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**2010 FINAL**  
**UPPER CLARK FORK RIVER BASIN**  
**RESTORATION WORK PLAN**

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**PREPARED BY:**

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## List of Acronyms

ADLC	Anaconda-Deer Lodge City-County Government
UCFRB Advisory Council	Upper Clark Fork River Basin Remediation and Restoration Advisory Council
ARCO	Atlantic Richfield Company
B-SB	Butte-Silver Bow City-County Government
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFC	Clark Fork Coalition
CFR	Clark Fork River
CFWEP	Clark Fork Watershed Education Program
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
MOU	Memorandum of Understanding
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

# **SECTION 1.0:**

## **Executive Summary**

## 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 Advisory Council (UCFRB Advisory Council),<sup>1</sup> the Trustee Restoration Council,<sup>2</sup> 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. The State revised the *RPPC* in March 2002, January 2006, and January 2007.

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 or replacement 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 would be located in the UCFRB are eligible for funding. This requirement does not apply to: (1) research or education projects, provided that the proposed research or education pertains to restoration of natural resources located in the UCFRB; and (2) a project, or a portion thereof, that would be located outside of the UCFRB but would have

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<sup>1</sup> The UCFRB Advisory Council consists of 8 citizen volunteers representing the public and various interest groups and 5 government representatives.

<sup>2</sup> The TRC consists of the Chairman of the Advisory Council, the Attorney General, the Governor's Chief of Staff, and the directors of the State's three natural resource agencies.

the effect of restoring or significantly facilitating the restoration of natural resources or lost services of the UCFRB.

As of June 2011, the State has awarded approximately \$111.6 million for 121 grant projects since December 2000. Information on these projects can be found on the Department of Justice website at [www.doj.mt.gov](http://www.doj.mt.gov) under “Montana Lands” or upon request from the NRDP (406-444-0205).

## 1.2 Work Plan Overview

This *2010 Final Work Plan* describes the State’s evaluation of twelve 2010 Restoration Grant proposals, the public review process associated with the pre-draft and draft versions of this document, and the Governor’s final funding decisions. The *RPPC* sets forth the process that the State follows in evaluating proposals and making funding decisions.

Section 2.0 contains a project summary, a map, and an evaluation criteria summary table for each project. Section 3.0 summarizes the final funding recommendations. The following summarizes the various phases of the application submittal and evaluation process and describes the sections of this document that are reflective of these phases.

- In December 2009, the NRDP and the UCFRB Advisory Council recommended a funding cap of \$7.5 million for the 2010 grant cycle and the TRC set the funding cap at \$7.5 million.
- In February 2010, the NRDP distributed the 2010 grant application materials and conducted educational workshops on the application process.
- In April 2010, the NRDP received twelve grant applications for a total Restoration Fund request of \$17,954,015. Subsequently, one applicant reduced their request, which reduced the total request to \$17,713,693. Table 1-2 provides a summary of the 2010 grant proposals.
- All twelve applications were judged as meeting all the minimum qualification criteria.
- In June, July, and August 2010, applicants presented their projects to the UCFRB Advisory Council. In August and September 2010, this Council conducted project site visits.
- In October 2010, the NRDP completed its staff evaluation and pre-draft funding recommendations and issued the *Pre-Draft UCFRB Restoration Work Plan*. The NRDP evaluated the twelve projects according to criteria specified in the *RPPC*. These evaluations were based on application review guidelines contained in Appendix C that were derived from the criteria set forth in the *RPPC*. In the *Pre-Draft Work Plan*, the NRDP recommended 7 projects for full or partial funding, did not recommended 2 projects for funding due to the \$7.5 million funding cap limitation, and did not recommended 3 projects for funding, regardless of the funding cap.

- The NRDP presented the *Pre-Draft Work Plan* to the UCFRB Advisory Council at its October 20, 2010 meeting. Appendix B contains a summary of the UCFRB Advisory Council's funding recommendations, as well as input from the Department of Interior (DOI) on the 2010 project proposals.
- At its October 26, 2010 meeting, the TRC considered input from staff, the UCFRB Advisory Council, and the public in deciding on the draft funding recommendations that would be the subject of public comment. The TRC recommended 9 of the 12 proposals for a total funding of \$13,148,970, subject to certain funding conditions. The TRC's draft recommendations affirmed those the draft funding recommendations made by the UCFRB Advisory Council at its October 20, 2010 meeting and involve an increase in the funding cap.
- The NRDP solicited public comment from October 28, 2010 to November 30, 2010 on the 2010 *Draft UCFRB Restoration Work Plan (Draft Work Plan)*. The NRDP received 2 comments during the public comment period and an additional 53 late comments. The evaluation tables in Section 2 provide a summary of all the public input received before and during the public comment period on all the grant proposals.
- The NRDP prepared a draft response to comments document for consideration by the Advisory Council and TRC at their December 2010 meetings to determine their final funding recommendations to the Governor. This response to comments document will be revised to reflect the final decisions of this Governor.
- At its December 15, 2010 meeting, the Advisory Council considered public comment and the NRDP's draft response to comments document and unanimously voted to reaffirm its draft funding recommendations for nine proposals and to recommend an additional proposal for funding. Appendix B contains a summary of the UCFRB Advisory Council's final funding recommendations.
- At its December 21, 2010 meeting, the TRC voted to recommend ten of the twelve proposals for total funding of \$16.7 million after consideration of public comment and the NRDP's draft response to comments document.
- In June 2011, Governor Brian Schweitzer completed his funding decisions for the 2010 proposals. He approved funding for nine of the twelve proposals for a total funding of \$13,045,902. Table 1-1 provides a summary of the Governor's final funding decisions, which are subject to certain funding conditions that are indicated in the criteria evaluations in Section 2.0.

Table 1-1 Governor's Final Funding Decisions

<b>Large Grant Cycle Requests</b>	<b>Requested Funding</b>	<b>Approved Funding</b>
<b>Projects Approved for Funding</b>		
Racetrack Creek Flow Restoration	\$500,000.00	\$500,000.00
Maud S Canyon Trails/Open Space (Revised Request)	\$115,598.00	\$62,040.00
Children's Fishing Pond/Hillcrest Open Space	\$1,566,998.00	\$1,200,000.00
Big Hole Transmission Line (Year 4)	\$2,760,000.00	\$2,760,000.00
2010 Cottonwood Creek	\$289,647.00	\$289,647.00
2010 Native Plant Materials	\$252,279.00	\$252,279.00
Butte Waterline (Year 10)	\$1,817,546.00	\$1,817,546.00
Anaconda Waterline (Year 9)	\$2,644,390.00	\$2,664,390.00
Big Hole River Pump Station Replacement	\$3,500,000.00	\$3,500,000.00
Total Approved for Funding		<b>\$13,045,902.00</b>
<b>Projects Not Approved for Funding</b>		
Anaconda Metering	\$3,622,708.00	\$0.00
Restoration, Nutrients and Green River Bottoms	\$268,367.00	\$0.00
Knowledge Resource Mining in the UCFRB	\$376,160.00	\$0.00



Table 1-2

<b>2010 NRDP Grant Proposal Summary</b>			
<b>Applicant and Project Name</b>	<b>Project Summary</b>	<b>Funding Source</b>	<b>Total Funding Requested</b>
Anaconda-Deer Lodge County  Anaconda System-wide Metering Project	Install water meters on all 2,642 un-metered water system connections over 2 years to achieve system-wide metering, conserve water supply, and replace lost groundwater resources.	NRDP	\$3,622,708
		Other	\$253,961
		<b>Total</b>	<b>\$3,876,669</b>
Anaconda-Deer Lodge County  Anaconda Waterline – Year 9	Replace 12,200 feet of leaking waterline in Anaconda. This is the 9 <sup>th</sup> year of continuing waterline replacement project.	NRDP	\$2,644,390
		Other	\$220,386
		<b>Total</b>	<b>\$2,864,776</b>
Butte-Silver Bow  Big Hole River Pump Station Replacement Project	Replace the deteriorated Big Hole Pump Station, which is part of the Big Hole water system that supplies drinking water to Butte.	NRDP	\$3,500,000
		Other	\$500,000
		<b>Total</b>	<b>\$4,000,000</b>
Butte-Silver Bow  Big Hole Transmission Line – Year 4	Replace 20,000 feet of the leaking Big Hole Transmission Line, which supplies drinking water to Butte. This is the 4th year of a continuing waterline replacement project.	NRDP	\$2,760,000
		Other	\$690,000
		<b>Total</b>	<b>\$3,450,000</b>
Butte-Silver Bow  Butte Waterline – Year 10	Replace 13,000 feet of leaking waterline in Butte and install 500 meters in un-metered homes. This is the 10 <sup>th</sup> year of a continuing waterline replacement project and the 2 <sup>nd</sup> year of voluntary meter installations.	NRDP	\$1,817,546
		Other	\$201,950
		<b>Total</b>	<b>\$2,019,496</b>
Clark Fork Coalition  Racetrack Creek Flow Restoration Project	Secure the right to maintain and enhance in-stream flow for the benefit of the fishery resource of Racetrack Creek, a tributary of the Upper Clark Fork River.	NRDP	\$500,000
		Other	\$515,000
		<b>Total</b>	<b>\$1,015,000</b>
Deer Lodge Conservation District  2010 Native Plant Materials	Continue to select and market superior-performing native plant materials well adapted to the conditions of mining-impacted areas in the UCFRB and provide certified seed and plants to commercial seed growers and conservation seedling nurseries. (4 year project)	NRDP	\$252,279
		Other	\$81,000
		<b>Total</b>	<b>\$333,279</b>

Table 1-2

2010 NRDP Grant Proposal Summary			
Applicant and Project Name	Project Summary	Funding Source	Total Funding Requested
East Ridge Foundation with U.S. Forest Service  Maud S Canyon Trails and Open Space Project	Increase recreational opportunities by conducting land acquisition, land reclamation, and trail development activities in Maud S Canyon east of Butte.	NRDP	\$115,598
		Other	\$132,295
		Total	\$247,893
Rocky Mountain Supercomputing Centers, Inc.  Knowledge Resource Mining in the UCFRB	Develop a “tool” that will allow for immediate access to and analysis of the data collected in the UCFRB over the years by various entities using a GIS-user interface and provide links to the governing documents with that data.	NRDP	\$376,160
		Other	\$66,815
		Total	\$442,975
Skyline Sports and Butte-Silver Bow  Children’s Fishing Pond/Hillcrest Open Space Project	Develop a children’s fishing pond, repair the riparian and upland areas, create an outdoor educational component, and develop trails in the Hillcrest open space area east of Butte.	NRDP	\$1,566,998
		Other	\$770,136
		Total	\$2,337,134
The University of Montana (Flathead Lake Biological Station and Montana Tech)  Restoration, Nutrients, and Green River Bottoms	Initiate and conduct monitoring over 2 years to evaluate the relationships between nutrients, algae and macrophytes, and river processes that produce and consume oxygen along restored and unaltered portions of the Upper Clark Fork River.	NRDP	\$268,367
		Other	\$73,826
		Total	\$342,193
Watershed Restoration Coalition  2010 Cottonwood Creek	Improve aquatic and riparian habitat in lower Cottonwood Creek by increasing in-stream flows, improving fish passage, and enhancing riparian habitat.	NRDP	\$289,647
		Other	\$169,484
		Total	\$459,131
		NRDP	\$17,713,693
		Other	\$3,674,853
		Total	\$21,388,546

## **SECTION 2.0:**

# **Project Summaries, Maps, and Criteria Summary Tables**

## **Racetrack Creek Flow Restoration Project Clark Fork Coalition**

### **Project Summary**

The Clark Fork Coalition (CFC) seeks funding to purchase stored water rights in Racetrack Creek (Figure 1) in order to convert them from irrigation to instream flow for the benefit of the aquatic resources, which will contribute to the restoration of natural resources by increasing water quantity of the Creek. Their request is for \$500,000 in Restoration Funds with \$500,000 cash match and \$15,000 in-kind matching funds for a total project cost of \$1,015,000. The total cost of the water right purchase is \$1,000,000 and \$15,000 is for converting the water right to instream flow. The \$500,000 requested in Restoration Funds would go towards the water right purchase.

Upon approval of funding and receipt of a water right change authorization, the CFC would own and manage the water right for instream flow purposes, with 90% of the releases from Racetrack Lake being protectable<sup>1</sup> to the point of irrigation diversion (Cement Ditch Headgate). The amount of protectable water beyond the Cement Ditch Headgate to the Clark Fork River (Figure 1), would exclude any loss due to evaporation and any loss to groundwater, which would be determined through the DNRC change authorization process.

Racetrack Lake has three water rights for a total of about 650 acre-feet of water. The Cline family owns the largest water right in the amount of 8.3 cfs, or 433 acre-feet of water per year, which is 6/9 of the total claim on Racetrack Lake. The Clines installed sprinkler pivots to replace flood irrigation in 2006, with private funds. The other water rights owners are not a part of this purchase. They are Leo Nichols, with 144 acre-feet per year (2/9 of the total water right), and Ted Beck, with 72 acre-feet per year of water (1/9 of the total water right). These current owners of the water rights have an easement to use the stored water in Racetrack Lake for irrigation from the Beaverhead-Deerlodge National Forest, which administers the land where the lake is located.

Per the *Draft Prioritization of Tributaries in the Upper Clark Fork River Basin for Fishery Enhancement, May 2010 (FWP and NRDP)*,<sup>2</sup> Racetrack Creek has been divided into two reaches, Upper and Lower Racetrack Creek. Upper Racetrack Creek extends from the lake, which is the headwaters of the drainage, to the National Forest boundary. Upper Racetrack Creek was assessed in the Tributary Prioritization document, but not designated as a priority for protection or enhancement because it is in good condition and located on the National Forest. Lower Racetrack Creek extends from the Forest Service boundary to the confluence with the Clark Fork River. It has been designated in the Tributary Prioritization as a Priority 1 area for protection and enhancement because of the following reasons: 1) the stream is located in Reach A of the Clark Fork River and it scored very high in Goal 1, which is its potential to restore the

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<sup>1</sup> The Water Commissioner typically assumes a 10% loss of water to the point of diversion estimates for these type of perceived losses, per information provided by Rankin Holmes of the CFC to Tom Mostad in a phone conversation on September 10, 2010.

<sup>2</sup> This ranking is subject to change upon completion of the official comment period and finalization of the document, which should occur in the fall of 2010.

mainstem fishery by improving recruitment of trout from the tributaries; and 2) the area scored high in Goal 2, which means it has the potential to replace lost trout angling in the mainstem by improving trout populations and fishing opportunities in tributaries. Currently, Lower Racetrack Creek is one of only four streams in the UCFRB that are ranked as Priority 1 areas in the Tributary Prioritization document.

#### Past, Current, and Future Related Projects

The Clines are also landowners and water rights owners on the West Side Ditch, which has been the subject of several past studies, including two funded project development grants (PDGs). In 2009, the Upper Clark Fork River Basin Steering Committee approved a \$25,000 PDG that involved compiling existing reports and related data on irrigation flow, investigating the existing water rights and the potential for leasing and/or changes to existing water rights, and analyzing alternatives to increase flow in the Clark Fork River. In 2010, the West Side Ditch Company also partnered with the CFC on an approved \$25,000 NRDP PDG metering project that will seek to define the amount of use versus the amount of leakage in the West Side Ditch. The CFC is also currently conducting a \$23,150 NRDP PDG approved in 2009 that seeks to characterize loss or gain of flow, determine irrigation demands, investigate irrigation-related groundwater storage and return flow, and assess the potential for increasing the ranch's efficiency in converting excess water to instream flow for the Clark Fork Coalition's Dry Cottonwood Creek Ranch near the headgate of the West Side Ditch on the Clark Fork River.

The CFC has initiated discussions with the other water right owners on Racetrack Lake for a potential future project that would include the purchase of their water rights so the entire lake's water rights would be owned by CFC, to be managed for fishery enhancement. The CFC is also exploring future potential proposals that would involve some of the Clines' other water rights on Racetrack Creek, and still other projects that could involve other ditches on Racetrack Creek, such as the Cement and Morrison ditches.<sup>3</sup>

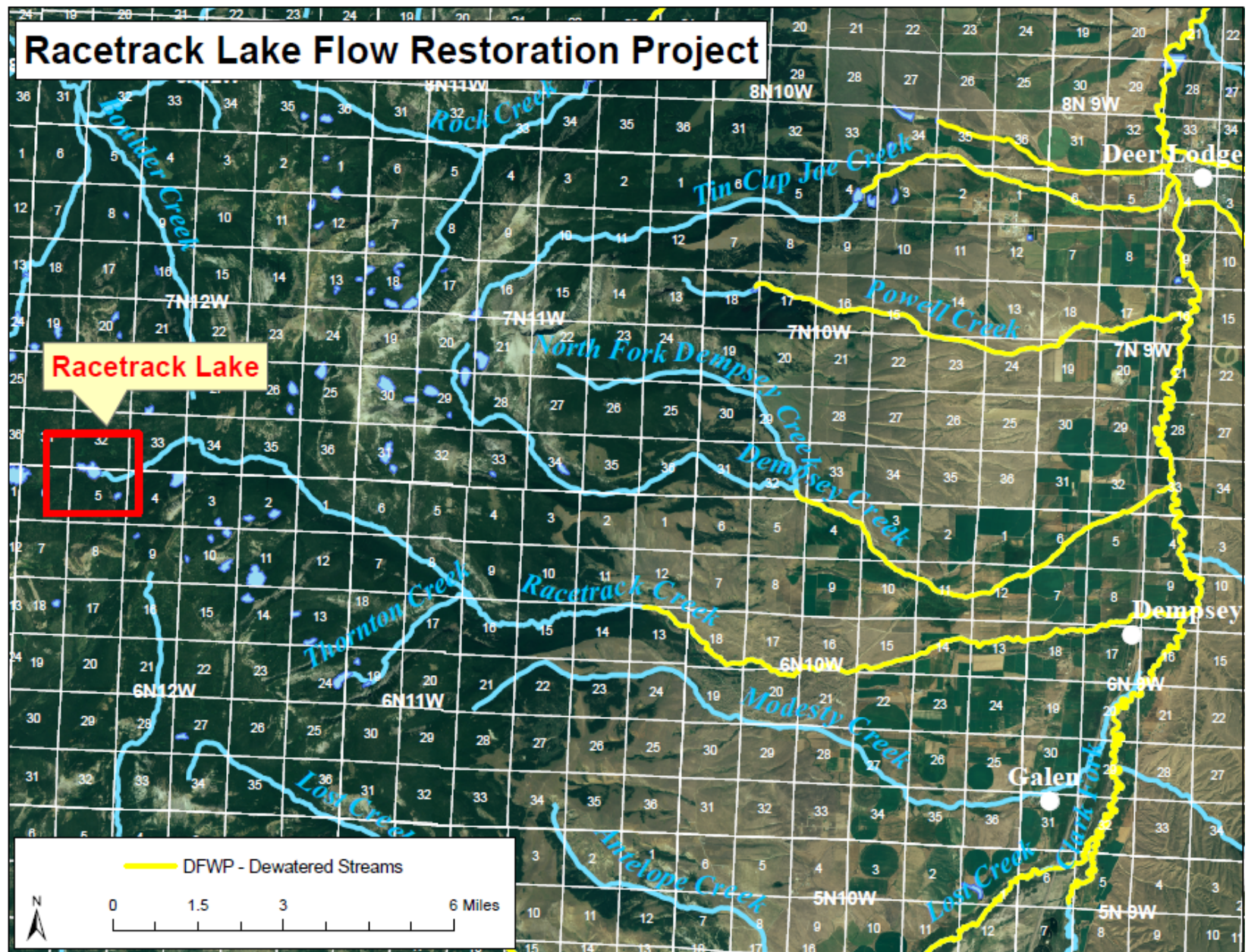
#### Final Funding Decision and Conditions

The Governor approved this project for the requested funding for \$500,000, subject to the following funding conditions in addition to the standard *RPPC* conditions: 1) that the Restoration Fund be reimbursed by \$500,000 if the use of the water right is changed from instream flow; and 2) that should the Columbia Water Basin Transaction Program's required appraisal of the water rights not validate the value of the water right that is requested, then this project would have to be reconsidered through the substantial change of scope process, pursuant to standard NRDP grant agreement requirements.

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<sup>3</sup> Rankin Holmes of CFC described these potential future projects at the June 16, 2010 Advisory Council meeting and the September 15, 2010 Advisory Council field trip to Racetrack Creek.

Figure 1





<b>Summary of RPPC Criteria Evaluation: Racetrack Creek Flow Restoration Project</b> <b>Applicant: Clark Fork Coalition</b>	
<b>CRITERIA/SUMMARY</b>	<p>The Clark Fork Coalition (CFC) is proposing to purchase the water rights to maintain and enhance instream flow for the benefit of the fishery resource in Racetrack Creek, a tributary of the upper Clark Fork River. The request is for \$500,000 in Restoration Funds, with \$500,000 cash match and \$15,000 in-kind matching funds for a total project cost of \$1,015,000.</p> <p>Application Quality: Fair</p>
<b>Final Funding Decision and Conditions</b>	<p>The Governor approved this project for the requested funding for \$500,000, subject to the following funding conditions in addition to the standard <i>RPPC</i> conditions: 1) that the Restoration Fund be reimbursed by \$500,000 if the use of the water right is changed from instream flow; and 2) that should the Columbia Water Basin Transaction Program's required appraisal of the water rights not validate the value of the water right that is requested, then this project would have to be reconsidered through the substantial change of scope process, pursuant to standard NRDP grant agreement requirements.</p>
<b>1. Technical Feasibility</b>	<p><u>Reasonably Feasible with NRDP funding conditions:</u> The proposed tasks are to: 1) purchase the water rights; 2) convert acquired irrigation water rights to instream flow; 3) manage water to maximize the benefits for the fishery; and 4) maintain the dam structure into the future. Purchasing water rights is commonly done throughout the State with willing buyers and sellers. Converting irrigation rights to instream flow is possible, but requires a water right change authorization from the DNRC. This process could take six months to two years depending upon the number and type of possible objections to the change by other water right owners in the area. Since the lake water rights owners have an easement with the National Forest for use of the lake for irrigation, the use would also need to be changed to in-stream flow via the appropriate Forest Service process. The CFC will manage instream flow for fish by manipulating the lake outflow structure at the time of the year that is most needed, which is in July and August; CFC has committed in its application to obtaining FWP approval of its flow management regime. The CFC has successfully completed several past grant projects.</p> <p>The proposal recognizes that maintenance of the dam structure is needed and the CFC has committed to conduct this task in the application, though no Restoration Funds for this task were requested. In order to accurately estimate possible future maintenance costs, a maintenance plan for the dam structure and professional engineer's inspection and report on the dam's current condition have been completed and submitted to NRDP after the submission of the grant proposal.<sup>4</sup> The inspection report concluded that even though some minor wood debris removal, additional monitoring and inspection is needed, the dam is adequately protected from overtopping, seepage erosion and structural instability as required by the Forest Service regulations (FSM 7500).</p>

<sup>4</sup>*Racetrack Lake Dam Engineer's Report of Safety Inspection and Hazard Assessment*, Hydrometrics, September 2010 and *Operating and Maintenance Procedures for Racetrack Dam*, Hydrometrics, September 2010.

