and environmental assessment activities, none of the proposed activities are ones for which a governmental entity would normally be responsible or would receive funding in the normal course of events. Even though the full project would involve stream, fishery and recreational improvements on lands that are now owned or will be owned by various governmental entities (FWP, DEQ, and the USFS), none of these entities are specifically responsible for these improvements, nor would these agencies necessarily receive

³⁸ Email to Tom Mostad from Ray TeSoro Regional Mining Geologist USDA-Forest Service, Northern Region.

³⁹ *Draft Silver Bow Creek Watershed Restoration Plan*, prepared by NRDP, Confluence Consulting, and DTM Consulting, dated December 2004.

funding for such activities in the normal course of events. The USFS and FWP have been active participants in the application process and will continue to participate in the management of the acquired property that go to each agency. FWP will also participate in headgate design, and in revegetation efforts that will occur on FWP lands.

Weed control is a landowner responsibility. Since some of the proposed weed control activities will occur on lands now owned or to be owned by state government, they are considered as activities that augment normal government function. The \$3,000 for chemical weed control is targeted for areas where soils are disturbed to implement other project activities, such as the tailing removal and trail construction areas. The \$6,000 proposed for 5 years of biological weed control activities will cover both disturbed and undisturbed areas of lower German Gulch that are of mixed private/public ownership and fall within GGTU's project boundary. The restoration actions will in turn increase foot traffic from the lower gulch, which could further spread the weeds. GGTU proposed five-year biological control program should help counter that potential problem. The NRDP considers these weed control efforts as ones that are either necessitated by or targeted to restoration activities funded by the NRDP.

GGTU requests \$5,000 to fund a consultant to perform the needed environmental assessment work required under NEPA for the proposed trail on USFS lands. While a NEPA analysis is required by law for proposals on USFS lands, such as this proposal, but for this proposal, no NEPA analysis would be triggered. The restoration funding would result in implementation of a restoration project that would not otherwise occur through normal government function. Thus, the NRDP considers this activity as one that augments normal government function.

Land Acquisition Criteria

19. Desirability of Public Land Ownership – Restoration/Replacement Beneficial

The proposed 82-acre acquisition will facilitate the construction of the proposed pilot study (Task #1) and the construction of the trail (Task #3). Acquiring the land will allow for later restoration activities to take place as well as providing for beneficial recreation opportunities for Butte, Anaconda and surrounding communities. Acquiring these lands would also protect about 1.3 miles of the riparian corridor from potentially detrimental activities. The current tax revenue is \$515.41. The USFS does not pay taxes on its acquired lands, but FWP would pay taxes similar to those of the current landowner on the parcel it would acquire. Thus, the tax revenues will be less than those generated now and also less than would be generated under a development scenario. Adding the proposed lands to already existing state and federal lands will have a minimal impact to demands for governmental services. The NRDP believes that the positive aspects of this acquisition outweigh these minor impacts.

20. Price – Uncertain

The applicant completed an appraisal on the properties and the price was determined to be \$1,000 per acre for approximately 82 acres, for a total of \$82,000, \$41,000 of which is requested in Restoration funds. The potential seller wanted other commitments to be met before agreeing to the price. The commitments are proposed to be 8 lifetime TU memberships (contributed by

TU), a placard acknowledging the Layton family and a 99-year recreational easement.⁴⁰ Since the lease was not considered in the appraisal, a supplemental or reappraisal would be needed that considers the effect of the easement on fair market value.

The NRDP agrees that the property is a key part of the goal of the project, but can only fund the acquisition if it can be purchased at fair market value. A funding recommendation is contingent upon the State's verification that the purchase price is for a fair market value.

Monitoring and Research Criteria: These criteria are only applicable to the pilot demonstration project task.

21. Overall Scientific Program – Coordinates

The restoration activities and/or monitoring could provide information that is useful to the USFS in remediation at the Beal Mine. Since the extent of selenium contamination is yet unknown, the knowledge gained regarding the affects of selenium on the fish population in German Gulch due to the stream restoration may be useful elsewhere. In addition, the physical placement of woody debris and pools as a part of the channel design could supply information as to effects on the fish population that may be used in other locations.

22. Assistance with Restoration Planning – Moderate Benefits

The project will be of moderate benefits to future stream restoration efforts in terms of needed information on the status and condition of natural resources and recovery potential. The only constraint is the possible long-term effect the selenium may have on the restored area and its fish population. The results obtained from the pilot project could then be implemented at other locations on the stream with success.

⁴⁰ Draft MOU between GGTU and the Layton Family Trust, February 26, 2005.

Butte-Silver Bow Local Government

Drinking Water Infrastructure Replacement – Year Five and Year Six

Project Summary

Butte-Silver Bow City-County (B-SB) proposes to replace inadequate water distribution lines in the city of Butte. The proposal is for a multi-year project with the expectation for 2 years (2006 and 2007) of construction funding. In 2006, approximately 17,000 feet of waterline is to be replaced at a cost of \$2,052,359, with \$1,539,269 requested in Restoration funds. In 2007, approximately 17,000 feet of waterline is to be replaced at a cost of \$2,113,929, with \$1,585,447 requested in Restoration funds.

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 and by EPA's 1994 Record of Decision. 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. The State's 1995 Restoration Determination Plan considered upgrading Butte's antiquated water system as a viable restoration alternative for the bedrock groundwater injuries in Butte. Butte is asking for repair of inadequate distribution lines only in the area that has bedrock injury. This proposal will enhance the water supply from an unaffected source, thus compensating the public for some of the lost use of groundwater that Butte has suffered due to the inability to tap clean bedrock groundwater in much of the City.

This proposal totaling \$3,124,716 is for years 5 and 6 of an intended 15-year funding request to the NRDP by B-SB for waterline replacement. The Governor has approved funding for years 1 through 4 totaling \$4,721,513. By applying a 3% rate increase to the year 5 request, the NRDP estimates the total request to the Restoration Fund for the 15-year replacement program would be \$24.4 million.⁴¹ This evaluation does not address that long-term plan. If B-SB seeks further funding beyond the 2 years of funding under this proposal, it will need 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 (see figure 3). The lines vary in size from 6 to 12 inches. 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 and submitting the designs to DEQ for approval; 4) preparing and releasing bid packages for selection of 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 B-SB records and database.

⁴¹ B-SB calculates in the application that the 15-year NRDP contribution would be \$21.7 million; however, this calculation appears to have a math error.

The NRDP has a reasonable degree of confidence that technologies proposed for water distribution main replacement can be achieved. The B-SB 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 B-SB to create procedures for water main replacement when B-SB acquired the water system in 1992. As of December 2004, B-SB has replaced approximately 285,000 feet of transmission and system upgrades that exceeded \$47 million. B-SB successfully implemented 3 years of waterline replacement projects funded by the NRDP and is currently implementing the Year 4 project.

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. Standard construction procedures for water main replacement are being planned for this work and the project team has successfully conducted similar efforts since 1992 with minimal problems. Taking into account any inconvenience and annoyance to residents, B-SB has determined approximately 17,000 feet of water main replacement in the Butte Hill area as a reasonable quantity of lines for replacement per year. This project is reasonably feasible based on the information provided.

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

The proposed costs for implementing Year 5 of the waterline replacement is \$2,052,359, with \$1,539,269 (75%) requested in Restoration funds and \$513,090 (25%) from B-SB. The proposed costs for implementing Year 6 of the project is \$2,113,929, with \$1,585,447 (75%) requested in Restoration funds and \$528,482 (25%) from B-SB. The breakdown in total costs and the cost per lineal foot of pipe are detailed in Table 1 and Table 2.

Table 1

	Year 5	Year 6	Funding Source
Engineering	\$ 145,768	\$ 150,141	77% NRDP; 23% B-SB
Construction	\$1,861,398	\$1,917,240	77% NRDP; 23% B-SB
Administration	\$ 45,193	\$ 46,549	100% B-SB
Total	\$2,052,359	\$2,113,929	75% NRDP; 25% B-SB

Table 2

Cost Per Lineal Foot (lf)	Year 5	Year 6
Construction Cost	\$99.54/lf	\$102.53/lf
10% Construction Contingency	\$9.95/lf	\$10.25/lf
Engineering Cost	\$8.57/lf	\$8.57/lf
Subtotal	\$118.07/lf*	\$121.61/lf*
B-SB administrative Costs	\$2.66/lf	\$2.74/lf
Total	\$120.73/lf	\$124.35/lf

*These amounts were corrected by B-SB from the original application⁴²

⁴² Facsimile from Jean Pentecost of B-SB to Tom Mostad of NRDP dated April 27, 2005.

This project request is for the fifth and sixth years of an intended 15-year effort, which started in 2002 replacing water lines system-wide to address the long-term maintenance problems of the system. This 15-year effort, combined with improvements made by B-SB between 1992 and 2001 (independent of NRDP requests), would replace a total of 255,000 feet of waterline, would represent about 40% of the entire water distribution system and about half of the sections in most need of replacement. Although this effort lags behind the accepted rule-of-thumb for a waterline replacement of 1% each year, the project would achieve substantial progress toward getting the community's infrastructure needs met.

The funds requested from NRDP, and the percentage of the overall cost of the project, have both increased over the past 4 years. B-SB's 2001 draft plan⁴³ for waterline replacements and other NRDP project indicates B-SB's intent to "request \$1 million per year in NRD funds, and provide a direct match of \$500,000 annually..." which calculates to a 67% funding rate by NRDP per year. Past projects approved for funding have ranged from \$1,165,795 in year 1 to \$1,197,971 in year 4, with a 3% increase between year 1 and year 4. Year 5's request of \$1,539,269 is \$341,298 (29%) more than the year 4 request. In addition, B-SB matching fund contributions for years 1 through 4, which ranged from \$648,963 to \$557,919, were 32% of the total projects compared to the 25% in matching funds proposed for years 5 and 6.

The above figures indicate that the cost to the NRDP to replace 17,000 feet of waterline has significantly increased in this year's request compared to previous years' request. B-SB states the increases are due to the increased costs in water main renewal, which resulted in B-SB using more funds than originally reserved to supplement the NRD projects for B-SB water renewal outside the boundary of the damaged aquifer.⁴⁴ Due to the cost increase, B-SB has spent more than their proposed matching fund amounts each of the last three years. In Year 1 and Year 2 they averaged approximately \$65,000 more than predicted and approximately \$140,000 more than their predicted matching funds in Year 3 of the project. The Year 4 bid, however, is within its predicted budget. These increased costs of construction, combined with B-SB's lower match, have increased NRDP cost which means the project has a lower benefit:cost ratio than previous years' projects.

The NRDP agrees with the applicant that this project represents an important step in replacing services lost due to injured groundwater resources. The State's 1995 Restoration Determination Plan⁴⁵ 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;

⁴³ 20-year Draft Plan: *A Look Forward to 2020: Butte-Silver Bow's Project Priorities for the Natural Resource Damage Program*, March 12, 2001.

⁴⁴ Tom Mostad of NRDP phone conversation with Jean Pentecost of B-SB on May 24, 2005.

⁴⁵ *Restoration Determination Plan Upper Clark Fork River Basin*, NRDP, October 1995.

- 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 B-SB's continued provision of a reliable source of potable water to its residents meeting current federal and state regulations; and
- The opportunity to conserve more water during drought conditions as a result of reduced leakage.

B-SB has indicated that in the past year they have repaired 264 leaks, though the amount of water lost due to the leaks and the corresponding cost to replace the water is not known. B-SB has submitted an application for a Water Master Plan to NRDP that, when implemented, could provide B-SB with a water balance for the system and also provide a better determination of the leakage in the system.

The NRDP requested information from B-SB on the cost savings associated with waterline replacement. Since the cost saving for repairing leaks is not available, B-SB has made several assumptions in an attempt to calculate the cost savings. B-SB projects that if these leaks were not repaired, the water loss would have cost B-SB about \$938,000 in annual water treatment costs.⁴⁶ Though many assumptions were made in the B-SB calculation and they cannot precisely quantify the benefit, the fact that B-SB has 264 leaks in their water system in one year is a good indication that their waterline system needs to be addressed.

Despite the lower benefit:cost ratio than that of previous years projects due to B-SB's decrease in its proportionate matching fund contribution and to B-SB's predicted increase in replacement costs, the NRDP believes the benefits gained from this replacement proposal still outweigh the costs. This proposal will benefit and compensate a large public for some of the lost use of groundwater that Butte has suffered due to inability to use bedrock groundwater in much of the City.

3. Cost Effectiveness – Likely Cost Effective

B-SB considers the proposed project the most economical alternative to replace lost services from injured groundwater resources. B-SB indicates the no action alternative would eliminate one of the few viable means to replace the lost services that groundwater provides. B-SB also considered another alternative varying 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. B-SB states that the proposed level of replacement of 17,000 feet of line per year is optimum based on B-SB's experience over the last 13 years. B-SB appropriately uses safety,

⁴⁶ This cost assumes the average leak is ¼ inch in size and the rate of leaking is 20 gpm, which equates to 28,800 gal/day/leak, 7.6 million gal/day for all leaks and for a total of 2,775 million gal/year for all leaks. The total leak rate is then multiplied by \$338.12 per million gallons of delivering water from the Big Hole River to Butte. B-SB claims that not fixing the leaks would more than double the amount of the water and the current cost of supplying the needed to water to Butte due to the leakage from \$870,000 to \$1.8 million. Jean Penticost of B-SB letter to Carol Fox, dated May 31, 2005.

public health, and leakage criteria to plan the sequence of leak repairs, with the areas of greatest impact addressed first.

The proposed replacement schedule and cost estimates are reasonable based on previous waterline replacement costs in Butte. B-SB budgeted this project based on the actual cost of pipeline replacement using Year 3 costs as an average of approximately \$1.73 million for 17,366 feet of pipe construction, which equates to \$99.54/lineal foot of pipe, which was used to cost out Year 5 (Table 1). Because replacement pipes are an oil-based product, future pipe costs are expected to increase.

The past benefits of the NRDP funds have allowed B-SB to replace approximately 51,000 feet of waterline with 17,000 additional feet to be replaced with the Year 4 project. One of the benefits from the waterline replacement is the reduced number of leaks.⁴⁷ The NRDP funded waterline replacement, combined with B-SB funded waterline replacements has resulted in B-SB ability to reduce the number of leak crews from two to one.

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.

Given the successful project performance of similar pipeline replacement work with NRDP funds over the last three years, the NRDP believes that the selected alternative of replacing pipe and the level of pipe replacement proposed by B-SB of approximately 17,000 feet per year for Year 5 and Year 6 is cost effective.

B-SB has applied for a NRDP Grant to secure funds for a water master plan that will address the rehabilitation of existing facilities, system capacity expansion, additional water treatment capacity, and additional storage. B-SB justifies going ahead with waterline replacement despite the lack of an updated master plan given that lack of investment in major infrastructure by past owners of the system caused the county to be significantly behind the accepted rule-of-thumb for replacement of 1% per year. The NRDP believes this is a reasonable justification, plus B-SB has applied for funding for completing a master plan next year.

Multi-Year vs. One-Year Submittal Alternative

The Trustee's Multi-Year Funding Policy⁴⁸ provides the option for B-SB to submit this proposal as a multi-year request. B-SB's only justification for requesting for two years of funding is that they have secured county matching funds for two years. B-SB's ability to secure funding is only one factor in the granting process; however, there are other factors to be considered. Each year's pipeline replacement is independent and could stand alone as a single project, as has been done with the past four requests. The public benefits to be derived (lineal feet of pipe placement) from funding these projects are the same whether the project is funded for 2 years or 1 year. However,

⁴⁷ Tom Mostad of NRDP phone conversation with Jean Pentecost of B-SB on June 6, 2005.

⁴⁸ NRDP Funding Policy for Multi-Year Projects, approved by the Trustee Council November 14, 2000, Attachment 1 to this evaluation.

because there are variables to the future requests that cannot be predicted, such as matching funds, whether or not the benefit:cost relationship would be better or worse for a multi-year request vs. a continued single-year request scenario would vary depending on those unpredictable variables.

From a broader scale, the cost-effectiveness of a 2-year vs. 1-year submittal depends on the other choices for grant funding in any one year. Since each project is evaluated, ranked and funded each year, the priority of the Year 6 project could be different than Year 5. It is unlikely, but possible, that if the Year 6 project were ranked lower than other projects in the subsequent grant cycle it would not be funded. Given that this project can be implemented on an annual basis and that the priority of this project over other potential projects in future grant cycles will vary, the NRDP recommends only Year 5 funding be approved.

4. Environmental Impacts – No Significant Adverse Impacts

Replacing Butte’s water mains presents 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 total water from leaking pipes.

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

Potentially adverse impacts to the human environment during construction activities include worker accidents, 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. B-SB will follow safety guidelines of the Montana Public Works and Standard Specifications.

In addition to bringing clean water to residences, replacing water mains will also benefit the community by reducing impacts on human health and safety that are caused by water leaks. These include 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 Decision⁴⁹ 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. B-SB 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 bedrock groundwater cannot be accessed for residential use.

⁴⁹ *Record of Decision, Butte Mine Flooding Operable Unit*, U.S. Environmental Protection Agency, September 1994.

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:

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

It is unlikely that this project will impact these resources, since work will occur on already constructed and paved streets. The DOI and Tribes support this project. The Tribes have commented on the potential for encountering buried cultural features and/or artifacts during excavation (Appendix D).

Stage 2 Criteria

10. Project Location – Within Basin and Proximate

The project will be conducted above the injured Butte Hill bedrock aquifer 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 for thousands of years. 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 – 4 support comments; 1 opposition comment

The NRDP received four support comments on this project, including letters of support from the B-SB Council of Commissioners and the B-SB Chamber of Commerce. The NRDP also received comments from a Butte resident who is opposed to any use of natural resource damage funds for infrastructure improvements in Butte. (Refer to the State’s response to comments⁵⁰ for reasons why the State recommends funding despite this opposition.)

14. Matching Funds and Cost Sharing – 25%

Restoration Fund Request Year 5:	\$1,539,269 (75%)
B-SB cash match:	\$ 475,428 (23%)
B-SB in-kind match:	<u>\$ 37,661 (2%)</u>
Total Project Costs:	\$2,052,359

Restoration Fund Request Year 6:	\$1,585,447 (75%)
B-SB cash match:	\$ 489,692 (23%)
B-SB in-kind match:	<u>\$ 38,791 (2%)</u>
Total Project Costs:	\$2,113,929

B-SB has matching funds of \$513,090 for Year 5 and \$528,482 for Year 6 of the total project costs for this year’s proposal.

Independent of this match specific to the approximately 17,000 ft. of waterline to be replaced in this project, B-SB will also invest approximately \$500,000 towards water main replacement in other areas of Butte outside of the bedrock-injured areas in 2005 and 2006. Also, though not considered a cost share for this specific project request, B-SB has noted the \$47 million dollars already invested by Butte municipal drinking water system ratepayers over the past 12 years.

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 therefore reduce power requirements for pumping and treating water.

17. Coordination and Integration – Coordinates

Coordination of this project is done with other waterline replacement projects in the Butte area.

⁵⁰ NRDP, 2005. *The State of Montana’s Responses to Public Comments on the Draft 2005 UCFRB Restoration Work Plan.* December 2005.

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. The costs B-SB faces to upgrade their system are greater than typical community costs due, in part, to pervasive groundwater contamination underlying Butte. In the absence of that injury, Butte may have been able to construct a 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.⁵¹ B-SB ratepayer's costs are significantly higher than other similar communities. For example, a 2003 study of the monthly water rates of Montana's cities with populations over 7,500 based on 10,000 gallons of water used, Butte's water rate of \$65.58/10,000 gal was the highest and more than two times the rate of the next highest cities, Bozeman (\$33.74/10,000 gal.) and Helena (\$33.76/10,000 gal).⁵² Presently only 45% of Butte's residences are metered.

Another consideration of this criterion is that B-SB is contributing 25% of this project and seeks to address the water main leak problems over a 15-year period to bring annual maintenance costs in line with other similar utility systems. Over the 15 years NRDP's funding would result in the replacement of 255,000 feet, or about 29% the total amount, which is 877,500 feet, of pipeline that needs to be replaced. After that, B-SB will be funding routine maintenance costs.

⁵¹ *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.

⁵² *Survey of Water, Wastewater and Solid Waste Facility Rate in Montana*: by Department of Commerce July 2, 2003.

Anaconda-Deer Lodge County

Seventh, East Sixth and East Eighth Water Distribution Upgrade

Project Summary

Anaconda-Deer Lodge City County (ADLC) proposes to replace 11,800 feet of leaking, 104-year old waterlines along Seventh, East Sixth and East Eighth streets in the City of Anaconda. The total project costs are \$1,989,200, with \$250,500 in matching funds and \$1,738,700 requested in Restoration funds. Currently, Anaconda's water system is losing 2.2 million gallons of water per day via leaking waterlines, which could be further reduced by 350,000 gallons per day if this project is implemented. Repairing these leaks is an alternative that will provide the city with additional water resources instead of developing a new source of water.

Anaconda is located adjacent or partially within the 40 square miles of groundwater contamination associated with the Anaconda Regional Water, Waste, and Soils Operable Unit. 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 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 indicates some 30 square miles of contaminated bedrock groundwater to the north and south of the City.

This request is the fourth year of what ADLC has indicated will be a multi-year funding request to replace the waterline system, with \$2,968,376 in Restoration funds approved for 18,375 feet of waterline replacement and 2,150 feet of new waterline installation in the past three years. With implementation of this project, 52,910 feet of waterline would remain to be addressed in future projects.⁵³ ADLC has identified \$12.5 million of needed water system upgrades in the next seven years, but has not indicated what portion of those costs would be sought in Restoration funds.

Stage 1 Criteria

1. Technical Feasibility – Reasonably Feasible

This project involves the replacement of approximately 11,800 feet of dilapidated waterline along Seventh, East Sixth, and East Eighth streets in Anaconda (see figure 4). This waterline replacement project will be completed after the Fourth Street waterline replacement projects, which will be completed in 2005. Major project tasks include producing designs and specifications, preparing and competitively releasing a construction bid package, and implementing waterline construction and oversight. ADLC has already procured an engineering firm to produce the design documents.

⁵³ The 2004 Preliminary Engineering Report (PER) for Anaconda's Municipal Water System (prepared for ADLC by HKM Engineering, of Butte, August 2004) indicates 72,910 feet of waterline in need of repair. With the completion of 8,200 feet for West Fourth approved in 2004 and 11,800 feet for this proposed project, 52,910 feet of waterline would remain to be addressed in future projects.

The current waterline is Kalimane pipe that is 104-years old and is the next priority as identified in the 2004 PER ADLC proposes to manage and be responsible for the design, project bidding and contracting, construction oversight, and waterline maintenance. Restoration funds will be used for installation of the new waterline, connection to existing water service, and construction oversight.

ADLC has successfully completed 45,000 feet of waterline replacement since 1994, including waterlines along Commercial and Park Avenue, Main Street, Fourth Street, installed a waterline to the Warms Springs Campus, constructed a new well field and water storage tank, and contracted for engineering services for the design and planning of these projects. The same level of effort and approach is proposed by ADLC for this project. ADLC has invested \$8.4 million in its water system since 1992.

The NRDP has a reasonable degree of confidence that the technologies proposed to complete this project can be achieved. Standard design and construction techniques that conform to the Montana Public Works Standards Specifications for Construction and the Department of Environmental Quality (DEQ) specifications will be used for this waterline replacement project.

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

Total cost for the proposed project is projected to be \$1,989,200, with \$1,738,700 (87.4%) requested in Restoration funds and \$250,500 (12.6%) to be provided by ADLC in matching funds.

The leaking waterlines in Anaconda lose approximately 2.2 million gallons of water per day.⁵⁴ 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 2004 PER concluded that the best alternative to develop a water supply would be to conserve the water already being treated and piped out through the water distribution system. Based on the 2004 PER's estimated average leakage of the entire system of 30 gallons/day per lineal feet of pipe, this project could reduce water loss from the entire system by up to approximately 350,000 gallons/day. Using ADLC's estimated production/delivery cost of \$1.07 per thousand gallons, a water savings of 350,000 gallons/day would result in about \$138,000 in annual benefits, which far exceeds the annual equivalent cost of the \$1.99 million project of \$23,400 per year.⁵⁵

Conservation of the leaking water derived from this project will be a direct benefit to 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;

⁵⁴ The August 2004 Preliminary Engineering Report revised the previous 1992 leaking waterline losses from 1.6 to 2.2 million gallons.

⁵⁵ ADLC calculated this annual cost based on a total project costs of \$1.99 million, a 100-year project life span and an interest rate of 4.0%.

- Reduction in potential for property damage and reduction in associated insurance claims for leaky pipes; and
- Opportunity to conserve more water during drought conditions as a result of reduced leakage.

Restoration funds are needed to help defer costs of replacing waterlines and to conserve water. The project offers substantial benefits to the Anaconda public. It constitutes cost effective compensatory restoration for extensive injuries to the shallow and bedrock aquifers surrounding the City of Anaconda. Thus, NRDP believes the benefits gained from this replacement proposal exceed its costs.

3. Cost-Effectiveness – Cost Effective

The project involves replacing 11,800 feet of waterline for \$1,989,200. Costs were estimated using bids from the 2003 and 2004 waterline projects, preliminary draft design plans for this proposed project, and ADLC's consulting engineer's knowledge and experience. ADLC's engineer made some necessary adjustments to account for individual bid item pricing. The NRDP believes the use of this approach to estimate costs is appropriate and has been accurate in the past. Of the 11,800 feet of waterline to be replaced, 10,500 feet are 8-inch line, 700 feet are 6-inch line, 500 feet are 12-inch line, and 100 feet are 4-inch line. A description of the waterline replacement locations is provided on page 12 of the application. ADLC will probably use ductile steel pipe for the larger 12-inch waterline and PVC pipe for the smaller diameter lines.

The application uses the alternative analyses from the 2004 PER to compare seven methods for enhancing water supply. Rehabilitation of the existing distribution system scored the highest, compared to installing meters, adding additional water wells or developing the Hearst Lake/Fifer Gulch Surface Water Source. In addition, the application compares two other construction methods that could be used to complete this project compared to conventional water main replacement. ADLC evaluated using trenchless technology and installing a new waterline in a different corridor. As presented in the application, neither of the alternative methods of installation was as cost effective as standard waterline installation within the existing waterline corridor.

ADLC has water development limitations because of the groundwater contamination associated with the Anaconda Water, Waste, and Soils Operable Unit and the restrictions on installation of new well fields in some areas inside and 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. ADLC does hold the water rights to Hearst Lake/Fifer Gulch (7.63 cubic feet per second), although ADLC indicates a new pipeline and treatment system would be required to integrate this water into the current system at a cost of approximately \$1.7 million. Additional wells at the current well field may not be possible due to an agreement between ADLC and the West Valley Water Users. This agreement was negotiated to protect the water rights of the West Valley Water Users.

Metering water use is another mechanism to conserve water. ADLC has recently contracted with an engineering firm to assess their water system. The 2004 PER concludes that along with waterline replacement, water metering is the best way to reduce water loss from the current water system. The report indicates that 7% of the connections within Anaconda are metered. A new ordinance passed in February 2004 requires metering for all new connections and ADLC proposes to install system-wide water metering by 2008 at an estimated cost of \$2.1 million. A water rate increase is also proposed, which should make metering more attractive to users. The current loss of water through leaks appears greater than the estimated possible water savings from installation of meters.⁵⁶ While proceeding with more intensive efforts to increase use of water meters, replacing waterlines is likely a more cost-effective method to conserve water in the short-term.

In conclusion, the alternative of replacing the leaking 7th, E. 6th, and E. 8th waterline is a cost effective alternative compared to other water development alternatives and waterline replacement methods, and the estimated costs are reasonable since actual contractor bids were used to estimate the potential costs for this project. Also, the materials proposed should provide the City of Anaconda with a quality waterline serving system users for many years.

4. Environmental Impacts – No Significant Adverse Impacts

This project presents no significant adverse impacts to the environment. It will have potentially adverse impacts to aesthetics from the short-term excavation during the installation of the new waterline. ADLC will use erosion control to protect stormwater runoff and indicates that, if required, the contractors will obtain a construction site stormwater management permit from DEQ. The project will potentially benefit water conservation by reducing leaks.

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 ADLC has proposed mitigation measures to alleviate these adverse impacts to the greatest extent possible. Temporary waterlines and construction site safety measures are proposed. 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, and by increasing availability of water otherwise lost to leakage. In addition to bringing clean water to the City of Anaconda, the services will also improve fire protection pressure and flows. ADLC indicates that standard OSHA and Montana Public Work Standards for work place safety practices will be followed during the completion of this project to insure worker and public health and safety.

⁵⁶ In a letter dated May 18, 2003, Dave Shultz, of B-SB, indicated that metering is estimated to save 1/3 of the difference between winter base usage and summer peak usage; this reduction is also generally applicable to metering in Anaconda. This difference may not equal the current loss of 2.2 million gallons per day from the ADLC waterlines.

6. Results of Superfund Response Actions – Consistent

This project is consistent with remedy in that contaminated groundwater is not being accessed for use. The project will not conflict or coordinate with any known EPA Superfund actions.

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/Sufficient Information Provided

The ADLC has provided sufficient information on 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 contamination from other potential sources 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.

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

It is not anticipated this project will have any impacts on resources related to the Tribes or DOI. The DOI and Tribes support this project. The Tribes have commented on the potential for encountering buried cultural features and/or artifacts during excavation (Appendix D).

Stage 2 Criteria

10. Project Location – Within Basin and Proximate

This project is located within the City of Anaconda, within the UCFRB and within and adjacent to the injured groundwater resource boundary.

11. Actual Restoration of Injured Resources – No Restoration

This is a replacement project; 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 project constitutes replacement of lost services because it replaces 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 Regional Water, Waste, and Soils Operable Unit is infeasible as recognized in the State's 1995 Restoration Determination Plan. Use of much of the bedrock aquifer north and south of Anaconda is also not feasible due to contamination. Thus, ADLC has lost potential sources of water for future development and needs. Optimization and conservation of existing water resources from the current leaking water supply system (approximately 2.2 million gallons per day) is an effective means of enhancing its water resources. Thus, there is a direct connection between the potential services lost and the services this project will replace.

13. Public Support – 7 support comments

The NRDP received a total of 7 comments in support of the funding the Anaconda waterline project, including letters from the ADLC Council of Commissioners, the Anaconda Area Chamber of Commerce, the Anaconda Local Development Corporation, the Anaconda Public Schools, and AFFCO Fabricating.

14. Matching Funds and Cost Sharing – 12.6%

Restoration Fund Request:	\$1,738,700
ADLC Cash Match:	\$ 230,500
ADLC In-kind Match:	<u>\$ 20,000</u>
Total Project Costs:	\$1,989,200

ADLC has proposed to provide matching funds of \$250,500, or 12.6% for this project. These matching funds from ADLC are for administration, project oversight, fiscal management, and construction coordination services. ADLC is providing \$230,500 in cash as well as \$20,000 in staff in-kind services.

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 Impacts

The ADLC states that the grant project will provide a net benefit to the local ecosystem by conservation of water resources and reduced power requirements for pumping and treating water. These statements are correct; however, the overall effect of the requested grant funds is limited since the replacement of the Seventh, East Sixth, and East Eight waterlines could conserve up to 16% of the 2.2 million gallons of water loss per day in Anaconda.

17. Coordination and Integration – Integrates

This project is integrated with other ADLC plans. It will be completed following completion of the West Fourth Street waterline replacement project being completed the summer of 2005.

18. Normal Government Functions – Augments Normal Government Functions

Waterline installations and repairs are part of local government responsibilities as they are the owners of the water distribution systems. The NRDP considers this project as one that augments, not replaces, normal government function because communities typically rely on grant funds to assist in funding such work and also because the replacement of severely leaking waterlines is an effective way to compensate the community for extensive injuries to the Anaconda area groundwater resources that were covered under Montana v. ARCO.

ADLC proposes to provide matching funds of \$250,500, or 12.6% for this project. ADLC has offered several reasons as to why they are currently unable to contribute greater funding to this project at this time. They include a remaining debt of \$3.2 million that remains on the 1994 water bond used to fund system improvements, a 95% water rate increase over the last decade, declining economic conditions in the community, and a current high mill levy (750 mils). ADLC has not applied to the state's Treasure State Endowment Fund and Renewable Resource Grant and Loan programs because ADLC does not currently meet these program's target rates for eligibility due to low cumulative water and sewer rates and because these programs effectively require water metering for competitive consideration and a match via additional local debt. Nor is the county eligible for Community Development Block Grants. ADLC proposes to increase the flat monthly fee by 26% and other rates as recommended by the 2004 PER, which should increase the use of water meters as well as increase revenue for future water projects.⁵⁷ ADLC proposes to install system-wide water metering by year 2008, which will help conserve water and, with the proposed increase in water rates, make other grant programs more accessible.

ADLC's diligence and documented efforts to implement the 2004 PER recommendations should be considered with future funding requests for water system improvements.

Land Acquisition Criteria – Not Applicable

Monitoring and Research Criteria – Not Applicable

⁵⁷ The ADLC Commission intends to act on the proposed water rate increase in summer 2005. An April 2005 draft resolution proposes a 26% increase in the residential "flat" monthly rate (from \$18.58 to \$25.10), a 27% increase in sprinkling rates, a 26% increase in commercial rates, a 22% increase in rates for metered residential users, and a 34% increase in rates for metered commercial rates.

Butte Silver Bow Big Butte Property Acquisition

Project Summary

Butte-Silver Bow (B-SB) requests \$704,682⁵⁸ to acquire the approximately 300-acre Big Butte property located adjacent to Butte's urban corridor for public ownership, use and management and to conduct initial protection measures of fencing, signage, and trail rehabilitation. B-SB proposes contributing \$93,893 in matching funds. Of the \$704,682 requested, \$630,633 is budgeted for the acquisition and \$74,049 for protection measures.

The Big Butte property is comprised of approximately 21 privately owned mining claims and tracts. Historically, these lands have been open to the public and recreational users in Butte have used these areas for a variety of activities. Due to public interest in maintaining access to this area, B-SB sought and received a \$20,200 Project Development Grant in 2004 from the NRDP to pursue purchasing this property. Currently 61% of the targeted Big Butte area (181 acres) is under a buy-sell and/or options agreements, another 22% (66 acres) have verbal commitments and negotiations are progressing on the balance. Through this acquisition, B-SB seeks to secure public access to lands that provide an array of recreational opportunities and to preserve and protect the property's natural resource and scenic values.

Stage 1 Criteria

Property Description: The proposed acquisition area is located adjacent to the Butte's urban corridor (see figure 5). The prominent hill known as the Big Butte is the city of Butte's namesake and an important historical landmark. The proposed acquisition land includes the hill itself and lands that extend west and to the south. It borders the upper west-side residential area, the Kennedy School and Montana Tech.

1. Technical Feasibility – Reasonably Feasible with NRDP changes/conditions

B-SB seeks to acquire and transfer into public ownership the Big Butte property to protect this area as community open space, while securing the current and future recreational uses and natural resources. The objectives in protecting the Butte Area will be obtained by:

1. Securing ownership by acquisition.
2. Protecting the acquired area through trail obliteration and abandonment, trail re-design, and trail use restrictions.
3. Educating the public about the project and use restrictions.

B-SB intends to use standard real estate practices and licensed appraisers, real estate agents and surveyors to complete the acquisition. The land acquisition is well planned and the NRDP believes all the parcels are suitable for purchase with the exception of Parcel 6, which is 20 acres valued at \$37,040. This parcel was included in the acquisition price in the application but left

⁵⁸ The original application was for \$694,749 but due an omission of three parcels in the appraisal, the amount of the request increased by \$9,932. This amount includes the purchase price for the added parcels, realtor fees, title fees and contingency. The applicant's match also increased by \$700.

out of the project boundary. B-SB indicated that it was not included in the boundary due to a mine dump on the west edge to the parcel. The Environmental Protection Agency (EPA) would not “exempt” the property boundary from future clean up if that parcel were included. B-SB indicated their desire to negotiate with the current owner to resurvey the parcel and to purchase only the non-dump acreage. The NRDP recommends that, due to the contamination problems associated with this parcel and given its location on the southern border of the property, Parcel 6 be completely excluded from the acquisition.⁵⁹

In the application, B-SB indicates they intend to request the Council of Commissioners to change the designation of the Big Butte Area to open space in the B-SB Master Plan and request the Planning Board to change zoning for the Big Butte area from residential to open space. In addition they intend to finalize and adopt the Big Butte Open Space Operations and Management Plan to ensure the protection of the property. If the acquisition is approved, NRDP recommends a funding condition that the NRDP approve the final Operation and Management Plan. This approval would be to verify that the Operations and Management Plan for the Big Butte property is consistent with what was represented to the State in the application process, namely that the area be maintained as non-motorized open space available for low-impact public recreation.

The one exception to the non-motorized designation within the project boundary would be approximately 73.56 acres located west of the Whiskey Gulch road. In supplemental information provided to NRDP, B-SB discusses how this area will be managed to minimize impacts from motorized use.⁶⁰ Motorized use will be allowed in this area only on the two main access roads and existing trails (see figure 5). Signs will be erected to compel users to stay on existing roads and trails. The Operations and Management Plan will require that soil erosion and vegetation damage be monitored to determine the need for further regulation or management changes. B-SB will also use proper trail building practices on these lands to decrease the potential for erosion. This motorized area is considered a buffer zone between the unregulated private motorized lands to the west and the regulated, public non-motorized open space to the east. With its landscape, terrain and topography, Whiskey Gulch is suited to be a transition point between the two management areas.

In order to protect the area from further physical degradation, B-SB intends on hiring a contractor experienced in trail design to complete an analysis of the current trail system. Field surveys will outline appropriate classification (e.g. such as hiking and mountain biking) and specific trail action such as maintenance, re-design, obliteration, or abandonment. These recommendations will be submitted to the Planning Board for approval and subsequently submitted for public review and comment. Based on the trail survey results, certain existing trails will need to be obliterated. Trail obliteration involves scarification (breaking up the hardened crust), contouring the surface, outsloping land for runoff control, fertilizing, and re-seeding with native species seeds. Other trails that are too steep or too close to others will be re-designed using hand tools and volunteer work. All trail work will be designed to closely approximate the specifications of the United States Forest Service.

B-SB requests funding for initial protection measures such as fencing, signage, and trail work. B-SB has indicated that while they do intend to seek additional grants sources besides NRDP for

⁵⁹ The realtor and title transaction fees will be reduced as a result of excluding parcel 6, but the exact amount is not specified herein because that amount could only be determined by going forward with the acquisition of parcel 6.

⁶⁰ June 6, 2005 memo from Jon Sesso of B-SB to Kathy Coleman of NRDP.

the long-term rehabilitation, trail and protection work, they are prepared to fully assume the long-term operations and management responsibility for the Big Butte Open Space.

In order for the goals of this project to be met, education and enforcement of appropriate trail use is necessary. B-SB intends to rely on signage identifying proper trail use and installing a jackleg fence defining the project boundaries. Parking areas will be improved at the trailheads with information kiosks, which provide maps of the area and trail designations. Whether or not B-SB can provide the needed enforcement is uncertain.

A risk does exist that negotiations with multiple landowners might not result in the full acquisition. Approximately 61% of the property has already been secured with buy-sell agreements and options and there are verbal commitments on another 22% of the land. Given that negotiations may not succeed on all parcels as planned, a funding condition is needed that would require NRDP review and approval if a reduced number of acres are to be acquired than what is proposed.

In addition, since most of the title work remains to be completed for this project, a funding condition is also necessary to ensure that the title work confirms that the property is properly appraised without any encumbrances that would significantly affect the property value and its potential public uses. While the NRDP does not require the acquisition of the sub-surface mineral rights in addition to the surface rights, it is highly recommended.

With the exclusion of parcel #6 and the indicated funding conditions, the NRDP believes that the project is reasonably feasible.

2. Relationship of Expected Costs to Expected Benefits – Net Benefits with NRDP changes

The total cost of this project is \$798,575 with \$704,682 requested in Restoration funds and \$93,193 in matching funds. Approximately, 86% (\$630,633) of the requested funding is for the property acquisition, associated fees and contingency. The acquisition costs are at or below fair market value. The remaining 14% (\$74,049) is for costs associated with protection of the area. These costs include funding for trail obliteration, trail abandonment (with partial reclamation), trail re-design, fencing, and signage. A breakdown of these costs is as follows:

Acquisition	Estimated Cost
Purchase price	\$576,480
Realtor fees (2%)	\$11,530
Title fees	\$5,700
Boundary Survey	\$32,000
Contingency ² (10%)	\$4,923
Subtotal	\$630,633
(1) Matching funds not included	
(2) Excludes purchase price	

Protection	Estimated Cost
Fencing/Signs	\$60,345
Trails	\$2,132
Parking/Trailheads	\$4,840
Contingency (10%)	\$6,732
Subtotal	\$74,049
(1) Matching funds not included	

The end product of this acquisition would be public ownership and management of the property. Most of the property supports a good quality complex of native vegetation including native grasses, forbs, shrubs and trees and provides habitat for small mammals, including rabbits, squirrels, foxes, and coyotes. The major benefits expected by placing the property in public ownership are:

- Securing public access to lands located adjacent to Butte’s urban corridor that would provide an array of low-impact recreational services, including biking, hiking, bird watching, and other general recreational opportunities;
- Providing connections to the Greenway Service District Trails project as well as the Historic BA&P Trails project;
- Preserving high-quality open space area and scenic views;
- Establishing a long-term land use and operations and management strategy for the area;
- Providing buffer lands to decrease conflicts between wildlife and developing suburban lands to the east and south; and
- Protecting the area from high impact uses such as off-road vehicle use and potential impacts associated with the sale and development of the property, which may conflict with the benefits to be derived from public ownership.

The NRDP believes that these potential benefits to natural resources and the public’s use and enjoyment of those natural resources from this proposed acquisition make the investment in the property and needed protection features worthwhile with the exception of Parcel 6, as discussed in criterion #1. Excluding parcel 6, valued at \$37,040, results in a revised recommended budget of \$667,642.

With the property’s location on the edge of the Butte urban area and its close proximity to Montana Tech, this acquisition can provide immediate benefit to a significant segment of the public.

3. Cost-Effectiveness – Likely Cost Effective

Part of preparing the grant proposal involves evaluating alternatives that would accomplish the project goals and selecting the best approach. B-SB has indicated that, while acquiring the lands without the proposed management or the protection components would reduce the price of the project, creating and maintaining a safe, attractive open space would be difficult without those components. Another alternative would be to utilize conservation easements. B-SB noted the ability to restore degraded sections or create appropriate trails would be severely hampered with this alternative and the difficulty of negotiating with 16-20 different landowners on individual easement management issues. The no-action alternative could result in residential, commercial and/or industrial development and therefore loss of an open-space recreational location adjacent to Butte’s urban corridor. The alternative of purchasing additional land west of the current

property boundary is not possible as it is slated for possible remedial action under the Westside Soils Operable Unit.

The NRDP did consider recommending only the purchase of property east of the Whiskey Gulch and not including the motorized area in the acquisition; however, information provided by B-SB indicated that there would be no cost savings and, in fact, while the acquisition would be less in total acreage, the per acre price most likely would have been the same if not higher.⁶¹ In addition, by subdividing Parcels 1 and 2, both of which overlap the Whiskey Gulch road, a survey would be required at a cost estimated by B-SB of \$3,000 to \$12,000 per parcel.

The NRDP believes that B-SB is the best receiving entity for this property given its proximity to the urban corridor of Butte and its desire to receive ownership and management of the area. B-SB's approach of developing and implementing a conservation-oriented management plan, followed by rehabilitation of the damaged areas and further protection through renovation of current trails is reasonable. The budget for transaction costs is reasonable, particularly given the numerous parcels and landowners involved and the price of the parcels is at or below fair market value as determined by a professional land appraiser. The utilization of the Anaconda Job Corp, the Montana Conservation Corp, and the Northern Rockies Outdoor Center for trail and fencing work greatly enhances the benefit:cost ratio of the proposed protective measures. For these reasons, the NRDP considers the project as likely to be cost-effective.

4. Environmental Impacts – No Significant Adverse Impacts

No adverse environmental impacts are projected due to this acquisition and the subsequent protection activities. B-SB notes that due to the protection of these native upland landscapes through soil stabilization and revegetation, there will be a beneficial impact to these resources, as well as surrounding resources. An example given would be the reduction in sediment load of Whiskey Gulch, Green Lake and Silver Bow Creek.

Potential impacts to the environmental resources may occur by way of increased public access if the acquisition of this property occurs. However, with the proposed use of conservation-oriented management and weed management plans, B-SB can reduce the likelihood and magnitude of these impacts.

B-SB will monitor the effects to soil and vegetation in the motorized section of the acquisition to determine if regulation or management changes are warranted. Proper trail building and maintenance practices will be used to decrease the potential for erosion.

5. Human Health and Safety Impacts – No Adverse Impacts

No adverse impacts to human health and safety are anticipated with this public acquisition or associated protection aspects of the project.

⁶¹ June 6, 2005 memo from Jon Sesso of B-SB to Kathy Coleman of NRDP.

6. Results of Response Actions – Consistent

This property acquisition and associated protection activities will not conflict with any Superfund response actions. The site is within the Butte Priority Soils Operable Unit. The NRDP has received a letter from Bob Fox of the EPA (Feb. 20, 2004) stating that the levels of metals collected from a soil sample near the Big Butte property are below the residential action levels set by the Agency for the Butte Priority Soils Operable Unit; therefore, EPA does not anticipate taking remedial action in the Big Butte area. In a follow-up letter from Sara Sparks of EPA (Feb. 15, 2005), EPA reviewed the boundary changes (from the PDG) and verified that there are no known mine waste dumps or elevated levels of metals associated with mining activities on this property. In addition, metal levels of four samples taken in October 2004 in the Whiskey Gulch area of the property were significantly below EPA's action levels for recreational soils, parks and play areas.⁶² The NRDP requested additional samples from two small mine dumps located at the head of Whiskey Gulch that were not included in the original sampling. The results were significantly below the most stringent residential action levels established for BPSOU.⁶³

As discussed previously in criterion #1, parcel #6 has potential contamination problems, thus the NRDP is not recommending this parcel for purchase.

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

The project will not affect the timeframe for recovery of injured resources.

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

No permits are needed for the proposed acquisition and protection activities. In its application, B-SB recognizes the regulatory changes that would be needed to carry out the desired changes, which are described under criterion #1. B-SB appropriately proposes the development of a conservation-oriented management plan specifying permitted uses and addressing alternatives for high impact users who would have a reduced area for motorized activity as a result of this acquisition.⁶⁴ Approval of this management plan would be a funding condition placed on the acquisition as discussed in criterion #1.

State law relating to weed control is set forth in MCA sec. 7-22-2101 et seq. This law places certain weed control responsibilities on state agencies and municipalities. See MCA 7-22-2151. Additional responsibilities were added by Senate Bill 259, which became law after the submittal of this year's grant applications. This law requires certain weed control planning and implementation activities specific to purchases of real property using public funds or the receipt

⁶² This data was included in an email from Tom Malloy to Kathy Coleman dated May 24, 2005.

⁶³ Results included in an email from Tom Malloy to Kathy Coleman dated June 6, 2005.

⁶⁴ B-SB is currently considering leasing county owned land adjacent to the county landfill, east of Browns Gulch road to the MX club. This lease would allow some form of free public access to the facility. In addition, private lands between Big Butte and the Browns Gulch road are also expected to remain open for motorized use. (May 23, 2005 memo from Jon Sesso of B-SB to Kathy Coleman of NRDP.)

of real property by non-federal public entities. This law sets forth the following requirements that are applicable to this project:

- 3) That the property be inspected by the county weed management district prior to the purchase of the property. SB 259 provides that the costs associated with the inspection be borne by the seller.
- 4) That a noxious weed management agreement be developed and incorporated into the purchase agreement. The purpose of this agreement is to ensure compliance with the district weed management program.

Any funding recommendation for this project would need to have a condition requiring that these provisions of SB 259 be complied with as part of project implementation.

B-SB indicated in the application that they would be responsible for weed control and abide by state and local weed management requirements. Weeds are also addressed in B-SB's Draft Open Space Management Plan. This plan indicates that biological or mechanical controls will be used versus herbicides.

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

According to the B-SB Historic Preservation Officer, there are no known Tribal resources located within the Big Butte Area property boundaries. The DOI and Tribes support this project. The Tribes have requested that B-SB address the potential for and protection of cultural resources in its management plans (Appendix D).