<b>Summary of RPPC Criteria Evaluation: Racetrack Creek Flow Restoration Project</b> <b>Applicant: Clark Fork Coalition</b>	
	<p>The CFC makes clear its intent to permanently manage the instream flow for the benefit of the fishery resource. However, to address any potential risk of the water rights not being used as intended, the NRDP recommends an additional funding condition that would require reimbursement of Restoration Funds for \$500,000 if the beneficial use of the water right is changed from instream flow. With implementation of these funding conditions, the NRDP considers the proposal as reasonably feasible.</p>
<b>2. Costs:Benefits</b>	<p><u>Potential Net Benefits:</u> The proposed cost of the purchase of the water rights is \$1,000,000 for 8.3 cfs (433 ac-ft) of stored water. A significant benefit to this proposal is the large amount (\$500,000) of cash matching funds and the \$15,000 in-kind matching funds that has been included in this proposal. Even though this cost-benefit analysis evaluates the full project, the amount of Restoration Funds spent can be viewed as essentially half of the amount needed to achieve the benefits.</p> <p>The benefits of the proposal would be to convert irrigation water rights to instream flow for Racetrack Creek, listed as a Priority 1 area in the draft Tributary Prioritization document, and the Clark Fork River, an identified injured resource, which could improve the fishery of these waterways. However, the benefits of the predicted additional instream flow to Racetrack Creek are not currently fully known because an accurate wetted perimeter study to determine how much water is needed for fish has not been completed for Lower Racetrack Creek.<sup>5</sup> The proposal recognizes that the water provided with this purchase is probably not adequate for providing all of the water that is necessary for fish in Racetrack Creek and that other projects are currently being planned to supply additional instream flow that should supply adequate water for the fish. However, there are indications that the 8.3 cfs of flow will be a significant enough amount of additional water that will assist the dewatered lower reach of the stream. In addition, since Racetrack Lake water is stored water, it is anticipated that 90% can be legally protected until it reaches the irrigation point of diversion at the Cement Ditch Headgate. The amount that can be protected to the Clark Fork River will be determined through the DNRC change authorization process, taking into account evaporative and groundwater loss, both unknown at this time. Racetrack Creek also has a water commissioner, so that the amount of water that can reach the Clark Fork River can be assured, except for any loss due to evaporation and loss to groundwater. These increase the likelihood that the benefits of instream flow to the Racetrack Creek fishery will be realized.</p> <p>If the predicted augmentation of 8.3 cfs is realized, the proposal may offer high net benefit, as this amount is 20% of the 40 cfs that has been identified as a minimum flow at Galen, which has been identified as a dewatered area of the</p>

<sup>5</sup> Based on a wetted perimeter study conducted as a part of the DNRC Final EIS for the Upper Clark Fork Water Reservation Application (1991), FWP requested 26 cfs for Upper Racetrack Creek and 3 cfs for Lower Racetrack Creek. However, FWP is not sure if the 3 cfs is presently accurate, as indicated in an August 24, 2010 e-mail from Jason Lindstrom of FWP to Tom Mostad of NRDP.



<b>Summary of RPPC Criteria Evaluation: Racetrack Creek Flow Restoration Project</b> <b>Applicant: Clark Fork Coalition</b>	
	<p>Clark Fork River. However, there is some uncertainty that the entire amount of water can reach the river, due to evaporative loss and possible loss to groundwater, which will be determined through the DNRC's change authorization process. Nevertheless, any additional flow resulting from this project can help dilute the effects of the release of hazardous substances currently deposited in the bed and banks of the Clark Fork River and improve the river's water quality and fishery. The project could also improve the success of the bank vegetation after remediation and restoration activities have been completed. As proposed, the flow rate and the timing of the flow will be coordinated with FWP to maximize the benefits to Racetrack Creek and the river. Subject to the recommended funding conditions, the NRDP considers the project to be one of potential net benefit based on its reasonable cost (refer to cost-effectiveness criterion), considerable matching funds, and the likelihood that the additional flow resulting from the project could substantially improve flow for fish in Racetrack Creek and will assist the Clark Fork River fishery.</p>
<b>3. Cost-Effectiveness</b>	<p><u>Likely Cost-Effective:</u> The proposal's chosen alternative is to purchase 433 ac-ft of water for \$1,000,000, of which \$500,000 is Restoration Funds. The price of \$1,000,000 was set by the Clines as the minimum acceptable sale price. Another option investigated in the proposal compared the cost of the water to the value of the water to the irrigator.<sup>6</sup> This analysis showed that, after taking out the cost of fuel and equipment use, the total \$1 million cost of this proposal would only buy water for about 11 years when compensating the irrigator on a year-by-year basis. When comparing these alternatives, a permanent purchase of the water rights is much more cost-effective in the long-term than purchasing water on a year-by-year basis. An appraisal of the water was not included in the proposal, but as there is a lack of comparable sales within the UCFRB, an appraisal would likely use the value of water in another drainage that may or may not be applicable to the Basin. The value of the water needs to be site-specific since each stream has different benefits for differing amounts of water. The other funder of this project, the Columbia Water Basin Transaction Program, is requiring a water appraisal prior to purchase of the water rights. Should that Program's required appraisal not validate the value of the water right that is requested, then this project would have to be reconsidered through the substantial change of scope process, pursuant to standard NRDP grant agreement requirements.<sup>7</sup> This would allow for the current asking price to be renegotiated with the landowner, if the current price of \$1 million exceeds the appraised amount. There is also the alternative of purchasing all of the water rights instead of just 6/9ths, which CFC is actually considering for future funding. Even though this proposal does not include all of the water rights on the lake, the management of the water for fish should not be hindered by the other current water rights holders.<sup>8</sup> The NRDP thus considers the selected alternative to be likely cost-effective.</p>

<sup>6</sup> This was done by estimating the area the water could be used to irrigate, about 350 acres for a season and that those acres could produce 3 tons/ac of hay at \$100/ton. If these values were used to compensate the irrigator for the water use on a year by year basis, the cost would be \$105,000 for the 433 ac-ft of water per year.

<sup>7</sup> A substantive change in the scope or budget of an approved grant project requires reconsideration of the project by the NRDP, the Advisory Council, the Trustee Restoration Council, and approval by the Governor.

<sup>8</sup> Based on August 24, 2010 phone conversation between Mike McLane, FWP water rights specialist, and Tom Mostad of NRDP.

<b>Summary of RPPC Criteria Evaluation: Racetrack Creek Flow Restoration Project</b> <b>Applicant: Clark Fork Coalition</b>	
<b>4. Adverse Environmental Impacts</b>	<u>No Adverse Impacts</u> : The proposal will have no adverse impact to the environment.
<b>5. Human Health and Safety</b>	<u>No Adverse Impacts</u> : The proposal does not present any adverse impacts to human health and safety. The report on the dam's current condition have been completed and submitted to NRDP after the submission of the grant proposal. <sup>9</sup> The safety report states that the dam meets safety standards for its low hazard dam classification. In addition, there is no potential decrease in agricultural production due to the proposed water rights purchase. Any potential decrease in agricultural production would have occurred with the previous conversion from flood irrigation to a pivot, and not with the proposed water rights purchase. This stored right is currently not legally available to downstream water users, and under this proposal that would also be the case. Thus any potential impact to downstream users would occur only to those users that are or would be using more than their legal water right allows.
<b>6. Results of Response Actions</b>	<u>Coordinates</u> : The project coordinates with remediation of the Clark Fork River, by providing more flow, which could dilute the heavy metal contamination and help maintain the bank vegetation when remediation and restoration are completed in this area.
<b>7. Natural Recovery Potential</b>	<u>May Reduce the Recovery Period</u> : The proposed increased flow in Racetrack Creek could contribute to the restoration of injured natural resources by improving water quality by diluting the release of hazardous substances in the Clark Fork River covered under <u>Montana v. ARCO</u> that remain on the Clark Fork River bed and banks.
<b>8. Applicable Policies and Laws</b>	<u>Consistent/Sufficient Information Provided</u> : The proposal identified the applicable water rights requirements necessary to complete the project.
<b>9. Resources of Special Interest</b>	<u>No Impacts</u> : There will be no ground disturbance associated with this proposal that should be of concern to the Tribes or DOI. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of funding this project as recommended by that Council (see Appendix B). If funded, the grant agreement would require proper consultation with the Tribes for situations when Tribal resources are encountered during project implementation. The DOI recommends funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within Basin and Proximate</u> : The project study area is within and adjacent to the Clark Fork River injured resource area.
<b>11. Actual Restoration of Injured Resources</b>	<u>May Contribute to Restoration</u> : The project would augment restoration activities by providing flow to the Clark Fork River, though the extent of the re-watering is undefined and would depend upon the time of year and the amount of flow on any water year.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Same</u> : The project would provide additional flow to the Clark Fork River, thereby improving its fishery and fishing opportunities. These services are the same lost recreational and habitat services addressed under <u>Montana v. ARCO</u> .
<b>13. Public Support</b>	<u>No Support Comments</u>

<sup>9</sup>. Racetrack Lake Dam Engineer's Report of Safety Inspection and Hazard Assessment, Hydrometrics, September 2010.

<b>Summary of RPPC Criteria Evaluation: Racetrack Creek Flow Restoration Project</b> <b>Applicant: Clark Fork Coalition</b>	
<b>14. Matching Funds</b>	<u>49% cash matching funds; 2% In-kind matching funds:</u> \$500,000 cash from the Columbia Basin Water Transaction Program for purchase of the water rights and \$15,000 in-kind matching funds from the CFC for due diligence work on water rights.
<b>15. Public Access</b>	<u>Not Applicable</u>
<b>16. Ecosystem Considerations</b>	<u>Positive:</u> The project will have positive effects because it fits within a broad ecosystem concept by improving flow to the Clark Fork River and it fits with the State's draft tributary prioritization plan that sets forth priorities on a broad basin-wide scale. <sup>10</sup>
<b>17. Coordination &amp; Integration</b>	<u>Coordinates/Integrates:</u> The proposal may coordinate and could potentially integrate well with restoration activities on the Clark Fork River by augmenting flow and improving the fisheries. It addresses goals 1 & 2 set forth in the State's draft tributary prioritization plan that focus on restoring the Clark Fork River fishery by improving recruitment and trout angling. <sup>11</sup>
<b>18. Normal Government Functions</b>	<u>Outside of Normal Government Function:</u> The proposal is not an activity that a governmental entity is obliged by law to conduct or would normally conduct without supplemental funding.

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<sup>10</sup> *Draft Prioritization of Tributaries in the Upper Clark Fork River Basin for Fishery Enhancement, prepared by FWP and NRDP, May 2010.*

<sup>11</sup> Ibid.

## **East Ridge Foundation with the U.S. Forest Service Maud S Canyon Trails and Open Space Project**

### **Project Summary**

The East Ridge Foundation, in cooperation with U.S. Forest Service, initially requested \$355,920 in Restoration Funds to enhance and protect the Maud S Canyon Areas as a community open space/recreational trail area by conducting land acquisition, land reclamation, and trail development activities. Due to failed negotiations with an adjacent landowner, however, the location of the trail was changed from a private parcel to a parcel of Forest Service land instead. Without those acquisition costs, the applicant reduced its request to \$115,598, with the goals and objectives remaining the same. This evaluation is based on this revised amount.

The project location is the Maud S Canyon (Figure 2), which is located within the urban area of Butte and is adjacent to existing land owned by the East Ridge Foundation (ERF) and National Forest Service land. The ERF property is approximately 132 acres of land that is available to the public for non-motorized recreational opportunities. The proposed trail is approximately 1.75 miles long mostly on ERF property, with the exception of a ½ mile section to be located on Forest Service property.

This proposal has three main components: 1) acquisition of four parcels of adjacent land; 2) completion of a loop trail system that will provide access to the Continental Divide National Scenic Trail; and 3) reclamation and protection of the acquired land. Following is a summary of the costs for these components. This project also contains a contingency of \$7,600.

#### **Land Acquisition (\$46,598 requested or 40% of total Restoration Funds requested):**

Four parcels totaling 69 acres that are owned by the Fredlunds would be purchased under this proposal. This property would provide additional open space and protect the area from future development. The acquisition costs are estimates, as these parcels have not been appraised.

<b>Acquisition Costs</b>	
Appraisal	\$2,500.00
Survey/filing	\$3,000.00
Purchase fees	\$3,000.00
Fredlund property	\$38,098.00
<b>Total</b>	<b>\$46,598.00</b>

#### **Loop Trail and Maintenance (\$56,400 requested or 48% of total Restoration Funds requested):**

Two trails currently exist that provide access to the Burlington Northern Santa Fe Railroad (BNSF) and then to the top of the drainage. From that point, there is a primitive trail on National Forest Service land that leads to the Continental Divide. Current users of the trail system have established a trail that loops down the face of the lower ridge to the railroad. This trail does not meet acceptable trail design standards and there are also safety concerns associated with the active railroad status of the BNSF line. Currently, users either cross the tracks or travel parallel

to the tracks, which is unacceptable to BNSF. The Forest Service is currently working with BNSF line to obtain a formal agreement for a trail crossing. In order to relocate the trail to meet approved design standards, the loop component of the trail will be located on an isolated section of National Forest land. This trail will be approximately 1.75 miles long to provide a scenic loop and would meet Forest Service design standards.

**Loop Trail / Maintenance Costs**

Loop trail survey and design	\$1,950.00
Loop trail construction	\$43,750.00
Weed spraying	\$10,550.00
Native seed mix	\$150.00
<b>Total</b>	<b>\$56,400.00</b>

**Protection and Rehabilitation (\$5,000 requested or 4% of total Restoration Funds requested):**

The Yellow Jack parcel, included in the acquisition, which has remnants of past mining activities and contains shallow shafts, would be reclaimed.

**Protection / Rehabilitation Costs**

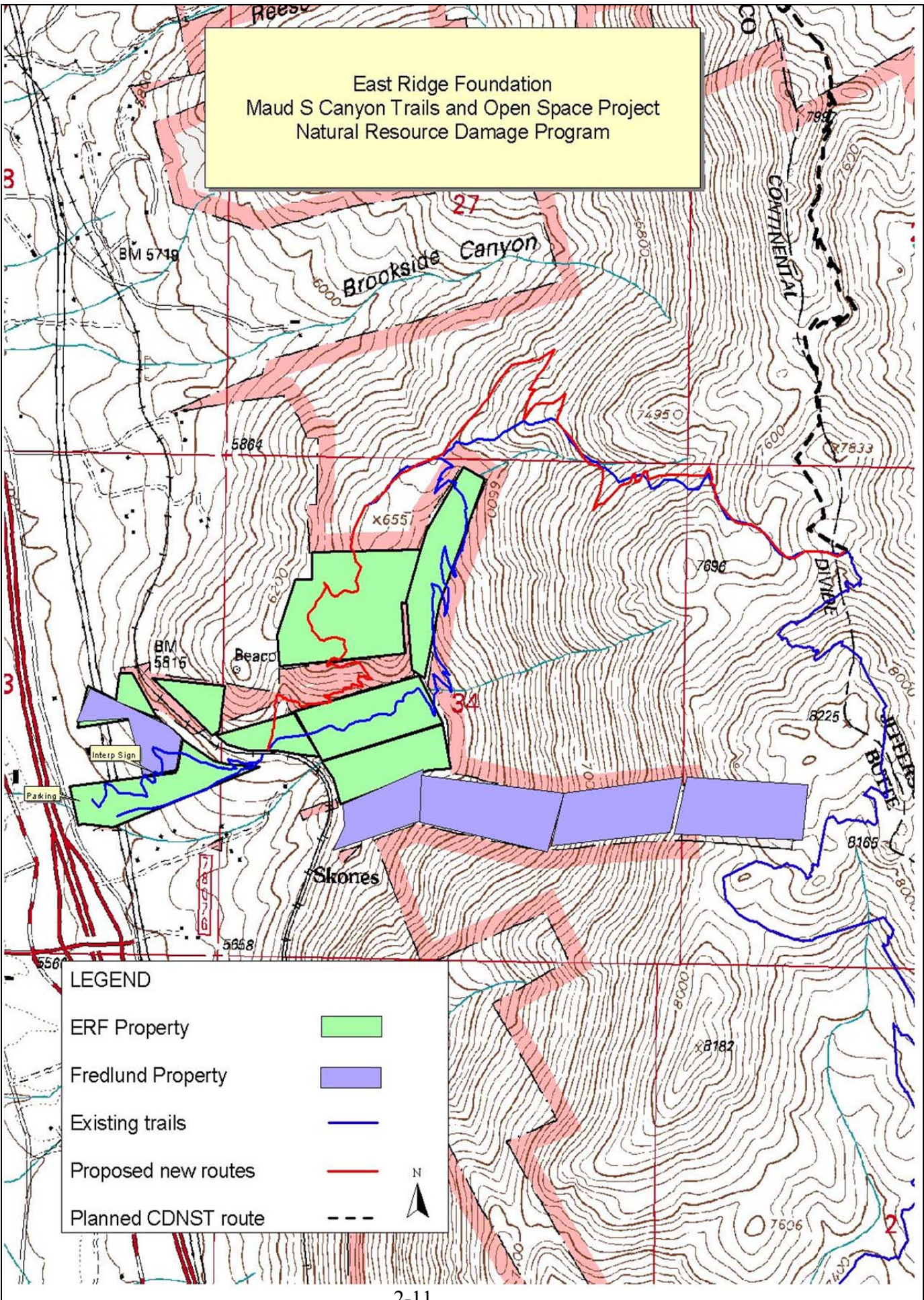
Yellowjack mine rehabilitation	\$5,000.00
<b>Total</b>	<b>\$5,000.00</b>

**Final Funding Decision and Conditions**

The Governor approved this project for partial funding of \$62,040, subject to the standard *RPPC* funding conditions and two additional funding conditions requiring: 1) NRDP review and approval of final trail design and the agreement between the ERF and USFS; and 2) approval by BNSF of the trail railroad crossing. The acquisition (\$46,598) and rehabilitation (\$5,000) project components were not approved for funding. The acquisition of the property is not necessary to complete the loop trail and costs of the acquisition outweigh the benefits. Based on these reductions to the project, the contingency is reduced from \$7,600 to \$5,640, which is 10% of the project budget.



Figure 2





**Summary of RPPC Criteria Evaluation for Maud S Canyon Trails and Open Space Project**  
**Applicant: East Ridge Foundation with the U.S. Forest Service**

<b>Project Summary</b>	The East Ridge Foundation (ERF), in cooperation with the U.S. Forest Service (USFS) seeks \$115,598 <sup>1</sup> for the development of a loop trail system at Maud S Canyon and protection of surrounding land. The application includes purchase of four parcels; survey, design and construction of trail; and rehabilitation of purchased parcels. As revised by the ERF, the total project costs are \$247,893 with \$88,895 of cash match and \$43,400 of in-kind match.
<b>Final Funding Decision and Conditions</b>	The Governor approved this project for partial funding of \$62,040, subject to the standard <i>RPPC</i> funding conditions and two additional funding conditions requiring: 1) NRDP review and approval of final trail design and the agreement between the ERF and USFS; and 2) approval by BNSF of the trail railroad crossing. The acquisition (\$46,598) and rehabilitation (\$5,000) project components were not approved for funding. The acquisition of the property is not necessary to complete the loop trail and costs of the acquisition outweigh the benefits. Based on these reductions to the project, the contingency is reduced from \$7,600 to \$5,640, which is 10% of the project budget.
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<p><u>Reasonable Feasibility for Trail Component/Uncertain Feasibility for Acquisition/Rehabilitation Component:</u> The objectives in this proposal appear to be feasible and standard technologies will be implemented for the building of the trail. All trail work will meet USFS trail standards and design. Both the USFS and ERF have committed to maintaining the trails in conjunction with USFS staff and volunteer groups/individuals. One uncertainty is the portion of the trail that is going to be built on USFS property. The revised application does not address what steps will be taken for access or permitting on this property, although a representative of the USFS has indicated that the agency is in agreement.<sup>2</sup> If obtaining access on the USFS property is successful, which has occurred with other existing sections of the trail, the building of the trail appears to be feasible. Another uncertainty involves the needed approval by BNSF of the trail railroad crossing. The NRDP's two recommended funding conditions address these uncertainties.</p> <p>The acquisition portion of the project, which involves four parcels owned by one entity, has significant uncertainties because all of the land transaction due diligence work (appraisal, buy/sell, and title work) has not been completed. The ownership of the mineral rights is also in question due to the lack of title work. While there appears to be a willing seller, the lack of information makes this portion of the project uncertain. It also lends significant uncertainty to the rehabilitation component, which would occur on one of the parcels to be acquired.</p>
<b>2. Costs:Benefits</b>	<u>Net Benefit with NRDP revisions:</u> The benefits of this project would be to enhance recreational opportunities and open-space enjoyment by creating an additional 1.75 miles of trail next to Butte's urban corridor on the existing Maud S Trail.

<sup>1</sup> The original requested amount was \$355,920, but after negotiations fell through with an adjacent landowner, the application was revised and resubmitted on 9/23/10.

<sup>2</sup> Email from Jocelyn Dodge dated 9/27/10 indicates that the Forest Service is in agreement with East Ridge Foundation building across Forest Service land and if the project is funded they will complete an agreement.

**Summary of RPPC Criteria Evaluation for Maud S Canyon Trails and Open Space Project**  
**Applicant: East Ridge Foundation with the U.S. Forest Service**

The area is a popular recreation area, with an estimated use of 30-50 per day during the week and twice that on weekends.<sup>3</sup> A loop trail connection will be created, which would decrease safety concerns for the current user-created loop that does not meet trail standards and address additional concerns with regard to an active railroad crossing. The applicant indicates that it is the USFS' intention to continue the Continental Divide National Scenic Trail along the East Ridge past Our Lady of the Rockies to the Nez Perce Trail No. 92 in Elk Park. Future trail connections are also planned from Maud S to the pending Children's Fishing Pond. Its location directly off I-90 is a primary gateway to the urban community of Butte will be accessible to both residents and visitors to the area. The cost of trail construction and maintenance (\$62,040) would be of net benefit.

The portions of the project not recommended for funding are the acquisition of the Fredlund property and associated rehabilitation of one of the parcels in that acquisition. These portions of the project are not considered cost-effective and do not add sufficient benefit to the project. While the acquisition would provide 69 additional acres of open space, the costs exceed the benefits that would be achieved. The proposed acquisition area is not needed for the loop trail, and since there is no legal access to these parcels, the risk that the property would be developed, with a resulting loss of open space, is low.

**3. Cost-Effectiveness**

Cost-Effective with NRDP Revisions: Except for the acquisition and rehabilitation components, the proposed approach, level of effort, and costs are reasonable. The proposed approach of using existing ERF and USFS property for the new trail addition is cost-effective compared to locating the trail on private lands. The applicant originally provided analysis of different options including: 1) the acquisition without management or restoration; 2) trail easements; and 3) no action. Based on failed negotiations with an adjoining landowner, the applicant's revised proposal looked at the option of placing the loop trail on USFS land, which was ultimately selected as the preferred alternative. Alternative 2, easements on the Fredlund property, should have been explored further. This option would have protected the land as open space at a much lower cost, particularly since the possibility exists of landowner donation.<sup>4</sup> With the revised trail location, concerns about trail maintenance needs on this property no longer exist. Another alternative that should have been explored would be to locate the loop trail on existing ERF or USFS property, and finding alternative funding sources for the purchase of the adjoining property, or not purchasing the property at all, since it has a low risk of being developed due to the lack of legal access. This alternative recommended by the NRDP accomplishes the overriding goal of the proposal, to build a loop trail system, at lower costs, and is thus considered more cost-effective than as proposed.

**4. Adverse Environmental Impacts**

Short-Term Adverse Impacts with Mitigation: There are potential short-term adverse impacts to riparian, wetland, and terrestrial areas that could result from trail construction activities. These impacts and mitigation of them would be

<sup>3</sup> These use estimates were provided by Jocelyn Dodge of the USFS to Kathy Coleman of the NRDP in a 10/1/10 e-mail.

<sup>4</sup> This option was raised as a possibility to explore with the Fredlunds at the 8/11/10 Advisory Council site visit.