Stage 2 Criteria

10. Project Location – Within Basin and Proximate

The proposed Big Butte land acquisition is located on 300 acres next to Butte's urban corridor. Thus, this project is considered proximate to injured areas.

11. Actual Restoration of Injured Resources – No Restoration

The acquisition is a replacement project and is not intended to accomplish restoration of an injured natural resource. It does, however, have the potential to protect the area's natural resources from potentially detrimental development and high-impact off road vehicle use and enhance the resources through soil stabilization and revegetation.

12. Relationship between Service Loss and Service Restoration – Similar

This project acquires land for open space and public access for low impact natural resource based recreational opportunities. These services are substantially similar to some of the lost recreational and habitat services addressed under Montana v. ARCO.

13. Public Support – 19 support comments; a petition with 24 signatures

The NRDP has received 19 support comments including 5 letters from 5 entities. The groups expressing support of this project were ARCO, Montana Tech and the Butte Chief Executive and Council of Commissioners, Mining City Trail Riders and Sacred Ground. Copies of a petition expressing support for the project signed by 24 individuals were included in the application.

In addition, a Big Butte Task Force, comprised of interested citizens and stakeholders, was established to coordinate the process of acquiring the Big Butte area. This Task Force provided guidance regarding concerns over public ownership, resource protection and enhancement, and assisted with elements of the grant application.

14. Matching Funds – 12% (in-kind) as proposed; 7% (in-kind) as revised by NRDP

As Proposed		As Revised	
Restoration Fund Request	\$704,682	Recommended Funding	\$667,642
B-SB Salaries and Fringe	\$ 24,373	B-SB Salaries and Fringe	\$ 24,373
B-SB In-direct Costs	\$ 4,874	B-SB In-direct Costs	\$ 4,874
Trail and Fence Labor	\$ 13,528	Trail and Fence Labor	\$ 13,528
B-SB Compost	\$ 5,000	B-SB Compost	\$ 5,000
Realtor Commission Reduction	\$ 46,118	Realtor Commission Reduction	\$ 0
Total Project Cost	\$798,575		\$715,417

In their application, B-SB documented in-kind matching funds totaling \$93,893, or 12% of the total project cost.

With the NRDP’s proposed budget reduction of \$37,040 (see criterion #1), and exclusion of the realtor commission reduction, the match decreases to \$47,775, or 7% of total project costs. While the realtor commission reduction is recognized as a cost savings, it is not recognized as a legitimate match. That is because it is uncertain if the proposed realtor commissions would be charged at the budgeted rate of 10% of the acquisition price for each parcel and because a contractor paid out of Restoration funds is actually performing a significant portion of the realtor work.

In addition to the match detailed above, an estimated savings of \$31,956 will be obtained by utilizing the services of Montana Conservation Corp. The amount is not included as a match but is worth noting.

15. Public Access – Increased Access Beneficial

Although the Big Butte area is presently under private ownership, public access is informally allowed by the landowners. The acquisition of these private lands for ownership by B-SB will assure perpetual public access for a variety of low-impact recreational uses and users. B-SB will facilitate non-motorized public access to the project area as discussed in criterion #1 with the exception of the 73.5 acres to the west of the Whiskey Gulch road. This area will be open to

motorized use on the two existing roads and the existing trails that are designated on the 6/7/05 Big Butte Trail map (see figure 5). These roads and trails will be marked with signs indicating users must stay on designated trails. This area will allow motorized access to private motorized lands to the west.

A conservation oriented management plan as well as weed management will minimize impacts of increased public access. Soil and vegetation will be monitored to determine any need for regulation or management changes.

16. Ecosystem Considerations – Positive

This acquisition fits within a broad ecosystem context because it is aimed at protecting the lands and natural resources in the headwaters area of the UCFRB from potential detrimental impacts associated with development and high-impact uses.

17. Coordination and Integration – None

This project falls within the priorities established in the *Draft Silver Bow Creek Watershed Restoration Plan*.⁶⁵ The development of recreational features such as parks, swimming areas and trails that are readily accessible for citizens in the Butte area ranked as a high priority in the draft plan. In addition, providing additional connecting trails between the Greenway and urban residential areas ranked as a very high priority. This project will enhance the efforts of the Greenway Service District Trails as well as the Historic BA&P Trails.

18. Normal Government Functions – Outside Normal Government Functions

No governmental entity is specifically responsible for acquiring lands in the UCFRB, nor does any governmental entity receive funding for such acquisitions in the normal course of events. The acquisition of the Big Butte property is something B-SB has shown interest in at the request of area citizens to protect the area and provide public access to this area landmark. Nor is any governmental entity specifically responsible for or funded to perform the proposed fencing, signage, and trail work.

Land Acquisition Criteria

19. Desirability of Public Ownership – Replacement Beneficial

The potential benefits of public ownership of this property are summarized under Criterion #2. While public ownership would preclude future development and associated greater tax revenues, the associated economic loss is considered acceptable by B-SB who put forward the proposal and other public input to date is supportive of the project. The tax revenue lost from the transition from private to public ownership will be a minimum of \$4,450 per year, which is the current total tax revenue derived from the acquisition parcels. B-SB has also accepted full responsibility for the increased demand in governmental services associated with this project.

⁶⁵ *Draft Silver Bow Creek Watershed Restoration Plan*, prepared by the NRDP, Confluence Consulting, and DTM Consulting, dated December 2004.

Public ownership of this property will provide replacement of lost or impaired services as described under criterion #12.

Given the above factors, the NRDP considers this project as one for which public ownership is beneficial overall with the exception of Parcel 6 as discussed in criterion #1.

20. Price – Reasonable

Appraisals commissioned by B-SB of the various parcels comprising the acquisition totaled \$576,480 for 298 acres. Reducing the acquisition price by \$37,040 for Parcel 6, which is not recommended for funding, the total purchase price would be \$539,440 based on the fair market value of the parcels totaling 278 acres. As a condition of approval, the title work must confirm that property is properly appraised without any encumbrances that would significantly affect the property value.

Monitoring and Research Criteria – Not Applicable

Greenway Service District Duhamé Property Acquisition

Project Summary

The Greenway Service District (GSD) requests \$1,643,809⁶⁶ to acquire the 1,745-acre Duhamé property located immediately south of Durant Canyon along Silver Bow Creek for public ownership, use, and management. The purchase would acquire wildlife habitat and public non-motorized access for hunting, camping, hiking and other recreational uses. The Duhamé property, which has elevations varying from 5,200 to 6,200 feet, provides a variety of landscapes for year-round and critical winter range for wildlife habitat. The property partly borders four miles of the Silver Bow Creek floodplain.

The property also borders the Montana Fish, Wildlife and Parks (FWP) Fleecer and Mount Haggin Wildlife Management Areas (WMA). The GSD and FWP plan to incorporate the Duhamé property as an extension of FWP lands if the land is purchased. This request includes \$156,000 for initial fencing, surveying, and weed control efforts. Long-term management and maintenance would be integrated with adjoining state lands if this land were put into public ownership.

Stage 1 Criteria

1. Technical Feasibility – Potentially Feasible

This project would secure public ownership of the Duhamé property (see figure 6) in order to: 1) provide an array of services, including hunting, wildlife viewing, hiking, and other general recreational opportunities; 2) provide a buffer of lands to decrease conflicts between wildlife and developing suburban lands to the east; 3) preserve and enhance high-quality diverse wildlife habitat, open space areas, and scenic views between Anaconda and Butte with appropriate long-term management, maintenance and operations activities.

Project Background

The Duhamé family initially contacted the GSD in 2002 regarding the potential acquisition of the property. The GSD was awarded a \$25,000 Project Development Grant (PDG) in December 2003 to conduct the steps necessary for acquisition of the property. At that time, the GSD asked the primary adjoining landowner, FWP, to assist the GSD in this effort. During 2004 and early 2005, the GSD, with assistance from FWP, conducted the following tasks:

- 1) Gathered information on land boundaries, wildlife values, game management efforts, management plans and potential or planned projects on or near the Duhamé property.
- 2) Evaluated existing land surveys to determine the surveying needs and costs.
- 3) Commissioned a property appraisal. A 1/6/05 appraisal by Kembel, Kosena & Company concluded a market value of the property at \$870,000 or \$500 per acre.

⁶⁶ This request is \$71,889 less than the original request due to the applicant's revisions, which are discussed in criterion #3.

- 4) Commissioned a timber appraisal. A 12/04/05 appraisal by Andreozzi Forestry Consulting estimated the merchantable timber volume for the property at 3,300,000 board feet and established the estimated value for this timber to be \$617,830.
- 5) Negotiated the purchase price and buy sell agreement terms with the landowner. The landowner accepted the GSD's offer of \$1,487,830, which was based on adding the property appraisal value to the timber value.

Since the NRDP's initial evaluation of this project for the July 2005 *Pre-Draft Work Plan*, most of the uncertainties associated with appraisal and title work have been resolved.⁶⁷ The GSD's requested funding of \$1,643,809 is a total of \$1,487,830 for the purchase price of the property and \$155,979 for 5 years of land maintenance activities. The GSD's proposed purchase price for the property of \$1,487,830 is the sum of a 1/6/05 appraisal of the fair market value of the property at \$500/acre (\$870,000) and the separately derived valuation of the merchantable timber on the property at \$617,830. The NRDP did not believe that this additive methodology constituted a valid fair market valuation of the property, plus there were deficiencies with the appraisal, so a new appraisal was obtained. The State's 10/21/05 appraisal concluded a value of \$1,275,000. Title work completed in September 2005 verified that legal access did not exist to the property, and the new appraisal reduced the estimated value of the property because of the lack of legal access. In his final funding decision, the Governor settled these issues of purchase price and legal access by approving the project for funding at requested amount of \$1,643,809, subject to the Duhames obtaining legal access to the Duhamé property from a third party that would provide FWP access to the property in a manner acceptable to it.

The NRDP's further evaluation of the restrictive covenant or "no build" easement of a 270-acre portion of the property (described more under criterion #3, p. A-66) has indicated that the covenant requires that the Duhames and any subsequent landowners of this portion of the property to indemnify ARCO and release ARCO from certain liabilities, including any liability relating to environmental conditions on this portion of the property. This provision raises several problems for the State and issues to be resolved, thus approval of the project is conditioned upon satisfactory resolution of this issue.

The applicant has properly outlined and planned for the process required for FWP to own, operate and manage all or part of the Duhamé property. Approval of both the FWP Commission and State Land is required, but has not yet been obtained. FWP has committed to work closely with the GSD to gain the FWP Commission's support and approval of this acquisition.

In order to increase the likelihood of FWP Commission approval and to address immediate protection needs, the GSD has requested \$155,979 for needed maintenance actions such as fence repair, a survey, and weed control over a 5-year period. After five years, FWP would incorporate the property into the agency's budget for continued maintenance of the WMA. Five miles of new fence will be used to keep livestock out during the initial recovery of the property,

⁶⁷ When the NRDP issued the July 2005 *Pre-Draft Work Plan*, a valid appraisal and title work remained to be completed. The title work was needed to complete a proper appraisal so that all encumbrances, mineral rights, legal access, restrictions, or other reservations of the property that could affect the value the property were identified and taken into consideration in the valuation of the property. Another outstanding issue at that stage of the NRDP's evaluation was a potential cell tower lease being considered by the Duhames that would have placed responsibilities on subsequent landowners; this lease was dropped in August 2005.

which is needed due to overgrazing and inadequate weed control in the past. The fencing will also serve to control grazing in the long-term if livestock are brought back into the property. FWP's plan to use both chemical and biological weed control with a budget of \$25,000 for five years will likely control the serious weed infestation on the property. The county weed manager strongly supports this request based on the past history of weed control efforts on the property.⁶⁸

In summary, the remaining significant uncertainties to the feasibility of this project are associated with obtaining legal access and resolving the outstanding indemnification provisions. The GSD has properly outlined and planned for the process required for FWP to own, operate and manage the Duhamé property; however, the required approvals by the FWP Commission and State Land Board remain to be obtained. If for some reason FWP does not obtain the property, the GSD has the authority to assume ownership and provide for the planned public recreational uses.

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

Direct costs to the Restoration Fund to acquire the 1,745-acre Duhamé property would be \$1,643,809. Costs for the land purchase, which was negotiated between the Duhamé's and the GSD, is \$1,487,830. The costs for a land survey (\$38,000), title insurance and closing (\$5,000), fencing (\$80,551) and weed control (\$25,000) over the next five years, and contingency (\$7,428) total \$155,979.

By acquiring public ownership of the high quality wildlife habitat and recreational lands that constitute the Duhamé property, the project will protect these areas from development or land use activities that might be detrimental to natural resources, provide public access, and maintain and enhance natural resources through conservation-focused public management of those resources. Major public benefits attributable to the project include:

- Public access to lands that provide an array of services, including hunting, wildlife viewing, hiking, bird watching, and other general recreational opportunities, sustained by access from adjoining public lands and the Silver Bow Creek Greenway;
- Preservation and enhancement of high-quality forested wildlife habitat and scenic views between Anaconda and Butte open space areas with appropriate long-term management, maintenance and operation activities and integration of the public ownership operation and maintenance of the adjoining state wildlife management areas and national forestlands; and
- Creation of buffer lands to decrease conflicts between wildlife and developing suburban lands.

The property, which stretches about four miles along the southern side of Durant Canyon, is mid-way between Butte and Anaconda. The public from both communities and Montana as a whole will benefit from public ownership of the Duhamé property. Wildlife along the injured Silver Bow Creek and from surrounding lands will also benefit from public acquisition and conservation-oriented management of the high quality winter range and forest cover areas that exist on the property. Maps prepared by FWP showing winter density surveys for both elk and mule deer depict high densities of these species in the Duhamé properties. High quality

⁶⁸ Information provided in a June 1, 2005 e-mail from Fred King of FWP to Greg Mullen of NRDP.

grassland areas make up about 60% of the property and the other 40% is forested with Douglass fir (78%) and Lodgepole pine (22%)⁶⁹. These north facing forested areas provides security cover, bedding areas, and general protection for elk.

In a support letter from FWP's Butte area wildlife biologist, Vanna Boccadorri⁷⁰ outlines the benefits for wildlife. She stated that landowners neighboring the Duhome property suffer game damage from elk and deer feeding on haystacks and in fields where cattle are to be wintered. FWP will be able to minimize these burdens on the nearby landowners if FWP owns the Duhome property and manages it as part of the Mount Haggin WMA.

It should be noted that the State already has a property interest in an important portion of the Duhome property that is subject of this grant application. As a result of the 1999 partial settlement of Montana v ARCO, the State acquired the portions of the Duhome property in the Silver Bow Creek floodplain. At the same time, the Duhomes agreed to place a restrictive covenant (or "negative easement") on all of their property stretching along Silver Bow Creek in the Durant Canyon viewshed, consisting of about 270 acres, or about 15% of the entire parcel. This covenant does not allow residential development or other building in the area and restricts the uses of the area to agricultural related uses. The State obtained the benefits of and right to enforce this restrictive covenant when it acquired the portions of the Duhome property in the Silver Bow Creek floodplain. The restrictive covenant already provides for protection of the areas closest to the floodplain; the majority of the property does not have such protection.

In summary, public acquisition of the Duhome property offers substantial benefits to wildlife resources and associated public recreational services. The Governor finds that if the funding conditions are met, this project will provide net benefits.

3. Cost-Effectiveness –Potentially Cost Effective

This criterion considers whether this project accomplishes its goals the least costly way possible, or whether there is a better alternative. The GSD considered three alternatives to the selected proposal – the no-action alternative, an alternative that acquires the land without maintenance funding, and conservation easements. The GSD adequately addressed why these alternatives are inferior to the selected alternative. The no-action alternative would have left the parcel in private ownership, which would most likely result in private land ownership that would not accommodate public recreational uses. Also, by not securing a purchase of this land, coordination with FWP's management strategies at the surrounding game range would be lost. Deleting the proposed start-up maintenance funding would reduce the likelihood of FWP Commission approval and would also delay needed improvements in areas of habitat degradation. Finally, conservation easements were considered but were not acceptable to the property owners.

Another alternative would be to vary the operation and maintenance efforts such as changing the amount of fence removed or repaired. Based on input from the NRDP and further analysis, FWP reduced the length of fence needing removal and replacement by almost a half from the original application.⁷¹ This reduction and final quantity of recommended fencing is reasonable given FWP's experience in this area.

⁶⁹ From the timber appraisal of the Duhome property by Andreozzi Forestry Consulting, 12/9/05.

⁷⁰ Letter from Vanna Boccadori to Gregory Mullen, June 14, 2005.

⁷¹ Information provided in a June 1, 2005 e-mail from Fred King of FWP to Gregory Mullen of NRDP.

The weed control request is also likely to be cost effective given that it is based on FWP's similar weed control efforts in adjacent areas and that the county weed manager believes the budget of \$25,000 to be appropriate. The applicant has proposed mapping the areas needing weed control efforts and has indicated that both chemical and biological controls will be initiated. FWP has been successfully using biological weed control on leafy spurge for a number of years on the Mt. Haggin WMA.⁷² FWP can integrate biological weed control efforts on this property with those already underway on the adjacent WMA.

The surveying request for \$38,000 may not be cost effective in light of the details outlined in the survey report presented in the application. Due to the considerable portions of bordering state lands, it is questionable whether all of the surveying outlined is necessary. The State should approve of what areas are to be surveyed before the work is completed.

In summary, the NRDP believes the proposed approach to acquiring and managing this property are sound approaches. The Governor finds that if the funding conditions are met, the project will be cost effective.

4. Environmental Impacts – No Significant Adverse Impacts

Purchase of the Duhamé property presents no adverse impacts to the environment. Acquisition of the property will likely enhance the natural resources of the property and nearby lands by protecting natural resources from potentially detrimental development or land management activities and by implementing the planned fencing and weed control measures.

5. Human Health and Safety Impacts – No Adverse Impacts

No adverse impacts to human health and safety are anticipated with this public acquisition or associated protection aspects of this project.

6. Results of Superfund Response Actions – Positive Coordination

Public ownership of the Duhamé property would complement the remediation efforts planned for the Silver Bow Creek floodplain corridor near Durant Canyon. The Duhamé property is adjacent to four miles of the Silver Bow Creek floodplain, which is owned by DEQ or the railroad companies. A portion of the property has contaminated tailings that will be removed by DEQ as part of the Silver Bow Creek remediation. Although there is a “no build” restriction on about 270 acres of the property along the Silver Bow Creek floodplain on the Duhamé property (see criterion #3), most of the Duhamé lands are steep and directly above Silver Bow Creek. If the land is placed in public ownership, controls can be placed on other activities that could have detrimental erosion impacts to the remediated Silver Bow Creek.

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

The project most likely will not change the time frame for recovery.

⁷² Information provided in a June 17, 2005 phone conversation between Kriss Douglass of MFWP and Carol Fox of the NRDP.

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. The GSD also appropriately outlined the proper procedures that would be required if FWP or GSD took title of the property.

State law relating to weed control is set forth in MCA sec. 7-22-2101 et seq. This law places certain weed control responsibilities on state agencies and municipalities. See MCA 7-22-2151. Additional responsibilities were added by Senate Bill 259, which became law after the submittal of this year's grant application. This law requires certain weed control planning and implementation activities specific to purchases of real property using public funds or the receipt of real property by non-federal public entities. This law sets forth the following requirements that are applicable to this project:

- 1) That the property be inspected by the county weed management district prior to purchase of the property. SB 259 provides that the costs associated with the inspection be borne by the seller.
- 2) That a noxious weed management agreement be developed and incorporated into the purchase agreement. The purpose of this agreement is to ensure compliance with the district weed management program.

Compliance with the provisions of SB 259 should be a condition of funding.

The project budget includes funding for weed control in the next five years. After that, FWP will assume weed control responsibilities.

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

Given the preservation/protection focus of this acquisition and the high quality resources of the property as described in criterion #3, this project is likely to benefit any such resources of special interest. The Tribes have noted the need for a cultural resource review and possible cultural resources survey in the event of surface or subsurface disturbances (Appendix D).

Stage 2 Criteria

10. Project Location – Within the Basin and Proximate

The lands proposed for acquisition are located midway between Butte and Anaconda, within the Silver Bow Creek watershed and the eastern edge of the German Gulch watershed. The land stretches along four miles of the southern boundary of Silver Bow Creek floodplain (miles 11-14) in Durant Canyon. Most of the lands in the floodplain itself are owned by DEQ or the railroad companies. The eastern boundary and half the southern boundary of the property are contiguous with the FWP Mt. Haggin and Fleecer WMAs. About half of the southern property borders a single landowner on a small cattle ranch.

11. Actual Restoration of Injured Resources – May Contribute to Restoration

This project involves the acquisition of unimpaired resources that are near to injured Silver Bow Creek floodplain corridor. While the project will not directly address restoration of wildlife habitat along Silver Bow Creek, the acquisition may enhance wildlife populations whose range might extend to the nearby-injured areas once the restoration of Silver Bow Creek is initiated along Durant Canyon in 2007.

12. Relationship between Service Loss and Service Restoration – Same

The project area includes diverse habitats that are similar to those of the terrestrial injured areas – upland areas that are a mix of native grasslands and forests at similar elevations. Given these similarities in habitat and the close proximity of this area to the injured areas, a close link exists between services lost and services replaced by this project. Hunting, wildlife viewing, and general recreational services to be provided by this project are substantially equivalent to some of the services lost due to natural resource injury in the UCFRB, including the Anaconda Uplands.

13. Public Support – 43 support comments; 393 signatures on petition

The NRDP received 43 support comments including six letters in support of the acquisition of the Duham property from Trout Unlimited, B-SB's office of the Chief Executive, FWP's Region 3 Supervisor, FWP's field biologist, an adjacent landowner, and the Duham family. The NRDP also received petitions with a total of 393 signatures indicating support of the project.

14. Matching Funds and Cost Sharing – None

There are no matching funds proposed for the project. The GSD has noted the in-kind support of the development of this project and states it will continue to provide staff support throughout the review process.

15. Public Access – Increased Access Beneficial

This project will ensure permanent public access by securing public ownership. This land was previously not open to the public and public ownership will ensure access from nearby public lands via foot travel only since no existing roads go directly to the property. The planned protection measures such as weed control and conservation-oriented management by FWP will mitigate any negative impacts from increased public access.

16. Ecosystem Considerations – Positive

This project fits within a broad ecosystem context because it is aimed at further protecting the lands surrounding Silver Bow Creek, which are the headwaters of the UCFRB. It will protect multiple resources such as forested and grassland habitat that support ungulate populations. The project fits well in a broad ecosystem context by providing a continuous connecting habitat protected area of the bordering FWP WMA's, which are 55,000 acres in size.

17. Coordination and Integration – Coordinates/Integrates

The project fits well with watershed benefit priorities set out in the *Draft Silver Bow Creek Watershed Restoration Plan*.⁷³ The draft plan ranks the restoration importance of 56 different restoration needs in the Silver Bow Creek watershed. This acquisition will protect existing resources by controlling potentially detrimental land use practices along lands that drain into the Silver Bow Creek Corridor and German Gulch. The plan recognizes the importance of land acquisitions and conservation easements to protect these areas in the Silver Bow Creek watershed and, in general, ranked preservation/protection of high quality resources such as would be accomplished under this project as a high priority. The project also coordinates with FWP's management efforts for the adjacent Mt. Haggin and Fleecer Mountain WMAs. Acquisition of this property would complement restoration activities on German Gulch and the Silver Bow Creek Greenway.

18. Normal Government Functions – Outside Normal Government Functions

Acquisition of the Duhamé 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. FWP is involved in land acquisitions through the Habitat Montana Program and through other funding sources such as grant funds. However, FWP is not specifically responsible for acquiring lands in the UCFRB, nor does it receive funding for such acquisitions in the normal course of events. It is unlikely the State could acquire this property through its normal agency funding.

FWP is responsible for maintenance activities on public lands that they own and manage. FWP will fund all maintenance activities after the initial five-year period of start-up maintenance funds requested by the GSD are utilized.

19. Desirability of Public Ownership – Replacement Beneficial

The potential substantial benefits of public ownership are summarized under criterion #2. Although the project will not improve injured resources covered under Montana v. ARCO, it does provide services equivalent to those that were lost. The current annual tax revenues for the property is \$800. If FWP were to acquire the property, FWP would pay the same amount as would be generated under private ownership pursuant to 87-1-603 MCA. This amount, however, would be less than the tax revenue that would be likely under a development scenario. While public acquisition will increase the demand for governmental services, the increase is considered minor given the proposed protection measures and plan to incorporate the area into FWP's existing WMA. The NRDP believes that the positive aspects of public acquisition outweigh this potential negative impact.