**Summary of RPPC Criteria Evaluation for Maud S Canyon Trails and Open Space Project**  
**Applicant: East Ridge Foundation with the U.S. Forest Service**

	addressed through best management practices during construction and reclamation activities. The ERF recognized the need for required permits, and they planned for the needed weed control to address impacts of increased site use.
<b>5. Human Health and Safety</b>	<u>Short-Term Adverse Impacts with Mitigation:</u> The applicant acknowledges that there may be some short term impacts to human health and safety that may result for construction activities such as dust, noise and access; however, the implementation of worker safety and traffic control plans during construction and the reclamation will mitigate these potential adverse impacts.
<b>6. Results of Response Actions</b>	<u>Consistent:</u> This project will not duplicate or interfere with results of a Superfund response action, as it is an area that is not proposed for remediation. Through the planned efforts to rehabilitate and protect the natural resources of the Maud S area, the full project may augment remediation efforts in the Butte area.
<b>7. Natural Recovery Potential</b>	<u>No Effect on Recovery Period</u>
<b>8. Applicable Policies and Laws</b>	<u>Consistent/Sufficient Information Provided:</u> The application indicates adequate knowledge of the applicable laws and rules that must be addressed to implement the project, including a local conservation district 124 permit.
<b>9. Resources of Special Interest</b>	<u>No Impact:</u> According to the Forest Service Zone Archeologist, there are no known Tribal resources located within the project boundaries. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of partial funding of this project as recommended by that Council (see Appendix B). If funded, the grant agreement would require proper consultation with the Tribes for situations when Tribal resources are encountered during project implementation. The DOI also recommends partial funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within the Basin and Proximate:</u> The proposed project area is close to the Butte Area One and Silver Bow Creek injured areas and the Butte Priority Soils Operable Unit.
<b>11. Actual Restoration of Injured Resources</b>	<u>No Restoration:</u> This is a replacement project and is not intended to accomplish restoration of an injured natural resource. It does, however, have the potential to enhance the resources through soil stabilization and revegetation.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Similar:</u> The ecological and recreational services that would be enhanced by the project are similar to some of the services that were lost or impaired under <u>Montana v. ARCO</u> , such as hiking and bird watching.
<b>13. Public Support</b>	<u>13 Support Letters:</u> from the Rotary Club of Butte; Butte Restoration Alliance; USFS; Montana Fish, Wildlife and Parks; Mile High Back Country Horsemen; P & M Runners; Project Green of Montana; All About Dawgs; Butte Silver Bow Weed District; Thread Writers; Two Wheelz; Robert Lienemann; and Kelly Hemmert.
<b>14. Matching Funds</b>	<u>53% as proposed, 67% as recommended (\$88,895 cash match(45%); \$43,400 in-kind match (22%)):</u> The cash match includes Recreational Trails Program grants in the amount of \$85,750 and weed spraying in the amount of \$3,145. Of the total in-kind match, \$43,150 is volunteer labor and \$250 for fencing material.

**Summary of RPPC Criteria Evaluation for Maud S Canyon Trails and Open Space Project**  
**Applicant: East Ridge Foundation with the U.S. Forest Service**

<b>15. Public Access</b>	<u>Potential Increased Public Access:</u> Presently the Maud S area is open to public access and provides trail opportunities. This project provides an additional 1.75 miles of trail, which may increase use. The ERF adequately plans to address any potential adverse impacts for this increased use, such as additional weed control needs.
<b>16. Ecosystem Considerations</b>	<u>Positive:</u> Implementation of this project would fulfill a number of restoration needs outlined in the <i>Silver Bow Creek Watershed Restoration Plan</i> including developing open space and trails and creating additional trails between the Greenway and the urban residential areas.
<b>17. Coordination &amp; Integration</b>	<u>Coordinates:</u> The proposed project is coordinated and integrated with three planning documents adopted by B-SB – its <i>2009 Growth Policy</i> , the <i>2009 Comprehensive Master Plan for Parks, Trails, Open Space and Aquatics</i> , and B-SB’s <i>2020 Vision Statement</i> . The USFS intends to continue the Continental Divide National Scenic Trail along the East Ridge past Our Lady of the Rockies to the Nez Perce Trail No. 92 in Elk Park. It is envisioned that this trail system can eventually tie into the proposed Hillcrest Children’s Fishing Pond/Recreation area.
<b>18. Normal Government Functions</b>	<u>Outside/Augments Normal Government Function:</u> No governmental entity is specifically responsible for or funded for the proposed project activities. The ERF is a non-profit organization and does not have an income source other than grants. The USFS has indicated that they do not have funding to develop this portion of the Maud S trail and that their resources are going towards the Continental Divide National Scenic Trail. The next section of this trail to be funded and constructed by the USFS is the section from Maud S Canyon to the Lady of the Rockies at an estimated cost of \$150,000.
<b>Property Acquisition Criteria</b>	The NRDP does not recommend the land acquisition portion of this proposal as discussed in criteria #2 and #3.
<b>21. Desirability of Public Ownership</b>	<u>Replacement Beneficial:</u> While purchase of this property would be beneficial in that it would protect the resource from possible development, there are too many uncertainties as discussed in criterion #2 and #3. The property involved in the acquisition would not go into public ownership, but instead be owned by ERF and provide public access. The acquisition portion of the project is not being recommended (see criterion #2 & #3), but if it were it would require a deed restriction to ensure the State’s investment was protected.
<b>22. Price</b>	<u>Uncertain:</u> The reasonableness of the proposed purchase price associated with the proposed acquisition of \$46,598 is uncertain because it is not based on an appraisal and there are too many unknowns regarding the property, including access issues and mineral rights, due to the lack of completed title work and a buy/sell agreement.

## **Butte Silver Bow and the Skyline Sportsmen's Association Children's Fishing Pond/Hillcrest Open Space Project**

### **Project Summary**

Butte-Silver Bow City/County Government (B-SB) and the Skyline Sportsmen's Association request \$1,566,998 to develop and maintain a children's fishing pond and passive recreation area within the urban corridor of Butte (Figure 3). B-SB owns the 57-acre tract of land in east Butte near the intersection of I-15 and I-90, called the Hillcrest area, which is where the 0.5 acre fishing pond and adjoining recreation area are to be located. Reese Creek, a perennial stream that runs from the East Ridge under I-15 to the site, is the potential water source for this pond, in addition to a deep well to augment during low flow periods. As proposed, total project costs are \$2,337,133, with \$750,136 of in-kind match, and \$20,000 cash match. The three major project components proposed for Restoration Fund expenditure include design and construction for \$1,173,349; operation and maintenance (O&M) costs for five years at a cost of \$374,871; and educational development costs for \$18,778.

Design, Engineering, and Construction (\$1,173,349 requested or 74% of total Restoration Funds requested): The major design, engineering, and construction activities will consist of stream restoration work, building of the pond, trails, and amenities. Reconstruction of approximately 600 feet of Reese Creek is necessary for the capture and use of this surface water for the pond. A deep well will be drilled adjacent to the pond to augment flows into the pond during low flow periods. The pond will be built following the Montana Fish, Wildlife and Parks (FWP) design criteria.<sup>1</sup> It would be about 12 to 15 feet deep, designed to prevent winterkill.

The open space park will include a parking area, hang glider landing area, and approximately 1.5 miles of gravel trails with a paved trail from the parking lot to the pond. It will be closed to motorized use. The vegetation of the open space area will consist of three major areas: the riparian/wetland zone surrounding the stream channel and pond; upland areas planted with native grass mix; and upland areas planted with native grass, forb, and shrub species. Proposed amenities include a full service restroom, a picnic area with six cement tables, and a natural amphitheater for outdoor education activities that will consist of a small hillside and tiers for seating up to 40 students. Park amenities include: picnic areas with benches; boardwalks on trail with stream crossing; fencing around riparian areas and interpretive signs. A further breakdown of design, engineering and construction costs is included in Table 1.

5 years Operations and Maintenance (\$374,871 or 23% of total Restoration Funds requested): The applicants request approximately \$75,000 per year for five years of operation and maintenance. This would include a maintenance supervisor and two technicians full time for six months per year. This budget would also include supplies, utilities, and weed control. Restoration Funds would also be used to purchase a service truck, mowers, repair parts for the well pump, and miscellaneous tools. The breakdown for these costs is:

- Salary and Benefits (manager & two staff) \$308,270
- Supplies and materials \$ 38,000
- Utilities \$ 3,600
- Equipment (truck, mowers) \$ 25,000

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<sup>1</sup> *A Guide to Building and Managing Private Fish Ponds in Montana*, by FWP, July 2006.

Education Component (\$18,998 or 1% of total Restoration Funds requested): These funds would be for staff of the Clark Fork Watershed Education Program (CFWEP) to prepare an outdoor classroom guide and develop content for twelve education stations within the park area. The educational component will be implemented by CFWEP, and the material will be based upon the existing CFWEP curriculum, but adapted for grades K-6. CFWEP will be coordinating with local teachers on the development of the curriculum.

#### Past and Current Related Projects

A \$25,000 Project Development Grant was approved in 2008 to complete a feasibility study and a site master plan for the construction of this pond in the Hillcrest area. Results from this study revealed that the water quality is good and that there is sufficient ground and surface water available to support a pond. To date, \$16,999 has been spent on the grant.

#### Final Funding Decision and Conditions

The Governor approved this project for partial funding of \$1,200,000, subject to the standard *RPPC* funding conditions and the following additional funding conditions requiring that: 1) the NRDP approve of the educational materials; and 2) that B-SB place a deed restriction on the property to assure the goals of public access and open space are met in the long-term.

Below is a table showing the proposed amount and the approved amount for those categories which have been reduced. For operations and maintenance, the recommended funding is for a .5 FTE for the first five years and \$38,000 for supplies and materials for five years, which includes weed control. The operations and maintenance budget was reduced by \$252,006. The bathroom costs were reduced by \$36,760, and the interpretive signs under park amenities were reduced by \$15,000. The contingency on the project was reduced by \$63,234. The reasons for these reductions are detailed in criterion #2.

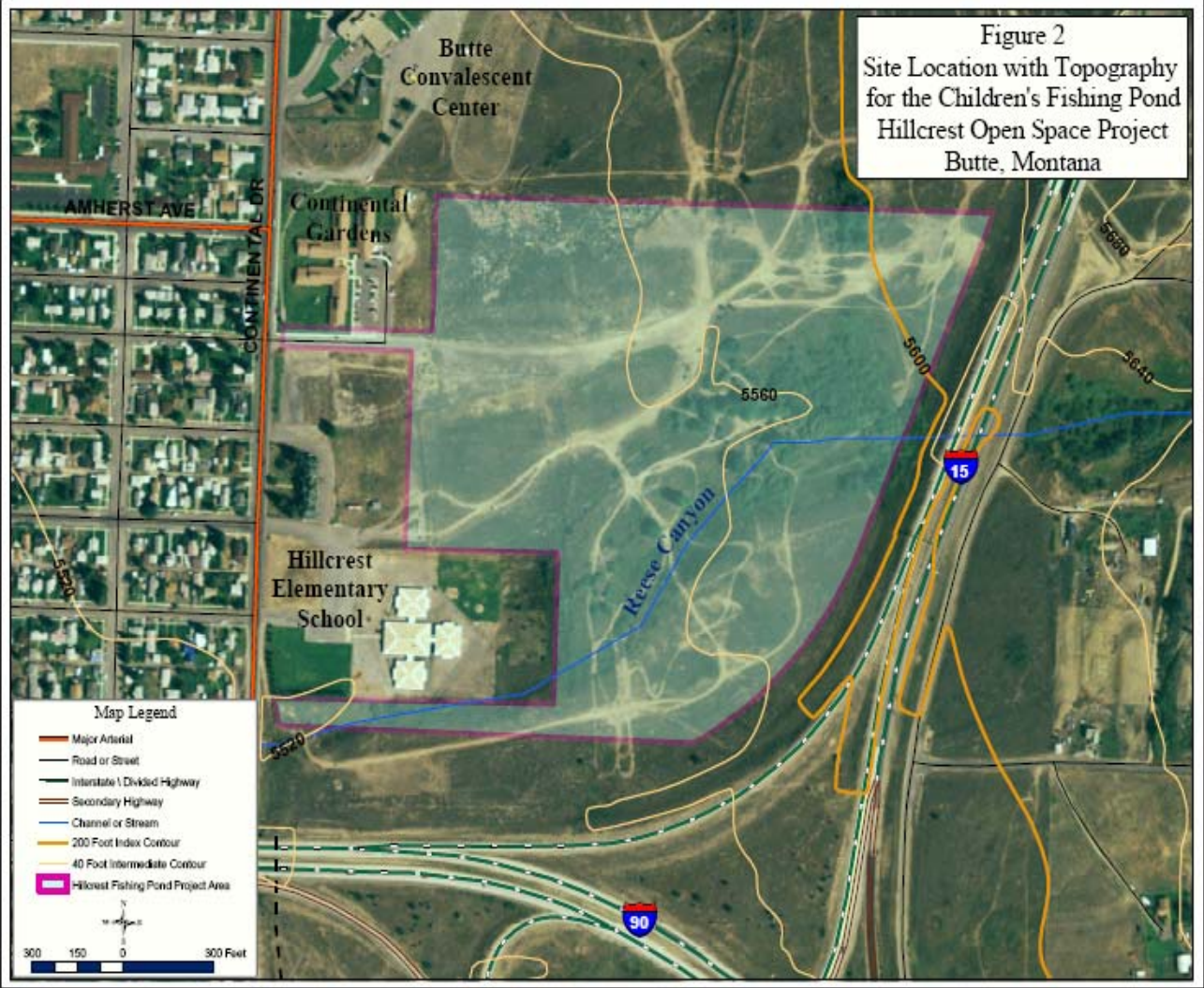
**Table 1**

<b>Budget Category</b>	<b>Proposed Amount</b>	<b>Approved Amount</b>	<b>Reduced Amount</b>
Pond/Amphitheater	\$202,668	\$202,668	\$0
Well Construction	\$81,834	\$81,834	\$0
Parking Lot & Trail Construction	\$230,578	\$230,578	\$0
Park Reclamation	\$146,685	\$146,685	\$0
Stream Restoration	\$56,260	\$56,260	\$0
Park Amenities w/o Bathroom	\$101,357	\$86,357	\$15,000
Bathroom	\$158,410	\$121,650	\$36,760
Contingency <sup>2</sup>	\$146,669	\$83,435	\$63,234
Bonds	\$48,890	\$48,890	\$0
Education	\$18,778	\$18,778	\$0
Operation and Maintenance	\$374,871	\$122,865	\$252,006
<b>Total Project</b>	<b>\$1,567,000</b>	<b>\$1,200,000</b>	<b>\$367,000</b>

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<sup>2</sup> In order to stay within the \$1,200,000 amount approved by the Trustee Restoration Council, the applicant agreed that the contingency be reduced to 9%.

Figure 3



**Summary of RPPC Criteria Evaluation for Children’s Fishing Pond/Hillcrest Open Space Project**  
**Applicant: Butte Silver Bow and the Skyline Sportsmen’s Association**

<b>Project Summary</b>	Butte-Silver Bow City/County Government (B-SB) and the Skyline Sportsmen’s Association request \$1,566,998 to develop and maintain a children’s fishing pond and passive recreation area within the urban corridor of Butte near the intersection of I-15 and I-90, called the Hillcrest area. As proposed, total project costs are \$2,337,133, with a claimed \$750,136 of in-kind match and \$20,000 cash match. The three major project components proposed for Restoration Fund expenditure include design and construction for \$1,173,349; operation and maintenance (O&M) costs for five years at a cost of \$374,871; and educational development costs for \$18,778.
<b>Final Funding Decision and Conditions</b>	<p>The Governor approved this project for partial funding of \$1,200,000, subject to the standard <i>RPPC</i> funding conditions and the following additional funding conditions requiring that: 1) the NRDP approve of the educational materials; and 2) that B-SB place a deed restriction on the property to assure the goals of public access and open space are met in the long-term.</p> <p>Budget cuts recommended by TRC and approved by Governor: For operations and maintenance, approved funding is for a .5 FTE for the first five years and \$38,000 for supplies and materials for five years, which includes weed control. The operations and maintenance budget was reduced by \$252,006. The bathroom costs were reduced by \$36,760, and the interpretive signs under park amenities were reduced by \$15,000. The contingency on the project was reduced by \$63,234. The reasons for these reductions are detailed in criterion #2.</p>
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<p><u>Reasonably Feasible</u>: There are no significant uncertainties with regards to the engineering, design, construction, and maintenance of the proposed pond/recreational area. Results from ground and surface water sampling revealed that the water quality is good and that there is sufficient ground and surface water available to support a pond. The pond will be designed to prevent winterkill. Surface water from Reese Canyon can be used to supply the pond, with the planned restoration of the stream channel to prevent loss of that surface water between the outlet and the pond inlet. Low stream flows will be augmented with a deep ground water well drilled near the pond. The applicants indicate that they will obtain all necessary permits associated with work within a floodplain and also obtain any necessary water rights permits/authorizations. B-SB recognizes coordination with FWP will be needed with regards to the stocking needs and requirements. In preliminary discussions, FWP indicated its willingness to stock the pond annually. The proposed operation and maintenance activities are feasible and routinely conducted by B-SB park crews. There are no uncertainties with regards to the education component, as long as it is conducted by the CFWEF as proposed and remains consistent with the current curriculum. Since this is currently a high use motor vehicle area, education and enforcement of appropriate trail use is necessary. B-SB intends to rely on signage identifying proper trail use and installing a perimeter fence on a portion of the project area. Judged by continued vandalism problems in other existing park areas, whether or not B-SB can provide the needed enforcement and protection of this area is uncertain.</p>

**Summary of RPPC Criteria Evaluation for Children's Fishing Pond/Hillcrest Open Space Project**  
**Applicant: Butte Silver Bow and the Skyline Sportsmen's Association**

<p><b>2. Costs:Benefits</b></p>	<p><u>Net Benefit, as revised; Net Cost as proposed:</u> The applicants indicate that the project location at the primary gateway to the urban community of Butte will attract both residents and visitors to the area. The \$1,192,127 for design, engineering, construction, and the educational components is likely of net benefit, based on the anticipated natural resource and recreational benefits, especially given the location to the urban corridor and the fact that it will be the only children's fishing pond in the Butte area. Establishment of a fishing pond and recreational open space area in east Butte will provide for recreation opportunities that would benefit a large public, including area youth and residents, as well as visitors. In addition to these recreational service benefits, the project would involve rehabilitation and protection of riparian and upland habitats and outdoor education opportunities. Adding to the project's value, B-SB is donating the land (57 acres) for this project, which has an estimated value of \$677,000.<sup>3</sup> To assure that the investment of Restoration Funds in and benefits of this project are maximized in the long-term, a funding condition is recommended that B-SB place a deed restriction on the property to assure the goals of public access and open space are met in the long-term.</p> <p>In terms of costs, the recommended cuts are to portions of the O&amp;M, restroom, signage, and contingency project components. A large portion of the O&amp;M budget is considered to be of net cost, namely salaries for three individuals full time for six months a year and the purchase of a truck. B-SB commits to the long-term maintenance of the Hillcrest park, after the initial five years of grant assistance for O&amp;M costs. Although the O&amp;M budget would also cover O&amp;M activities for five years at Thompson Park and Big Butte recreational sites, B-SB previously committed to not seek Restoration Funds for any future O&amp;M costs at those two sites in its 2005 and 2008 grant requests for those projects. Paying the entire portion of three staff and purchase of a maintenance truck is excessive and duplicative concerning the Big Butte and Thompson Park projects; therefore, the costs for this component outweigh the benefits. The recommended budget for O&amp;M of \$122,865 will cover funding of .5 FTE for the first five years, dedicated solely to the Hillcrest park area, and includes the requested \$38,000 for supplies and materials, including weed control. The proposed cost for installing a full service bathroom at \$158,410 is excessive compared to other similar recreational projects funded by NRDP and has been reduced by \$36,760. The cost for signs appears to be excessive for the total acreage of the project (15 signs for \$30,000). The signage budget is recommended to be cut to \$15,000. A 10% contingency percentage was recommended; however, in order to stay within the \$1,200,000 budget recommended by the Trustee Restoration Council and approved by the Governor, the applicant agreed to reduce the contingency to 9%. In addition, the total contingency was reduced as a result of the other project reductions. With this total budget cut of \$367,000, the project is considered to be of net benefit.</p>
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<sup>3</sup> The estimated is based on current Department of Revenue assessment, as indicated in a 9/27/10 from Jon Sesso of B-SB to Kathy Coleman of NRDP.

**Summary of RPPC Criteria Evaluation for Children’s Fishing Pond/Hillcrest Open Space Project**  
**Applicant: Butte Silver Bow and the Skyline Sportsmen’s Association**

<b>3. Cost-Effectiveness</b>	<u>Cost-Effective:</u> The proposed approach, level of effort, and costs for the project are reasonable, except for those components not recommended for funding due to excessive costs. The applicants provided alternatives that included the proposed action, no action, placement of a fishing pond in three other sites in Butte, or delaying the project. Delaying the project efforts would reduce the benefits. Appendix A of the application contains the results of a fishing pond site comparison study that describes the potential sites and provides the reasons for site selection based on cost, safety, and environmental condition factors. The study concluded the Hillcrest site as the most suitable, due to its accessible location, safety aspects, and lack of known soil or water contamination. After the site was chosen, a site analysis was done to consider location and design alternatives for the desired project components. The analysis also examined the ecology, history, and human factors associated with the site. <sup>4</sup> Since B-SB owns the selected site, there would not be any acquisition costs associated with the preferred alternative, therefore offering cost savings. An alternative not examined by the applicants would be funding portions of the project and not others, such as: construction of the pond only with no parking, trail system, or amenities; or funding of the construction with the trails and amenities, but not the O&M. Funding of the pond with no trails or amenities would detract from the overall success of the project and likely decrease the usage. The TRC’s recommended partial funding alternative should provide similar benefits as the proposed project at substantially reduced costs.
<b>4. Adverse Environmental Impacts</b>	<u>Short Term Adverse Impacts with Mitigation:</u> There are potential short term adverse impacts to surface water, riparian areas, and wetlands that were not addressed by the applicants; however, these impacts and mitigation would be addressed under the necessary permits required for this project, including 310 and 404 permits. The applicants did recognize and list the required permits, and they planned for the needed weed control to address impacts of increased site use.
<b>5. Human Health and Safety</b>	<u>No Significant Adverse Impacts:</u> This project does not involve any activities that will significantly adversely impact human health and safety or other aspects of the human environment. The applicants noted that officials of the nearby Hillcrest Elementary School have indicated their support of the project in meetings and that they will involve these officials in final design efforts to address any student safety issues that could arise with the fishing pond. The project will result in an increased demand on governmental entities and need for additional weed control, but these impacts are adequately planned for by the applicants. By dedicating the site to open space/recreational use, the County is precluding the increase in tax revenue that would occur with residential development.
<b>6. Results of Response Actions</b>	<u>Consistent:</u> This project will not duplicate or interfere with results of a Superfund response action, as it is an area that is not proposed for remediation.
<b>7. Natural Recovery Potential</b>	No Effect on Recovery Period

<sup>4</sup> Kate Dinsmore, “Enhancing Recreational Opportunities in Butte, Montana,” Landscape Architecture, University of Arizona, 2009.



**Summary of RPPC Criteria Evaluation for Children's Fishing Pond/Hillcrest Open Space Project**  
**Applicant: Butte Silver Bow and the Skyline Sportsmen's Association**

<b>8. Applicable Policies and Laws</b>	<u>Consistent/Sufficient Information Provided:</u> The B-SB Council of Commissioners adopted a Growth Policy in February 2009, in which the project area was designated Open Space, and the Planning Board is expected to recommend the area to be re-zoned from residential to Open Space in late September 2010. <sup>5</sup> Entities involved with needed zoning approvals include the Parks and Recreation Board, Planning Board, Public Works/Parks and Recreation Dept., the Chief Executive, and Council of Commissioners. All other permits required for the project have been identified and will be obtained, including any needed water rights permits/authorizations.
<b>9. Resources of Special Interest</b>	<u>No Likely Impact:</u> The B-SB Historic Preservation Officer indicated that there are no known Tribal resources located within the project boundaries. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of partial funding of this project as recommended by that Council (see Appendix B). If funded, the grant agreement would require proper consultation with the Tribes for situations when Tribal resources are encountered during project implementation. The DOI also recommends partial funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within the Basin and Proximate:</u> The proposed pond site is close to the Butte Area One and Silver Bow Creek injured areas and the Butte Priority Soils Operable Unit.
<b>11. Actual Restoration of Injured Resources</b>	<u>No Restoration:</u> This is a replacement project outside an injured area. This project will not directly restore injured natural resources or contribute to the restoration of natural resources; however, with the proposed riparian and upland work outlined, the project will improve the riparian resources of Reese Creek.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Similar:</u> The ecological and recreational services that would be enhanced by the project are similar to some of the services that were lost or impaired under <u>Montana v. ARCO</u> , such as hiking and bird watching. Pond fishing is a recreational service that is considered similar to, but not the same as, services lost. The settlement in <u>Montana v ARCO</u> also resolved claims for services that unimpaired resources provide by virtue of their existence. The education portion of this grant focuses on the restoration of lost services through public education about the injured or lost natural resources and by enhancing stewardship of restored resources. The site is now, and would continue to be, used for a hang-glide landing, which is not considered to be a recreational service similar to that covered under the lawsuit. The amount of Restoration Funds, however, contributing to this aspect is minimal and confined to some leveling and planting.
<b>13. Public Support</b>	<u>11 Support Letters:</u> from Butte Silver Bow Planning Board, Wally and Darlene Frasz, Montana Gliding Association, Susanne Clague, Butte Public Schools, Trout Unlimited, Lewis and Terra Pesanti, the Butte Restoration Alliance, Two Wheelz, Thread Writers, and the B-SB Chief Executive/Council of Commissioners. Several public meetings were also held in conjunction with the documents discussed under criterion # 17, as well as the design process conducted as part of the PDG project.

<sup>5</sup> Information provided to Kathy Coleman of NRDP by Jon Sesso of B-SB in a 9/14/10 phone conversation.

**Summary of RPPC Criteria Evaluation for Children’s Fishing Pond/Hillcrest Open Space Project**

**Applicant: Butte Silver Bow and the Skyline Sportsmen’s Association**

<b>14. Matching Funds</b>	<p><u>39% Total Match</u>, as revised (\$20,000 cash match (1%); \$750,136 (38%) in-kind match: For cash match, the Skyline Sportsmen and Montana Hang Glider have committed \$10,000 each in cash.<sup>6</sup> Of the total in-kind match, \$677,000 is based on the value of the land that is being donated by B-SB. B-SB based this valuation on Department of Revenue analysis of undeveloped raw land (\$11,865/acre).<sup>7</sup> The NRDP agrees that the existing county ownership significantly reduces the overall project costs compared to a site under private ownership and that by donating the land, the county is precluding the potential income that would occur if the property were to be sold for residential development. (The NRDP did not analyze the suitability of this land for residential development.) The NRDP believes that if B-SB assured the use of the land for recreational and conservation purposes in perpetuity through a deed restriction as recommended in its funding condition, the estimated value of the land would be considered to be a legitimate match. In addition, B-SB will donate as an in-kind match \$23,600 in gravel, \$5,000 for truck use and tools, and \$16,282 for donated in-direct costs. The National Park Service’s Recreation, Trails and Conservation Assistance Program’s technical assistance was valued by the applicants at \$3,500. Volunteer labor from Montana Hang Gliders and Skyline Sportsmen was valued at \$2,000 and \$3,000 respectively.</p>
<b>15. Public Access</b>	<p><u>Increased Access Beneficial</u>: Presently, the Hillcrest area is open to public access, but is zoned as residential and not open space. B-SB is in the process of zoning the area as open space. The project would increase diverse public access to the Hillcrest area by creating a planned recreational area with parking, trails, and amenities. The project will result in an increased demand on governmental entities and a need for additional weed control, but these impacts are adequately planned for by the applicants. The project would displace recreational motorized vehicle users that have historically used the site. Motorized use in this area is not currently authorized, desired, or encouraged. Residents in the area have asked local government to try and control this unauthorized use. Although B-SB acknowledges this displacement of motorized users to other areas, the county does not believe it has an obligation to identify or manage other alternative areas.<sup>8</sup></p>
<b>16. Ecosystem Considerations</b>	<p><u>Positive</u>: This project would result in the Hillcrest site becoming open space lands to be rehabilitated and managed in an ecologically-protective manner, thus protecting riparian and terrestrial resources in the headwaters of the UCFRB that would occur. Implementation of this project would fulfill a number of restoration needs outlined in the <i>Silver Bow Creek Watershed Restoration Plan</i>, including creating fishing opportunities in the Butte area; develop open space and trails; and create additional trails between the Greenway and the urban residential areas.</p>
<b>17. Coordination &amp; Integration</b>	<p><u>Coordinates</u>: The proposed project is coordinated and integrated with three planning documents adopted by B-SB – its 2009 <i>Growth Policy</i>, its <i>Comprehensive Master Plan for Parks, Trails, Open Space and Aquatics</i>, and B-SB’s 2020</p>

<sup>6</sup> A detailed budget summary was not submitted with the application, but was submitted by Lori Casey in an email dated 9/23/10.

<sup>7</sup> Information provided in an e-mail Jon Sesso of B-SB to Kathy Coleman of NRDP dated 9/27/10.

<sup>8</sup> Information provided in an e-mail Jon Sesso of B-SB to Kathy Coleman of NRDP dated 9/27/10.

**Summary of RPPC Criteria Evaluation for Children's Fishing Pond/Hillcrest Open Space Project**  
**Applicant: Butte Silver Bow and the Skyline Sportsmen's Association**

*Vision Statement.* The educational component will be coordinated with CFWEP. It is envisioned that the Hillcrest trail system could eventually tie into the Maud S trail system.

**18. Normal Government Functions**

As revised: Outside Normal Government Function (Engineering, Design, Construction and Education Component)/Augments Normal Government Function (O&M): B-SB nor any other governmental entity is specifically responsible for, or currently funded for, developing the proposed fishing pond and passive recreational area. The applicants indicate that they do not have the funds to construct this project or the immediate improvements needed. The only project component that involves some governmental responsibility is the O&M component. The applicants indicate that after the initial capital investment is made, B-SB and the project partners will be accountable and prepared to assume the substantial share of long term operation and management responsibility for the project area. As proposed by the applicants, the proposed 5-year O&M component would have covered this site as well as two other park sites that were subject of past NRDP funding (Thompson Park and Big Butte), and possible other sites. As explained under criterion #3, the NRDP considered this request excessive, particularly since it proposes funding activities B-SB already committed to do as part of the approval of the funding of the previous grants and was not site-specific. As proposed, the NRDP considered the project component to unacceptably replace normal government function. With the O&M budget reduced to supply and materials and a .25 FTE seasonal worker specific to the proposed site as recommended by the NRDP, it augments normal government function.

**Property Acquisition Criteria**

Not Applicable: B-SB already owns the parcel contemplated for this project. There would be no change in ownership, just in designation of land use from residential to open space.

## **Butte-Silver Bow Big Hole Transmission Line Replacement – Year 4**

### **Project Summary**

Butte-Silver Bow (B-SB) proposes to replace 20,000 feet of deteriorated water transmission line that carries water from the Big Hole River to Butte (see Figure 4). The overall goal of this project is to provide safe, reliable and affordable drinking water to the citizens of Butte and Rocker. Up to 70% of the potable water supplied to Butte and all of the potable water supplied to Rocker comes from the Big Hole River, which is 22 miles south of Butte. Total project costs are \$3,450,000 with \$2,760,000 requested in Restoration Funds and \$690,000 in matching funds. Of this requested amount, \$2,310,000 is for pipeline materials and \$450,000 is for contracted engineering services.

The bedrock aquifer beneath Butte has been so severely injured by past mining operations that natural recovery of the aquifer will not occur for thousands of years as concluded by the State's 1995 Restoration Determination Plan and by the EPA's 1994 Record of Decision for the Butte Mine Flooding Operable Unit. Restoration of the bedrock aquifer is not feasible, thus the aquifer's availability as a source of drinking water and its storage 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. 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 its urban area.

### **Status of Past, Current, and Future Related Requests**

This proposal marks the fourth year of B-SB's request for Restoration Funds to replace sections of the Big Hole Transmission Line. The Governor has approved three previous grants in 2007, 2008, and 2009 to replace a total of 35,000 feet of transmission line (15,000 feet/year) for \$5,961,822 in Restoration Funds. B-SB has completed work on Year 1, and the project has been closed out. The physical installation of the new line has been completed for Year 2; however, the drawings have not been finalized and the NRDP has not received the final report or invoice. B-SB has also recently completed installation of 7,300 feet of new pipeline using \$750,000 in funds from a federal "Stimulus" grant. B-SB's consultant engineering firm has completed the design for the Year 3 transmission line, and the Montana DEQ has approved this design. The request for bids for the Year 3 materials has gone out, with proposals due back to B-SB by September 28, 2010. B-SB plans to approve the material purchased shortly thereafter and to begin installing pipe by mid-October 2010. B-SB will work through the 2010/2011 winter on Year 3 and hopes to complete installation of this approximately 15,000 feet run of pipe in April 2011. This segment should complete the pipeline all the way to the Feely Hill Treatment Plant, roughly the half way point from the Big Hole River to Butte. If Year 4 receives approval, B-SB's crews plan to start this project in April 2011 and should complete it by the end of 2011. B-SB hopes to ask for roughly 42,000 feet of pipe in a \$4.5 million Year 5 request that would

finish the transmission line all the way to Butte.<sup>1</sup> B-SB plans to continue seeking funding through federal appropriations, state loan/revolving funds, and possible rate increases and updates to service fees.

In addition to the three past Big Hole pipeline projects, B-SB has been approved for funding totaling \$21,455,412 for 14 other water system improvement grant projects. B-SB has also submitted two other water system grant requests this year: 1) a \$3,500,000 request to replace the deteriorated Big Hole Pump Station; and 2) a \$1,817,546 request to replace 13,000 feet of leaking waterline in Butte and install 500 meters in un-metered homes. The attached table summarizes the status of the past approved and current grant requests for B-SB water system improvements.

#### Final Funding Recommendation and Conditions:

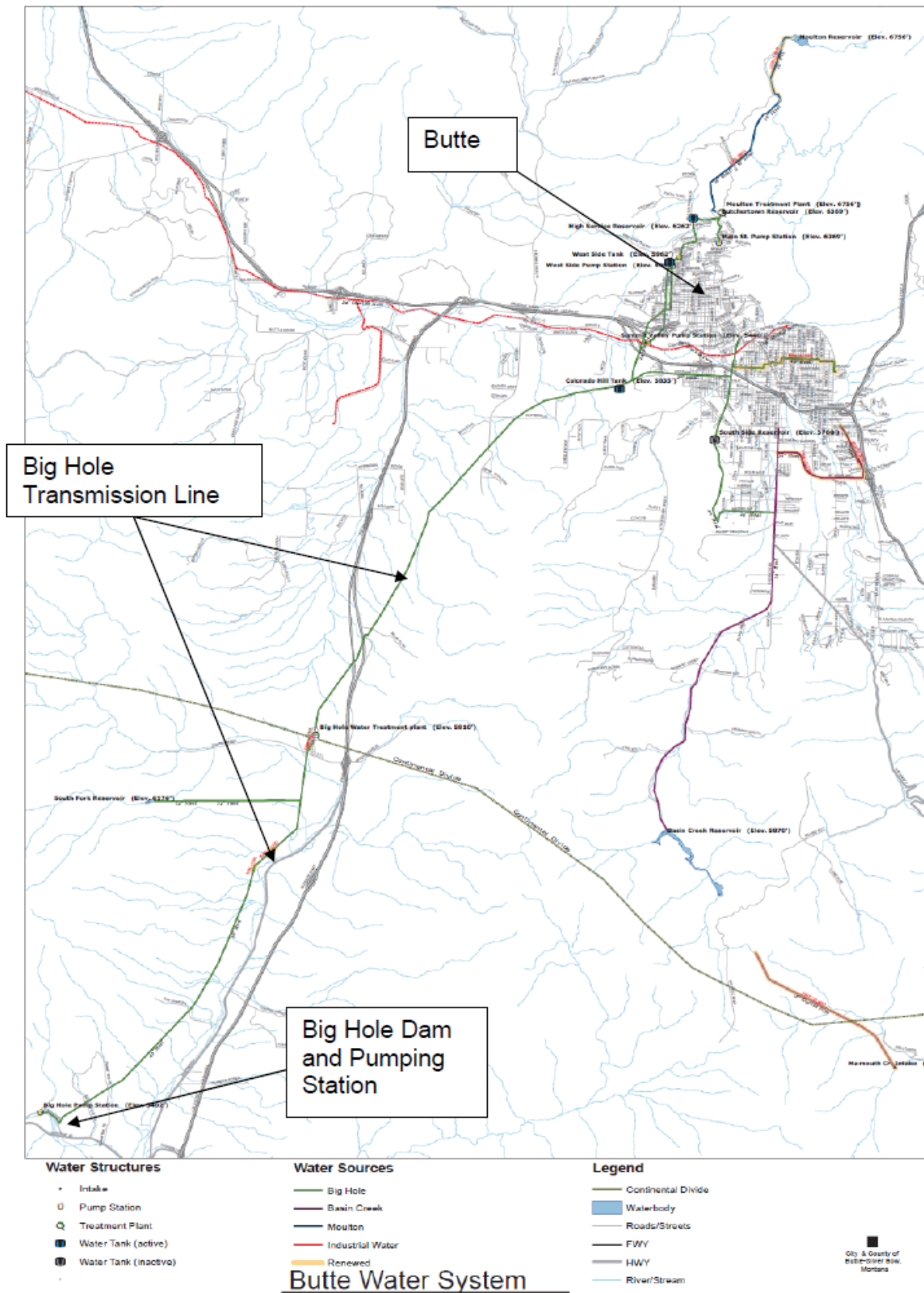
The Governor approved the project for the full funding requested of \$2,760,000, subject to the standard *RPPC* funding conditions.

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<sup>1</sup> Rick Larson of B-SB provided these updated estimates in a 9-13-10 telephone conversation with Pat Cunneen, NRDP. Beyond the Year 4 request, B-SB estimates it would take one more year and cost \$4.5 million to complete the project.

Grant Year	Project	Approved Restoration Funds	Committed Local Match	Status
2001	Year 1 - Butte Waterlines	\$1,165,795	\$542,719	completed & closed
2002	Year 2 - Butte Waterlines	\$1,168,842	\$543,218	completed & closed
2003	Year 3 - Butte Waterlines	\$1,188,905	\$553,497	completed & closed
	Basin Creek Dam Rehabilitation	\$503,006	\$303,006	completed & closed
2004	Year 4 - Butte Waterlines	\$1,197,971	\$557,917	completed & closed
	High Service Tank Replacement	\$1,192,802	\$343,010	completed & closed
2005	Year 5 - Butte Waterlines	\$1,539,269	\$513,089	completed & closed
	Master Plan	\$174,634	\$93,211	completed & closed
2006	Year 6 - Butte Waterlines	\$1,819,581	\$606,526	completed & closed
2007	Year 7 - Butte Waterlines	\$2,417,003	\$268,556	completed & closed
	Year 1 - Big Hole Transmission Line	\$1,644,722	\$548,242	completed & closed
2008	Year 8 - Butte Waterlines	\$2,414,424	\$314,647	completed; final invoice & report pending
	Big Hole Diversion Dam Replacement	\$3,714,833	\$441,012	on-going
	Butte Metering	\$273,600	\$51,561	on-going
	Year 2 - Big Hole Transmission Line	\$1,650,542	\$504,863	Pipe installed; final drawing, invoice & report pending
2009	Year 9 - Butte Waterlines	\$2,684,747	\$497,668	underway and on schedule; 80% completed
	Year 3 - Big Hole Transmission Line	\$2,666,618	\$687,049	pipe ordered; to be completed 4/2001
<b>Total</b>	<b>17 Projects Approved</b>	<b>\$27,417,294</b>	<b>\$7,369,791</b>	
		<b>Requested Restoration Funds</b>	<b>Proposed Local Match</b>	
2010	Year 10 - Butte Waterlines	\$1,817,546	\$201,950	
	Year 4 - Big Hole Transmission Line	\$2,760,000	\$690,000	
	Big Hole Pump Station	\$3,500,000	\$500,000	
	2010 Total Request	\$8,077,546	\$1,391,950	

Figure 4



Summary of RPPC Criteria Evaluation for Big Hole Transmission Line Replacement: Year 4 Applicant: Butte-Silver Bow	
<b>Project Summary</b>	<p>Butte-Silver Bow (B-SB) proposes to replace 20,000 feet of water transmission line from the Big Hole River to Butte. The Big Hole is the main water source for the City of Butte and the sole source for the community of Rocker. Total project costs are \$3,450,000 with \$2,760,000 requested in Restoration Funds and \$690,000 in matching funds.</p> <p>Overall Application Quality: Good.</p>
<b>Final Funding Decision and Conditions</b>	The Governor approved the project for the full funding requested of \$2,760,000, subject to the standard <i>RPPC</i> funding conditions.
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<u>Reasonably Feasible</u> : The proposed design and construction tasks are technically feasible and the selected approach is likely to achieve the stated objectives. B-SB will use county crews to replace the waterline and employ standard construction methods and materials to implement the project. To date, B-SB has replaced approximately 27,000 feet of Big Hole Transmission Line, plus 52,000 of other B-SB water transmission lines, using its own crews. On average, B-SB crews have been able to install 200 feet/day; therefore, this project would take approximately 100 working days. Although B-SB proposes to replace 5,000 more feet of line with this proposal than past proposals, they have properly planned this additional work so that it can be completed within the proposed one-year schedule.
<b>2. Costs: Benefits</b>	<u>Net Benefits</u> : This project offers substantial benefits to Butte and Rocker residents. The transmission line is in need of replacement, and this proposed project would fix 17% of the total line. Replacement of the line is a high priority designated by B-SB's <i>2008 Water Master Plan</i> (see criteria #17). Benefits include improved delivery of a reliable potable water source; reduced demand on water resources; reduced water pumping, treating, and transportation costs; reduced repair costs; improved flows and fire protection; and reduced potential risks to system users by eliminating the exposure to contaminants contained in the internal coating of the old transmission line. Given the substantial benefits and the 20% cash match, the project is considered to be of net benefit.
<b>3. Cost-Effectiveness</b>	<u>Likely Cost-Effective</u> : B-SB provided a limited analysis of alternatives that compared the proposed replacement to the alternatives of no-action, which would not accomplish project goals or alternate water supplies, which currently is not feasible. The alternatives analysis conducted for the 2009 grant indicated that other alternatives of downsizing the diameter of the pipe or lining the pipe were inferior to the proposed approach. B-SB proposes to use its own crews for all needed labor in order to provide matching funds and have the needed controls associated with the treatment plant. Work by B-SB crews will occur in a systematic fashion starting at the south end of the line and moving north. The southern half of the line, from Big Hole Pump Station to the Feeling Treatment Plant, is under higher pressures, more corrosive soil conditions, and has more significant leaks than the northern part of the line, which is gravity fed from Feely to Butte. Therefore, B-SB has proposed, and based its cost estimates, on using Class



<b>Summary of RPPC Criteria Evaluation for Big Hole Transmission Line Replacement: Year 4</b> <b>Applicant: Butte-Silver Bow</b>	
	200 pipe instead of Class 300 pipe in this northern section of the line, which could save up to 30% of pipe costs compared to past projects. <sup>2</sup> Completing this project as proposed is likely a cost-effective alternative to addressing problems with the water distribution system that are specific to the Big Hole Transmission Line. To economically address its broader water conservation goal, B-SB's 2008 <i>Water Master Plan</i> recommends system-wide metering be conducted in conjunction with leak reduction efforts (see criterion #17).
<b>4. Adverse Environmental Impacts</b>	<u>No Significant Adverse Impacts:</u> The project will have potential minor short-term adverse impacts to aesthetics and vegetation associated with excavation impacts. B-SB will reclaim the disturbed areas.
<b>5. Human Health and Safety</b>	<u>No Significant Adverse Impacts:</u> B-SB will adequately address any impacts to the human environment during construction, such as worker safety, dust, and noise, by following the guidelines of the Montana Public Works and Standard Specifications. The interior parts of the current transmission line are coated with a carcinogenic material, Bitumastic coal tar. This material is not a suitable coating for potable water pipes, as it can leach into the water supply. The current levels of leaching of Tetrachloroethene from the coal tar coating appear to be 0 to 3 ug/l; however, EPA has placed this contaminant in a zero tolerance list for public water supplies. Therefore, removal of this antiquated pipe can benefit human health.
<b>6. Results of Response Actions</b>	<u>Consistent:</u> The project will not interfere with or duplicate the results of any known EPA Superfund action.
<b>7. Natural Recovery Potential</b>	<u>No Effect on Recovery Period:</u> This replacement project will not affect Butte's aquifer recovery time.
<b>8. Applicable Policies and Laws</b>	<u>Consistent/Sufficient Information Provided:</u> B-SB has provided sufficient information on the applicable requirements needed to complete this project.
<b>9. Resources of Special Interest</b>	<u>No Impact:</u> This project is not likely to adversely impact natural resources of special interest or concern to the Tribes or DOI. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of funding this project as recommended by that Council (see Appendix B). If funded, the grant agreement would require proper consultation with the Tribes for situations when Tribal resources are encountered during project implementation. The DOI recommends funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Partly Outside the Basin but Serves the Basin:</u> The southern half of the Big Hole Transmission Line is outside of the UCFR Basin, and the northern half, which includes the portion specified in this request, is within the Basin boundary at the Continental Divide. Although a portion of the line is located immediately outside of the UCFRB, the pipeline serves water users that reside in the Basin. In effect, it replaces natural resources that cannot be restored in the

<sup>2</sup>The 30% estimate is based on comparing Year 1 project costs for Class 300 pipe at \$119.46 ft. vs. Year 2 Class 200 pipe costs at \$83.20/ft (p. 34 of applications).

Summary of RPPC Criteria Evaluation for Big Hole Transmission Line Replacement: Year 4 Applicant: Butte-Silver Bow	
	Basin. Therefore, the project is eligible for NRD funding, as provided for in the <i>UCFRB Restoration Plan, Procedures, and Criteria</i> . <sup>3</sup>
<b>11. Actual Restoration of Injured Resources</b>	<u>No Restoration</u> : This project replaces services of injured groundwater resources that cannot be restored and thus constitutes compensatory restoration.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Same</u> : The project replaces lost services to property owners and other members of the public in Butte who could utilize the bedrock aquifer if it was not injured.
<b>13. Public Support</b>	<u>One Support Letter</u> : The NRDP received one support letter from the B-SB Chief Executive/B-SB Council of Commissioners
<b>14. Matching Funds</b>	<u>20% cash matching funds</u> : B-SB will contribute a cash match of \$690,000 for construction labor costs.
<b>15. Public Access</b>	Not Applicable
<b>16. Ecosystem Considerations</b>	<u>Positive</u> : The project will conserve water and therefore reduce power requirements for pumping and treating water, which fits within a broad ecosystem concept.
<b>17. Coordination &amp; Integration</b>	<p><u>Partly Coordinates/Integrates</u>: The project coordinates with other B-SB water system improvement projects and B-SB's <i>2008 Water Master Plan</i>, which lists replacement of the Big Hole Transmission Line and replacement of the Big Hole Dam as the "Priority One Improvements" for the B-SB water system.<sup>4</sup> "Priority One" improvements are the most critical and should be implemented within the next 1-3 years. Replacement of the Big Hole Dam is expected to be completed by 2011 per an approved 2008 Restoration Fund grant.</p> <p>The <i>Master Plan</i> also recommends that B-SB conduct system-wide water metering, which is identified as a "Priority Three Improvement," in conjunction with water main replacement activities to conserve water, and that B-SB explore methods of encouraging flat rate customers to convert to meters. B-SB was funded by a 2008 grant to install 500 meters on existing connections and to conduct a public awareness campaign on the benefits of water metering. Their public campaign has been conducted, and 324 meters have been installed as of September, 2010. When the remaining 176 meters get installed, and there are more than that number of customers on the waiting list for a meter, then approximately 50% of Butte's service connections will be metered – that is up from 45% last year. Also, B-SB has asked for an additional 500 meters as part of their Year 10 Distribution Line Project request. B-SB had indicated installation of about 500 meters per year is what is feasible with existing crews. While B-SB is thus increasing its metering at an acceptable rate, B-SB has yet to implement the recommendation of the Master Plan with respect to adoptive water rates conducive to metering.</p>

<sup>3</sup> The *UCFRB Restoration Plan, Procedures, and Criteria* (p. 29) allows for funding of "a project, or portion thereof, that would be located outside the UCFRB but would have the effect of restoring or significantly facilitating the restoration of natural resources or lost services of the UCFRB."

<sup>4</sup> Butte-Silver Bow Water System Master Plan, prepared by Robert Peccia and Associates, July 2008 (p. 7).

Summary of RPPC Criteria Evaluation for Big Hole Transmission Line Replacement: Year 4 Applicant: Butte-Silver Bow	
<b>18. Normal Government Functions</b>	<p><u>Within but Augments Normal Government Functions:</u> The proposed transmission line replacement is the responsibility of B-SB since the County owns the water system. The NRDP considers this project as one that augments, not replaces, normal government function because communities typically rely on a combination of grant funds and user fees to fund such projects and because the proposal is an effective way to compensate the community for the pervasive and extensive injuries to the groundwater resources underlying Butte that were covered under <u>Montana v. ARCO</u>. B-SB acquired the public water system in 1992. Other factors to consider in evaluating this criterion for local public water projects are the local match and ratepayer rates. B-SB is contributing 20% in cash matching funds. B-SB's combined water and sewer rate of \$51.65, compared to the Department of Commerce's rate of \$58.49.<sup>5</sup> B-SB's flat rate for water only is \$38.15 which is above the Department of Commerce's target rate of \$35.60.</p>

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<sup>5</sup> The Department of Commerce uses this target rate to assess whether a community is adequately funding any public facility project in proportion to their financial resources. If the target rate is met, the community is eligible for state grant assistance. Since B-SB provides both a sewer and water system, it is the combined water and sewer target rate that is used to determine eligibility for state grant assistance, and not the water rate. .