20. Price

As indicated under technical feasibility criterion, the Governor approves the project costs without requiring an updated appraisal, provided that legal access for and satisfactory to FWP is obtained.

⁷³ *Draft Silver Bow Creek Watershed Restoration Plan*, prepared by NRDP, Confluence Consulting and DMT Consulting, December 2004.

Butte-Silver Bow Local Government The Water Master Plan

Project Summary

Butte-Silver Bow City County (B-SB) proposes to prepare a water master plan to identify and prioritize future water system needs. Total project costs are \$267,845, with \$174,634 requested in Restoration funds and \$93,211 in matching funds.⁷⁴ Components of the water master plan include water demands, water supplies and facilities. The master plan is intended to serve as the roadmap for implementing major capital improvements.

Butte's bedrock 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 and by EPA's 1994 Record of Decision. Restoration of the bedrock aquifer is infeasible, thus the aquifer's drinking water storage capacity and transport services have been lost for thousands of years. This proposal constitutes replacement, because it is a critical planning element needed to identify the best water replacement alternatives that will enhance the supply and delivery of uncontaminated drinking water to the Butte public. It will thus compensate the public for some of the lost use of groundwater that Butte has suffered, due to the inability to tap clean ground water in much of the City.

Stage 1 Criteria

1. Technical Feasibility – Reasonably Feasible

This project involves the development of a water master plan that will determine the best way for B-SB to maintain an adequate supply of good quality drinking water at reasonable cost. The master plan will be based on four driving factors: aging infrastructure, population and economic growth, increasingly limited water supply opportunities, and state and federal regulations. To implement the water master plan, B-SB will: 1) select a consulting engineering firm to collect and complete data to develop the water plan; 2) establish Butte's water demands; 3) conduct hydraulic modeling of Butte's water system; 4) develop water supply alternatives; 5) evaluate existing water treatment plants; 6) analyze the present water distribution system; 7) evaluate existing storage facilities; 8) conduct a source water protection analysis; 9) and prepare and finalize the water master plan.

The existing water master plan was completed in 1988. Since then, B-SB has completed about \$47 million in water infrastructure improvements to the system. These improvements include the construction of two filtration plants, the rehabilitation of three pump stations, the construction of a nine million gallon water storage reservoir, and the replacement of 285,000 feet of water transmission lines. B-SB states that the water master plan will be updated as needed as improvements are made to B-SB's water system to meet the needs of B-SB's citizens.

⁷⁴Due to a math inaccuracy, the total costs for the water master plan is \$35,000 more than the \$232,845 that was estimated in the original proposal. B-SB has agreed to cover this cost, thereby increasing the applicant's match. This evaluation is based on the revised budget.

The NRDP has a reasonable degree of confidence that the objectives proposed for developing a water master plan can be achieved. B-SB Department of Public Works, Water Utility Division, has extensive experience with the water infrastructure system and will be directing the work of a competitively procured qualified engineering consultant to develop the water plan. B-SB also has extensive knowledge in grant execution and contracts management, which will be required for this effort.

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

Costs proposed for updating the water master plan total \$267,845, with \$174,634 (65%) requested in Restoration funds and \$93,211 (35%) in matching funds from B-SB. Restoration funds would cover about 74% of the contracted services for the plan or \$174,634. B-SB is funding the remaining 26% of contracted services or \$60,366 and all county salaries and wages, which are estimated at \$32,845.

Updating B-SB's water master plan will benefit Butte citizens by identifying the water capital improvements necessary to assure that Butte has a reliable and safe drinking water supply. The 1988 plan is so outdated it no longer serves this purpose. Without a water master plan, B-SB would be managing a water system without a roadmap that prioritizes infrastructure needs. A new water master plan would give B-SB the tools needed to cost-effectively manage a city water system. A water master plan could also assist B-SB in applying for various improvements via federal and state grant or loan programs, which require a water master plan for any water funding. Similar to other planning efforts, benefits of this effort depend on future implementation efforts.

The State's 1995 Restoration Determination Plan⁷⁵ considered upgrading Butte's water system as a justifiable replacement alternative for bedrock injuries in Butte. This proposal, which is of similar nature, represents an important step in compensating the public for some of the lost use of groundwater resources of the Butte's bedrock aquifer.

Due to the reasons outlined above, the benefits outweigh the costs associated with this project.

3. Cost Effectiveness – Likely Cost Effective

B-SB did not provide a detailed alternative analysis. A no action alternative and an alternative that considered each potential capital project individually, instead of the entire water system, were offered. B-SB notes that these alternatives would not be cost effective because the individual project alternative would require duplication of the engineering selection process and the no-action alternative would not accomplish the project goal of identifying and prioritizing future water infrastructure needs.

In NRDP's review comments on the 2004 B-SB application to replace the High Service water tank, NRDP's consulting engineer⁷⁶ suggested that a water system master plan should be

⁷⁵ Restoration Determination Plan, Upper Clark Fork River Basin, NRDP, October 1995.

⁷⁶ Memo from Gary Swanson to Gregory Mullen, *Review of High Service Tank Replacement application*, May 26, 2004.

completed in order to make an accurate and complete assessment of any significant water system improvement for the entire water system (distribution, transmission, storage, supply and treatment).

He also recommended that the plan include a computer model of the entire water system to optimize and size improvements in the water system. Without a computer model, the relationship between various aspects of the water system and the overall effect of proposed improvements can be difficult to predict. This is especially true in the case of a water system like Butte's where the distribution system is comprised of multiple pressure zones. The current proposal will address the needs listed above, including a computer model.

The costs of the plan are similar to those of other water master plans for other major Montana cities.⁷⁷ The following cities are also preparing water master plans at this time:

- Helena \$220,000 to update a 20 year-old water master plan
- Great Falls \$250,000 to update a 15 year-old water master plan
- Billings \$525,000 to update a 10 year-old water and sewer master plan
- Bozeman \$150,000 to update a 7 year-old water master plan

Given this comparison, and that Butte's water system is more complex and its master plan is 17 years old, the NRDP considers the project costs as reasonable. The NRDP believes that completing the water master plan as proposed is likely cost effective because the costs are reasonable and the planning approach is sound.

4. Environmental Impacts – No Adverse Impacts

This planning project does not present any adverse impacts on the environment. The project can help improve water conservation.

5. Human Health and Safety Impacts – No Adverse Impacts

This project does not present any adverse impacts to the human environment. The project should have a beneficial effect on human health and safety by identifying critical improvements needed to reliably deliver clean drinking water.

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.

⁷⁷ Based on phone conversations with water managers of Helena, Bozeman, Billings and Great Falls and Gregory Mullen.

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

This 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/Insufficient Information Provided

While B-SB did not provide adequate information for this criterion, other B-SB applications have shown that B-SB has adequate knowledge of the applicable policies, rules, and laws tied to public water systems that are necessary for this type of project.

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

It is not anticipated that this project will have any impacts on resources related to the Department of Interior (DOI) or the Tribes. The Tribes support the project. The DOI supported the project in written comments but did not vote in support of it at the August 10, 2005 Advisory Council meeting.

Stage 2 Criteria

10. Project Location – Within Basin and Proximate

The project area that the master plan will evaluate is in or around the city of Butte, except for the Big Hole intake, which is 25 miles south west of Butte. Although the Big Hole intake is outside of the UCFRB, it services users that reside in the UCFRB.

11. Actual Restoration of Injured Resources – No Restoration

This is a replacement project; actual restoration of the bedrock aquifer in Butte is infeasible. The State recognized this infeasibility in its 1995 Restoration Determination Plan that selected a replacement alternative for this groundwater injury. This plan considered upgrading the water system as a viable restoration alternative for the bedrock injuries in Butte.

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 for thousands of years. This proposal constitutes replacement of lost services to thousands of property owners and other members of the public in Butte who could utilize the aquifer if it was not injured. The development of a comprehensive water master plan will enhance the options for a water supply from an unaffected source. Thus, there is a direct connection between lost services and the drinking water services that are the focus of this proposed planning effort.

13. Public Support – 4 support comments; 1 opposition comment

The NRDP received four comments in support of the water master plan project, including letters from the B-SB Council of Commissioners and the Butte Chamber of Commerce. The NRDP also received comments from a Butte resident who is opposed to any use of natural resource damage funds for infrastructure improvements in Butte. (Refer to the State’s response to comments⁷⁸ for reasons why the State recommends funding despite this opposition.)

14. Matching Funds and Cost Sharing – 35% Match (12% in-kind)

Restoration Fund Request:	\$174,634
B-SB cash match:	\$ 60,366
B-SB in-kind match:	\$ 32,845
Total Project Costs:	\$267,825

B-SB has matching funds of \$93,211, or 35% of the total project costs, for this proposal. The matching funds consist of \$60,366 (23%) for contracted services and \$32,845 (12%) for in-kind labor.

Although not considered as a cost share on this proposal, B-SB has noted the \$47 million already invested by Butte municipal drinking water system ratepayers over the past 13 years. These monies were used for constructing a treatment plant for the Big Hole water supply, water line replacement, and for other surface water supply and transmission improvements.

15. Public Access – Not applicable

Public access is not applicable to this project since it involves developing a master plan for a water system.

16. Ecosystem Considerations – Positive

Since Butte’s water system is completely reliant on surface waters supplies, a water master plan, which considers water conservation, will have a positive effect.

17. Coordination and Integration – Coordinates/Integrates

The Butte Master Plan coordinates with other funded efforts to improve Butte’s drinking water system that includes the Basin Reservoir, High Service, and waterline projects.

18. Normal Government Functions – Within but Augments Government Functions

Developing a water master plan is a normal responsibility of local governments that is typically accomplished via funding from grants and ratepayers. The costs B-SB faces to upgrade their system are greater than typical community costs due, in part, to pervasive groundwater

⁷⁸ NRDP, 2005. *The State of Montana’s Responses to Public Comments on the Draft 2005 UCFRB Restoration Work Plan*. December 2005.

contamination underlying Butte. In the absence of that injury Butte may have been able to construct a 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.⁷⁹ B-SB ratepayer's costs are significantly higher than other similar communities. For example, a 2003 study of the monthly water rates of Montana's cities with populations over 7,500 based on 10,000 gallons of water used, Butte's water rate of \$65.58/10,000 gallons was the highest and more than two times the rate of the next highest cities, Bozeman (\$33.74/10,000 gal.) and Helena (\$33.76/10,000 gal).⁸⁰ Presently, only 45% of Butte's residences are metered.

In 2004, B-SB applied for \$100,000 to the DNRC renewable resource grant program to complete a water master plan. While recommended for funding in HB6, the project did not rank high enough to be funded.⁸¹ The primary factors contributing to its low ranking of 54 out of 59 projects was the lack of a detailed alternative analysis and a public involvement plan.

⁷⁹ *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 both Butte's bedrock and alluvial aquifers.

⁸⁰ *Survey of Water, Wastewater and Solid Waste Facility Rate in Montana*: by Department of Commerce July 2, 2003.

⁸¹ In order to be funded under HB6, six projects ranked above the master plan project would have drop out, which is highly unlikely according to the DNRC grants administrator, Pam Smith, in a July 1, 2005 phone conversation with Greg Mullen of NRDP.

APPENDIX B

**PROJECT CRITERIA
COMPARISONS**

Appendix B: 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 contained in Appendix A. Four of the seven projects proposed have land acquisition components; one of the seven projects has a research component.

Stage 1 Criteria Required by Legal Considerations

#1 Technical Feasibility

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.

The Butte Waterline, Anaconda Waterline, Butte Master Plan, and Greenway projects are all considered reasonably feasible as proposed and likely to achieve the stated objectives. Of these, the two waterline projects have the highest degree of certainty of technical and administrative feasibility given that both counties have successfully completed waterline replacements for a number of years. While the master plan effort, in contrast, involves some new efforts for Butte-Silver Bow, the county has the needed experience with the water infrastructure system and will be directing the work of a competitively procured qualified engineering consultant to develop the water plan. The Greenway will employ well-known and accepted technologies that, for the most part, have already proven successful in past Silver Bow Creek efforts. Although some uncertainty exists for some of the ecological enhancements because the GSD will rely on DEQ's and NRDP's contractors for specific designs that will be produced at a later time in coordination with remedial design efforts, the NRDP agrees with this approach because it provides for optimum coordination with remedy. The success of the Greenway land acquisition efforts depends on the results of landowner negotiations and other tasks to be conducted as part of the project.

The Big Butte project is considered as reasonably feasible with NRDP changes. The objectives of securing public ownership by acquisition and protecting the acquired area through trail work and restrictions and associated user-education efforts have a reasonable likelihood of success. Due to potential contamination problems, parcel 6 should not be included in the acquisition. The uncertainties involving the incomplete landowner negotiations (61% of the property is under buy/sell agreements and another 22% have verbal commitments), title work, and management plans are addressed via funding conditions. An uncertainty also exists about whether Butte-Silver Bow will provide the needed enforcement on the non-motorized sections.

Of the six proposed tasks for German Gulch, two are considered reasonably feasible as proposed and three are considered reasonably feasible with the NRDP changes/conditions. There are significant uncertainties that exist with the proposed water lease as it relies on a groundwater

replacement supply that may not meet needed flow and regulatory requirements. The ability to drill two wells that will produce the needed 1 to 2 cfs and that will not be directly connected to the surface water, as per applicable water right regulatory requirements, is uncertain. A reappraisal/supplemental appraisal may be needed if a proposed 99-year recreational easement is not eliminated.

Since the NRDP's initial evaluation of the Duhome project for the July 2005 *Pre-Draft Work Plan*, most of the uncertainties associated with appraisal and title work have been resolved. The Governor's approval of the project for the requested amount depends on the Duhomes obtaining legal access to the Duhome property from a third party that would provide FWP access to the property in a manner acceptable to it. Besides this issue, resolution of the indemnification clause issue and approval of the FWP Commission and State Land Board remain to be completed. The project is considered potentially feasible.

#2 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 essentially a summation of results of all other criteria.

The Greenway project offers high net benefits. It will substantially benefit the injured natural resources of Silver Bow Creek by enhancing fish and wildlife habitat and the ecological and recreational services associated with these restored resources. Organic matter placement, plantings in the floodplain, and aquatic enhancements will accelerate recovery of these resources. The constructed wetlands that could result from land acquisition activities would protect and improve water quality, provide fish and wildlife habitat, store floodwaters, and augment surface water during dry periods. The public will be able to access and enjoy a variety of recreational activities in a restored floodplain corridor in a controlled manner that is protective of restored resources. The project provides for optimal coordination with remedy, thereby achieving significant costs savings.

Four of the six tasks proposed in the German Gulch project are likely to derive net benefits to both injured resources and replacement resources and associated recreational services. These tasks comprise 75% of the requested funds. The German Gulch has an outstanding to high-value fishery resource using FWP's rating system, including a productive, nearly genetically pure native westslope cutthroat trout fishery. Based on results of the Silver Bow Creek watershed planning effort, it is the tributary that offers the greatest potential to augment restoration of the Silver Bow Creek fishery. The improvements to the German Gulch fishery that would be derived from the fish barrier, fish screen, and water lease aspects of the project can substantially contribute to restoration of the Silver Bow Creek fishery. Removal of the tailings and the enhancement of the upland vegetation will remove the potential water quality and human health problems associated with the waste material and facilitate the proposed recreational trails. The trail development and acquisition components will improve recreational access to and use of

lower German Gulch, which is a popular recreational area for hunters and anglers close to Butte and Anaconda.

The German Gulch pilot stream restoration and cultural resource and interpretative signage tasks will derive benefits that are considered to be at least commensurate with the costs. These tasks entail 25% of the requested funds. The pilot project will provide valuable information for future restoration efforts and improved riparian vegetation and channel stability. The cultural resource inventory will help facilitate future restoration efforts. The interpretive signage, as reduced by the NRDP, will educate the public on the mining history and restoration alternatives. Due to inadequate information, the \$10,000 requested for planning future projects is not recommended for funding.

The Butte Waterline, Anaconda Waterline and the Butte Master Plan projects will have net benefits to the Butte and Anaconda communities and water system users. The waterline projects will improve fire protection, conserve water, and reduce treatment, repair and property damage costs. The Butte waterline project will cost-effectively benefit and compensate the public for some of the lost use that Butte has suffered due to the inability to use groundwater in much of the city. Though B-SB lacks detailed information on the total water leakage or the leakage attributable to the proposed lines to be replaced, the fact B-SB has 264 leaks in their system last year indicates a great need for these repairs. The Anaconda Waterline project constitutes cost-effective compensatory restoration for extensive injuries to the shallow and bedrock aquifers surrounding Anaconda. Using ADLC's estimated production/delivery cost of \$1.07 per thousand gallons, a water savings of 350,000 gallons/day would result in about \$138,000 in annual benefits, which far exceeds the annual equivalent cost of the \$1.99 million project of \$23,400 per year. Updating B-SB's water master plan will benefit Butte citizens by identifying the water capital improvements necessary to assure that Butte has a reliable and safe drinking water supply. A new water master plan would give B-SB the tools needed to cost-effectively manage a city water system. The benefits of the Butte Master Plan are less direct than the waterline projects and dependent upon future implementation.

The Big Butte project, as revised by the NRDP, will also derive net benefits. It will provide the public with a variety of low-impact recreational opportunities; preserve open space and scenic views; protect the area from high impact uses; and provide buffer lands to decrease impacts to wildlife. With the property's location on the edge of the Butte urban area and its close proximity to Montana Tech, this acquisition can provide immediate benefit to a significant segment of the public.

Public acquisition of the Duhamel property offers substantial benefits to wildlife resources and associated public recreational services. The property provides a variety of landscapes for year-round and critical winter range wildlife habitat, scenic views and open space, and a variety of associated recreational opportunities, such as hunting and wildlife viewing. The Governor finds that if the funding conditions are met, this project will provide net benefits.

#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 Anaconda Waterline and Butte Waterline projects are considered cost-effective, economical ways for the counties to address their future water supply needs given the significant documented leakage from their water distribution systems. ADLC provided a more detailed analysis of alternatives that better demonstrated the cost-effectiveness of its proposed approach than B-SB provided. Estimated costs for both projects are considered reasonable since they are based on recent competitive bidding for similar work. Although B-SB applied for two years of funding, the NRDP recommends that only one year be funded, given that no cost-savings were indicated by funding two years, that the project can be implemented on an annual basis, and that the priority of this project over other potential projects in future grant cycles will vary.

The Greenway, Big Butte, and Butte Master Plan projects are considered as likely to be cost-effective. While none of the applications for these projects contained a detailed analysis of alternatives, the proposed approaches are considered as sound and the costs as reasonable. The selected alternative for the Greenway, including a request for two years instead of one year of funding, provides for optimal coordination with remediation compared to other alternatives. The costs and approaches for the ecological enhancements are based on similar past efforts with adjustments proposed based on lessons learned from those past efforts. No other alternatives exist to the proposal approach that would accomplish the intended goal of completing public ownership and management of the entire Silver Bow Creek floodplain. The NRDP considers the transaction costs for the Big Butte project as reasonable and the approach of county ownership and management and development of a conservation-oriented management plan as sound. The price for the acquired parcels is at or below fair market value. The costs of the Butte Master Plan are comparable to those of other major cities in Montana and the proposed approach will adequately address the needs for water planning that were identified in the NRDP's evaluation of the 2004 High Service Tank project.

The German Gulch application also did not have a detailed analysis of alternatives. Based on supplemental information provided by the applicant and additional analysis by the NRDP, five of the six tasks for the German Gulch project are considered as likely to be cost-effective. A more administratively feasible and lower cost alternative to the proposed alternative for the water lease would have involved compensating the Spangler Ranch for lost hay production without a replacement groundwater supply, but was not acceptable to the Spangler Ranch. The NRDP recommends a less expensive, more permanent signage alternative than that proposed be funded at \$5,400 to accomplish the desired educational goals, which would reduce the budget of this task by \$39,300.

The proposed approach to acquiring and managing the Duhome property are sound approaches. The Governor finds that if the funding conditions are met, this project will 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. All of the projects will have long-term benefits to the environment.

The Butte Master Plan is a planning effort that will not have any adverse impacts.

Both the Duhamé and Big Butte projects will likely enhance natural resources by protecting the acquired lands from potentially detrimental land uses and by implementation of immediate protection measures. The majority of the Big Butte property would be non-motorized; 75 of the 300 acres would be open to motorized use on established trails and roads only. Potential impacts to environmental resources could result from the increased access afforded by the Big Butte and Duhamé acquisitions; however, the applicants for these projects properly plan to mitigate such impacts with implementation of conservation-oriented management and weed management plans. The Greenway and German Gulch projects also involve acquisition components that would protect lands from potentially detrimental land uses and adequate planning to mitigate the impacts of increased public use to vegetation and wildlife.

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

#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 have any significant adverse human health and safety impacts.

The Butte Master Plan should have a beneficial impact on human health and safety by identifying critical improvements needed to reliably deliver clean drinking water. The waterline projects can also 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 Big Butte and Duhamé acquisitions do not present any adverse impacts to human health and safety.

The Greenway, Butte Waterline, Anaconda Waterline, and German Gulch have potential impacts associated with construction or field activities, but none are deemed significant and mitigative measures are appropriately planned. Both the Greenway and German Gulch projects involve pedestrian trails crossing over active railroad tracks that present safety concerns that the applicants plan to address.

#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 and German Gulch projects involve positive coordination with remedial actions. The Greenway involves optimum coordination with the planned Silver Bow Creek remediation in Subarea two and four; and the Greenway's proposed activities will enhance remedial activities. The German Gulch fish screen and water lease activities will enhance the water quality and fisheries of Silver Bow Creek and thus enhance remediation efforts. The applicant needs to get approvals from DEQ and ARCO in order to coordinate the tailings removal with DEQ and dispose of tailings at Opportunity Ponds.

Public ownership of the Duhamé property would complement the Silver Bow Creek remediation efforts in Durant Canyon. Even though there is an enforceable 270-acre "no build" restriction on the property along the Canyon, public ownership and the protection of the entire parcel would be beneficial to the wildlife and public that will utilize the Canyon.

The Big Butte, Butte Master Plan, Butte Waterline, and Anaconda Waterline projects are considered consistent with remedial actions. They will not interfere with or duplicate the results of these actions. The EPA has verified that the Big Butte acquisition area will not be the subject of any future remedial actions.

#7 Recovery Period and Potential for Natural Recovery

This criterion evaluates whether and to what degree a project affects the time frame 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.

Of the seven projects, the Greenway has the greatest likelihood of enhancing the recovery time of injured resources. Proposed ecological enhancement will accelerate recovery of the injured aquatic and terrestrial resources of Silver Bow Creek. Augmenting instream flows in German Gulch and re-establishing connectivity between German Gulch and Silver Bow Creek via the proposed Task 4 components of the German Gulch project could improve the recovery time frame of injured aquatic resources of Silver Bow Creek. The other five projects are not expected to affect the time frame 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 seven projects can be implemented in compliance with applicable laws and rules. All applications identified the needed permits and plans for obtaining them. The Butte Master Plan application lacked adequate details of this criterion, however, other applications from B-SB demonstrate adequate knowledge of the applicable laws pertaining to public drinking water systems.

Senate Bill 259, which became law after submittal of this year's grant applications, requires certain weed control planning and implementation activities that are applicable to non-federal public acquisitions. Compliance with the provisions of SB 259 is a condition of funding for the Greenway, German Gulch, Duhome, and Big Butte projects.

#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 (Tribes) and the Department of Interior (DOI) 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 considers the Greenway, German Gulch, and Duhome projects as likely to benefit any such resources of special interest. Of these, the German Gulch will derive the greatest benefits to native trout. The Anaconda Waterline, Butte Waterline, Butte Master Plan, and Big Butte projects are not likely to have any impacts on these resources.

The NRDP solicited information from both the Tribes and the DOI regarding these resources or sites that are relevant to all proposals. Appendix D contains comment letters from the DOI and Tribes. The Tribes support all seven projects as indicated by the affirmative votes of their representative at the August 10, 2005 Advisory Council meeting. The Tribe's comments provide suggested language for grant agreements for the Butte Waterline, Anaconda Waterline, Big Butte, Duhome, and German Gulch projects. The language is specific to the possibility of encountering tribal cultural resources during implementation of these projects. In its written comments, the DOI indicated its support of the Greenway, Anaconda Waterline, Butte Waterline, and Butte Master Plan projects and support of portions of the German Gulch project. At the August 10, 2005 Advisory Council meeting, the DOI representative voted in support of all projects except for the Butte Master Plan project.

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 seven projects are considered within the UCFRB and proximate to injured resources. All restoration activities associated with the Greenway proposal will be conducted at or near the

injured resource areas of Silver Bow Creek. The Butte Waterline project overlies the injured Butte Hill groundwater resource. The Anaconda Waterline project is adjacent to the injured Anaconda-area groundwater resource. The Big Butte project is located on 300 acres next to the Butte's urban corridor.

The project area that the Butte Master Plan project will evaluate is all in or around the City of Butte, except the Big Hole intake, which is 25 miles southwest of Butte. Although the Big Hole intake is outside of the UCFRB, it services users that reside in the UCFRB.

The 1,745 acres of Duhamel lands are mid-way between Butte and Anaconda along four miles of the southern border of Durant Canyon and Silver Bow Creek. The German Gulch project is also located about mid-way between Butte and Anaconda.

#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 project components of the Greenway project constitute actual restoration of injured resources. Some Greenway project components contribute to restoration such as land acquisition/easements along Silver Bow Creek and the Miles Crossing planning effort. It is anticipated that the German Gulch project will indirectly contribute to restoration of the injured resources of Silver Bow Creek through implementation of the planned improvements of fish passage, enhanced flows from German Gulch to Silver Bow Creek and the proposed stream and floodplain restoration activities in Upper German Gulch. The Duhamel project may contribute to restoration, as wildlife populations whose range might extend to the nearby-injured areas would benefit from public ownership and protection.

The Butte Master Plan, Butte Waterline, and Anaconda Waterline projects are considered replacement projects and will not restore or contribute to the restoration of injured resources; however, these projects replace services of injured groundwater resources that cannot be restored and constitute compensatory restoration.

The Big Butte project is also a replacement project and not intended to accomplish restoration of an injured natural resource. It does, however, have the potential to protect the area's natural resources from potentially detrimental development and high-impact off road vehicle use and also enhance the resources through soil stabilization and revegetation.

#12 Relationship between Service Loss and Service Restoration

This criterion examines the connection between the services that a project seeks to address and the services that were lost or impaired. Projects that focus on providing the same or similar

services as those lost or impaired will be favored over projects that focus on providing dissimilar services.

All of the proposed projects have the focus of providing services that are the same or substantially similar to those services that were lost. The Greenway project will provide some of the same services that were lost due to injuries include ecological services that restored habitat provides to fish and wildlife and recreational services such as fishing and hiking. The German Gulch and Duhamé projects will provide public recreational services that are substantially equivalent to some of the services lost due to natural resource injuries in the UCFRB such as wildlife viewing and hunting.

The Butte Waterline and Anaconda Waterline projects will provide replacement drinking water services that are closely linked to the injured groundwater resources of the Butte and Anaconda areas. They will enhance the water supply from an unaffected source. The Butte Master Plan will determine the best way to enhance Butte's water supply from unaffected sources.

The Big Butte project acquires land for open space and public access for low impact natural resource based recreational opportunities such as hiking that are considered substantially similar to lost services covered under Montana v. ARCO.

#13 Public Support

This criterion assesses the level of public support based on information provided to the State between application submittal in March 2005 through the end of the public comment period in October 2005.

The Duhamé project has received the highest demonstrated public support with 43 support comments and a petition of support signed by 393 individuals. The Big Butte has the next highest demonstrated public support with 19 support comments and a petition supporting the project signed by 24 individuals. The German Gulch project has 16 support comments. Both the Anaconda Waterline project and Greenway project received seven comments in support of the each project.

The Butte Master Plan and Butte Waterline projects each received four comments in favor of these projects. Both projects also received one letter of opposition from a Butte resident who is opposed to any use of NRD funds for infrastructure improvements in Butte.

#14 Matching Funds

This criterion evaluates the extent to which a project entails cost sharing.

In terms of percentage match, the Butte Master Plan has the highest percent of matching funds at 35% totaling \$93,211, with a cash match of \$60,366 and an in-kind match of \$32,845. The Butte Waterline follows with a 25% match totaling \$513,089, with a cash match of \$475,428 and a \$37,661 in-kind labor match.

The German Gulch project has matching funds totaling \$173,702 as revised by the NRDP, which is approximately 17% of total project cost, with \$137,841 as a cash match and \$35,861 as an in-kind match.

The Anaconda Waterline project has matching funds totaling \$250,500, or about 12.6% of total project costs, with of \$230,500 as a cash match and \$20,000 as an in-kind match.

The Big Butte project has matching funds as revised by the NRDP totaling \$47,775, or about 7% of total project costs, all of which is in-kind.

The Duhame and Greenway project have no matching funds.

#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 for every project, nor is it relevant to all projects.

The Greenway, German Gulch, Duhame and Big Butte projects all will result in increased public access. The Greenway's proposed land acquisition and management activities will allow the public to access and recreate along Silver Bow Creek in a manner protective of restored resources. The German Gulch project will enhance hunting, hiking, and fishing opportunities in the area. The Duhame and Big Butte projects will ensure permanent public access by securing public ownership. All four projects propose weed control and management measures to minimize the impacts from increased public access.

Public access is not a component of the other three 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.

All seven projects positively fit within the broad ecosystem context. Both the Greenway and German Gulch projects will improve aquatic and terrestrial resources and associated recreational services in the headwaters of the UCFRB. The Duhame project is aimed at further protecting the lands surrounding Silver Bow Creek, which are the headwaters of the UCFRB. The Big Butte project fits within a broad ecosystem context because it is aimed at protecting the lands and natural resources in the headwaters area of the UCFRB from potentially detrimental impacts associated with development and high-impact uses. The Butte Waterline and Anaconda Waterline projects will conserve water and reduce power requirements of pumping and treating water. The Butte Master Plan will consider water conservation measures.

#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 German Gulch, Greenway, Big Butte, and Duhamé projects all are consistent with the priorities established in the *Draft Silver Bow Creek Watershed Restoration Plan*; they all address needs ranked as either very high priority or high priority. Of these projects, the Greenway and German Gulch projects address the needs of highest priority. The Greenway, Duhamé, and German Gulch projects coordinate with each other. The Greenway project also coordinates with funded educational projects that are using Silver Bow Creek as an outdoor classroom. The Big Butte project will provide connecting trails between the Greenway Service District Trails as well as the Historic BA&P. The German Gulch project plans restoration activities that can help the native fishery better withstand the impacts from upgradient contaminant problems at the Beal mine. The Anaconda Waterline project is integrated with ADLC's Preliminary Engineering Report. The Butte Waterline project coordinates with other waterline projects in the Butte area. The Butte Master Plan coordinates with other funded efforts to improve Butte's drinking water system that includes the Basin Reservoir, High Service, and waterline projects.

#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 Big Butte, Duhamé, and Greenway projects involve efforts that are outside normal government function. After initial protection measures are implemented, the prospective government entities that will own the properties to be acquired by these projects will assume operation and maintenance responsibilities. All components of the German Gulch project are outside normal government functions, except weed control and environmental assessment activities that augment normal government functions. The weed control and environmental assessment tasks are necessitated by or targeted to the proposed restoration activities.

The Butte Waterline, Butte Master Plan and Anaconda Waterline projects all augment government function because communities typically rely on a combination of grant funds and user fees to fund such projects and because of the extensive injuries to groundwater resources. All three projects constitute compensatory restoration for extensive injuries to the bedrock aquifer underlying Butte Hill and the shallow alluvial aquifer in areas surrounding Anaconda that were covered under Montana v. ARCO. Restoration of these injured groundwater resources is technically infeasible, which is one reason these communities sought to augment their existing

supplies from uncontaminated sources. Of these projects, the Butte Master Plan augments normal government function to a greater extent than the waterline projects.

Stage 2 Land Acquisition Criteria

These criteria are applicable to the Big Butte and Duhamé acquisition projects, and to the German Gulch and Greenway projects, which have acquisition components.

#19 Desirability of Public Ownership

All the acquisition projects are considered as ones with overall positive benefits from public ownership. The Greenway project's proposed acquisition of two critical parcels in the Silver Bow Creek floodplain will derive the greatest benefits to injured resources. The Duhamé acquisition can enhance injured resources of Silver Bow Creek. The acquisition lands for the German Gulch proposal will be used to conduct pilot stream restoration projects that will benefit resources of German Gulch and Silver Bow Creek. The Big Butte project will benefit replacement resources. Given its location next to the Butte urban area, it is likely to receive the greatest recreational use of the four projects.

A negative aspect common to all the acquisition projects is the potential loss of increased tax revenues that would be generated under a development scenario. Plus, there will be an increased demand in governmental services associated with the acquisitions. The existing tax revenue is likely to be the same under FWP ownership of the Duhamé property, but be less for the Greenway, Big Butte and German Gulch projects, since the GSD, B-SB and the USFS, respectively, do not pay property taxes. The positive benefits of these acquisitions are considered to outweigh the negative impacts associated with tax revenues and increased demand for governmental services.

#20 Price

The price for the Big Butte acquisition is reasonably based on a fair market appraisal; however, title work remains to be completed and that title work could require reappraisal. While the price for the Greenway parcels remains to be determined via appraisals, the basis for the estimated cost is considered reasonable.

The Governor approves the Duhamé project costs without requiring an updated appraisal, provided that legal access for and satisfactory to the FWP is obtained.

The price for German Gulch acquisition remains uncertain due to the need for a supplemental appraisal for German Gulch if the 99-year recreational easement is executed. Funding approval for this project is conditioned on purchase at or below fair market value.

Stage 2 Monitoring and Research Criteria

These criteria apply to any research activity and to projects for which monitoring is a significant focus of the project. These criteria only apply to the pilot stream restoration component of the German Gulch project.

#21 Overall Scientific Program

The criterion considers the extent to which the proposed monitoring and research efforts coordinate or integrate with other scientific work in the UCFRB. Greater benefits can be achieved when monitoring and research projects can use and assist other projects.

The stream demonstration project coordinates with on-going investigation efforts by the USFS to address selenium contamination problems from the Beal Mine and other scientific work in the Basin on stream restoration methods.

#22 Assistance with Restoration Planning

Under this criterion, the State will consider whether the knowledge that might be gained from a monitoring or research project will directly assist with future restoration efforts.

The stream demonstration project will derive moderate benefits in terms of information needed for future stream restoration efforts in German Gulch and other areas.

APPENDIX C

PROJECT BUDGET SUMMARY TABLES

TABLE 1 - DETAILED PRELIMINARY COST ESTIMATE, 2005 GREENWAY GRANT APPLICATION

Silver Bow Creek Greenway

YEAR ONE (2006) COSTS:

March 4, 2005

Area / Item Description	Quantity	Unit	Unit Cost	Total	Notes
ECOLOGICAL AND HABITAT IMPROVEMENTS					
Phase 1 Enhanced Plant Seed Mix	182.8	Acres	\$237.16	\$43,352.85	Based on Reach F-H Design and Bid Tabulations
Phase 1 Organic Matter	91.4	Acres	\$1,499.23	\$137,029.62	Based on Reach F-H Design and Bid Tabulations, 1%
Phase 2 Enhanced Seed Mix	101.5	Acres	\$237.16	\$24,071.74	Based on Reach F-H Design and Bid Tabulations
Phase 2 Organic Matter	50.8	Acres	\$1,499.23	\$76,085.92	Based on Reach F-H Design and Bid Tabulations, 1%
Phase 2 Floodplain Transplants	35.5	Acres	\$1,623.04	\$57,858.50	Based on Reach F-H Design and Bid Tabulations
Reach J Stream Bank Transplants	7,500	L.F.	\$3.25	\$24,375.00	Reach F-H Planting Design Cost Estimate, Bid Tabulations
Stream Habitat/Restoration Stream Banks	7,500	L.F.	\$7.00	\$52,500.00	Woody debris, or other improvements to be designed by DEQ
Subtotal				\$415,073.63	
LAND ACQUISITION AND EASEMENTS:					
Earhart Property Acquisition	120.1	Acres	\$1,500.00	\$180,150.00	\$1500 per acre, total acquisition costs, see Table 1A
Subtotal				\$180,150.00	
PLANNING					
Miles Crossing Conceptual Planning	1	Estimate	\$50,000.00	\$50,000.00	Rough Estimate for planning, coordination, conceptual design, etc
Golden Technologies Planning	1	Estimate	\$35,000.00	\$35,000.00	Rough Estimate for planning, appraisal, survey, etc.
Subtotal				\$85,000.00	
YEAR 1 COST TOTALS					
Ecological Features and Land Acquisition				\$595,223.63	Land, Organic Matter and Plantings
Design (5%)				\$29,761.18	Design of restoration elements
Contingency (5%)				\$29,761.18	Contingency for land, plantings and stream improvements only
Project Administration and Oversight (5%)				\$29,761.18	General project coordination and oversight
Subtotal				\$684,507.17	
Planning Efforts				\$85,000.00	Contingency, design and administration included in the planning estimates
TOTAL YEAR 1 (2006) COSTS				\$769,507	

TABLE 1A - DETAILED PRELIMINARY COST ESTIMATE, 2005 GREENWAY GRANT APPLICATION (continued)

Silver Bow Creek Greenway

YEAR TWO (2007+) COSTS:

March 4, 2005

Area / Item Description	Quantity	Unit	Unit Cost	Total	Notes
ECOLOGICAL AND HABITAT IMPROVEMENTS					
Phase 3 Enhanced Plant Seed Mix	135.3	Acres	\$237.16	\$32,087.75	Based on Reach F-H Design and Bid Tabulations
Phase 3 Organic Matter	67.7	Acres	\$1,499.23	\$101,422.91	Based on Reach F-H Design and Bid Tabulations, 1%
Phase 3 Floodplain Transplants	47.4	Acres	\$1,623.04	\$76,859.06	Based on Reach F-H Design and Bid Tabulations
Gravel Pit Enhanced Seed	18.5	Acres	\$237.16	\$4,387.46	Based on Reach F-H Design and Bid Tabulations
Gravel Pit Organic Matter	18.5	Acres	\$1,499.23	\$27,735.76	Based on Reach F-H Design and Bid Tabulations, 1%
Gravel Pit Floodplain Transplants	6.5	Acres	\$1,623.04	\$10,509.18	Based on Reach F-H Design and Bid Tabulations
Reach I and J Enhanced Seed Mix	146.4	Acres	\$237.16	\$34,720.22	Based on Reach F-H Design and Bid Tabulations
Reach I and J Organic Matter	146.4	Acres	\$2,301.46	\$336,933.74	Based on Reach F-H Design and Bid Tabulations, 2%
Reach I and J Floodplain Transplants	146	Acres	\$1,623.04	\$237,613.06	Based on Reach F-H Design and Bid Tabulations
Subtotal				\$862,269.14	
MONITORING AND MAINTENANCE					
Stream Habitat and Diversity Monitoring	1	LS	\$ 46,383.00	\$46,383.00	Supplements DEQ monitoring program, see detailed estimate
Revegetation Monitoring	1	LS	\$38,000.00	\$38,000.00	Based on Estimate from reaches F and G
Subtotal				\$84,383.00	
YEAR 2 COST TOTALS					
Ecological Features				\$862,269.14	Plantings, Reaches H and I stream improvements, and monitoring
Monitoring and Maintenance				\$84,383.00	Stream and Vegetation Monitoring
Design (5%)				\$43,113.46	Design of ecological enhancements only
Contingency (5%)				\$43,113.46	Contingency for ecological enhancements only
Project Administration and Oversight (5%)				\$43,113.46	General project coordination and oversight
Subtotal				\$1,075,992.51	
TOTAL YEAR 2 (2007+) COSTS				\$1,075,993	
TOTAL PROPOSAL COSTS				\$1,845,500	

Step 6. Proposal Budget

Applicant Name: George Grant Chapter of Trout Unlimited

Project Title: German Gulch Watershed Restoration Project

Project Budget Summary Form

EXPENSE CATEGORY	UCFRB RESTORATION FUND	APPLICANT CONTRIBUTION	OUTSIDE SOURCES	TOTAL
1. SALARIES AND WAGES	0	0	0	0
2. FRINGE BENEFITS	0	0	0	0
3. CONTRACTED SERVICES	\$720,524.17	0	\$124,536.06	\$845,060.23
4. SUPPLIES AND MATERIALS	0	0	0	0
5. COMMUNICATIONS	0	0	0	0
6. TRAVEL	0	0	0	0
7. RENT AND UTILITIES	0	0	0	0
8. EQUIPMENT	0	0	0	0
9. MISCELLANEOUS	\$191,995.00	\$15,200.00	\$41,000	\$248,195.00
TOTAL \$	\$912,519.17	\$15,200.00	\$165,536.06	\$1,093,255.23

Chart A: Project Budget Summary
NATURAL RESOURCE DAMAGE PROGRAM -- 2005 APPLICATION
Butte-Silver Bow - Drinking Water Infrastructure Replacement Project -- Year 5

DESCRIPTION	Annual Hours	Y2005 Total	NRDP Share (75%)	BSB Share	15-year Total***	15-year NRDP Share	15-year BSB Share
1. SALARIES AND WAGES							
DPW Director	82	\$2,341	0	2,341	\$35,115	0	\$35,115
Water Division General Manager	252	\$7,440	0	7,440	\$111,606	0	111,606
Jean Pentecost, DPW Engineer	404	\$8,600	0	8,600	\$128,994	0	128,994
Other Professional Staff	572	9,724	0	9,724	\$145,860	0	145,860
				0	\$0		
Sub-Total Salaries		28,105	0	28,105	\$421,575	0	421,575
				0			
2. BENEFITS @ 34% of Wages		9,556	0	9,556	143,336	0	143,336
Total Wages and Benefits:		37,661	0	37,661	564,911	0	564,911
3. CONTRACTED SERVICES:							
Engineering Consultation		145,768	111,787	33,980	2,186,515	1,530,560	655,954
Construction Contractor** (includes supplies and materials to replace pipes and re-pave roads)		1,861,398	1,427,482	433,916	27,920,970	19,544,679	8,376,291
4. SUPPLIES AND MATERIALS		0	0	0	0	0	0
5. COMMUNICATIONS		0	0	0	0	0	0
6. TRAVEL		0	0	0	0	0	0
7. RENT AND UTILITIES		0	0	0	0	0	0
8. EQUIPMENT		0	0	0	0	0	0
9. MISCELLANEOUS							
Indirect Costs @ 20% of salaries and benefits		7,532	0	7,532	112,982	0	112,982
TOTAL PROJECT COSTS:		\$ 2,052,359	\$ 1,539,269	\$ 513,090	\$ 30,785,378	\$ 21,075,239	\$ 9,710,138

NOTES:

** Construction contractor based on average of actual cost from 2004 + 10% contingency for proposed SOW (~17,000 feet per year)

ANACONDA WATERLINE PROJECT BUDGET SUMMARY FORM ¹

EXPENSE CATEGORY ²	UCFRB RESTORATION FUND		APPLICANT CONTRIBUTION		OUTSIDE SOURCES ³	TOTAL
	2005	2006	2005	2006	2006	
1. SALARIES AND WAGES				\$15,625		\$15,625
2. FRINGE BENEFITS				\$4,375		\$4,375
3. CONTRACTED SERVICES		\$1,738,700	\$5,500	\$225,000		\$1,969,200
4. SUPPLIES AND MATERIALS						
5. COMMUNICATIONS						
6. TRAVEL						
7. RENT AND UTILITIES						
8. EQUIPMENT						
9. MISCELLANEOUS						
TOTAL \$	\$0	\$1,738,700	\$5,500	\$245,000		
	\$1,738,700		\$250,500		\$0	\$1,989,200

¹ This table provides summary expense totals from the following Budget Detail Form.

² For multi-year projects, expenses must be broken down by year.

³ Clearly indicate the outside sources of funds.

BUDGET DETAIL FORM

EXPENSE CATEGORY² <i>(See Estimated Construction Cost spreadsheet at the end of this section.)</i>	UCFRB RESTORATION FUND		APPLICANT CONTRIBUTION		OUTSIDE SOURCES ³	TOTAL
	2005	2006	2005	2006	2006	
1. SALARIES AND WAGES (See Budget Estimate, Salaries and Wages narrative.)				\$15,625		\$15,625
TOTAL SALARIES AND WAGES \$				\$15,625		\$15,625
2. FRINGE BENEFITS (Fringe benefit multiplier for this project is 0.28)				\$4,375		\$4,375
TOTAL FRINGE BENEFITS \$				\$4,375		\$4,375
3. CONTRACTED SERVICES • Mobilization, Site Work & Demo/Disposal:		\$229,500				\$229,500
• New Mains & Fittings:		\$637,700				\$637,700
• Service Re-connects:		\$204,000				\$204,000
• Utilities & Restoration:		\$84,500				\$84,500
• Asphalt & Concrete:		\$365,000				\$365,000
• Traffic Control:		\$50,000				\$50,000
• Contingencies (10%):		\$157,000				\$157,000
• Engineering Design/ Inspection and Grant Administration (15%):		\$11,000	\$5,500 prelim.engr.	\$225,000		\$241,500
TOTAL CONTRACTED SERVICES \$	\$0	\$1,738,700	\$5,500	\$225,000	\$0	\$1,969,200
4. SUPPLIES AND MATERIALS						
TOTAL SUPPLIES AND MATERIALS						
5. COMMUNICATIONS						
TOTAL COMMUNICATIONS \$						

EXPENSE CATEGORY <i>(See Estimated Construction Cost spreadsheet at the end of this section.)</i>	UCFRB RESTORATION FUND		APPLICANT CONTRIBUTION		OUTSIDE SOURCE 1	TOTAL
	2005	2006	2005	2006	2006	
6. TRAVEL						
TOTAL TRAVEL \$						
7. RENT AND UTILITIES						
TOTAL RENT AND UTILITIES \$						
8. EQUIPMENT						
TOTAL EQUIPMENT \$						
9. MISCELLANEOUS						
TOTAL MISCELLANEOUS \$						
ALL CATEGORIES GRANT TOTAL \$	\$0	\$1,738,700	\$5,500	\$245,000	\$0	\$1,989,200
	\$1,738,700		\$250,500			

² For multi-year projects, expenses must be broken down by year.