## Cottonwood Creek Habitat Enhancement Project, Stage I Watershed Restoration Coalition

### Project Summary

The Cottonwood Creek Habitat Enhancement Project, Stage I, submitted by the Watershed Restoration Coalition (WRC), proposes a two-year project to improve in-stream flows, riparian habitat, fish passage, and stream channel habitat for fish and other aquatic species through improvements in irrigation efficiency; stock watering and grazing management; and culvert and diversion design. The project area is located east of Deer Lodge on sections of Cottonwood Creek that range from ¼ mile to 2 miles upstream of the confluence with the Clark Fork River (Figure 5). Total project costs are proposed to be \$459,131, with \$289,647 requested in Restoration Funds, \$156,934 proposed as cash matching funds and \$12,550 proposed as in-kind matching funds for these activities. The WRC will accomplish the above goals by improving water quality through improved water and land management practices; increasing water quantity through water lease (or other) agreements and changing the point of diversion; designing headgates and a culvert to increase fish passage; and enhancing riparian habitat by fencing and grazing management. The breakdown of the proposed tasks and their associated budgets are in Table 1.

**Table 1. Budget Breakdown for project as proposed by WRC**

Task	Proposed Restoration Funds	Matching Funds		Total
		Cash	In-kind	
1) Improve In-stream Flow	\$200,385	\$133,934		\$334,319
2) Design & Improve Fish Passage	\$27,100	\$9,000		\$36,100
3) Enhance Riparian Habitat	\$31,120	\$11,000	\$4,000	\$46,120
4) Salaries and Admin	\$31,042	\$3,000	\$8,550	\$42,592
<b>Total</b>	<b>\$289,647</b>	<b>\$156,934</b>	<b>\$12,550</b>	<b>\$459,131</b>

The *Draft Prioritization of Tributaries in the Upper Clark Fork River Basin for Fishery Enhancement, May 2010 (FWP and NRDP)*<sup>1</sup> divided Cottonwood Creek into two areas, Upper and Lower Cottonwood Creek. Upper Cottonwood Creek is above Baggs Creek to its headwaters on the National Forest and Lower Cottonwood Creek runs from the confluence of Baggs Creek to the Clark Fork River. Upper Cottonwood was assessed and not designated a priority for protection or enhancement because the stream was in good condition. Lower Cottonwood was given a Priority 2 rank because it was high in both Goal 1, which is its potential to restore the mainstem fishery by improving recruitment of trout from the tributaries, and in Goal 2, which is its potential to replace lost trout angling in the mainstem by improving trout populations and fishing opportunities in tributaries. Lower Cottonwood Creek is one of 11 areas in the UCFRB that are ranked as Priority 2 areas in the State's Tributary Prioritization document.

The WRC is a coalition of four conservation districts, one county commissioner, and two weed board supervisors. The conservation districts involved with the WRC include the Mile High

<sup>1</sup> This ranking is subject to change upon completion of the official comment period and finalization of the document, which should occur in the fall of 2010.

Conservation District, Deer Lodge Conservation District, Granite Conservation District, and Missoula Conservation District. The WRC is working with the following landowners on this proposal: the Applegate Ranch (irrigation pivot); McQuery Ranch (stockwatering wells); Sherm Anderson (riparian fencing); and Burt, Pruyn, and Dippold-Pruyn (diversion structures).

#### Past Approved and Related Requests

In 2001, the WRC received \$135,941 in Restoration Funds to assess streams in the East Deer Lodge Valley, including Cottonwood Creek, and conducted several conservation projects involving implementation of agricultural best management practices. The WRC's 2001 East Valley grant that assessed Cottonwood Creek identified some nutrient, flow, fish barrier, and riparian habitat problems and included some conservation activities in the area, such as pipeline construction for off-stream stock watering. As of July 1, 2010, this grant had leftover funds of \$41,077. All that remains to be done on this grant is completion of final reporting.

In 2008, the WRC was approved for \$90,377 in Restoration Funds for a project development grant (PDG) to gather stream and irrigation flow and fish habitat data in Cottonwood Creek to better understand some critical elements of the flow regime, fish entrainment issues, and fish barriers, and to develop projects to address these problems. The WRC is currently in the process of completing these tasks, with \$18,728 remaining in grant funds as of July 1, 2010.

Although the WRC indicates that this project is not part of a larger project, it notes there are still other possible projects that could improve the aquatic and riparian resources of Cottonwood Creek, including improving flow and fish passage in the lower portion of the creek and possibly addressing the needs on the Kohrs-Manning Ditch near the Clark Fork River. This proposal also includes the funding of designs for four irrigation headgates to be funded and built at some undefined time in the future. The proposal does not state if Restoration Funds would be sought for the next stages, though it is implied.

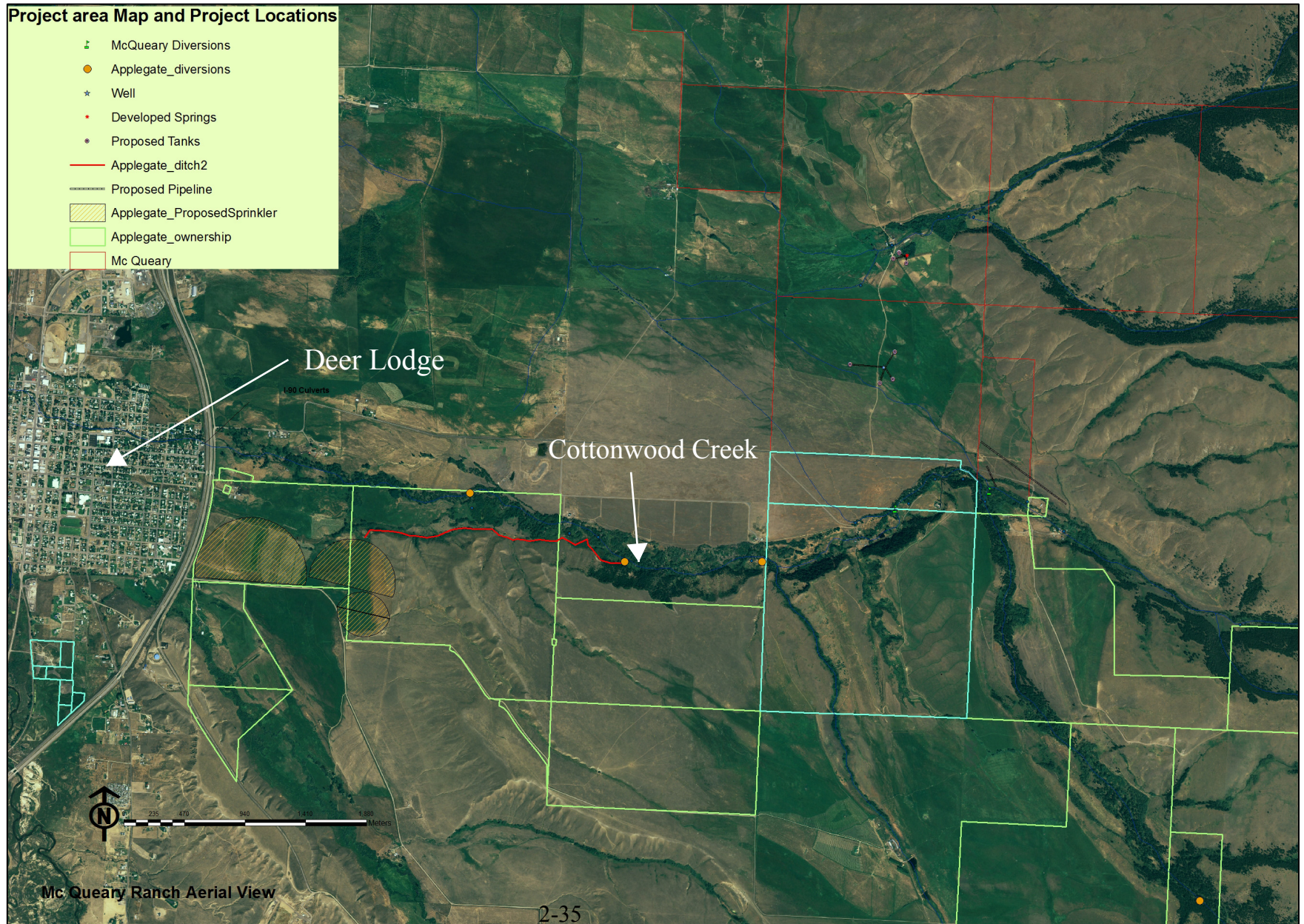
#### Final Funding Decision and Conditions

The Governor approved full funding of the project for the requested \$289,647, subject to the standard *RPPC* funding conditions that apply to all projects, and three additional funding conditions requiring that: 1) all diversion structure designs be subject of review and approval by the NRDP and include lockable headgates and measuring devices; 2) the WRC provide of a 20-year grazing management plan that is subject of review and approval by the NRDP and excludes grazing of this riparian area for no less than 5 years following the fencing; and 3) the NRDP obtain sufficient information to confirm the benefits from the pivot irrigation portion of the proposal.



Figure 5

# Project Area Map



<b>Summary of RPPC Criteria Evaluation for Cottonwood Creek Habitat Enhancement Project, Stage I</b> <b>Applicant: Watershed Restoration Coalition</b>	
<b>CRITERIA/SUMMARY</b>	<p>The Cottonwood Creek Habitat Enhancement Project, Stage I, submitted by the Watershed Restoration Coalition (WRC), proposes to improve in-stream flows, riparian habitat, fish passage and stream channel habitat for fish and other aquatic species through improvements in irrigation efficiency; stock watering and grazing management; and culvert and irrigation diversion design. The WRC requests \$289,647 in Restoration Funds, with \$156,934 proposed as cash matching funds and \$12,550 proposed as in-kind matching funds, for a total project cost of \$459,131.</p> <p>Application Quality – Fair; missing critical information on some project components.</p>
<b>Final Funding Decision and Conditions</b>	<p>The Governor approved full funding of the project for the requested \$289,647, subject to the standard <i>RPPC</i> funding conditions that apply to all projects, and three additional funding conditions requiring that: 1) all diversion structure designs be subject of review and approval by the NRDP and include lockable headgates and measuring devices; 2) the WRC provide of a 20-year grazing management plan that is subject of review and approval by the NRDP and excludes grazing of this riparian area for no less than 5 years following the fencing; and 3) the NRDP obtain sufficient information to confirm the benefits from the pivot irrigation portion of the proposal.</p>
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<p><u>Reasonably Feasible with Funding Conditions:</u> NRDP's initial application review, in the summer of 2010, determined there was some uncertainty as to whether the proposed installation of the irrigation pivot for in-stream flow, which is a portion of Task 1, could achieve its objective because of critical information missing in the application. This included information on the type of in-stream flow agreement between WRC and the water right holder and information associated with water rights due diligence steps, such as addressing if or how much of the "saved" water can legally remain in-stream, since there is a senior water right holder. The applicant supplied this information to the NRDP on October 13, 2010, which was too late for consideration in the NRDP's <i>Pre-Draft Work Plan</i> and thus the NRDP did not recommend this part of the project for funding in its <i>Pre-Draft Work Plan</i>. The supplemental information was, however, considered by the Advisory Council and TRC at their October meetings. Based on that information, the TRC recommended this portion of the project for funding, in addition to the other project components, subject to a funding condition that the NRDP obtain sufficient information to confirm the benefits from the pivot irrigation portion of this proposal. The applicant estimates this will augment instream flow by 1.7 cfs in late summer/early fall. The NRDP's December 2010 review of supplemental information provided in October 2010 related to the pivot project and water rights concluded that the risk that the senior water holder would take a portion of the water that would otherwise be saved as a part of this project is low and thus this project component likely to derive benefits worth the costs.</p> <p>The other portion of Task 1, changing the point of diversion from stock watering to a groundwater well, is reasonably feasible, though it must go through the DNRC's change process, which can take over a year. The portion of Task 3</p>



<p align="center"><b>Summary of RPPC Criteria Evaluation for Cottonwood Creek Habitat Enhancement Project, Stage I</b></p> <p align="center"><b>Applicant: Watershed Restoration Coalition</b></p>	
	<p>(enhancing riparian habitat through fencing) is feasible, however, the portion of the task involving the grazing management is not clear as proposed. The proposal does not explain how long the grazing management plan is to be enforced or what is involved in the grazing management plan to ensure that riparian habitat is improved, nor does it include a commitment to exclude grazing for any amount of time. In order to have a reasonable chance of success, NRDP recommends the review and approval of a 20-year grazing management plan and a grazing exclusion of this riparian area for no less than 5 years following the fencing. The NRDP considers Task 2 (designing fish passage at I-90 culvert and four irrigation diversions); and Task 4 (salaries and administration, as modified above) to be reasonably feasible as proposed.</p>
<b>2. Costs:Benefits</b>	<p><u>Commensurate Benefits with the funding conditions:</u> The following cost-benefit analysis is on a task-specific basis. Despite the uncertainties for some of the tasks discussed above, the project costs are considered as likely to be at least commensurate with the benefits.</p> <p>Task 1 involves \$264,904 total funding (\$160,827 in Restoration Funds) for the purchase and installation of an irrigation pivot, associated pipeline placement, and diversion reconstruction, in exchange for a lease of the water right of 1.7 cfs<sup>2</sup> for instream flow. The WRC proposes to assist the water right holder in the DNRC change process to change the use to instream flow, and administer this water lease. Although the length of time this lease would remain in effect has not been determined, the NRDP estimates that it will take 21 years for the cost of purchasing and installing the pivot to equal the value of the quantity of water that will remain as instream flow, if the water were used for irrigation.<sup>3</sup> Based on the NRDP's December 2010 review of the supplemental information provided by the applicant in October 2010, a 20-year water lease is recommended, which should enable this project component to derive benefits worth the costs.</p> <p>Task 1 also involves \$69,415 total funding (\$39,558 in Restoration Funds) for replacement of stream stock water with a groundwater well and associated pipes and tanks. Without a wetted perimeter study to determine the amount of flow that is necessary for fish, there is some uncertainty in the amount of benefits to be derived from both parts of this task. Both of these water rights would, however, likely benefit fish survival to some degree.</p> <p>Task 2 involves \$36,100, in total funds (\$27,100 in Restoration Funds) for the design of four irrigation diversions and fish passage device on a culvert. The benefits of these designs will not be realized until these structures are constructed, which the proposal does not address, thus there is some uncertainty about the benefits of this task. Such an uncertainty is</p>

<sup>2</sup> The amount of water that is saved for instream flow will be from 1.2 cfs of salvage water and 0.5 cfs of split season lease (July 15 – September 15). WRC letter to Tom Mostad, NRDP Staff, October 9, 2010.

<sup>3</sup> This calculation by, Tom Mostad, NRDP Staff, was derived by dividing the total cost of the pivot (not just Restoration Funds) by the value of the water over time.



<b>Summary of RPPC Criteria Evaluation for Cottonwood Creek Habitat Enhancement Project, Stage I</b> <b>Applicant: Watershed Restoration Coalition</b>	
	<p>typical of project development grants, which involve funding to develop a future project that may or may not be implemented, and funding of the designs will better define the costs of a full project to build the structures. To ensure that the future benefits of replacing diversion structures are realized, the NRDP recommends as a condition of funding that the designs of these structures be subject of review and approval by the NRDP and include lockable headgates and measuring devices in order to ensure that the irrigation withdrawals are within the water users' allowable water right when these structures are constructed.</p> <p>Task 3 involves \$46,120 in total funds (\$31,120 in Restoration Funds) for installation of riparian fencing on Reese Anderson Creek, a tributary to Lower Cottonwood Creek, and will exclude grazing for 5 years and manage grazing thereafter. This would likely increase riparian vegetation, resulting in better fish habitat. Task 4, involves \$42,592 in total funds (\$31,042 in Restoration Funds) for needed administration of the project by WRC and the Clark Fork Coalition.</p>
<b>3. Cost-Effectiveness</b>	<p><u>Uncertain/Likely Cost-Effective:</u> Based on the NRDP's initial review of the supplemental information provided in mid-October on the pivot portion of this project, its cost-effectiveness is uncertain. However, subsequent NRDP review and the TRC's funding conditions allow for verification of project benefits by the NRDP prior to funding of this project portion. Should the results of the DNRC change of use process significantly change the predicted project benefits, the project could be reconsidered by the Advisory Council and TRC, with a final decision by the Governor.</p> <p>The other components of Task 1 involving stock watering and grazing management, are considered to be likely cost-effective and no other alternative seems to be capable of providing this winter water right. The benefits of Task 2, designing four irrigation headgates, will only be realized when the irrigation diversions are constructed and they successfully improve fish passage. Another alternative not proposed could have been to include the construction of the diversions with this proposal. Though this alternative would have increased costs, it would have derived a greater level and certainty of benefits, although funding the design first can help better define the costs of the full proposal. Tasks 3 and 4 seem to be the most cost-effective alternatives to accomplish the goals.</p>
<b>4. Adverse Environmental Impacts</b>	<p><u>Minor Adverse Impacts:</u> Although the project will have minor impact to the environment associated with the one diversion that will be reconstructed, it should overall benefit water quality and water quantity to the stream and improve fish and riparian habitat.</p>
<b>5. Human Health and Safety</b>	<p><u>No Adverse Impacts:</u> This proposal does not present any adverse impacts to the human environment. Installation of irrigation diversion structure and the irrigation pivot would involve only a relatively small amount of construction activity. The pivot is the only project component that could impact agricultural production.</p>

<b>Summary of RPPC Criteria Evaluation for Cottonwood Creek Habitat Enhancement Project, Stage I</b> <b>Applicant: Watershed Restoration Coalition</b>	
<b>6. Results of Response Actions</b>	<u>Consistent</u> : The project will not conflict with any Superfund response actions.
<b>7. Natural Recovery Potential</b>	<u>May Reduce the Recovery Period</u> : The tasks associated with the project may have a small effect on the recovery of natural resources of the Clark Fork River by adding to the flow of the river, which may dilute the release of hazardous substances remaining in its beds and banks. If the fish populations increase as a result of this project, they could migrate to the Clark Fork River at some times of the year.
<b>8. Applicable Policies and Laws</b>	<u>Consistent</u> : The WRC adequately identifies the permits, such as 310, 404 and 318, that are likely to be needed for the tasks that would occur near and in the stream.
<b>9. Resources of Special Interest</b>	<u>Minor Adverse Impacts</u> : There will be a small amount of ground disturbance associated with this project that may cause a small amount of stream sedimentation with removal and replacement of stream diversions. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of funding this project as recommended by that Council (see Appendix B). If funded, the grant agreement would require proper consultation with the Tribes for situations when Tribal resources are encountered during project implementation. The DOI recommends funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within Basin</u> : The project is located on the Cottonwood Creek, a tributary to the Clark Fork River and is located approximately 1/4 to 2 miles from the Clark Fork River.
<b>11. Actual Restoration of Injured Resources</b>	<u>May Contribute to Restoration</u> : This proposal gathers data that may assist in future restoration activities of the fishery of Cottonwood Creek. If these future projects are implemented, they may have a positive effect of the fishery of the Clark Fork River, which is an injured resource addressed under <u>Montana v. ARCO</u> .
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Same</u> : With increased instream flow, riparian fencing and improved fish passage, this project can enhance aquatic and riparian resources that are considered substantially equivalent to the injured resources and services covered under <u>Montana v. ARCO</u> , such as fish habitat and fishing.
<b>13. Public Support</b>	<u>No Support Comment</u> : Though there may be public support for this project, no public comments have been received.
<b>14. Matching Funds</b>	<u>34% Cash Match, 3% In-kind Match</u> : The WRC proposes to supply \$25,000 cash match, \$111,934 in cash match from NRCS, and \$20,000 from Future Fisheries. The WRC is also obtaining \$4,000 in landowner in-kind match and \$8,550 in-kind match from the Clark Fork Coalition.
<b>15. Public Access</b>	<u>No Access Change</u> : The application makes no statement about what kind of public access is currently available on Cottonwood Creek within the project area, though it exists downstream within the city limits of Deer Lodge. The proposal does not involve an increase in public access.
<b>16. Ecosystem Considerations</b>	<u>Positive</u> : The proposed project is consistent with broad ecosystem concepts that improve multiple natural resources in the area. It also fits with the State's Draft Tributary Prioritization Plan that sets forth priorities on a broad basin-wide scale (see criterion #17).

<b>Summary of RPPC Criteria Evaluation for Cottonwood Creek Habitat Enhancement Project, Stage I</b> <b>Applicant: Watershed Restoration Coalition</b>	
<b>17. Coordination &amp; Integration</b>	<u>Coordinates:</u> The project is on Lower Cottonwood Creek, which is a Priority 2 Area as designated by the Tributary Prioritization. <sup>4</sup> The project ranked high in goals 1 and 2, which are to restore the mainstem fishery by improving recruitment from tributaries and to replace lost trout angling in the mainstem by improving trout populations and fishing opportunities. For the most part, this project should address some of the problems on Lower Cottonwood Creek and coordinate and integrate the restoration activities in the area.
<b>18. Normal Government Functions</b>	<u>Outside Normal Government Functions:</u> No governmental entity is obligated by law to conduct or would normally conduct the proposed activities, such as improvements in water quantity, riparian habitat, fish passage design and fish habitat, though several State and Federal agencies have grant programs that address these kinds of issues.

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<sup>4</sup> *Draft Prioritization of Tributaries in the Upper Clark Fork River Basin for Fishery Enhancement, May 2010 (FWP and NRDP)* and the priorities may change with response to public comments on the document.

**Deer Lodge Valley Conservation District  
Bridger Plant Materials Center  
Integration of Selected Native Plant Materials for Enhanced Restoration  
Activities in the UCFRB**

**Project Summary**

This project is a joint effort between the Deer Lodge Valley Conservation District and the Natural Resources Conservation Service (NRCS) Bridger Plant Materials Center (BPMC). The project involves continuing the development of a seed supply of native plant species that are best adapted to the climatic and acidic/heavy metal soil conditions of the UCFRB, particularly the Anaconda upland area. Total project costs are \$333,279 for four years, with \$252,279 requested in Restoration Funds and \$81,000 to be provided as in-kind matching funds. Of the requested Restoration Funds, with \$236,279 for salaries for a project leader, technician and BPMC staff, \$8,000 for travel, and \$8,000 for supplies/miscellaneous. The project goals and tasks are:

- 1) Releasing acidic/heavy metal-tolerant plants adapted to mine and smelter-impacted sites in western Montana in order to assure the best adapted plants can be used in the UCFRB as well as other contaminated and degraded areas throughout western Montana and the Northern Rockies area. This goal involves maintenance of seed increase production fields at the Bridger facility so foundation quality seed is available to commercial seed producers and nursery growers.
- 2) Providing technical assistance and collaborating with government agencies and the conservation community to assure BPMC seed products are available for use. This goal involves frequent coordination with NRDP, revegetation design consultants, grant recipients, and others who are planning and conducting remediation and restoration work in the UCFRB on the schedule and needs of field restoration activities related to seed and plants.

Status of Related Past and Current Related Projects

This project started in 1995 and has been funded primarily by the NRDP over the last 9 years. The NRDP has funded this project since 2001 for a total of \$401,326. The first four-year grant was approved in 2001 for \$141,400 and was completed successfully in 2004. The second grant was approved for \$259,926 in late 2004 and is now almost complete, with \$12,212 remaining to be spent as of July 1, 2010. Past efforts focused on collecting seed from 95 plants in the Anaconda area and then testing these plants in field trials. Plants demonstrating superior survival, establishment, and growth have been selected for production. The BPMC has made selections and released foundation seeds for 3 grasses, 2 shrubs, and a forb, and have seed increase fields for 6 grasses and 3 forbs, as well as 6 shrub increase orchards. Past efforts have focused on research. With this proposal the applicants propose to assist in making these plants available for use in restoration actions.

Final Funding Decision and Conditions

The Governor approved funding of this project for all four years at the requested \$252,279, subject to the standard *RPPC* funding conditions, for a total project cost of 333,279.