BIG BUTTE PROJECT BUDGET SUMMARY FORM

EXPENSE CATEGORY	UCFRB RESTORATION FUND	APPLICANT CONTRIBUTION		OUTSIDE SOURCES		TOTAL
		Cash	In-Kind	Cash	In-Kind	
1. SALARIES AND WAGES			\$18,054			\$18,054
2. FRINGE BENEFITS			\$6,319			\$6,319
3. CONTRACTED SERVICES	\$57,459			\$45,418	\$13,528	\$116,405
4. SUPPLIES AND MATERIALS	\$58,013		\$5000			\$63,013
5. COMMUNICATIONS						
6. TRAVEL						
7. RENT AND UTILITIES			\$4,874			\$4874
8. EQUIPMENT						
9. MISCELLANEOUS (Land Purchase & Contingency)	\$579,277					\$579,277
TOTAL \$	\$694,749		\$34,247	\$45,418	\$13,528	\$787,942

BUDGET DETAIL FORM

EXPENSE CATEGORY	UCFRB RESTORATION FUND				APPLICANT CONTRIBUTION		OUTSIDE SOURCES		TOTAL
	Year 1	Year 2	Year 3	Total	Cash	In-Kind	Cash	In-Kind	
SALARIES AND WAGES						\$18,054			
TOTAL SALARIES AND WAGES \$						\$18,054			\$18,054
FRINGE BENEFITS						\$6,319			
TOTAL FRINGE BENEFITS \$						\$6,319			\$6,319
CONTRACTED SERVICES (Break down specific types of services)	\$11,355 Realtor fees \$4,800 Title company fees \$32,000 Surveyor fees \$2,904 Parking area/Trailheads \$6,400 Fencing/signs						\$45,418 Commission Reduction	\$13,528 Fence/Trail labor	
TOTAL CONTRACTED SERVICES \$	\$57,459						\$45,418	\$13,528	\$116,405

EXPENSE CATEGORY	UCFRB RESTORATION FUND				APPLICANT CONTRIBUTION		OUTSIDE SOURCES		TOTAL
	Year 1	Year 2	Year 3	Total	Cash	In-Kind	Cash	In-Kind	
SUPPLIES AND MATERIALS	\$53,945 Fencing and signs \$2,132 Trails \$1936 Trailheads					\$5000 Compost, gravel			
TOTAL SUPPLIES AND MATERIALS \$	\$58,013					\$5000			\$63,013
COMMUNICATIONS									
TOTAL COMMUNICATIONS \$									
TRAVEL									
TOTAL TRAVEL \$									
RENT AND UTILITIES						\$4,874 Indirect Costs			
TOTAL RENT & UTILITIES \$						\$4,874			\$4,874
EQUIPMENT									
TOTAL EQUIPMENT \$									
MISC	\$567,730 Land Purchase (see Appendix C for individual parcel prices) \$4,815 Contingency (10%) for acquisition costs (not included purchase price) \$6,732 Contingency (10%) for protection costs								
TOTAL MISC \$	\$579,277								\$579,277
ALL CATEGORIES GRAND TOTAL \$	\$694,749					\$34,247	\$45,418	\$13,528	\$787,942

TABLE 1 - COST ESTIMATE, DUHAME PROPERTY ACQUISITION GRANT APPLICATION

Silver Bow Creek Greenway

March 4, 2005

Area / Item Description	Quantity	Unit	Unit Cost	Total	Notes
PROPERTY PURCHASE					
Land Purchase	1	LS	\$870,000.00	\$870,000.00	See Property Appraisal
Timber Purchase	1	LS	\$617,830.00	\$617,830.00	See Timber Appraisal
Subtotal				\$1,487,830.00	
CLOSING AND OTHER COSTS					
Survey	1	LS	\$38,000.00	\$38,000.00	Estimate Provided By Dan Brown Surveying
Title Insurance and Closing Costs	1	LS	\$5,000.00	\$5,000.00	Title Insurance, Recording, Closing, Buy-Sell, Deed, Etc
Subtotal				\$43,000.00	
OPERATIONS AND MAINTENANCE					
Weed Control	1	Estimate	\$25,000.00	\$25,000.00	See FWP Estimate
Remove Fence	5.00	Miles	\$2,110.00	\$10,550.00	See FWP Estimate
Replace Fence	5.00	Miles	\$14,000.00	\$70,000.00	See FWP Estimate
Subtotal				\$105,550.00	
Contingency (5%)				\$7,427.50	Survey, Closing and O&M, Because stuff happens
Subtotal				\$7,427.50	
TOTAL PROJECT COSTS				\$1,643,807.50	

Chart A: Project Budget Summary
NATURAL RESOURCE DAMAGE PROGRAM -- 2005 APPLICATION
Butte-Silver Bow - Master Plan

DESCRIPTION	Annual Hours	Y2005 Total	NRDP Share	BSB Share		
1. SALARIES AND WAGES						
DPW Director	38	\$1,319	0	1,319		
Water Division General Manager	162	\$4,783	0	4,783		
Jean Pentecost, DPW Engineer	264	\$5,620	0	5,620		
Other Professional Staff	512	8,704	0	8,704		
				0		
Sub-Total Salaries		20,426	0	20,426		
				0		
2. BENEFITS @ 34% of Wages		6,945	0	6,945		
Total Wages and Benefits:		27,371	0	27,371		
3. CONTRACTED SERVICES:						
Engineering Consultation		235,000	174,634	60,366		
4. SUPPLIES AND MATERIALS		0	0	0		
5. COMMUNICATIONS		0	0	0		
6. TRAVEL		0	0	0		
7. RENT AND UTILITIES		0	0	0		
8. EQUIPMENT		0	0	0		
9. MISCELLANEOUS						
Indirect Costs		5,474	0	5,474		
@ 20% of salaries and benefits						
TOTAL PROJECT COSTS:	\$	267,845	\$	174,634	\$	93,211

NOTES:

APPENDIX D

INPUT FROM THE:
ADVISORY COUNCIL,
DEPARTMENT OF INTERIOR, AND
CONFEDERATED SALISH AND
KOOTENAI TRIBES

UPPER CLARK FORK RIVER BASIN REMEDICATION AND RESTORATION EDUCATION ADVISORY COUNCIL

Jim Flynn, Chair
Anaconda

TO: Trustee Restoration Council

Sally Johnson,
Vice chair
Missoula

FROM: Jim Flynn, Advisory Council Chairman

Larry Curran
Butte

DATE: November 14, 2005

Dennis Daneke
Missoula

RE: Advisory Council Preliminary Recommendations

Jim Dinsmore
Hall

The Remediation and Restoration Education Advisory Council met on November 9, 2005 to get an update on public comment and vote on the 2005 grant applications. The Council's final funding recommendations are as follows:

Dale Mahlum
Missoula

Jerry Harrington
Butte

SBC Greenway – Year One: \$769,507; Year Two: \$1,075,993

John Hollenback
Gold Creek

German Gulch – \$876,162

Paul Babb
Butte

Butte Waterline – \$1,539,269

Gene Vuckovich
Anaconda

Anaconda Waterline – \$1,738,700

Jules Waber
Deer Lodge

Big Butte Acquisition – \$667,642

Linda Bouck
Anaconda

Duhamel Acquisition – up to \$1,643,809, subject to reappraisal option based on obtaining legal access

Richard Opper,
Director
Dept. of
Environmental Quality

Butte Master Plan – \$174,634

Jeff Hagener, Director
Dept. of Fish, Wildlife
and Parks

Attached is a summary of the action taken by the Council on each project. I look forward to the discussion at our meeting on November 18, 2005.

Mary Sexton, Director
Dept. of Natural
Resources and
Conservation

James Steele, Jr.
Confederated Salish &
Kootenai Tribes

Laura Rotegard
U.S. Dept of Interior

ADVISORY COUNCIL FINAL RECOMMENDATIONS
ON 2005 GRANT PROJECTS

Summary of 11/9/05 Advisory Council Meeting

1. Silver Bow Creek Greenway – Motion to approve NRDP’s staff recommendation for full funding at \$769,507 for Year 1 and \$1,075,993 for Year 2 subject to the specified funding conditions passed 12-0. No discussion.
2. German Gulch – Motion to approve NRDP’s staff recommendation for partial funding at \$876,162 subject to the specified funding conditions passed 12-0. No discussion.
3. Butte Waterline – Motion to approve NRDP’s staff recommendation for full funding at \$1,539,269 for Year 1 passed 12-0. No discussion.
4. Anaconda Waterline – Motion to approve NRDP’s staff recommendation for full funding at \$1,738,700 passed 12-0. No discussion.
5. Big Butte Acquisition – Motion to approve NRDP’s staff recommendation for partial funding at \$667,642 subject to the specified funding conditions passed 12-0. No discussion.
6. Duhamé Acquisition – There was an original motion to approve NRDP’s staff recommendation for funding \$1,430,979, of which the purchase price for the land is not to exceed \$1,275,000. This motion was then amended to include the following language:

“The applicant would be allowed to perfect legal access. Once legal access is obtained the appraisal would be updated to reflect legal access and a new fair market evaluation would be established. The project would be recommended for funding at the appraised value plus \$155,979 for five years of operation and maintenance, not to exceed the total requested amount of \$1,643,809.”

The motion on the amendment passed 7-5 and the motion with the amendment also passed 7-5. Discussion centered on the appraisal and legal access issues, mineral rights and the indemnification clause.
7. Butte Master Plan – Motion to approve NRDP’s staff recommendation for full funding at \$174,634 passed 7-5. No discussion.

**UPPER CLARK FORK RIVER BASIN
REMEDICATION AND RESTORATION EDUCATION ADVISORY COUNCIL**

Summary of April 13, 2005 Meeting

All members present except for Haley Beaudry, Judy Jacobson, and Laurence Siroky.

Jim Flynn called the meeting to order. The February 2005 meeting minutes were approved. The next meeting will be held on May 11, 2005.

Applicant Symposium: Carol Fox explained the purpose and format of the Applicant Symposium. Members can request copies of the applications on the sign up sheet or later by contacting Kathy Coleman. Carol will contact members regarding any desired follow-up questions of the applicants or NRDP. The NRDP will then provide the Council with written responses before the Council's July meeting. Council members will have the opportunity to visit project sites in May and June.

Applicants for seven 2005 grant cycle proposals presented their projects to the Council. Copies of the applicant's PowerPoint presentations are available upon request from Kathy Coleman. The following is the summary of the questions and responses that followed each presentation, with responses indicated by an "R".

Anaconda Waterline, presented by Alden Beard of BETA, consultant for Anaconda Deer-Lodge County.

- What accounts for the difference between the \$163/ft of pipe for the Anaconda project compared to the Butte project? What is the basis for the cost estimate? R: There are differences between the size of pipe and type of pipe used by Anaconda vs. Butte, plus different soil/bed conditions. Anaconda is now dealing with a smaller pipe (8", 10") whereas larger transmission mains were replaced in the past. The estimates are derived on documented past costs. The engineer's costs estimate for the 2004 project was very close to the lowest bid on the project. Is this price lower than the previous unit costs? R: While I don't have the exact comparison to last year's projects, I can get that data to you.
- Your match at 12% is lower than Butte's at 25%. How do you determine your match? R: The Chief Executive/Commissioners determine how much they can take out of the water enterprise fund. ADLC is cash-strapped now and unable to lay ancillary lines like Butte does. ADLC found it difficult to meet and document the in-kind match for county staff time of \$50,000 to \$60,000 on the past waterline projects and therefore decreased this matching contribution.
- How does the work affect the individual homeowner lines? R: The county does not have jurisdiction over these lines; the public jurisdiction end at the curb stop. The county's work does not change the pressure to the customer's service connection. The customer benefits from improved delivery to their line, increased fire protection, and less leakage.

- Does the new survey enable Anaconda to reprioritize, as there does not appear to be a reduction in the leak estimates based on past projects? R: The '04 leakage study was a more refined and exhaustive study, consequently more accurate than the study completed 14 years ago. The number of leaks/leak volume estimates are higher based on the 2nd study. In addition to the more advanced technique used, more dilapidation of the pipes, and thus more leaks, have occurred since the first study.
- Does the 12% reduction in leakage apply to this year's proposal? R: Yes. It's a theoretical estimate based the overall system leakage rate of 30 gallons/day for every foot of pipe. Applying that to the 11,800' of pipe to be replaced results in the 12% estimate. There has not been a locational leak study since 1992.
- When you replace the old pipe, what do see in terms of the pipe condition? R: Three problems are consistently seen: perforations, lead joint failure, and fitting-related failures at the service taps.

Butte Waterline, presented by Jean Pentecost of Butte-Silver Bow.

- What is the basis for the cost estimate of \$121/foot and percentage of matching funds? R: Cost estimates are based on past documented costs. We reduced the matching funds this year (25%) from that provided in past years (32%) to be more in line with matching funds of other similar projects and because the county had to pay an extra \$100,000 on the 2004 project. The proposed match is just for the pipeline to be replaced with NRD funding; the county also contributes another \$500,000 annually to pipeline repairs in other parts of town.
- Does the application break out the size of pipe? R: No, we don't do the breakdown until we are certain of funding and conduct the engineering design. The size of pipe varies from 6" to 12" and this greatly affects price.
- What criteria do you use to determine what pipeline to replace? R: We look at leak frequency, as determined by a leak database; this is the major criteria and we target areas with the greatest leaks. We also consider problems areas identified by the county staff working on leaks. We've seen a significant reduction in leakage since the replacement program started.
- Do the rates to water users fluctuate and at what point do you reconsider those rates? R: Their rates don't fluctuate. 66% of the users are on a flat rate; the rest are on a metered rate. Because of bonding issues, we can't change rates at this time. As part of the proposed water master plan, we'll reconsider the rate structure.
- Did you say that you lowered your match based on consideration of the lower matching funds on other projects? R: Yes, that was part of the reason, but a bigger reason was that we had to kick an extra \$100,000 in 2004 beyond the amount budgeted for our matching contribution due to higher costs.

- What will be the total request to NRDP for the 15 years of waterline replacement? R: This total will change over time due to inflation and increased cost. Carol Fox noted that the current estimate in the application is total project costs to NRD of \$21.7 million over 15 years.
- Why did you apply for two years of funding? R: This decision was mainly tied to conclusion of the master plan, which will take a year to complete if it is funded. They want to consider any further funding requests beyond that based on results of the master plan.

Butte Water Master Plan, presented by Jean Pentecost of Butte-Silver Bow.

- Did you have a master plan before this? R: Yes, but there have been so many changes to the water system since the 1988 master plan that it is basically unusable.
- Will you have public review of the master plan? R: Yes, we'll have a public hearing.

Duhamé Acquisition, presented by Dori Skrukrud of the Greenway Service District.

- Has the property ever been logged? R: No.
- How long have the Duhamés owned this property? R: 40 to 50 years.
- What about the management that will occur with public acquisition? “Non-management” is a problem. R: The statements about preventing development don't translate to not actively managing the property. FWP will manage the property using approaches that have worked for similar management areas such as the Mt. Haggin area, which has grazing under a rest rotation system. They recognize the need for and have budgeted for weed control.
- Is all the property in Silver Bow County and what are the taxes? R: Yes, 2004 taxes were \$787.
- Please clarify the operation and maintenance request. R: The request is for weed control and fencing over a 5-year period. After that, the maintenance would become part of FWP's normal operating budget.
- Has the historical use been grazing or were there other activities that would require a Hazardous Materials Survey? R: FWP looks at the need for such a survey in conducting their environment assessment. Nothing has been revealed to date that would indicate the need for such a survey.
- What significance does this parcel provide to the existing Mt. Haggin wildlife management area? R: It contains critical habitat for mule deer and elk and these populations use both areas. This acquisition would compliment the existing area and provide an extra buffer for the adjacent landowners who get heavy wildlife population use on their property.

- Are there wildlife/landowner conflicts associated with the existing management area? R: Yes, FWP does provide depredation relief to some adjacent landowners. Will this acquisition lessen impacts to adjacent landowners? R: Yes, this will give FWP more tools to reduce these impacts.
- Where is the calving ground? R: In the Mount Haggin/Mule Ranch area.
- Please show the communication tower location. What is the possibility of requiring reclamation if the cell tower use is discontinued? R: The location was shown on the map. Proper reclamation would be required as part of the lease agreement.
- What are the access points to the property? R: Via German Gulch road, Miles Crossing, and from USFS roads.
- Please clarify the borders with German Gulch and Silver Bow Creek. R: These were highlighted on the map. There is private parcel between German Gulch and the Duhome property.

Silver Bow Creek Greenway, presented by Dori Skrukud, Greenway Service District.

- Did you pursue matching funds on this project or the Duhome? R: We did not. For the Greenway project, our match is the significant cost savings the project affords through coordination with remedy. Dori reiterated the project's restoration aspects.
- What about the revegetation success? It has been variable; there have been successes and failures that required replanting, plus some areas with unexpected conditions.

Big Butte Acquisition, presented by Cindy McIlveen, consultant for Butte-Silver Bow.

- Are the costs for all the parcels on just the ones with buy/sell agreements? R: For all of them.
- Do you have an agreement with Butte-Silver Bow on maintenance? Fencing/signage will not be enough to keep the motorized vehicles out of closed areas. Is there an area for motorized vehicle use? R: We have the county's letter of support and they have agreed to future operation and maintenance. All county departments are on board with this acquisition. We do anticipate some violations in the first 6 months but the county is willing and prepared to handle these problems. We are in negotiations on purchasing a moto-cross area, which should help reduce illegal use.
- Will you seek other funding sources for future recreational trail development? R: Yes. Having the acquisition in place will enable us to seek other funding sources, including some that are focused on recreational trails.

German Gulch Restoration, presented by Pat Munday of the George Grant chapter of TU and Josh Vincent of Water and Environmental Technologies.

- Why doesn't the railroad fix the bridge? R: Because it is a county road. Will you be closing the county road to the public? R: No, it will be public access to the bridge just as it is now. The bridge will be gated and locked so that only pedestrian and authorized vehicles can cross. We have approached the Greenway about having the bridge covered in their maintenance plan.
- You are creating infrastructure features that have set life spans and on-ongoing maintenance requirements. How will you handle this? R: The life span of the fish screen is 25 years; future maintenance will be handled between TU and the landowner. How will this be done? R: Via a long-term lease agreement with the landowner. Who will pay for the operation and maintenance that for the wells? R: This is part of the proposal. A lump sum payment for 30 years of estimated energy costs would be given to the landowner.
- What is the effect of the Basin closure on the wells? R: The water use from the wells will be offset by 2 cfs surface water the landowner ceases using for irrigation. There will be a change in the point of diversion. This would be allowed as an exception to the Basin closure if there is a zero sum gain.
- What will you be doing for range management? It will be difficult to rely on the seeding with natives to crowd out the weeds; weeds typically crowd out the natives. R: The planting is part of an overall management plan that includes biological weed control, road access control, grazing management, and other controls. We know we can't eliminate the knapweed but we can balance it with a healthy component of native vegetation and this is part of the work on the pilot vegetation study we're still conducting under the planning grant.
- Who will own the land you'll be acquiring? R: The 2 upper claims will go the U.S. Forest Service and the lower claim will go to Fish Wildlife and Parks.
- Do you have a lot of larkspur, which is an indicator of high selenium in the soils? R: No. The selenium problems are tied to water releases from Beal, not soil issues.
- What are the effects of selenium on fish? R: The selenium can affect the fish eggs, causing deformities and impairing reproductive success. Toxic levels have been found in the fish tissues.
- Is competition with brook trout a problem? R: Yes, but this is being successfully addressed with other funding sources.
- When will you know about the matches from the other funding sources? R: We should know about them in the next couple of months.
- Describe your plan for excavation, transport and disposal of the tailings? R: We need to negotiate the details with DEQ. Most likely, they will be hauled by train to Opportunity.

Public Comment

Milo Manning commented on behalf of the Greenway Service District in support of the German Gulch proposal.

Pat Munday commented on behalf of the George Grant chapter of TU in support of the Duhamel and Silver Bow Creek Greenway projects.

Follow-up Questions and Answers to the April 2005 Symposium

After the April 12, 2005 symposium, the Advisory Council members sent in follow-up questions to be answered by applicants or the NRDP staff concerning the 2005 projects. This document contains the answers and the NRDP's responses.

1. How does the multi-year funding policy address projects such as the waterline projects?

Following is the Trustee's policy for multi-year projects:

The Trustee shall have the flexibility to approve full or partial funding of multi-year projects. Projects would fall into one or 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 is 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.

The waterline projects could fall under either category 1 or 2 projects. When the multi-year policy was drafted, however, it was anticipated that multiple years of funding would be approved for those projects that would need multiple years of funding to reach completion in order to achieve substantive benefits. That is not the case with the waterline projects, which can derive benefits on an annual basis.

In its pre-draft funding evaluation, the NRDP recommends that only one year of the Butte waterline project be funded instead of two years given that no cost-savings were indicated by funding two years, that the project can be implemented on an annual basis, and that the priority of this project over other potential projects in future grant cycles will vary.

2. What are the anticipated future requests for water system improvements?

The latest estimate of Butte's 15-year water replacement program for NRDP funding request is \$24.4 million, with \$4.72 million approved for years 1 - 4 and \$1.54 recommended for year 5.

ADLC has identified \$12.5 of need repairs in the next 7 years but not indicated what portion of those costs would be sought in Restoration funds. \$2.97 million has been approved for years 1 - 3 and \$1.74 million is recommended for funding this year.

3. How do the past, current, and future funding requests for the water projects compare to the portion of the lawsuit that dealt with lost drinking water services?

The following provides details on how the 1995 NRD claim and 1999 partial settlement covered damages due to groundwater injuries; about the NRDP's knowledge of anticipated groundwater-related requests by B-SB and ADLC; and about how the claims for groundwater contamination compare to the anticipated requests.

A) The 1995 NRD claim for injury to groundwater resources and 1999 partial settlement

First, scientific studies were performed to determine the nature and extent of the groundwater contamination in the Anaconda, Butte, Rocker and Milltown areas. The State's conclusions regarding the nature and extent of this contamination are described in the *RPPC* at pages 10-15 and 20-22. The monetary damages resulting from these injuries were then estimated.

Compensable damages for past and future lost use and existence values for both the Anaconda, Butte, Rocker, and Milltown area groundwater injuries were estimated using a contingent valuation methodology (CVM). Use values refer to the monetary values of activities by individuals that are affected by natural resource injuries. Existence values, also called non-use or passive values, refer to the monetary values individuals would pay to protect or enhance resources for purposes not related to their own use. The total lost compensable value for these areas was estimated by the CVM Study to be \$121.5 million. This amount is about 30% of the total compensable claim of \$410.5 million. The study did not separate this amount by area. Compensable damages were also estimated for the Butte area in another study that used an alternative methodology. This study estimated the compensable damages for contamination of the groundwater in Butte to be in the range of \$50 to \$210 million. Under the 1999 partial settlement, the entire compensable claim was settled.

In another study, restoration damages were estimated. Restoration damages for the Butte Hill bedrock aquifer were estimated to be \$54.5 million, for the Butte alluvial aquifer - \$79.5 million, for the MT Pole area - \$19.5 million, and for the Anaconda, Milltown, and Rocker areas - \$3.6 million. The claims for groundwater injuries in the latter three areas were low compared to the other three claims because natural recovery was the selected restoration alternative for these areas. All these restoration damage claims attributable to groundwater injuries, except for the \$79.5 million Butte alluvial aquifer claim, were resolved in the 1999 partial settlement.

The total of the compensable and restoration damage claims settled via the 1999 partial settlement was \$545.9 million. Of that total, \$199.1 million, or 36.5% was for damages claims related to groundwater injuries.

B) Anticipated Requests

In its 20-year plan,¹ B-SB indicates its intention to apply to the NRDP for two types of groundwater replacement projects:

1) Leaking waterline replacement over 15 years. The latest estimate of Butte's 15-year water replacement program for NRDP funding request is \$24.4 million. The approved projects total \$4.72 million and this year's request is \$3.1 million.

2) Basin Creek Filtration Plant (\$14 million): The plan indicates the possibility that regulatory changes may require filtration of the Basin Creek supply. It indicates a potential request to use NRD funds for the capital improvements estimated at \$10 to \$14 million. It also indicates the possibility of seeking NRD funds to help defray some operation and maintenance costs that are not estimated.

ADLC has also indicated its intention to apply for multiple waterline replacement projects ADLC has identified \$12.5 of needed repairs in the next 7 years but has not indicated what portion of those costs would be sought in Restoration funds. \$2.97 million has been approved for years 1-3 and \$1.74 million is recommended for funding this year. Finally, ADLC received approval for \$309,268 to evaluate the need for an alternative central water supply for the Town of Opportunity. Sampling did not indicate the need for that supply, however, and the project costs are likely to total less than \$100,000.

Based on this information provided, **which is subject to change and likely to change**, the NRDP estimates about \$55 million for the water replacement projects based on likely requests indicated by ADLC and B-SB thus far. It should be noted that other communities in the UCFRB are also eligible to propose water replacement projects.

C) Comparative Analysis

¹ "A Look Forward to 2020: Butte-Silver Bow's Project Priorities for the NRDP," dated March 12, 2001.

It should be understood that the NRDP does not advocate, nor does the RPPC specify, an attempt to spend the \$129 million (\$118 million plus interest) awarded in natural resource damages via the 1999 settlement proportionate to the particular claims that were settled. Nonetheless, the NRDP offers the following requested perspective on the proportionality of groundwater claims to anticipated water replacement projects. Groundwater claims were about 36.5% of the total 1999 settled claims. 36.5% of the \$129 million NRD award is \$47 million. The NRDP estimates the total anticipated requests by B-SB and ADLC to be \$55 million based on information provided by these communities to date.

Another perspective is just to consider the interest revenues from the \$129 million, which have averaged about \$9 million/year in the past three fiscal years. Last year, the state funded three water system improvement projects for B-SB and ADLC for a total of about \$3.6 million, which is 40% of the average annual interest generated. This year, B-SB and ADLC have applied for three water system improvement projects that total about \$3.5 million for 2006, which is 39% of the average annual interest generated.

In conclusion, the groundwater requests to date are consistent with the proportion of the settled damage claims attributable to groundwater injuries, as are the indicated anticipated future requests from B-SB and ADLC. Again, the NRDP does not advocate that this “proportionate” approach be used to deciding how the awarded damages be spent.

4. How much was Anaconda’s water master plan and how was it funded?

\$20,000 with \$10,000 funded by Anaconda Deer Lodge County and \$10,000 funded in state grant funds (Treasure State Endowment Funds).