<b>Summary of RPPC Criteria Evaluation for Integration of Selected Native Plant Materials for Enhanced Restoration Activities in the UCFRB</b> <b>Applicant: Deer Lodge Valley Conservation District (DLVCD) and Bridger Plant materials Center (BPMC)</b>	
<b>Project Summary</b>	The overall goal of this project is to continue development and release of a seed supply of native plant species that are best adapted to the climatic and acidic/heavy metal soil conditions of the UCFRB, particularly the Anaconda uplands area. The total project cost is \$333,279 over four years, with \$252,279 requested in Restoration funds and \$81,000 as-kind in matching funds.
<b>Final Funding Decision and Conditions</b>	The Governor approved funding of this project for all four years at the requested \$252,279, subject to the standard <i>RPPC</i> funding conditions, for a total project cost of \$333,279.
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<u>Reasonably Feasible:</u> This project will employ well-known and accepted technologies for seed collection and propagation and the BPMC has demonstrated it has the expertise to accomplish the project. The project is centered on the principle that use of local seed is superior to use of non-local seed. The long-term success of the project depends on the demand by seed producers for the seed materials, which has only occurred to a limited extent to this point. This project will develop and release seed materials and interface with growers and reclamationists to enhance this demand. The NRDP believes that the need for these materials exists for remediation and restoration work in the Basin and other mining-impacted area, and that BMPC's proposed efforts will increase the likelihood that these materials be available and used when it is most needed.
<b>2. Costs: Benefits</b>	<u>Commensurate Benefits:</u> The benefits of this project will be the availability of locally adapted seed for revegetation of the UCFRB, particularly the Anaconda Upland areas. The project facilitates restoration of native wildlife habitat, acceleration of nutrient cycling, stabilization of soils and enhancements of soil properties. Continued growing of BPMC-produced seed for seed production facilities and woody shrub nurseries will insure that local seed supply and demand for it will continue over at least the next four years while this grant is in place and active remedy/restoration work is ongoing. Though most of the needed testing and production of the foundation seed materials has been accomplished through the past-funded projects, this project provides the critical field work at the BPMC and outreach/marketing effort to inform entities conducting remediation and restoration in the Basin about the superior local seed/plant materials developed by the BPMC so that those entities will use it instead of the more commonly used non-local seed. At this time, shrub seed from the BMPC has been used by nurseries growing shrubs for restoration in the UCFRB, and several seed production facilities are growing BPMC superior grasses. Seeds from these grass producing facilities will be purchased and used in the Anaconda Uplands this fall so actual benefits in restoration areas has yet to be proven, although test trials have shown superior growth. This project is needed to capitalize on the investment of the BPMC work over the last decade to obtain more widespread use of local seed on mining-impacted lands in the Basin. Previously, the NRDP judged the funded grants to be of net benefit based on the expected superiority of and demand for the seed and plant materials for remediation and restoration activities in the Basin. Since widespread demand and use of these materials has yet to occur

<b>Summary of RPPC Criteria Evaluation for Integration of Selected Native Plant Materials for Enhanced Restoration Activities in the UCFRB</b> <b>Applicant: Deer Lodge Valley Conservation District (DLVCD) and Bridger Plant materials Center (BPMC)</b>	
	but is the aim of this third grant, that NRDP considers this project to be of commensurate benefit and, potentially, net benefit.
<b>3. Cost-Effectiveness</b>	<u>Potentially Cost-Effective:</u> BMPC provided a limited analysis of alternatives that demonstrated the inadequacy of the no-action alternative. The positive results of BPMC's research to date, plus other revegetation studies in impacted areas, indicates that using locally adapted, metal tolerant seed for revegetation of impacted lands in the UCFRB is better than using the predominantly non-local seed which is presently available. The BPMC chose a 4-year proposal over a shorter timeframe because the project tasks of promoting restoration use, commercial seed production, and additional releases are multi-year processes. <sup>1</sup> They also proposed part-time instead of full-time in order to provide support of Basin restoration activities over a longer period of time. Because remedy and restoration are expected to be active at least during the next decade, and because the work being done by the BPMC is necessary to assure seed availability, the NRDP agrees that it is logical to ask for 4 years of funding at this time. This grant, particularly its marketing/promotional work, is expected to get this effort to a critical juncture point where the BPMC plant materials can be utilized by growers and reclamationists with less level of effort from the BPMC. With the increase of restoration activities occurring basin-wide due to the conclusion of the State litigation in 2008 plus continued remedy needs, this is the opportune time to market the BPMC materials. With the major testing and releases accomplished through past grants and the promotional outreach focus of this grant, the level of demand resulting from this grant will greatly affect the BPMC's future level of effort and need for grant funding and the cost effectiveness of this proposed grant.
<b>4. Adverse Environmental Impacts</b>	<u>No Adverse Impacts:</u> Beneficial impacts to the environment are likely to be derived from use of the seed product developed and released by the project. By providing foundation seeds of native species, the project provides beneficial impacts to air, water, soil, vegetation, fish and wildlife habitats and species.
<b>5. Human Health and Safety</b>	<u>No Adverse Impacts:</u> No adverse impacts are likely to be derived from this project.
<b>6. Results of Response Actions</b>	<u>Positive Coordination:</u> This project positively coordinates with and augments remedial actions by providing key plant materials and information that will be advantageous for both effective remedy and restoration in the UCFRB. Coordination would continue with NRDP, DEQ, EPA, ARCO, and others.
<b>7. Natural Recovery Potential</b>	<u>Reduces Recovery Period:</u> The plants used for this project can be used to restore injured wildlife habitat by providing superior seed for shrubs, forbs, and grasses.
<b>8. Applicable Policies and Laws</b>	<u>Consistent/Sufficient Information Provided:</u> All plant releases are made in accordance with applicable law. No permits are required for implementation.

<sup>1</sup>Supplemental information provided in a 9/9/10 email from Beth Graham of BMPC to Greg Mullen of NRDP.

<b>Summary of RPPC Criteria Evaluation for Integration of Selected Native Plant Materials for Enhanced Restoration Activities in the UCFRB</b> <b>Applicant: Deer Lodge Valley Conservation District (DLVCD) and Bridger Plant materials Center (BPMC)</b>	
<b>9. Resources of Special Interest</b>	<u>Beneficial Impact</u> : The project provides a seed product that can be used to improve the wildlife habitat in injured areas and thus benefit wildlife. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of funding this project as recommended by that Council (see Appendix B). The DOI recommends funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within Basin and Proximate</u> : The project's field-testing and seed collection activities occur at various locations within or near the upland injured areas. The seed production activities will occur at the BMPC facility located 45 miles south of Billings.
<b>11. Actual Restoration of Injured Resources</b>	<u>Contributes to Restoration</u> : The project can contribute to restoration by replacing lost upland habitat with native species adapted to the climatic and soil conditions in the UCFRB.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Same</u> : With the use of the BMPC foundation seed by commercial growers, this project could contribute to restoring some of the same services that were lost in uplands and riparian areas due to habitat loss.
<b>13. Public Support</b>	<u>5 support letters</u> : from Montana Association of Conservation Districts, Powell County Weed District, Powell County Commissioners, Department of Natural Resources and Conservation Seedling Nursery, and Westscape Native Nursery
<b>14. Matching Funds</b>	<u>24% In-Kind Match</u> : Three entities (the BPMC, the Soil and Water Conservation Districts of Montana, Inc. and the Deer Lodge Valley Conservation District) will provide \$81,000 total as an in-kind match, primarily for costs associated with use of the BPMC facilities.
<b>15. Public Access</b>	Not Applicable
<b>16. Ecosystem Considerations</b>	<u>Positive</u> : Any improvements in the revegetation success would benefit the natural resources throughout the UCFRB by reducing erosion, increasing wildlife habitat, and improving water quality.
<b>17. Coordination &amp; Integration</b>	<u>Coordinates/Integrates</u> : BPMC directly coordinates with other entities involved in revegetation in the UCFRB. The seed product from this project could be used in a multitude of needed revegetation projects on impacted mined lands in the UCFRB and throughout the Northern Rockies region. The BPMC will coordinate with the three year Butte Native Plant Diversity/Nursery project approved in 2008 for the Butte Nursery by supplying any grass or shrub seed that may be needed for revegetation in the Butte area. The Butte project focuses on forb plants and the BPMC focuses on grasses, thus the two projects are complementary and not duplicative. Both projects will have some shrub component, but there is not expected to be a large overlap in shrub species efforts.
<b>18. Normal Government Functions</b>	<u>Outside of Normal Government Function</u> : No governmental entities are responsible or funded for the development of the site-specific plant materials to be produced by this project. The BPMC, which is funded by the United States Department of Agriculture and Natural Resource Conservation Service, normally produces conservation plants and plant technology for the nation's various agriculture users. Specific efforts, such as those proposed by the BPMC for UCFRB project, would not normally occur without a specific funding source.

<b>Summary of RPPC Criteria Evaluation for Integration of Selected Native Plant Materials for Enhanced Restoration Activities in the UCFRB</b> <b>Applicant: Deer Lodge Valley Conservation District (DLVCD) and Bridger Plant materials Center (BPMC)</b>	
<b>Research and Monitoring Criteria</b>	
<b>21. Overall Scientific Program</b>	<u>Coordinates:</u> BPMC will continue its coordination with EPA, DEQ, NRCS, local conservation districts, and the Butte Nursery managed by MT Tech.
<b>22. Assistance with Restoration Planning</b>	<u>Moderate Benefits:</u> This project will be of at least moderate benefit to future restoration efforts in the UCFRB in terms of producing needed information on optimum revegetation methodologies and optimum seed source materials. Benefits could be of greater extents if the greater demand and use sought by this third grant is accomplished.



## **Anaconda-Deer Lodge County Anaconda System-wide Metering Project**

### **Project Summary**

Anaconda-Deer Lodge City County's (ADLC) goal is to extend Anaconda's existing municipal water supply through conservation as a surrogate for the community's lost opportunity to develop additional groundwater resources. To accomplish this, ADLC proposes to install system-wide metering in the City of Anaconda. Currently, Anaconda has 403 metered accounts which equates to less than 15 percent of the unmetered 2,642 remaining water users, including 278 unmetered commercial water users. With system-wide metering, ADLC projects a water savings of at least 20 percent of current total water use, which is 152 million gallons per year. The total project cost is \$3,876,670, with \$3,622,708 requested in Restoration Funds, of which \$2,835,998 is for purchase and installation of the meters, \$293,279 is for a 10% construction contingency, \$483,911 is for engineering,<sup>1</sup> and \$9,520 is for grant administration. ADLC is offering \$125,350 in cash match, of which \$96,795 is for construction implementation, \$25,350 is for 2010 meter rate study, and \$3,205 is for grant administration. ADLC is also offering \$128,612 in-kind matching funds, of which \$34,212 is for grant administration and associated fringe benefits, and \$94,400 is for hazardous materials investigation, sampling and removal oversight activities associated with construction.

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 about 30 square miles of contaminated bedrock groundwater to the north and south of the City.

### Past Approved and Current Related Requests

ADLC completed a Water Metering Study,<sup>2</sup> funded mostly with Restoration Funds, and a Draft Water System Rate Study,<sup>3</sup> funded by ADLC. Previously, the Governor has approved eight ADLC water main replacement projects, with about \$9.3 million<sup>4</sup> in Restoration Funds approved and/or spent for 54,773 feet of waterline replacement. Anaconda has completed seven of its funded grant projects and is currently implementing the 8<sup>th</sup> year project. Currently, 1.25 million gallons per day of water leaks from about 31,105 feet of water main that still need to be replaced, which is likely to cost over \$9 million.<sup>5</sup> ADLC has submitted a 2010 grant request of \$2,644,390

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<sup>1</sup> Engineering is proposed to be 15% of construction and contingency.

<sup>2</sup> This project was approved in 2007.

<sup>3</sup> The date of the draft is March 19, 2010.

<sup>4</sup> The actual amount of Restoration Funds approved for water main replacement is \$11,641,258. The amount spent on completed projects is less than approved due to several reductions in scope by ADLC over the years and also because the cost of construction was lower than expected on several projects.

<sup>5</sup> Page 14, ADLC Restoration Fund Grant Application, April 2010.

for 12,200 feet of pipe, which is the ninth year of water main replacement, and indicated its intent to continue with funding requests to replace the entire system. ADLC has not indicated what portion of those future costs would be sought in Restoration Funds. The following table summarizes the status of these past approved and current requests.

Table 1: ADLC Water System Projects Summary

<b>Grant Year</b>	<b>Project</b>	<b>Pipe footage</b>	<b>Restoration Funds</b>	<b>Local Match</b>
2002	Main St & Bowman Field Water Main <sup>6</sup>	6,349	\$705,308	\$102,606
2003	East 4 <sup>th</sup>	5,979	\$936,527	\$315,126
2004	West 4 <sup>th</sup>	9,095	\$1,108,330	\$280,488
2005	7 <sup>th</sup> , East 6 <sup>th</sup> , & East 8 <sup>th</sup>	7,189	\$1,051,096	\$160,930
2006	East 3 <sup>rd</sup> & South Birch	5,877	\$1,596,029	\$64,080
2007	East 6 <sup>th</sup> & East 7th	4,963	\$877,035	\$18,387
2008	Front & Alder	6,521	\$994,861	\$77,710
	<b>Subtotal of Completed Water Main Projects</b>	<b>45,973</b>	<b>\$7,269,186</b>	<b>\$1,101,820</b>
2009	W. 3 <sup>rd</sup> (in progress) <sup>7</sup>	8,800	\$1,988,478	\$217,552
	<b>Total Constructed &amp; Pending Water main Projects</b>	<b>54,773</b>	<b>\$9,257,664</b>	<b>\$1,319,372</b>
2007	Computer Modeling and Metering Studies	NA	\$92,759	\$5,378
	<b>Total of All Approved Projects</b>		<b>\$9,330,423</b>	<b>\$1,324,750</b>
2010	Anaconda Cross Sts - Phase II (proposed)	12,200	\$2,644,390	\$220,378
	Anaconda Full Metering (proposed)	NA	\$3,622,708	\$253,962
	<b>Total of All Approved and Proposed Projects</b>		<b>\$15,597,521</b>	<b>\$1,799,090</b>
Future	Anaconda Cross Sts - Phase III	10,745	<b>\$2,619,631<sup>8</sup></b>	
Future	Plus Large Diameter (14"-20") Supply Mains <sup>9</sup>	8,160	~2,400,000 <sup>10</sup>	

#### Final Funding Decision and Funding Conditions:

The Governor did not approve funding of this project.

<sup>6</sup> This total footage includes Bowman Field Airport line which was not a "leaking" main renewal, but rather a new extension with partial FAA funding. The total amount of leaking water main replaced was 3,969 feet.

<sup>7</sup> Since this project is in progress the final amount of Restoration Funds and matching funds are not known.

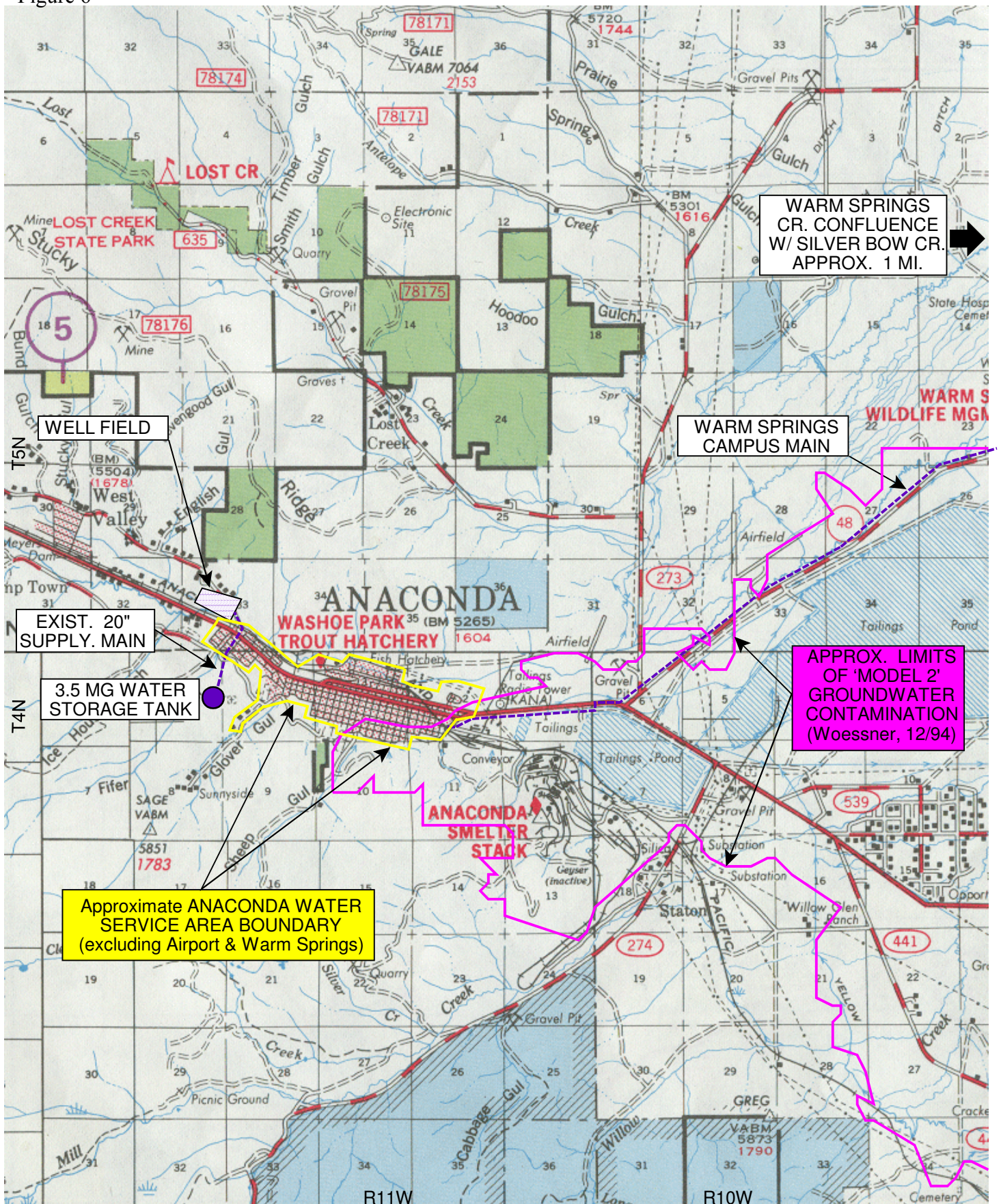
<sup>8</sup> This estimate is for construction and engineering only, no administrative costs were estimated. The cost estimate did not include the amount of the Restoration Funds request.

<sup>9</sup> The footage shown excludes 6,160 feet Pennsylvania Avenue main loop and the proposed 13,900 feet Mill Creek Industrial Park Line extension for which costs are estimated in the 2009 *PER Modeling Study Amendment*, according to Page 14 of the ADLC application.

<sup>10</sup> This cost was calculated by Tom Mostad, NRDP Staff, from the presentation by Alden Beard at the August 18<sup>th</sup> AC Meeting. Alden stated that ~\$5 million is needed for the two remaining future projects.



Figure 6



Anaconda System-wide Water Metering Project

**FIGURE 1 – PROJECT LOCATION**



**Summary of RPPC Criteria Evaluation for Anaconda System-wide Metering Project – 2010**  
**Applicant: Anaconda Deer Lodge County (ADLC)**

<b>Project Summary</b>	<p>Anaconda-Deer Lodge City County (ADLC) proposes to install 2,642 water meters on unmetered users, which would fully meter the City of Anaconda. The total cost is \$3,876,670, with \$3,622,708 requested in Restoration Funds and \$125,350 in cash and \$128,612 in-kind matching funds.</p> <p>Overall Application Quality: Good; the application is complete and accurate.</p>
<b>Final Funding Decision and Conditions</b>	The Governor did not approve funding of this project.
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<p><u>Reasonably Feasible, with NRDP funding condition:</u> This proposal involves the installation of water meters over about a year's time using competitive bidding process for procurement of the meters and a separate procurement for construction contractors. Standard engineering practices will be used. ADLC has successfully completed over 80,000 feet of water main replacement projects since 1994 with both Restoration Grant Funds and non-grant funds. This year's metering proposal is somewhat different, and would involve a significant amount of additional communication with the residents and businesses to accomplish this project. ADLC completed a water metering study that included educating area citizens about the benefits of metering and provided a successful start to the meter installation process. ADLC also completed a Metering Implementation Plan (March 2010) that provides a conceptual meter rate for water users. These efforts have shown ADLC is planning for and capable of this type of activity, which should increase the likelihood of successfully completing the project as proposed. The only significant uncertainty associated with the potential success of this proposal is that ADLC has not yet adopted a rate conducive to water conservation, which is needed in order for metering to accomplish water conservation. The NRDP addresses this uncertainty through its recommended funding condition, which is further explained under the Cost:Benefit criterion.</p>
<b>2. Costs:Benefits</b>	<p><u>Commensurate/Net Benefits:</u> ADLC estimates an approximate 20% savings in water use will result from the installation of a fully metered system. Other experts in the field estimate that system-wide water metering can result in water savings from 30% to 50% for similar size communities, when it is accompanied by volumetric pricing structure to encourage conservation which is necessary to achieve the expected water savings.<sup>11</sup> ADLC has investigated a rate structure in the <i>ADLC Metering Implementation Plan and a Draft Water System Rate Study</i> that was completed within the last year. These documents set the stage for implementation of system-wide metering, and fully explore meter installation and water rates structures that could result in water savings. However, such a water rate structure has not been adopted at this time.<sup>12</sup> For water savings benefits to be realized, a water rate structure that is conducive to overall</p>

<sup>11</sup> Kate Miller, TSEF Program MT Dept. of Commerce, via personal communication with Tom Mostad, NRDP Staff April 28, 2009.

<sup>12</sup> The adoption of a rate structure requires municipalities to conduct a public hearing process to change water rates as per MCA § 69-7-111.

**Summary of RPPC Criteria Evaluation for Anaconda System-wide Metering Project – 2010**  
**Applicant: Anaconda Deer Lodge County (ADLC)**

water savings must be adopted before water meters are installed and implemented as they are installed. Only after the meter installation and adoption of conservation-oriented water rates occurs will the water conservation benefits of the project be known. If water conservation exceeds the proposed 20%, then the project benefits could exceed the cost of the project, as further addressed under the Cost-Effectiveness criterion.

**3. Cost-Effectiveness**

Likely Cost-Effective with NRDP Funding Condition: ADLC has thoroughly analyzed the alternatives that were outlined in past studies. The 2004 Preliminary Engineering Report (PER) and the 2009 Computer Modeling Study both recommend that system-wide water metering and water main replacement be done simultaneously to assist in water conservation activities because of the greater benefits that can be derived from that approach. ADLC has been conducting water main replacement since 2002 with Restoration Funds but has not yet made a significant effort to install meters. ADLC's preferred alternative of full metering addresses that issue. ADLC also analyzed other alternatives and metering scenarios instead of full metering and appropriately dismissed them as not addressing the entire problem. NRDP agrees with ADLC's conclusion that full metering is the best alternative to determine the water use and assist in water savings for the City of Anaconda. While the NRDP believes that a full metering proposal is likely cost-effective when combined with the adoption of an appropriate rate structure conducive to water savings, we are uncertain if metering installed over several years is significantly less cost-effective. ADLC analyzed several different options for installation, including installation of meters over a four year period. Though the one-year installation was about \$10,000 less expensive, that selection was based more on ease of implementation rather than cost. ADLC has indicated that this project could be implemented with a reduced budget and scope, although the county might have to work out having current flat rates along with the metered rates.<sup>13</sup>

An additional analysis provided by ADLC indicates that the benefits of water metering compared to the benefits of waterline replacement are similar since both reduce pumping and treatment costs.<sup>14</sup> However, water metering offers the opportunity for each water user to control their cost for water, except for the base rate cost, and gives ADLC assurance that basic costs of system operations will be covered. When comparing the cost-effectiveness of replacing water meters versus water main replacement, the amount of the water savings will determine which activity achieves higher cost effectiveness. If the water saved via full metering is 20%, as predicted by ALDC, the value of water saved per gallon/day is about \$9.02. When this is compared to the 2010 ADLC Cross Streets Water Main Replacement, this is

<sup>13</sup> Based on 9/30/10 phone conversation between Alden Beard of Beta Consulting, consultant for ADLC and Tom Mostad, NRDP.

<sup>14</sup> 08-19-2010 memorandum from Alden Beard of Beta Consulting, consultant for ADLC, to Carol Fox of the NRDP re: "Advisory Council 18Aug10 Questions on ADLC Water Losses/Values and Water Rates."

**Summary of RPPC Criteria Evaluation for Anaconda System-wide Metering Project – 2010**

**Applicant: Anaconda Deer Lodge County (ADLC)**

	estimated to be about \$8.52, which means water main replacement would have higher cost-effectiveness. However, if full metering saves more than 20%, as other projects have shown, <sup>15</sup> then it is more cost-effective to conduct water metering. <sup>16</sup> The NRDP believes that, with the recommended funding condition, the project will realize water savings that will exceed the predicted 20% savings and the proposal will be cost-effective. Of course, the actual cost of each project may differ from the estimated costs, which could also change the cost-effectiveness of the project.
<b>4. Adverse Environmental Impacts</b>	<u>No Significant Adverse Impacts:</u> Installing water meters will not cause significant adverse impacts to the environment. Some amount of water conservation is an environmental benefit that may result.
<b>5. Human Health and Safety</b>	<u>No Significant Adverse Impacts:</u> ADLC has proposed mitigation measures to alleviate adverse impacts associated with construction activities, such as dust and noise.
<b>6. Results of Response Actions</b>	<u>Consistent:</u> The project will not interfere with or duplicate the results of any known EPA Superfund actions.
<b>7. Natural Recovery Potential</b>	<u>No Effect on the Recovery Period:</u> This replacement project will not affect the groundwater recovery period.
<b>8. Applicable Policies and Laws</b>	<u>Consistent/Sufficient Information Provided:</u> ADLC currently has a procedure to dispose of materials encountered during construction and this disposal would not be funded with Restoration Funds.
<b>9. Resources of Special Interest</b>	<u>No Impact:</u> The project is not likely to adversely impact natural resources of special interest to these entities. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of funding this project as recommended by that Council (see Appendix B). If funded, the grant agreement would require proper consultation with the Tribes for situations when Tribal resources are encountered during project implementation. The DOI recommends funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within Basin and Proximate:</u> The project will occur in Anaconda, which is within and adjacent to injured groundwater resource areas.
<b>11. Actual Restoration of Injured Resources</b>	<u>No Restoration:</u> This project replaces drinking water services lost in the area as a result of contamination where cleanup is infeasible and thus constitutes compensatory restoration.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Same:</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.
<b>13. Public Support</b>	<u>55 Support Comments:</u> from Headwaters Resource, Conservation & Development, Inc., Aware, Inc., Anaconda Deer Lodge County Weed Control and 52 Anaconda area citizens.
<b>14. Matching Funds</b>	<u>3.2% Cash &amp; 3.3% In-kind:</u> \$25,350 in cash and \$128,612 in-kind match.

<sup>15</sup> Page 11 of the ADLC's System-wide Water Metering Project 2010 Application states Fort Benton had a 58% water reduction after system-wide metering.

<sup>16</sup> Alden Beard of BETA, August 19, 2010 memo to the AC.

**Summary of RPPC Criteria Evaluation for Anaconda System-wide Metering Project – 2010**  
**Applicant: Anaconda Deer Lodge County (ADLC)**

<b>15. Public Access</b>	Not Applicable
<b>16. Ecosystem Considerations</b>	<u>Positive Impacts:</u> The proposal may conserve water, which reduces water treatment and energy requirements for pumping and treating, however, the amount of water savings is uncertain.
<b>17. Coordination &amp; Integration</b>	<u>Partly Coordinates/Integrates; Partly Inconsistent:</u> This project coordinates with a portion of the ADLC's 2004 Preliminary Engineering Report and the 2009 PER amendment, which proposes replacement of waterlines on a priority basis, and also with other funded ADLC waterline projects.
<b>18. Normal Government Functions</b>	<u>Augments Normal Government Functions:</u> Measuring water use is, for the most part, ADLC's responsibility because the county owns and manages the water distribution system. 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 installation of water meters which should reduce water use. This activity is an effective way to compensate the community for the pervasive and extensive injuries to the Anaconda area groundwater resources that were covered under <u>Montana v. ARCO</u> . ADLC acquired the public water system in the mid-1990s. Other factors to consider in evaluating this criterion for local public water projects are the local match and ratepayer rates. ADLC is contributing less than 7% in matching funds, though they have annually increased their water rates by 12 percent, 12 percent, and 11 percent for three consecutive years from January 2006 through January 2008, but not in 2009. However, ADLC's current combined water and sewer rate of \$36.76 is still below the Department of Commerce's combined target rate of \$50.42. Additionally, the ADLC currently conducts a voluntary metering program that requires users who wish to have meters installed to pay \$200 for the installation of the meter. <sup>17</sup>

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<sup>17</sup> Information provided at the 8-18-2010 Advisory Council meeting from ADLC Water Superintendent Puccinelli in response to a question about current metering in Anaconda.

## **Butte-Silver Bow Drinking Water Infrastructure Replacement – Year 10**

### **Project Summary**

Butte-Silver Bow (B-SB) proposes to replace approximately 13,300 feet of deteriorated water mains that serve 200 homes in uptown Butte and install up to 500 water meters on unmetered connections. B-SB's main goals for this proposal are to provide safe and adequate amounts of drinking water to Butte citizens, to promote water conservation, and to decrease the costs associated with delivering water to Butte residents by replacing deteriorated water lines and installing the meters. Total project costs are \$2,019,496, with \$1,817,546 requested in Restoration Funds and \$201,950 offered in cash matching funds. Of this requested amount, \$1,747,246 is for contracted services and \$70,300 is for metering supplies and materials.

The bedrock aquifer beneath Butte has been so severely injured by past mining operations that natural recovery of the aquifer will not occur for thousands of years as concluded by the State's 1995 Restoration Determination Plan and by the EPA's 1994 Record of Decision for the Butte Mine Flooding Operable Unit. Restoration of the bedrock aquifer is infeasible, thus the aquifer's availability as a source of drinking water and its storage 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. 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 its urban area.

### **Status of Past, Current, and Future Related Requests**

This proposal marks year 10 of an intended 15-year funding request to the NRDP by B-SB for waterline replacement. Governors have approved funding for year 1 through year 9 totaling \$15,596,538 to replace 155,052 feet of waterlines in Butte. B-SB has completed the year 1 through year 7 projects and replaced about 114,957 feet of waterlines. The Year 8 work has been completed in the field; however, the final invoice and report have not been received. Work on the Year 9 grant is on target with 14,442 feet of pipe installed out of the 18,152 feet that was approved. B-SB has five more annual requests for waterline replacement to complete improvements on the Butte Hill.

In addition to the nine past Butte waterline projects, B-SB has been approved for funding totaling \$11,820,696 for 8 other water system improvement grant projects. B-SB has also submitted two other water system grant requests this year: 1) a \$3,500,000 request to replace the deteriorated Big Hole Pump Station; and 2) a \$2,760,000 request to replace 20,000 feet of deteriorated water transmission line that carries water from the Big Hole River to Butte. The attached table summarizes the status of the past approved and current grant requests for B-SB water system improvements.

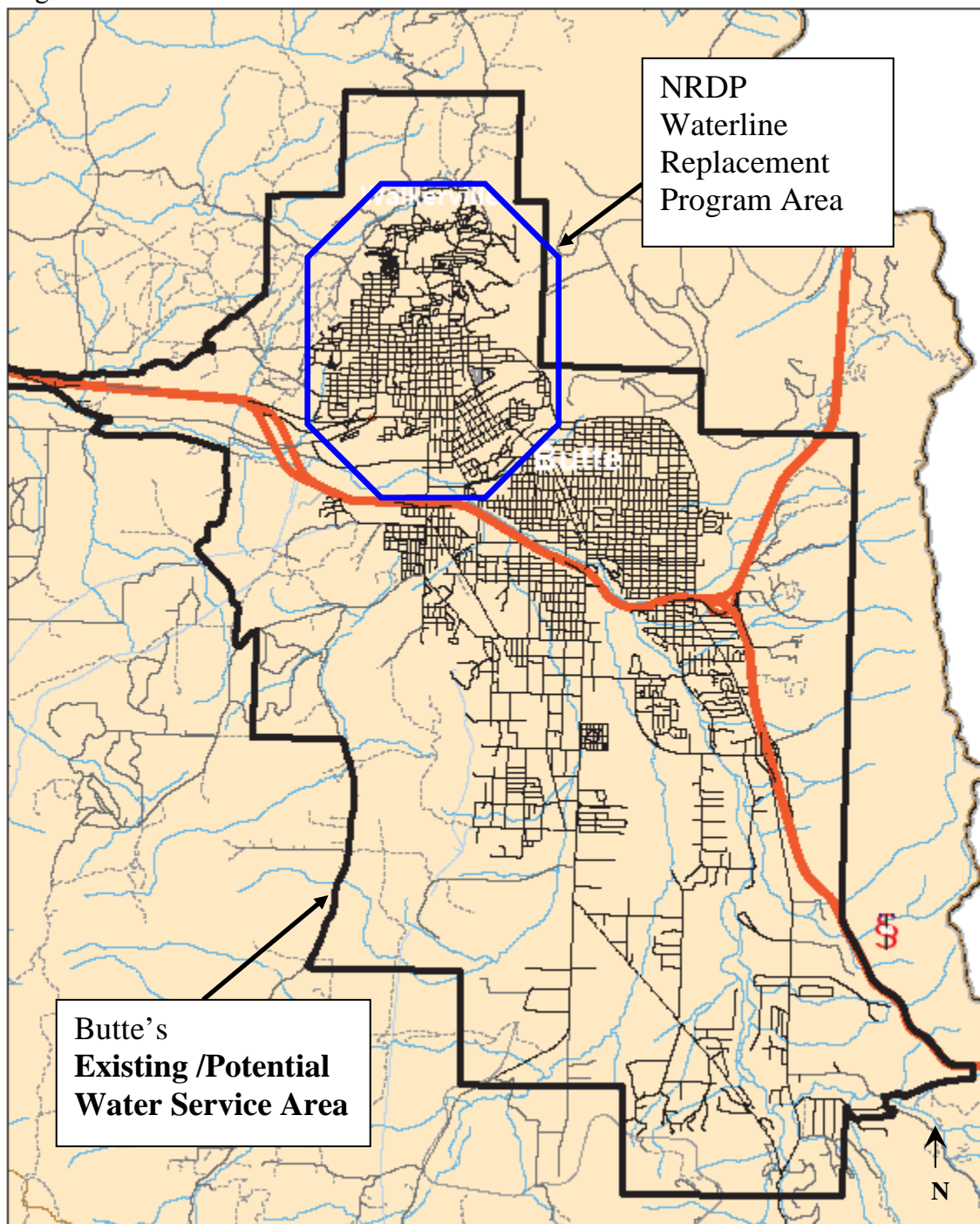


Final Funding Decision and Conditions:

The Governor approved this project for the full funding requested of \$1,817,546, subject to the standard *RPPC* funding conditions, and an additional funding condition requiring B-SB to complete a water rate study before reimbursement of Restoration Funds for expenditures on this project. The TRC also recommends that the funding for this project be covered by the proposed 36% allocation in the *Long Range Guidance Plan* proposed by the Advisory Council that is also the subject of public comment, if that Plan is adopted by the Governor.

Grant Year	Project	Approved Restoration Funds	Committed Local Match	Status
2001	Year 1 - Butte Waterlines	\$1,165,795	\$542,719	completed & closed
2002	Year 2 - Butte Waterlines	\$1,168,842	\$543,218	completed & closed
2003	Year 3 - Butte Waterlines	\$1,188,905	\$553,497	completed & closed
	Basin Creek Dam Rehabilitation	\$503,006	\$303,006	completed & closed
2004	Year 4 - Butte Waterlines	\$1,197,971	\$557,917	completed & closed
	High Service Tank Replacement	\$1,192,802	\$343,010	completed & closed
2005	Year 5 - Butte Waterlines	\$1,539,269	\$513,089	completed & closed
	Master Plan	\$174,634	\$93,211	completed & closed
2006	Year 6 - Butte Waterlines	\$1,819,581	\$606,526	completed & closed
2007	Year 7 - Butte Waterlines	\$2,417,003	\$268,556	completed & closed
	Year 1 - Big Hole Transmission Line	\$1,644,722	\$548,242	completed & closed
2008	Year 8 - Butte Waterlines	\$2,414,424	\$314,647	completed; final invoice & report pending
	Big Hole Diversion Dam Replacement	\$3,714,833	\$441,012	on-going
	Butte Metering	\$273,600	\$51,561	on-going
	Year 2 - Big Hole Transmission Line	\$1,650,542	\$504,863	Pipe installed; final drawing, invoice & report pending
2009	Year 9 - Butte Waterlines	\$2,684,747	\$497,668	underway and on schedule; 80% completed
	Year 3 - Big Hole Transmission Line	\$2,666,618	\$687,049	pipe ordered; to be completed 4/2001
<b>Total</b>	<b>17 Projects Approved</b>	<b>\$27,417,294</b>	<b>\$7,369,791</b>	
		<b>Requested Restoration Funds</b>	<b>Proposed Local Match</b>	
2010	Year 10 - Butte Waterlines	\$1,817,546	\$201,950	
	Year 4 - Big Hole Transmission Line	\$2,760,000	\$690,000	
	Big Hole Pump Station	\$3,500,000	\$500,000	
	2010 Total Request	\$8,077,546	\$1,391,950	

Figure 7



<p align="center"><b>Summary of RPPC Criteria Evaluation for Butte Waterline</b>  <b>Applicant: Butte-Silver Bow City County Government (B-SB) – Year 10</b></p>	
<b>Project Summary</b>	<p>Butte-Silver Bow City-County (B-SB) proposes to replace 13,300 feet of inadequate water distribution lines in the city of Butte that serve approximately 200 households/businesses. Total project costs are \$2,019,496 with \$1,817,546 requested in Restoration Funds and \$201,950 presented in matching funds.</p> <p>Overall Application Quality: Good</p>
<b>Final Funding Decision and Conditions</b>	The Governor approved this project for the full funding requested of \$1,817,546, subject to the standard <i>RPPC</i> funding conditions, and an additional funding condition requiring B-SB to complete a water rate study before reimbursement of Restoration Funds for expenditures on this project.
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<u>Reasonably Feasible</u> : The project will replace leaking waterlines via competitive bidding using standard engineering practices that conform to Montana Public Works Standards and DEQ requirements. B-SB has successfully conducted similar work over the last decade in Butte.
<b>2. Costs: Benefits</b>	<u>Commensurate Benefits</u> : This proposal will benefit and compensate a large public for some of the lost use of groundwater that Butte has suffered due to the inability to use bedrock groundwater in much of the City. Benefits include improved fire protection; reduced pumping, 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. However, the amount of water conservation as a result of the proposal is undetermined. Since an engineer's estimate in 1990, B-SB has not attempted to quantify the amount of leakage versus the amount of consumption for their water system, which makes it difficult to establish water conservation as a significant benefit.
<b>3. Cost-Effectiveness</b>	<u>Likely Cost-Effective/Uncertain</u> : B-SB provided a reasonable alternative analysis for meeting B-SB's specific goal of replacing deteriorated, undersized water mains, though the goal of conserving water is not well defined. While B-SB's <i>2008 Water Master Plan</i> recommends that system-wide water metering should be done with water replacement activities to conserve water by as much as 30%, <sup>1</sup> the alternative for system-wide water metering was not evaluated in the application. B-SB was approved for a volunteer metering and public awareness grant in 2008, with the public awareness component complete and approximately 372 of the 500 meters installed. <sup>2</sup> When that project is completed, about 50% of B-SB water service connections will be metered. Overall, there is insufficient information on leakage rates versus water use to determine the actual

<sup>1</sup> Butte-Silver Bow Water System Master Plan; Robert Peccia and Associates, July 2008, pages 4, 2-40, and 5-19.

<sup>2</sup> The grant agreement for this project was executed in August 2009. Rick Larson of B-SB provided these updated estimates in a 9-13-10 telephone conversation with Pat Cunneen, NRDP. When the remaining 176 meters get installed, and there are more than that number of customers on the waiting list for a meter, then approximately 50% of Butte's service connections will be metered – that is up from 45% last year.

<p align="center"><b>Summary of RPPC Criteria Evaluation for Butte Waterline</b>  <b>Applicant: Butte-Silver Bow City County Government (B-SB) – Year 10</b></p>	
	rate of water savings if system-wide metering were to be implemented. All issues considered, the selected alternative is likely cost-effective for improving the water system but uncertain for accomplishing the broader water conservation goal, since the water quantity conserved is still undefined. While B-SB is making progress in moving towards system-wide metering, it has not made progress in adopted water rates that are conducive to conservation as recommended by the <i>2008 B-SB Water Master Plan</i> . That plan recommends that B-SB explore methods of encouraging flat rate customers to convert to meters and notes that water rates for both flat rate and metered customers have not changed for the past 13 years. <sup>3</sup> To more cost-effectively address its broader water conservation goal, the NRDP recommends a funding condition requiring that B-SB complete a water rate study before reimbursement of Restoration Funds for expenditures on this project.
<b>4. Adverse Environmental Impacts</b>	<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.
<b>5. Human Health and Safety</b>	<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.
<b>6. Results of Response Actions</b>	<u>Consistent:</u> The project will not interfere with or duplicate the results of any known EPA Superfund actions.
<b>7. Natural Recovery Potential</b>	<u>No Effect on Recovery Period:</u> This replacement project will not affect the bedrock aquifer's recovery period.
<b>8. Applicable Policies and Laws</b>	<u>Consistent/Sufficient Information Provided:</u> The applicant identified and adequately planned for necessary permits.
<b>9. Resources of Special Interest</b>	<u>No Likely Adverse Impact:</u> The project is not likely to impact these resources of special interest to the Tribes or DOI, since work will occur on already constructed and paved streets. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of funding this project as recommended by that Council (see Appendix B). If funded, the grant agreement would require proper consultation with the Tribes for situations when Tribal resources are encountered during project implementation. The DOI recommends funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within Basin and Proximate:</u> Most of the project overlies the injured Butte Hill groundwater resource.
<b>11. Actual Restoration of Injured Resources</b>	<u>No Restoration:</u> The project replaces services of injured groundwater resources that cannot be restored and thus constitutes compensatory restoration.
<b>12. Service Loss/Service Restored</b>	<u>Same:</u> This proposal replaces lost services to property owners and other members of the public in Butte that could use the bedrock aquifer if it was not injured.

<sup>3</sup> *Butte-Silver Bow Water Master Plan*; Robert Peccia and Associates; Pages 6-22 & 6-30.

<p align="center"><b>Summary of RPPC Criteria Evaluation for Butte Waterline</b>  <b>Applicant: Butte-Silver Bow City County Government (B-SB) – Year 10</b></p>	
<b>13. Public Support</b>	<u>One Support Letter</u> : from B-SB Chief Executive/Chairman of the B-SB Council of Commissioners.
<b>14. Matching Funds</b>	<u>10% Cash Match</u> : B-SB will contribute \$59,750 cash for salaries and wages, \$87,500 in contracted services and \$54,700 in supplies and materials.
<b>15. Public Access</b>	Not Applicable
<b>16. Ecosystem Considerations</b>	<u>Positive</u> : Conserving water and reducing power needs for pumping and treating water fits within a broad ecosystem concept. Having a water rate conducive to conservation would improve ecosystem benefits.
<b>17. Coordination &amp; Integration</b>	<u>Partly Coordinates/Integrates; Partly Inconsistent</u> : This proposal coordinates with other Butte waterline replacement projects and the Big Hole transmission line, and if funded, will conserve some undetermined amount of water and/or reduce maintenance and improve the delivery of drinking water. However, B-SB currently does not have a rate structure that encourages water conservation or metering, which is inconsistent with the <i>B-SB 2008 Water Master Plan</i> . Thus, as indicated under the cost-effectiveness criterion, the NRDP recommends a funding condition requiring that B-SB completed a water rate study aimed at conservation.
<b>18. Normal Government Functions</b>	<u>Augments Normal Government Functions</u> : Waterline system installation and repairs are part of B-SB's responsibilities, since the county owns the water distribution system. The NRDP considers this project as one that augments, not replaces, normal government function because communities typically rely on a combination of grant funds and user fees to fund such projects, and because the proposal is an effective way to compensate the community for the pervasive and extensive injuries to the groundwater resources underlying Butte that were covered under <u>Montana v. ARCO</u> . B-SB acquired the public water system in 1992. Other factors to consider in evaluating this criterion for local public water projects are the local match and ratepayer rates. B-SB is contributing about 10% in cash matching funds. B-SB's combined water and sewer rates of \$54.81 are below the Department of Commerce's target rate of \$58.49. <sup>4</sup>

<sup>4</sup> The Department of Commerce uses this target rate to assess whether a community is adequately funding any public facility project in proportion to their financial resources. If the target rate is met, the community is eligible for state grant assistance. Since B-SB provides both a sewer and water system, it is the combined water and sewer target rate that is used to determine eligibility for state grant assistance, and not the water rate.

## **Anaconda-Deer Lodge County Anaconda Cross Streets - Phase II, Water Main Replacements – Year 9**

### **Project Summary**

Anaconda-Deer Lodge City County's (ADLC) goal is to extend Anaconda's existing municipal water supply through conservation as a surrogate for the community's lost opportunity to develop additional groundwater resources. To accomplish this, ADLC proposes to replace 12,200 feet of leaking, century old, waterlines on several cross streets in the City of Anaconda as indicated in Figure 8. ADLC projects savings of up to 383,000 gallons of water per day. The total cost is \$2,864,777, with \$2,644,390 requested in Restoration Funds, of which \$2,044,665 is for construction, \$224,535 is for construction contingency, \$370,350 is for engineering design and inspection, and \$5,040 is for grant administration. ADLC proposes a cash match of \$209,500, which consists of \$9,500 for a completed leakage evaluation study and \$200,000 for construction, and an in-kind match of \$10,887 for various administrative tasks. Total construction and engineering costs are \$2,469,000 and \$370,350, respectively.

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 about 30 square miles of contaminated bedrock groundwater to the north and south of the City.

### Status of Related Past Projects and Current Requests

This request is the ninth year of what ADLC has indicated will be continued multi-year funding requests to replace the waterline system, with about \$9.3 million<sup>1</sup> in Restoration Funds approved and/or spent for 54,773 feet of waterline replacement. ADLC has completed seven of its funded grant projects and is currently implementing the 8<sup>th</sup> year project. In addition, ADLC has completed a computer modeling and metering study grant approved in 2007. As of January 2009, 53% of the water mains have been replaced, which has stopped 42% of the leakage. Currently, 1.25 million gallons per day of water leaks from about 31,105 feet of water main that still need to be replaced, which includes this year's 12,200 feet of pipe, and is likely to cost over \$9 million.<sup>2</sup> ADLC has not indicated what portion of those future costs would be sought in Restoration Funds. ADLC has also submitted a 2010 grant proposal request for \$3,622,708 in Restoration Funds for a full metering project for the City of Anaconda. The attached table summarizes the status of these past approved and current requests.

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<sup>1</sup> The actual amount of Restoration Funds approved for water main replacement is \$11,641,258. The amount spent on completed projects is less than approved due to several reductions in scope by ADLC over the years and also because the cost of construction was lower than expected on several projects.

<sup>2</sup> Page 14, ADLC Restoration Fund Grant Application, April 2010.