5. How does the percentage of metering and water rates of Butte and Anaconda compare to other Montana communities (Great Falls, Helena, Billings, Missoula, Kalispell)?

Following are the percentage of metered connections for these cities: Butte - 45% metered; Anaconda - 7%; Great Falls, Helena, Billings - 100%; Bozeman – 98%; and Missoula – 50%.

6. How does the project application for the German Gulch proposal address/comply with the basin closure?

The UCFRB is closed to any new permits to appropriate water, however, the closure does allow an exception for permits to appropriate groundwater provided a hydrologic investigation demonstrates that the source of groundwater is not a part of or substantially or directly connected to surface water. GGTU proposes to conduct the required investigation via proposed pump test. If these tests reveal that a connection between the wells and surface water exists, then a permit for the wells would not be given pursuant to 85-2-337 MCA. GGTU must also successfully validate that the Spangler Ranch water

rights based on historic use are sufficient for the proposed lease and meet the criteria for a authorization to change a water appropriation specified in 85-2-402 MCA.

7. How will the project applicant manage the Big Butte property once it is signed and fenced?

B-SB has prepared a draft Operations and Management Plan and will seek approval and finalization if the acquisition is approved. B-SB is prepared to assume full long term operation and management responsibility for the Big Butte Open Space.

Management will be accomplished through trail obliteration, re-vegetation, soil rehabilitation, proper trail re-design and improvement. Areas requiring protection from motorized access will be fenced and signed. Public awareness and education will also take place. Current parking areas will be improved at the trailheads with information kiosks that outline project updates, future plans and provide updated maps of the area with trail designations. If trail designations are not honored, B-SB will intensify their approach to setting boundaries and dissuade misuse of the trail system.

B-SB will be responsible for weed control and will abide by state and local weed management requirements.

**UPPER CLARK FORK RIVER BASIN
REMEDICATION AND RESTORATION EDUCATION ADVISORY COUNCIL
July 13, 2005 Meeting Summary**

Members Present: Paul Babb, Linda Bouck, Larry Curran, Dennis Daneke, Jim Dinsmore, Jim Flynn, Sally Johnson, Dale Mahlum, Sandi Olsen, Glenn Phillips, Laura Rotegard, Laurence Siroky, Phil Tourangeau, Gene Vuckovich.

Members Absent: Jerry Harrington, John Hollenback, Jules Waber, James Steele, Jr.

Jim Flynn called the meeting to order. Minutes from the June meeting were approved. Jim welcomed the new members appointed by Governor Schweitzer. He then explained meeting agenda/procedures.

Process Overview: Carol Fox provided an overview of the grant project evaluation process, of the July 2004 *Pre-Draft UCFRB Restoration Work Plan*, and of the presentations that would follow by various NRDP staff on each project. She encouraged members to take the time between the July and August meetings to seek answers to any questions they have about the 2005 grant projects and the NRDP's staff evaluation.

1. Silver Bow Creek Greenway: Greg Mullen summarized the NRDP's review of this project. Advisory Council Questions, Comments, and Responses:

- Gene V. asked questions about the multi-year funding aspects of the Greenway project compared to the waterline project, which he believes merits multi-year funding as well. Have we funded multi-year projects before? If we have, why are we not funding the Butte waterline for two years? What is the difference between the Greenway and waterline projects in this respect? Jim F. responded that the Advisory Council felt that the more the projects were kept on a competitive basis, the better, and that voting each year provided that competitive basis. He noted that previously only the Greenway project had been approved for multiple years of funding. Carol noted the NRDP's response to this question is provided in Appendix D in the pre-draft work plan. Multi-year funding of the Greenway project is needed to allow for coordination with remedy, which provides cost savings. The waterline benefits can be derived on an annual basis. Sandi O. noted how the acquisition issues affect remediation and restoration and the benefits that would be lost without that critical planning. Gene noted that a project could come up next year that is higher priority than the Greenway and that waterline projects could coordinate with a road project that would make sense for multi-year funding. Carol responded that there was nothing in the waterline project's application indicating that cost-savings would be achieved from funding two years.

Public Comment

- Pat Munday asked why the Golden Technologies land purchase looks like such good deal at a price of \$150/acre. Is this low price tied to landowner liability issues under Superfund? If you have contamination on your property and touch it are you liable? Greg responded that the Golden Technologies land is only being assessed, not purchased, for the costs in the grant application. The Earhart and Golden Technologies properties

are the last two major pieces of land within the Silver Bow Creek corridor not in public ownership. The portion of the Golden Technologies property that contains waste will be cleaned up by remedy. We would like to prevent future dredging in remediated areas. Glenn P. noted that while under joint and severable liability, such landowners are potentially liable, ARCO was the responsible party sued for this contamination. Sally J. noted that EPA can issue a comfort letter to landowners whose property is contaminated with hazardous substances. Sandi O. noted the certain liability defenses are available to landowners under Superfund law.

- Dori Skrukrud of the Greenway Service District commented that Pat's points supported why it is important to do the proposed planning effort and that the Greenway project intends to connect the Golden Technologies property with surrounding state property. She also expressed appreciation for the NRDP's support of the Greenway funding.

2. German Gulch: Tom Mostad summarized the NRDP's review of this project. Advisory Council Questions, Comments, and Responses:

- Laurence S. asked how the applicant addressed the risks associated with railroad crossings. Tom indicated that the NRDP recognized this as an issue that remains to be worked out and that Trout Unlimited (TU) was working on the issue. Josh Vincent of TU indicated they are working with Greenway, which has a master agreement with the railroads, to address this issue.
- Laura S. asked whether TU provided a signage plan and about the reasons for the NRDP's cut in signage. Tom responded that the application was vague on signage plans and the NRDP cuts were made on a change in the type and number (from 8 to 2) of signs. The NRDP felt 2 signs would adequately meet the educational goals.
- Jim D. asked about how the uncertainties associated with the fish barrier/fish screen, and instream lease (task 4) related to the rest of the project. Could one take this task out and still have the rest of the project to go forward? Tom replied that the rest of the project could go forward without this task, but that task 4 was an important part of the project. The fish barrier could be completed independent of the fish screen and water lease. Josh Vincent agreed with Tom.
- Jim D. noted that the uncertainties with the fish screen/water lease would not be resolved before the next meeting and that is he uncomfortable about this task due to the uncertainties. The fish screen design is unknown and from what he has heard from Idaho ranchers, fish screens are a high maintenance item and not worth it. When will the water availability/right issues be resolved? What happens if the fish screen does not work? Josh Vincent responded that the design for the fish screen will follow FWP standard design, which has worked in other locations in Montana. Pat Munday of TU noted that the FWP biologist consulting on the design has designed other screens. TU's initial well data indicates a high probability of having an adequate groundwater replacement source for the water trade and they are confident they can work through other issues with the water trade. Hopefully, these issues can be resolved next spring. Glenn P. added that FWP is working with an expert to develop prototype fish screen designs for the agency and has hired contractors to maintain screens, which may be needed on this project.

- Gene V. asked whether the costs for the 30 years of operation and maintenance considered in the agreement accounted for likely increases in electrical costs? Yes.
- Jim D. noted the reliance on a basically mechanical fix for 30 years. What happens after that? Carol F. responded that when Silver Bow Creek is remediated, a more permanent alternative to pursue would be moving the point of diversion from German Gulch to Silver Bow Creek, which would provide even greater instream flow benefits.
- Larry C. asked whether the access issues were mainly with the railroad. Yes.
- Carol Fox reiterated the opportunity for Council members to meet with staff and the applicant to address the concerns about this project.

Public Comment

None on this project.

3. Butte Waterline: Tom Mostad summarized the NRDP's review of this project. Advisory Council Questions, Comments, and Responses:
 - Dennis D. asked whether 17,000' would be replaced per year. Yes.
 - Gene V. asked about the opposition letter. The letter was in general opposition to infrastructure projects in Butte. Carol will provide a copy to Gene.
 - Dale M. asked whether other communities would be eligible for NRD funding to fix waterlines. Carol responded such projects for communities in the UCFRB would be eligible for funding under the legal threshold, but that projects in communities outside of injured areas would not do well for the many criteria that give preference to injured areas.

Public Comment

None on this project.

4. Anaconda Waterline: Doug Martin summarized the NRDP's review of this project. Advisory Council Questions, Comments, and Responses:
 - Dennis D. asked about how the Butte groundwater injury compared to the Anaconda groundwater injury. Butte's entire groundwater supply was contaminated. Anaconda's well field is located west of the area of groundwater injury, but the extensive contamination to the east has limited the ability to expand the groundwater supply. An alternatives analysis of expansion options indicated the best option to be conservation of the existing supply through the repair of leaking lines.

Public Comment

None on this project.

5. Big Butte Acquisition: Kathy Coleman summarized the NRDP's review of this project. Advisory Council Questions, Comments, and Responses:

- Dale M. asked about how acquisition of land fits in with the lawsuit/settlement. This is a replacement project that provides for replacement of lost recreational services that were covered under the lawsuit via the compensable claim.
- Sally J. asked about the location of parcel 6. Is it on the edge? The parcel is located on the southern boundary and its deletion will not affect the whole purchase.
- Laurence S. asked whether the mineral rights would be purchased. The NRDP recommends acquisition of the mineral rights.
- Dennis D. asked about responsibility and funding for long-term management, specifically weed control, where is the funding for this? Who will enforce weed control? Dennis has observed too many public-owned parks that are not effectively managed for weeds. Kathy C. responded that Butte-Silver Bow will be responsible for weed control and the funding condition specific to SB259 has weed control requirements that must be incorporated into the acquisition agreement. Carol F. indicated that most likely the state would have to handle enforcement since the county owns the land and manages the weed control agency. Paul B. noted that the county is highly committed to this acquisition and would manage it like other county-owned property.
- Gene V. asked about the county's plans to keep motorized vehicles out of the closed area. Anaconda-Deer Lodge has problems enforcing this type of management. Cindy McIlveen responded that restricting motorized use to certain areas is an uphill battle, which they will tackle via a combination of education, alternate areas, fencing, signage and enforcement. Kathy C. noted that the NRDP had agreed to keeping a portion of the area to the west of Whiskey Gulch open to motorized use on established roads and trails as a buffer. Jim F. added that Butte-Silver Bow had worked on an alternate motorized area as part of the planning effort for this project.
- Laura R. had concerns about how the project fits with the lawsuit. Has a certain percentage of funding been earmarked for projects tied to the compensable claim? Jim F. responded that the Advisory Council has addressed this issue numerous times in the past and elected not to preclude any project via such prescription. Laura asked about other similar acquisitions projects that have been funded in the past that are similar to the Big Butte, Duhamel, German Gulch purchases. Carol noted the Watershed Land Acquisition and Stuart Mill Bay acquisition projects as comparable projects.

Public Comment

Matt Clifford asked about the status of the alternate area of motorized use.

6. Duhamel Acquisition Project: Greg Mullen summarized the NRDP's review of this project. Advisory Council Questions, Comments, and Responses:

- Gene V. asked several questions regarding the uncertainty with the appraisal. What constitutes fair market appraisal? If the buyer and seller work together, is that price fair market value? Did the owner conduct the appraisal? Carol reviewed the *RPPC* requirement for the state to verify that the purchase price is at fair market value, which typically requires an independent appraisal commissioned by the State. This is what the state did on the Stuart Mill Bay acquisition. She explained why the state was requiring a reappraisal that would integrate the timber and land values and be based on completion of title work. The Greenway Service District (GSD) commissioned an appraiser from a list of appraisers suggested by the NRDP.
- Linda B. asked about how the requirement of a reappraisal would affect the project timeline. Milo Manning of the GSD responded that this was their major concern. The GSD disagrees with the state's position that a reappraisal is needed but they want to move forward. They have a lot of questions/concerns about what moving forward with a reappraisal entails. Would it be a completely new appraisal or rely on information from the existing appraisal? Would a new timber appraisal be required? A timber sale south of Butte went for 17 times higher than the USFS appraisal. Delays could result in the landowner selling to another entity. The parcel fits well with the Silver Bow Greenway and the GSD does not want to lose this acquisition opportunity.
- Laurence S. asked whether a new appraisal be done before project approval. Greg indicated we do not know the timeframe for the reappraisal yet.
- Sally J. asked whether there was a current buy/sell agreement. Greg responded no. Milo M. added that the seller agreed to \$1.5 million, but Greenway did not want to execute the buy/sell agreement without knowing if NRD funds were available, which is also why they did not do the title work.
- Jim D. expressed a concern about not knowing a price and that the price could go up. Carol explained how a similar situation was handled on the Stuart Mill Bay project, where there was a funding condition requiring that the requested purchase price was at or below the fair market value determined by the state's independent appraisal. She indicated that in response to Milo's question, the state was seeking a new appraisal that integrates the land and timber values, not a review appraisal.
- Gene V. asked about what happens if the new appraisal is higher. Carol responded that we need to see what happens with the new appraisal and that proper methodology is the important issue.
- Dennis D. asked about whether the existing appraisal is invalid. Carol responded that the methodology the GSD used to add the land and timber appraisers was not a standard appraisal methodology to determine fair market value. She noted and apologized for the state's contribution to this mistake when the NRDP relayed to the GSD how this situation was handled on the Stuart Mill Bay project without providing the full details. The state also has a problem with the appraisal in that it was based on incomplete title work and

that an addendum issued by the appraiser was inconsistent with the appraisal itself. Title issues such as legal access and a restrictive covenant on a portion of the property could affect the appraised value. Milo M. noted that he did not believe that the no-build clause would affect the value.

- Carol reiterated the NRDP's position that the acquisition was a worthwhile acquisition for wildlife resources and public recreation but that the state needed a valid basis for judging the price. She did not want the project's benefits to be overshadowed by the unresolved appraisal/price issues.
- Dale M. commented that he is not sure how he can vote until all issues are resolved.
- Jim D. asked several questions related to acquisitions in general. Why do we acquire public property? How many have been turned down? Isn't acquiring public land a normal government function? How much is enough? Jim F. responded that these projects fit well with the lawsuit and the restoration mission of the program. He also mentioned two potential acquisition projects that never made it to the application stage. In his opinion, acquisition projects are good candidates for funding until we run out of funding. Carol reviewed the acquisition projects and noted that while the acquisition projects submitted to date had favorable funding recommendations, each proposal is case by case. Part of the evaluation process involves determining the desirability of public ownership. No government agency is responsible for and funded to do these acquisitions, consequently, they are outside normal government function.

Public Comment

- Matt Clifford commented that the Duhamé project is a valuable project that would provide key elk habitat and that the Clark Fork Coalition wants to see the project move forward. We need to see if unresolved issues can be worked out and not lose this great opportunity. He asked whether appraisal guidelines would indicate that the purchase price would be higher or lower than that offered based on adding the timber and land values. Carol responded that most likely the price would be lower, but that the appraisal guidelines indicate there are circumstances when the value of the whole could be more or less than sum of the value of the parts.
- Pat Munday of Trout Unlimited seconded Matt's comments. The Duhamé property is excellent wildlife habitat. The Duhamés are a willing seller and want to see it in public ownership. They approached the Greenway to do this; the state did not force them. He and many others in the Butte/Anaconda area do not want to see this land logged off or subject of land uses that would be detrimental to Silver Bow Creek.
- Gene V. asked some more questions about the appraisal process that Carol responded to. Jim F. suggested moving on to the next project since we could not cover all the details at this meeting and there is a month to work out some of these issues and additional information can be obtained. The Council does have an amount they can vote on.

7. Butte Master Plan: Greg Mullen summarized the NRDP's review of this project. Advisory Council Questions, Comments, and Responses:

- Laurence S. asked why the Big Hole treatment plant would not be included in Master Plan. Greg responded that it would be evaluated in the Master Plan. Carol clarified that the text Laurence was referencing was under the project location criterion, which noted that while the Big Hole treatment plant is outside the basin, it serves residents in the Basin.
- Jim F. was surprised that the staff recommended the project for funding given that it was for activities that were clearly a normal government function. Other cities do these plans on their own; the plans are needed whether or not the community is affected by mining contamination. He is concerned this is open a door to other projects that local government should be doing on their own. Not funding projects that are normal government function was a big issue with past Councils, which is why it is one of the evaluation criteria. Greg responded that the other communities do apply for grant funds to help fund these plans and that the State had considered the upgrading of Butte's water system as a viable replacement option for the bedrock injury. Carol explained how the NRDP evaluates normal government function and walked through the three options contained in the application review guidelines contained in Appendix E. She reviewed the reasons in the evaluation of this criterion about why the NRDP believes this project falls under the category of augmenting normal government function, but that it did not replace normal government function. The waterline projects are similarly ones that augment normal government function.
- Paul B. offered that if our grant funds are used for waterline replacement, then we should be willing to fund a plan aimed at making sure that the money spent on such replacement projects is spent cost-effectively.

Public Comment

None on this project.

Meeting Wrap-Up:

- Jim Flynn reminded folks that aside from the DOI and Tribal representatives, members do not have a proxy vote option. So if they want their input counted, they will need to attend the August meeting.
- Carol encouraged members to take advantage of the next 30 days to ask staff or applicants any questions and about the projects or staff's evaluation. Laurence S. asked that all members be provided with any additional information that is exchanged in this interim period. Carol agreed to do so.

Additional Questions/Responses

The following responses are additional responses to questions asked at by Council members at or after the July 13, 2005 Advisory Council meeting. These responses were provided by the NRDP in an 8/3/2005 cover memorandum for the 8/10/05 Advisory Council meeting.

What entity will be responsible for enforcement if the county did not effectively control weeds?

Montana Department of Agriculture's weed control specialists indicated that only county weed districts have enforcement authority under the Montana Noxious Weed Control Act. However, they also indicated that under the provisions of SB 259 that apply to this and other public acquisitions, the NRDP or any other entity could seek action in district court against the county for failure to comply with the noxious weed management agreement that must be incorporated into the purchase agreement.

How often will maintenance be needed on the fish screen and who will conduct and fund the needed maintenance over 30 years?

The application states that periodic maintenance of the screen will be needed. The landowner has agreed to perform regular maintenance tasks, such as cleaning of debris from the screen. As noted in the *Pre-Draft* (p. A-25), the landowner will receive reasonable compensation for his routine maintenance efforts. Other maintenance obligations have not been worked out, though some may be able to be done by FWP or the applicant.

Why is it necessary to establish connectivity between Silver Bow Creek and German Gulch before the Durant Canyon area is remediated? Won't the fish that are screened out from the diversion be unable to survive in the downgradient Silver Bow Creek? Why not wait and seek an alternative that permanently protects the connectivity of German Gulch and Silver Bow Creek, such as moving the point of diversion from German Gulch to Silver Bow Creek?

Although it is not absolutely necessary to establish connectivity before remediation, doing so would provide significant resource benefits by supplying clean cold water to Silver Bow Creek during the hottest time of the year. The clean water could be used by fish as a refuge from the more contaminated water that exists in Silver Bow Creek. This water would also help to alleviate water quality problems (high nutrients, algal blooms) that develop in lower Silver Bow Creek during late summer conditions, as recognized in the March 3, 2005 letter of support from the Tri-State Water Quality Council. Silver Bow Creek remediation is planned to occur in the German Gulch area in 2007 and/or 2008; however, several tasks, such as drilling and pump testing the wells, need to be completed prior to completing the water lease agreement. Approval of the water agreement this year will allow adequate time to implement these tasks before remediation reaches the mouth of German Gulch Creek. The applicant has requested funds to complete these tasks before remediation takes place, so that once remediation reaches the mouth of German Gulch Creek, there will be immediate benefit to the Silver Bow Creek fishery.

The fish screen would be located several hundred feet upstream from the confluence to Silver Bow Creek. The fish would be redirected a short distance downstream to the stretch of German Gulch above the confluence and in this way, the fish would not be placed directly into Silver

Bow Creek. Completing the fish screen in 2006 will eliminate fish entrainment and losses in 2006, 2007 and perhaps even 2008, which will have significant positive benefits to the fishery, even though Silver Bow Creek may not have sustainable fish habitat for several years. However, this scenario works only if the water trade is implemented at the same time, since the stretch of German Gulch that is to receive the fish needs to have the connectivity provided by the water trade.

There is no guarantee that Spangler Ranch will be as cooperative in the future and postponing the trade may not be an option. The Spangler Ranch seems to be motivated to cooperate at this time because irrigation improvements near the headgate are needed as the stream is undercutting the supports for the irrigation pipeline. The water trade scenario would at least temporarily shore up the pipeline and in turn the Spangler Ranch would agree to the water trade. The connectivity of German Gulch to Silver Bow Creek is completely reliant upon the cooperation of the Spangler Ranch. There is no known alternative except the trade of 2 cfs of German Gulch water for 2 cfs of groundwater that is acceptable to the landowner at this time. The timeframe for the improvement in the water quality of Silver Bow Creek is uncertain. The proposed water trade will cost-effectively achieve the goal of providing connectivity for 30 years and provide the opportunity to explore longer-term alternatives in the future when the water quality of Silver Bow Creek will be substantially improved and less of an uncertainty factor.

What are FWP's future management plans the Duhamé property:

The following excerpt from a 6/14/05 letter from Vanna Boccadori of FWP, to Greg Mullen of the NRDP addresses this issue:

As the Butte area wildlife biologist for Montana Fish, Wildlife, & Parks (FWP), I'm writing to voice FWP's support for the public acquisition of the Duhamé Property through the NRDP granting process. According to the Upper Clark Fork River Basin Restoration grant proposal for this acquisition, the Duhamé property would be deeded to the State of Montana and subsequently incorporated into the Mount Haggin Wildlife Management Area (WMA). Acquisition of this property would enhance our ability to manage wildlife populations and their habitat according to our current management plan for the Mount Haggin WMA.

During recent winter aerial surveys, upwards of 300 elk and as many as 100 mule deer have been observed utilizing the Duhamé Property. This property provides a variety of landscapes for year-round use and critical winter range for wildlife. Shrublands, side hills and south-facing slopes on the property provide prime deer forage areas, while top slopes contain grassy meadows that provide winter-long elk forage. The enclosed maps show winter population density of elk and mule deer, respectively, in this area.

Landowners neighboring the Duhamé Property suffer game damage from elk and deer feeding on haystacks and in fields where cattle are to be wintered. Over time these episodes break down landowner tolerance to wildlife. FWP will be able to minimize these burdens on the landowners if we own the Duhamé property and manage it as part of the Mount Haggin WMA. Additionally, once this property is incorporated into the WMA, we will apply our active weed management program to it as we do on all our WMAs.

Upon acquisition of the Duham Property, we will explore ways to incorporate this land into our rest-rotation grazing system that we currently operate in conjunction with the Beaverhead-Deerlodge National Forest. This cooperative grazing system allows for the movement and rotation of livestock from Forest Service pastures to pastures on the WMA and is designed so that the timing of livestock grazing enhances the vegetative communities and makes them available to wintering elk and deer populations. In the recent past the land has been overgrazed, leaving little residual forage for wintering wildlife.

**UPPER CLARK FORK RIVER BASIN
REMEDICATION AND RESTORATION EDUCATION ADVISORY COUNCIL
Summary of August 10, 2005 meeting**

All members were present except Dahl Mahlum and James Steele, who was represented by Phil Tourangeau.

Jim Flynn called the meeting to order. Members approved the July 13, 2005 meeting notes. The next meeting will be held on September 14th in Bonner.

Jim explained the procedures the Council would follow in deciding on funding recommendations for the 2005 grant projects. For each project, Carol Fox would review the staff recommendation, and then Jim would solicit a motion, discussion and public comment before the Council's vote on a project-specific basis.

Silver Bow Creek Greenway: NRDP's staff recommendation is for full funding at \$769,507 for Year 1 and \$1,075,993 for Year 2, subject to the specified funding conditions. The NRDP's funding recommendation was moved and seconded. There was no discussion or public comment. The project passed unanimously.

German Gulch: NRDP's staff recommendation is for partial funding at \$876,162, subject to the specified funding conditions. The NRDP's funding recommendation was moved and seconded. There was no discussion or public comment. The project passed 12-1, with Jules Waber voting no.

Butte Waterline: NRDP's staff recommendation is for full funding at \$1,539,269 for Year 1 and not to fund Year 2 at this time. The NRDP's funding recommendation was moved and seconded. There was no discussion or public comment. The project passed unanimously.

Anaconda Waterline: NRDP's staff recommendation is for full funding at \$1,738,700. The NRDP's funding recommendation was moved and seconded. There was no discussion or public comment. The project passed unanimously.

Big Butte Acquisition: NRDP's staff recommendation is for partial funding at \$667,642, subject to the specified funding conditions. The NRDP's funding recommendation was moved and seconded. Dennis D. asked about the funding conditions. Carol summarized the four conditions specified in the Pre-Draft. There was no public comment. The project passed unanimously.

Duhamme Acquisition: Carol provided an update on the appraisal, title, cell tower, and indemnification issues. The NRDP's staff recommendation is for funding not to exceed \$1,643,809, of which the purchase price for the land is not to exceed \$1,487,830, subject to the specified funding conditions. The NRDP's funding recommendation was moved and seconded.

Public Comment:

Milo Manning of the GSD noted there is no cell tower lease at this time and Verizon is most likely no longer interested in this lease.

Council Discussion and Questions:

- Jerry Harrington asked about how the indemnification clause would be resolved. Carol indicated that the GSD will pursue having ARCO remove the clause on the Duhome as well as other properties, which was the cleanest way to resolve it. There are other options that would entail a greater level of effort.
- Gene V. asked questions about who would gain the profits from the cell tower lease and how access was handled in the timber appraisal. Carol explained that the timber appraisal considered a payment for access in its net valuation of timber and that the cell tower lease appeared to be financially and legally unfavorable to the state. There were options to resolving the cell tower issue, including not having the state acquire the portion of land with the cell tower.
- Gene V. commented that there were too many outstanding issues for him to be able to vote in favor of the project at this time. Jim F. responded that the vote today was a preliminary funding recommendation and that the November vote was the final recommendation. More will be known by November and the staff has the needed funding conditions, so he feels comfortable voting in favor of the project at this time.
- Sally J. noted that the types of issues that remain to be resolved are very common in land transactions. The staff have appropriately identified them through due diligence and the funding conditions adequately address the outstanding issues. Gene V. responded that he doesn't have as much faith in the process.
- John H. commented that he did not understand why the cell tower was a concern if the state would be paid for it. Carol responded that it appeared to be unfavorable because the state would have responsibilities associated with the lease but the Duhames would receive the financial payments.
- John H. asked whether it was possible to vote no today and yes in November. Jim F. responded yes and that this had occurred on other projects. Carol reiterated that the funded conditions adequately addressed the cell tower lease and other uncertainties. She suggested that given that this vote affects what goes out for public comment, it would be preferable to vote yes now if the project seemed worthwhile for funding.
- Gene V. questioned whether a vote really mattered given that there were multiple votes. Carol responded that the Advisory Council's input at the draft stage had great weight with the Trustee Restoration Council's position as to what went out for public comment and why it was important for the Council to reconsider its draft recommendations in light

of public comment. The Council's input matters a lot to the Trustee Restoration Council and Governor.

- Laurence S. asked whether the state's due diligence would stop if the majority of the council voted no at this time. Carol responded no. The Trustee Restoration Council might have direction on this matter at the August 30th meeting.
- Dori Skrukrud of the Greenway Service District (GSD) spoke on behalf of the Duhames. She reiterated their willingness to proceed through the full process and have the due diligence work completed.
- Sally J. asked about what issues remain to be resolved by November. Carol indicated that whether or not there was cell tower lease had to be resolved before the appraisal is completed and that the value determined by the appraisal and needed title work would be completed by then. The indemnification clause issue may not be resolved by then; it depends on the GSD's follow-up with ARCO.
- Gene V. asked about what happens if the state's appraisal comes in lower or higher than the amount in the application that is subject of recommendation. Carol responded that the state would only agree to a price at or below the fair market value determined by the state's appraisal. As communicated by the GSD, the Duhames would honor the price that is in the application. If state's appraisal is higher, they would stick to the offered purchase price of \$1,487,830; if the appraisal is lower, the deal probably won't be completed without leverage funding from other sources. Dori S. confirmed this position.
- Matt Clifford offered comments on behalf of the Clark Fork Coalition. He noted that the project was not just a good opportunity, it was great one. That input from area biologists was one of the best opportunities for acquiring wildlife habitat in the Basin. He seconded Sally Johnson's comments that the outstanding issues are typical of the land acquisition projects. They have a lot of faith in the State's planned process to address uncertainties. He added that from his time on the Council, he can attest that the Council's input has a major weight in what is ultimately funded.
- Linda B. commented that she agreed it is a good project. There is a lot of public support for the project. The GSD/NRDP are working together to resolve the outstanding issues.
- Joe Shumaker of the GSD Board noted the Duhames' initial request to the GSD 2½ years ago that started the acquisition planning process. The family wants to do this and have been very cooperative to date despite all the complications. The community interest in the project is great. The Council's vote at this stage of the process is very important. It is possible that with a no vote from the Council, the Duhames may decide to withdraw from the process. He urged the Council's support.
- Vanna Boccadori of FWP noted that FWP wanted to see the process completed. The property supports quality wildlife resources. FWP would incorporate the property into

the Mt. Haggin wildlife management area and explore incorporating it into the existing rest rotation contracts done cooperatively with the Forest Service.

The motion passed on a 9-4 vote, with Gene V., John H., Jim D. and Jules W. voting no and other members voting yes.

Butte Master Plan: NRDP's staff recommendation is for full funding at \$174,634. The NRDP's funding recommendation was moved and seconded. There was no public comment.

Council Discussion and Questions:

- Dennis D. said that he believes the project was typical of what city communities do and he would prefer that the communities do their needed planning and then come forward with proposals that fit.
- Paul Babb responded that the community had inherited a dilapidated water system. The planning is critical for the waterline and other replacement projects that are funded by NRDP. It is money well spent for cost-effective replacement.
- Jim D. asked about what planning had been done in the past. Jon Sesso of Butte-Silver Bow provided the history of the water system and expenditures by the Butte ratepayers. The ratepayers are still paying off the \$40 million initial investment in improvements since they acquired it. The previous owner did not do the needed and legally required amount of planning and investments, so the county has had to play catch-up. They have been investing \$500,000/year in capital improvements starting in the early 1990's. Initially, they did not have to do much planning because they knew what needed to be fixed based on all the breaks. The NRDP recommended a water master plan in their review of the High Service tank project. They understood that if the county were to take on other projects besides fixing leaks, they needed a plan. The county has the same pot of money for the replacements as it does for the planning and chose to continue to maintain the matching funds on the waterline project. Without grant funds for the planning, the match would have decreased. The plan would help assure that monies on water projects are spent wisely. Butte's system is different than other communities because of the dilapidated state it was in when Butte acquired it in 1992; other communities conduct O&M on a routine basis whereas the previous owners of the Butte system did not. That's why the rates are so high.
- Dennis D. indicated that a major consideration for him was precedent. He wants the message sent out about the unique circumstances associated with Butte's system and the significant matching funds and ratepayer contributions.
- Jim F. asked about the entire budget for the Butte Water System. Neither Paul B. or Jon S. knew the exact figures. Jon indicated that annual budget was in excess of one million.
- Jim F. responded that he had several concerns about this proposal:

- that it is counter to the established policy of not funding normal government operations; planning for water systems is a normal government function;
- that just because the NRDP noted the need for a master plan doesn't mean that it needed to be funded by NRDP;
- that he doesn't have problem with the \$1.5 million in capital improvements, but this planning proposal sets a bad precedent for other planning efforts that are normal government operations; and
- he can't understand that the small amount of money can't be covered about of Butte-Silver Bow's large budget.

The motion passed on a 7-6 vote, with Jim F., Sally J. Dennis D., Laura R., Jim D. and John H. voting no and other members voting yes.

Additional Council Discussion and Public Comment:

- Jim D. has concerns about the process on some of the decisions, not so much the projects. He has a problem voting on projects when there are outstanding issues to be resolved. Jim F. responded that these could be addressed through the Advisory Subcommittee if there was consensus amongst members to do so. This is something that has been looked at before. Such discussions go through the subcommittee and then the full Council with public input and then go on to the Trustee Restoration Council and Governor. Gene V., Jules W., and Laurence S. supported this. Laurence noted the difficulty in having the due diligence on title work being done while decisions are made and the differences between such projects and engineering projects. Jules commented that he thought some of the outstanding issues on the Duhamé project should have been resolved at the planning stage. After more discussion, it was agreed that members would send Sally J. more specifics and concerns on what they would like to see the Advisory Subcommittee address. The Subcommittee will meet on Sept. 14th before the full Council meeting.
- Evan Barrett spoke on behalf of the Governor. He expressed appreciation that the Council had advanced the Duhamé project and concern that the procedures not overshadow the substance of the project. He noted that the term of the existing Council expires at the end of December and the Governor's intention to change the Council in the new year. He thus suggested that the existing Council advance ideas for changes to the policy/procedure for the new Council rather than taking formal action. He expressed the Governor's personal interest in NRD proposals and appreciation of the Council's detailed involvement in the process.

Announcements:

Carol announced the upcoming public meeting on the Milltown Consent decree on August 16th in Bonner and the Governor's visit to Butte to view the waterline project on August 18th.

Jim Flynn adjourned the meeting.

**UPPER CLARK FORK RIVER BASIN
REMEDICATION AND RESTORATION EDUCATION ADVISORY COUNCIL
Summary of November 9, 2005 meeting**

All members were present except Laura Rotegard and Jules Waber.

Jim Flynn called the meeting to order. Members approved the October 12, 2005 meeting notes. There will be no meeting in December.

Carol announced the public meeting on the Milltown restoration plan in Bonner on Thursday November 10, 2005 at 7:00 pm at St. Ann's Church and the Trustee Restoration Council meeting in Helena on November 18, 2005 at 9:30 a.m. in room 152 of the Capitol.

Kathy Coleman summarized comments received on the *Draft Work Plan*.

Jim F. explained the procedures the Council would follow in deciding on funding recommendations for the 2005 grant projects. For each project, Carol Fox would review the staff recommendation, and then he would solicit a motion, discussion and public comment before the Council's vote on a project-specific basis.

Silver Bow Creek Greenway: NRDP's staff recommendation is for full funding at \$769,507 for Year 1 and \$1,075,993 for Year 2, subject to the specified funding conditions. The NRDP's funding recommendation was moved and seconded. There was no discussion or public comment. The project passed unanimously.

German Gulch: NRDP's staff recommendation is for partial funding at \$876,162, subject to the specified funding conditions. The NRDP's funding recommendation was moved and seconded. There was no public comment. James Steele expressed the Tribe's appreciation to the staff and the applicant for considering the Tribe's interest in this project. The project passed unanimously.

Butte Waterline: NRDP's staff recommendation is for full funding at \$1,539,269 for Year 1 and not to fund Year 2 at this time. The NRDP's funding recommendation was moved and seconded. There was no discussion or public comment. The project passed unanimously.

Anaconda Waterline: NRDP's staff recommendation is for full funding at \$1,738,700. The NRDP's funding recommendation was moved and seconded. There was no discussion or public comment. The project passed unanimously.

Big Butte Acquisition: NRDP's staff recommendation is for partial funding at \$667,642, subject to the specified funding conditions. The NRDP's funding recommendation was moved and seconded. Dennis D. asked about the funding conditions. Carol summarized the four conditions specified in the *Pre-Draft Work Plan*. There was no public comment. The project passed unanimously.

Duhamé Acquisition: Carol summarized what had occurred on the Duhamé project since the Council's August meeting. She explained the conclusions of the new appraisal of \$1,275,000.

Based on this appraisal, the staff recommendation has changed. The staff now recommends this project for funding at \$1,430,979, with \$1,275,000 for land and \$155,979 for O&M. The title work verified that there is no legal access to the property, which affected the appraised price. The cell tower lease is off the table and is no longer a concern. The tailings on the property along Silver Bow Creek will be cleaned up under remedy. The indemnification clause issue remains to be resolved.

The Council asked questions about and discussed the appraisal, legal access, mineral rights and the indemnification clause issues at length.

Public Comment:

Milo Manning of the Greenway Service District (GSD) indicated he disagrees with the staff's interpretation of the *RPPC* regarding fair market value and with the comparable sales and timber appraisal methodology used in the State's appraisal. The GSD would like more opportunity to resolve outstanding issues with the NRDP.

Joe Shoemaker of the GSD stressed how important this property is for public acquisition given its location along Silver Bow Creek and German Gulch. The Duhames originally were asking \$1,100/acre and came down to \$853/acre. He believes they came down far enough. A real estate broker estimated the value at \$1,200/acre.

Vanna Boccadori of FWP said her agency is very much in favor of this project and it would be important to them to have legal access. FWP issued a final decision notice for its environmental assessment that supports this acquisition.

Jon Sesso of Butte-Silver Bow (B-SB) requested the Council be flexible in their recommendation. The flaws in the appraisal are a matter of interpretation. Appraisals are matters of opinion and there are different opinions. The Duhames have come down from their original asking price to a price that is below what they estimated the property value was for IRS tax purposes. The acquisition has broad support. He does not want such a great opportunity be lost when there are ways to fix it.

A motion was made and seconded to accept the staff's recommendation.

Council Discussion and Questions:

- Jerry noted that there is 14% difference between the requested price and the staff recommendation but almost unanimous support of the proposal. He doesn't want to be responsible for the project going down because of foolish consistency on an appraisal. Access is not critical to FWP. Carol responded that the requested price was not based on a valid appraisal.
- Gene questioned the merits of funding the project if it did not include the mineral rights. Sally and Jim F. offered that this situation is similar to most acquisitions and not a big issue.

- Dennis believes that the value of the acquisition is more than just the land value; there is value in the clean water and open space that the property provides.
- Sally agreed with the staff's evaluation of the technical issues and with the concerns the staff raised. They did a good job on the analysis. That said, the property is exceptional and she wants to see it funded. She offered an amendment to the original motion. The amendment stated that the applicant be allowed to perfect legal access. If legal access is obtained, the appraisal would be updated to reflect legal access and a new fair market evaluation would be established. The project would be recommended for funding at the appraised value, plus \$155,979 for five years of operation and maintenance, not to exceed the requested amount of \$1,643,809. She answered questions from other members to clarify the proposal. Carol indicated that the amendment would still meet the *RPPC* requirement regarding purchase at or below fair market value.
- Paul Babb commented that FWP should pay for legal access with sportsman fees. He also believes the motion should not be limited and the TRC should make the call about fair market value. He made a motion to end all motions. Jim F. refused to recognize the motion.
- Dennis questioned whether legal access to the adjacent FWP property would mean there was access to the Duhamme property. Carol responded that the appraiser has to look at this property independent of who might purchase it. Sally notes the difference between access from the legal standpoint and access from the property valuation standpoint.

The motion on the amendment passed on a 7-5 vote with Gene V., John H., Jim D., Dale M., and Dennis D. voting no and other members voting yes.

The motion as amended also passed on a 7-5 vote with Gene V., John H., Jim D., Dale M., and Dennis D. voting no and other members voting yes.

Butte Master Plan: NRDP's staff recommendation is for full funding at \$174,634. The NRDP's funding recommendation was moved and seconded. There was no public comment and no discussion. The motion passed on 7-5 vote with Jim F., Sally J., Dale M., John H. and Jim D. voting no and other members voting yes.

Sally reported on the recommendations from the Advisory Subcommittee to pass along to the future Council.

The Council and NRDP staff presented Jim Flynn with a plaque in appreciation for his service on the Council.

Jim Flynn adjourned the meeting.

TO: NRDP Staff: Carol Fox, Kathy Coleman, Doug Martin, Tom Mostad, Greg Mullen

FROM: Phil Tourangeau

DATE: 1 August 2005

RE: Comments Pertaining to Tribal Cultural Resources for 2005 Projects

Carol; Kathy, Doug, Tom and Greg:

I am submitting the following suggested text as comment for the Butte and Anaconda Waterline projects, the Duhamme and Big Butte Acquisition projects, and the German Gulch tailings removal and trail segment construction projects. The Tribal Cultural Preservation Office has reviewed the comments.

As we discussed, the suggested language is submitted for inclusion in the award documents for the projects. Please contact me if there are any questions. Thanks very much.

Suggested text for Butte and Anaconda Waterline replacement projects:

“The Butte and Anaconda regions are Tribal traditional use areas and contain recorded prehistoric sites. Applicants are encouraged to be aware to the potential for encountering buried cultural features and/or artifacts during excavations.”

Suggested text for Big Butte Acquisition:

“There apparently has not been a cultural resource survey of the Big Butte area. There is a potential for the presence of prehistoric cultural materials in undisturbed areas of the Butte region. It is requested that the applicant consider this potential and the need to protect such materials in its management plans for the undisturbed sections of the Big Butte Acquisition.”

Suggested text for the Duhamme Property Acquisition:

“In the event of activities that would result in surface or subsurface disturbance, the State Antiquities Act would apply and a cultural resource review and possibly a cultural resource survey may be required.”

Suggested text for German Gulch tailings removal and trail segment construction:

“A cultural resource survey is planned before tailings removal and trail construction will begin. The applicant has stated that the survey will be coordinated with the CSKT. Any prehistoric cultural resources identified during the survey should be avoided during construction, and should not be identified on interpretive signage”.



United States Department of the Interior

NATIONAL PARK SERVICE
Grant-Kohrs Ranch National Historic Site
266 Warren Lane
Deer Lodge, Montana 59722

May 10, 2005

Carol Fox, Director
Natural Resource Damage Litigation Program
State of Montana
Department of Justice
PO Box 201425
Helena, MT 59620-1425

RE: USDOJ Comments on 2005 Natural Resource Damage Restoration Fund Proposals

Dear Ms. Fox,

The United States Department of the Interior (USDOJ) has reviewed the applications submitted for funding under the 2005 Upper Clark Fork River Basin Restoration Fund Grant Program. The focus of our review was two-fold: (1) how the projects might impact DOI properties, trust resources, or legislative responsibilities; and (2) the overall appropriateness of each project given the funding guidelines. Our comments on the reviewed applications are as follows:

1. Seventh, East Sixth and East Eighth St. Water Main Replacements

Applicant:	Anaconda-Deer Lodge County
NRDP 2005 Grant Request:	\$ 1,738,700
Total project cost:	\$ 1,989,200

This project involves improvements to the existing drinking water system in Anaconda, providing infrastructure necessary to replace lost groundwater resources. This project is similar to drinking water supply infrastructure projects in Butte and Anaconda funded in previous years through the Restoration Program.

DOI supports this proposal for NRD funding.

2. Big Butte Property Acquisition

Applicant:	City and County of Butte-Silver Bow
NRDP 2005 Grant Request:	\$ 694,749
Total project cost:	\$ 787,942

This project proposes to purchase 300 acres of upland area within the Silver Bow Creek watershed for the purpose of upland resource protection, public recreation, and creating a walking path for area residents to access the greenway trail.

It is not clear how this project relates to the specific natural resource damage (NRD) claims of the State of Montana. If it is meant to replace lost ecological services within the Silver Bow Creek riparian corridor, such as water quality and fisheries, then the upland property purchase does not appear to be an appropriate replacement project. On the other hand, if the State's NRD settlement included lost ecological services in upland areas, specifically including wildlife habitat and public recreation, then this project would more likely fit the resource replacement criteria.

DOI reserves its opinion on this project pending clarification on the question of upland resource components in the State's NRD settlement.

3. *Butte Master Plan*

Applicant:	City and County of Butte-Silver Bow
NRDP 2005 Grant Request:	\$ 174,634
Total project cost:	\$ 232,845

This project proposes to develop a master plan for the replacement and maintenance of the Butte drinking water system. Given the amount of Restoration Program funding already dedicated to the Butte drinking water infrastructure, long term planning makes sense to ensure that financial resources are being applied within a well developed process. This project will facilitate fiscal responsibility and the projection of long term costs necessary to replace injured Butte-Silver Bow groundwater resources.

DOI supports this proposal for NRD funding.

4. *Duhamme Property Acquisition*

Applicant:	Greenway Service District
NRDP 2005 Grant Request:	\$ 1,715,698
Total project cost:	\$ 1,715,698

This project proposes to purchase 1,800 acres of private property to replace "high-quality wildlife habitat...and recreational lands within the Silver Bow Creek (SBC) Watershed". The property in question is upland acreage contiguous with the injured riparian areas of Silver Bow Creek, German Gulch, and Durant Canyon. As with the Big Butte Property Acquisition proposal (see no. 2 above), this project lists upland wildlife habitat, public recreation, and weed control among the ecological services it would replace. Consequently, the same questions arise regarding the appropriateness of replacing lost ecological services in upland areas.

DOI reserves its opinion on this project pending clarification on the question of upland resource components in the State's NRD settlement.

5. *German Gulch Watershed Restoration Project*

Applicant:	The George Grant Chapter of Trout Unlimited
NRDP 2005 Grant Request:	\$ 912,519
Total project cost:	\$ 1,093,255

This project is comprised of multiple components, including water quality enhancement activities, westslope cutthroat trout restoration, improved public access, property acquisition,

upland weed control, and cultural resource surveys. Because German Gulch is a tributary to Silver Bow Creek, several of these components clearly restore or replace lost riparian and water quality services. Other components, however, raise the same questions posed above for projects 2 and 4 concerning upland resources.

Additionally, this project proposes to remove mine tailings from contaminated areas (Goal 2). This raises the issue of whether or not these areas should be addressed through remedial action or under the Abandoned Mine Lands program, rather than utilize restoration funds to remove contaminants. Have these areas been assessed for possible remedial action? Are the contaminants to be removed residuals from previous response action? Would these contaminants more appropriately be characterized and removed through another program? Would the use of Restoration Program funds to remove mine tailings in upland areas of the Clark Fork River Basin set a precedent for using Restoration Program funds to perform remedial action on abandoned mine lands throughout the watershed and what are the likely ramifications of such a precedent?

DOI supports those project components addressing trout restoration, water quality improvements, and public education (Goals 1, 4, 5, and 6). For the upland components (Goals 2 and 3), however, DOI reserves its opinion pending clarification on the question of upland resource components in the State's NRD settlement.

6. Silver Bow Creek Greenway

Applicant:	Greenway Service District
NRDP 2005 Grant Request:	\$ 769,507
Total project cost:	\$ 1,845,500

This project is a continuation of the Greenway Trail Project and complements remedial action currently underway along Silver Bow Creek. The proposal covers a two year period, with a second year cost estimate of \$1,075,953.

DOI supports this proposal for NRD funding.

Thank you for the opportunity to review and comment on these proposals. If you have any questions, please contact me at 406-846-2070.

Sincerely,

S/L. Rotegard
 Laura Rotegard
 Superintendent

cc: Bill Olsen, USFWS
 Greg Nottingham, NPS



United States Department of the Interior

NATIONAL PARK SERVICE
Grant-Kohrs Ranch National Historic Site
266 Warren Lane
Deer Lodge, Montana 59722

May 10, 2005

Carol Fox, Director
Natural Resource Damage Litigation Program
State of Montana
Department of Justice
PO Box 201425
Helena, MT 59620-1425

**RE: USDOJ Comments on 2005 Natural Resource Damage Restoration Fund Proposals-
Butte Pipeline Project**

Dear Ms. Fox,

7. *Drinking Water Infrastructure Replacement for years 5 & 6*

Applicant:	Butte-Silver Bow Local Government
NRDP 2005 Grant Request:	\$ 3,124,416
Total project cost:	\$ 4,166,288

This project involves improvements to the existing drinking water system in Butte, providing infrastructure necessary to replace lost groundwater resources. This project is similar to drinking water supply infrastructure projects in Butte and Anaconda funded in previous years through the Restoration Program.

DOI supports this proposal for NRD funding.

Thank you for the opportunity to review and comment on this additional proposal. If you have any questions, please contact me at 406-846-2070.

Sincerely,

Laura Rotegard
Superintendent

cc: Bill Olsen, USFWS
Greg Nottingham, NPS

APPENDIX E
APPLICATION REVIEW
GUIDELINES

APPENDIX E

UCFRB RESTORATION GRANTS

APPLICATION REVIEW GUIDELINES

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.
- 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?

For this criterion, the State will identify the number of letters received by the State in either support or opposition to the project and identify the entities providing these letters. 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.

14. MATCHING FUNDS

General Consideration: To what extent does the project entail cost sharing?

For this criterion, the State will identify the amount of matching funds and indicate how much are cash contributions and how much are in-kind contributions. 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.

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.

No Access Change: The existing acreage and methods of public access would not change as a result of the project.

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 Normal 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 case law (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