Table 1: ADLC Water System Projects Summary

<b>Grant Year</b>	<b>Project</b>	<b>Pipe footage</b>	<b>Restoration Funds</b>	<b>Local Match</b>
2002	Main St & Bowman Field Water Main <sup>3</sup>	6,349	\$705,308	\$102,606
2003	East 4 <sup>th</sup>	5,979	\$936,527	\$315,126
2004	West 4 <sup>th</sup>	9,095	\$1,108,330	\$280,488
2005	7 <sup>th</sup> , East 6 <sup>th</sup> , & East 8 <sup>th</sup>	7,189	\$1,051,096	\$160,930
2006	East 3 <sup>rd</sup> & South Birch	5,877	\$1,596,029	\$64,080
2007	East 6 <sup>th</sup> & East 7 <sup>th</sup>	4,963	\$877,035	\$18,387
2008	Front & Alder	6,521	\$994,861	\$77,710
	Subtotal of Completed Water Main Projects	45,973	<b>\$7,269,186</b>	\$1,101,820
2009	W. 3 <sup>rd</sup> (in progress) <sup>4</sup>	8,800	\$1,988,478	\$217,552
	Total Constructed & Pending Water main Projects	54,773	<b>\$9,257,664</b>	\$1,319,372
2007	Computer Modeling and Metering Studies	NA	\$92,759	\$5,378
	Total of All Approved Projects		<b>\$9,330,423</b>	\$1,324,750
2010	Anaconda Cross Sts - Phase II (proposed)	12,200	\$2,644,390	\$220,378
	Anaconda Full Metering (proposed)	NA	\$3,622,708	\$253,962
	<b>Total of All Approved and Proposed Projects</b>		<b>\$15,597,521</b>	\$1,799,090
Future	Anaconda Cross Sts - Phase III	10,745	<b>\$2,619,631<sup>5</sup></b>	
Future	Plus Large Diameter (14"-20") Supply Mains <sup>6</sup>	8,160	<b>~2,400,000<sup>7</sup></b>	

#### Final Funding Decision and Conditions:

The Governor approved funding of this project for full funding of \$2,644,390, subject to the standard *RPPC* funding conditions that apply to all projects. The TRC also recommends that the funding for this project be covered by the proposed 36% allocation in the *Long Range Guidance Plan proposed* by the Advisory Council that is also the subject of public comment, if that Plan is adopted by the Governor.

<sup>3</sup> This total footage includes Bowman Field Airport line which was not a "leaking" main renewal, but rather a new extension with partial FAA funding. The total amount of leaking water main replaced was 3,969 feet.

<sup>4</sup> Since this project is in progress, the final amount of Restoration Funds and matching funds are not known.

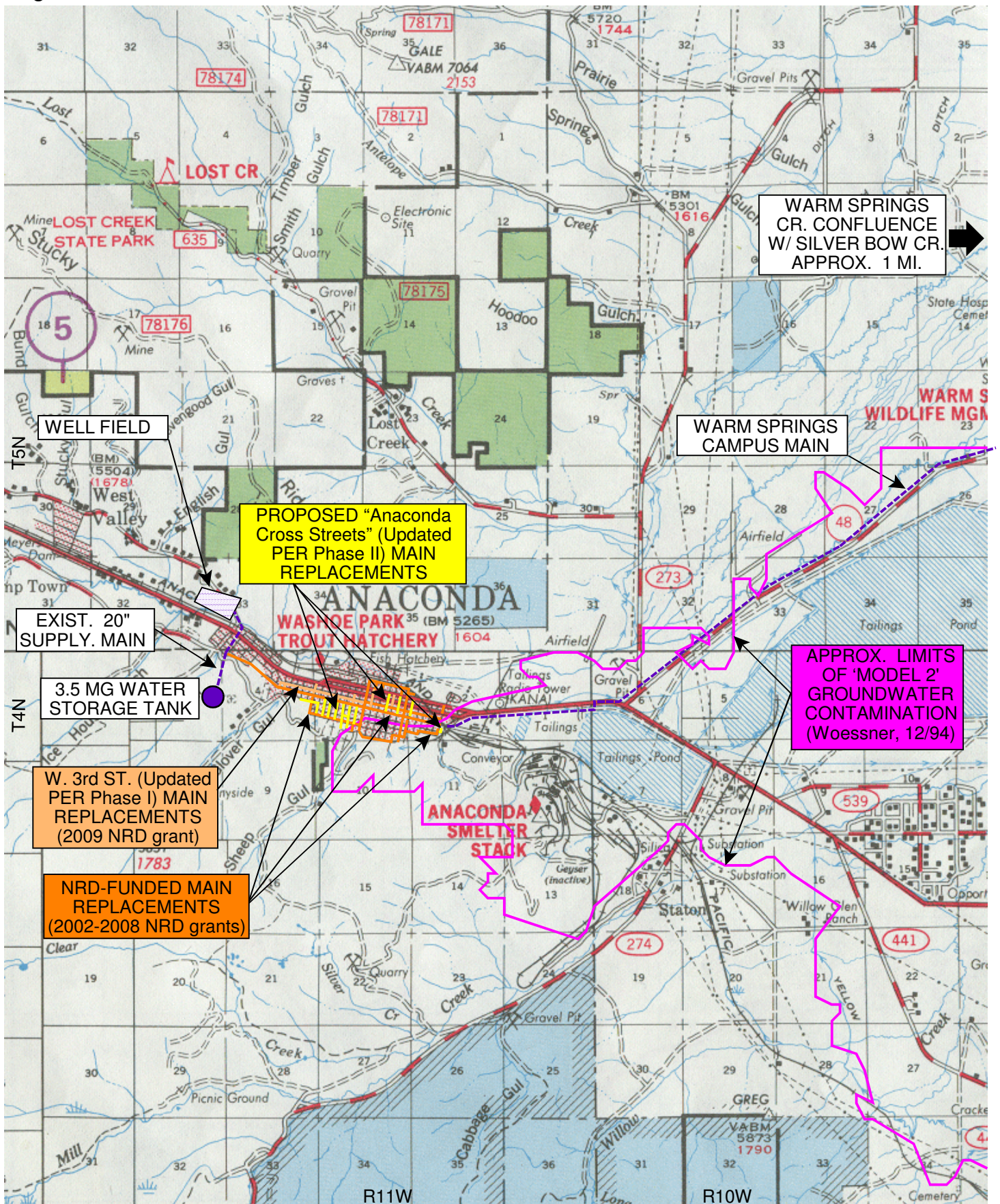
<sup>5</sup> This estimate is for construction and engineering only, no administrative costs were estimated. The cost estimate did not include the amount of the Restoration Funds request.

<sup>6</sup> The footage shown excludes 6,160 feet Pennsylvania Avenue main loop and the proposed 13,900 feet Mill Creek Industrial Park Line extension for which costs are estimated in the *2009 PER Modeling Study Amendment*, according to Page 14 of the ADLC application.

<sup>7</sup> This cost was calculated by Tom Mostad, NRDP Staff, from the presentation by Alden Beard at the August 18<sup>th</sup> AC Meeting. Alden stated that ~\$5 million is needed for the two remaining future projects.



Figure 8



*Anaconda Cross Streets (Updated PER Phase II) Water Main Replacements*

**FIGURE 1 – PROJECT LOCATION**



<b>Summary of RPPC Criteria Evaluation for Anaconda Cross Streets Water Main Replacements – 2010</b> <b>Applicant: Anaconda Deer Lodge County (ADLC)</b>	
<b>Project Summary</b>	<p>Anaconda-Deer Lodge City County (ADLC) proposes to replace about 12,200 feet of leaking, century old waterlines in cross streets in the City of Anaconda that serves 404 users. The total cost is \$2,864,777, with \$2,644,390 requested in Restoration Funds and \$209,500 in cash and \$10,887 in-kind matching funds.</p> <p>Overall Application Quality: Good; the application is complete and accurate.</p>
<b>Final Funding Decision and Conditions</b>	The Governor approved this project for full funding of \$2,644,390, subject to the standard <i>RPPC</i> funding conditions that apply to all projects.
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<p><u>Reasonably Feasible:</u> This proposal involves the replacement of dilapidated waterline, using competitive bidding process for construction contractors and 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 NRDP-funded water main projects since 2002. ADLC has successfully completed over 80,000 feet of water main replacement projects since 1994 with both Restoration Grant Funds and non-grant funds. This year’s proposal (12,200 feet of pipe) entails more pipe footage than previously constructed in past Restoration Grant proposals; however, this project should not be any more complex than past projects and ADLC should be capable of successfully completing the project as proposed.<sup>8</sup></p>
<b>2. Costs:Benefits</b>	<p><u>Commensurate Benefits:</u> ADLC estimates the proposed 12,200 feet of waterline replacement will save about 383,000 gallons of water loss per day. This predicted leakage rate is just a general estimate and is not accurate since leaks are not evenly distributed throughout the system. In addition, ADLC lacks specific water utilization records because only 12% of the ADLC water service connections are currently metered. This makes determining water use versus water leakage difficult. ADLC’s goal of water conservation as a benefit of the project is thus not well quantified. However, ADLC has submitted the Anaconda System-wide Water Metering Restoration Grant proposal in 2010 to address this problem of lack of information on water use versus water leakage.<sup>9</sup></p> <p>In addition to some water savings benefit, the project also offers 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, and offering greater fire protection in the areas of water main replacement. The project also constitutes compensatory restoration for extensive injuries to the aquifers surrounding Anaconda.</p>

<sup>8</sup> The average ADLC waterline proposal for the past 8 years has been about 7,100 feet of pipe.

<sup>9</sup> For more details, refer to ADLC’s 2010 Anaconda System-wide Water Metering Restoration Grant Project.

<b>Summary of RPPC Criteria Evaluation for Anaconda Cross Streets Water Main Replacements – 2010</b> <b>Applicant: Anaconda Deer Lodge County (ADLC)</b>	
<b>3. Cost-Effectiveness</b>	<u>Potentially Cost-Effective, depending upon the possible funding of the System-wide Metering Proposal:</u> The 2004 Preliminary Engineering Report (PER) and the 2009 Computer Modeling Study both recommend that system-wide water metering and water main replacement be done simultaneously to assist in water conservation activities. Also, although ADLC has demonstrated by past work that the selected alternative to replace water mains is likely cost-effective for improving water delivery and especially for fire protection, it appears that the best alternative for water conservation is to conduct these activities simultaneously. If the system-wide metering and this waterline proposal are both funded, the NRDP considers this project as likely cost-effective. Without funding of the system-wide metering proposal, this project is considered to have some uncertain cost-effectiveness due to the undefined amount of water conservation that it provides.
<b>4. Adverse Environmental Impacts</b>	<u>No Significant Adverse Impacts:</u> Replacing waterline will not cause significant adverse impacts to the environment. Some undefined amount of water conservation is an environmental benefit that may result.
<b>5. Human Health and Safety</b>	<u>No Significant Adverse Impacts:</u> ADLC has proposed mitigation measures to alleviate adverse impacts associated with construction activities, such as dust and noise. The project can have beneficial impacts to human health and safety by improving fire protection, reducing road hazards, and there may be some increase in the availability of water otherwise lost to leakage.
<b>6. Results of Response Actions</b>	<u>Consistent:</u> The project will not interfere with or duplicate the results of any known EPA Superfund actions.
<b>7. Natural Recovery Potential</b>	<u>No Effect on the Recovery Period:</u> This replacement project will not affect the groundwater recovery period.
<b>8. Applicable Policies and Laws</b>	<u>Consistent/Sufficient Information Provided:</u> ADLC indicates they will submit the required drawings to DEQ for review, coordinate with DEQ/EPA if contamination is encountered, and follow Montana Public Works Specifications. ADLC currently has an “Interim Development Permit System” that outlines the procedure to dispose of wastes encountered during construction and this disposal would not be funded with Restoration Funds.
<b>9. Resources of Special Interest</b>	<u>No Impact:</u> The project is not likely to adversely impact natural resources of special interest to these entities. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of funding this project as recommended by that Council (see Appendix B). If funded, the grant agreement would require proper consultation with the Tribes for situations when Tribal resources are encountered during project implementation. The DOI recommends funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within Basin and Proximate:</u> The project will occur in Anaconda, which is within and adjacent to injured groundwater resource areas.
<b>11. Actual Restoration of Injured Resources</b>	<u>No Restoration:</u> This project replaces drinking water services lost in the area as a result of contamination where cleanup is infeasible and thus constitutes compensatory restoration.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Same:</u> This project replaces services lost. Injured groundwater resources somewhat limit ADLC’s potential sources for water development, thus making replacement of water mains of existing sources means of enhancing its water resources.
<b>13. Public Support</b>	<u>62 Support Comments:</u> from Headwaters Resource, Conservation & Development, Inc., Anaconda Local Development Corporation, AWARE, Inc., ADLC Weed Control, and 58 Anaconda area citizens.

<b>Summary of RPPC Criteria Evaluation for Anaconda Cross Streets Water Main Replacements – 2010</b> <b>Applicant: Anaconda Deer Lodge County (ADLC)</b>	
<b>14. Matching Funds</b>	<u>7.3% Cash &amp; 0.4% In-kind</u> ; ADLC proposes a cash match \$209,500, which consists of \$9,500 for a completed leakage evaluation study and \$200,000 for construction, and an in-kind match of \$10,887 for various administrative tasks.
<b>15. Public Access</b>	Not Applicable
<b>16. Ecosystem Considerations</b>	<u>Positive Impacts</u> : The proposal may conserve water, which reduces water treatment and energy requirements for pumping and treating, however, the amount of water savings is uncertain.
<b>17. Coordination &amp; Integration</b>	<u>Partly Coordinates/Integrates</u> : This project coordinates with a portion of the ADLC's 2004 Preliminary Engineering Report and the 2009 PER amendment, which proposes replacement of waterlines on a priority basis, and also with other funded ADLC waterline projects.
<b>18. Normal Government Functions</b>	<u>Augments Normal Government Functions</u> : Waterline installations and repairs are part of ADLC's responsibilities, because the county owns the water distribution system. 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 the pervasive and extensive injuries to the Anaconda area groundwater resources that were covered under <u>Montana v. ARCO</u> . ADLC acquired the public water system in the mid-1990s. Other factors to consider in evaluating this criterion for local public water projects are the local match and ratepayer rates. ADLC is contributing less than 10% in matching funds, though they have increased their water rates annually by 12 percent, 12 percent, and 11 percent for three consecutive years from January 2006 through January 2008, but not in 2009. ADLC's current combined water and sewer rate of \$36.76 is still below the Department of Commerce's combined target rate of \$50.42.

## **Butte-Silver Bow Big Hole River Pump Station Replacement Project**

### **Project Summary**

Butte-Silver Bow (B-SB) proposes to replace the antiquated Big Hole River Pump Station that delivers water from the Big Hole River Diversion Dam to the water treatment plant at Feeley Hill for transmission to Butte and Rocker for domestic water uses. The Big Hole River is 22 miles south of Butte and supplies two-thirds of the city's water supply and serves as Rocker's main water source. B-SB estimates the total project costs would be \$4,000,000, with \$3,500,000 requested in Restoration Funds, to be used with \$500,000 cash matching funds. The first phase includes engineering and environmental planning, design, and permitting, which is estimated to cost \$500,000, would start in December 2010 and be completed by April 2011. The second phase involves construction that may begin in May 2011 and be completed by November 2011 at a cost of \$3,500,000.

The Big Hole Pump Station was constructed in 1899 and is listed on the National Register of Historic Places. It has undergone system upgrades throughout the years in order to keep up with system demands. The last major upgrade to this facility occurred in 1994 with the installation of five new 2,500 gallons per minute vertical turbine pumps, three with fixed speed motors and two with variable speed motors. With four pumps operating, the system is capable of delivering 14.4 million gallons of water a day to the treatment plant. In its application, B-SB cites several deficiencies with the facility, including risks of pump damage from cavitation, sediment/air entrainment, and pressure surges caused by power outages, as well as concerns with deteriorated intake piping and the concrete foundation of the building which allows groundwater to infiltrate this substructure and the potential difficulties to repair or upgrade these components. Grant funds would be used to address these problems by building a new pumphouse, including the following improvements: construction of a 40 foot by 80 foot building over a concrete wet well that would house six vertical turbine pumps fitted with variable speed motors. Each pump would be capable of moving 2 to 3.5 million gallons per day for a total system capacity of 15 million gallons per day. The design of this wet well would provide sufficient head to the pumps to prevent cavitation, allow for sediment to drop out and be flushed away, permit air to dissipate from the water prior to entering the pump intake, and serve as a surge relief to minimize the water hammer effects caused by loss of flow during a power outage. Some of the benefits for a new pump house would include increased operational and energy efficiency and improved accessibility and safety, while the old pump house could be maintained as a historic building.

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. 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. Enhancing B-SB's current water supplies that are from unaffected sources compensates 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.

### Status of Past, Current, and Future Related Requests

Since 2001, B-SB has been awarded nine grants totaling \$15,596,538 to replace 155,052 feet of waterlines in Butte. Eight of those projects have been completed, and the ninth project is on schedule with approximately 80% of the line installed. Three proposals to replace the Big Hole transmission line have received a total of \$5,961,882 since 2007. B-SB received \$3,714,883 in Restoration Funds in 2008 to replace the Big Hole Diversion Dam. Four other Butte water projects have received a total of \$2,144,042 since 2003. B-SB has received 17 grants for water projects totaling \$27,417,295 in restoration funds with \$7,369,791 offered in matching funds.

In addition to this grant request, B-SB has submitted a Year 10 request for \$1,817,546 to replace 13,000 feet of leaking waterlines in Butte and a Year 4 request for \$2,760,000 to replace 20,000 feet of the Big Hole water transmission line. For the future, B-SB indicates its intent to seek \$4.5 million to complete replacement of the Big Hole transmission line to Butte<sup>1</sup> and also anticipates five more annual requests for water line replacement to complete the improvements needed on the Butte Hill. B-SB plans to continue seeking funding through federal appropriations, state loan/revolving funds, and possible rate increases and updates to service fees. The attached table summarizes the status of the past approved and current grant requests for B-SB water system improvements.

### Final Funding Decision and Conditions

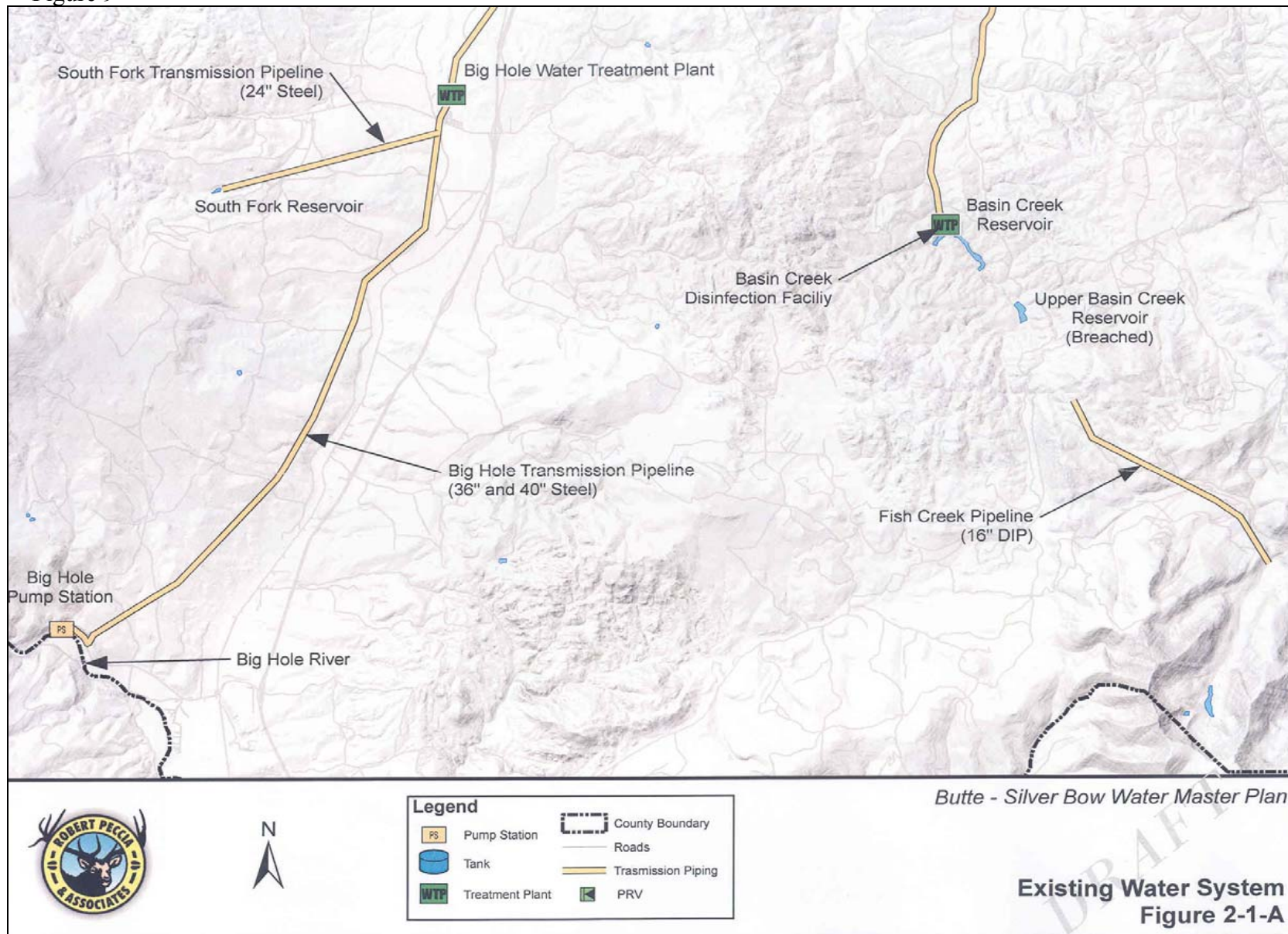
The Governor approved full funding of this proposal for the requested \$3.5 million, subject to the standard *RPPC* funding conditions.

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<sup>1</sup>Rick Larson of B-SB provided these updated estimates in a 9/13/10 telephone conversation with Pat Cunneen, NRDP. Beyond the Year 4 request, B-SB estimates it would take one more year and cost \$4.5 million to complete the project.

Grant Year	Project	Approved Restoration Funds	Committed Local Match	Status
2001	Year 1 - Butte Waterlines	\$1,165,795	\$542,719	completed & closed
2002	Year 2 - Butte Waterlines	\$1,168,842	\$543,218	completed & closed
2003	Year 3 - Butte Waterlines	\$1,188,905	\$553,497	completed & closed
	Basin Creek Dam Rehabilitation	\$503,006	\$303,006	completed & closed
2004	Year 4 - Butte Waterlines	\$1,197,971	\$557,917	completed & closed
	High Service Tank Replacement	\$1,192,802	\$343,010	completed & closed
2005	Year 5 - Butte Waterlines	\$1,539,269	\$513,089	completed & closed
	Master Plan	\$174,634	\$93,211	completed & closed
2006	Year 6 - Butte Waterlines	\$1,819,581	\$606,526	completed & closed
2007	Year 7 - Butte Waterlines	\$2,417,003	\$268,556	completed & closed
	Year 1 - Big Hole Transmission Line	\$1,644,722	\$548,242	completed & closed
2008	Year 8 - Butte Waterlines	\$2,414,424	\$314,647	completed; final invoice & report pending
	Big Hole Diversion Dam Replacement	\$3,714,833	\$441,012	on-going
	Butte Metering	\$273,600	\$51,561	on-going
	Year 2 - Big Hole Transmission Line	\$1,650,542	\$504,863	Pipe installed; final drawing, invoice & report pending
2009	Year 9 - Butte Waterlines	\$2,684,747	\$497,668	underway and on schedule; 80% completed
	Year 3 - Big Hole Transmission Line	\$2,666,618	\$687,049	pipe ordered; to be completed 4/2001
<b>Total</b>	<b>17 Projects Approved</b>	<b>\$27,417,294</b>	<b>\$7,369,791</b>	
		<b>Requested Restoration Funds</b>	<b>Proposed Local Match</b>	
2010	Year 10 - Butte Waterlines	\$1,817,546	\$201,950	
	Year 4 - Big Hole Transmission Line	\$2,760,000	\$690,000	
	Big Hole Pump Station	\$3,500,000	\$500,000	
	2010 Total Request	\$8,077,546	\$1,391,950	

Figure 9



Summary of RPPC Criteria Evaluation for the Big Hole River Pump Station Replacement Project Applicant: Butte-Silver Bow (B-SB)	
<b>Project Summary</b>	<p>Butte Silver Bow County (B-SB) proposes to replace the antiquated Big Hole River Pump Station that delivers river water diverted at the dam to the treatment plant at Feeley Hill and then to Butte and Rocker for domestic water uses. The Big Hole is the main source of water supply for the City of Butte and the community of Rocker. Total project costs are estimated to be \$4,000,000, with \$3,500,000 requested in Restoration Funds to be used with \$500,000 cash matching funds.</p> <p>Overall Application Quality: Good, but considerable details on alternatives and project design were lacking.</p>
<b>Final Funding Decision and Conditions</b>	The Governor approved full funding of this project for \$3.5 million, subject to the standard <i>RPPC</i> funding conditions.
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<p><u>Reasonably Feasible:</u> The proposed design and construction tasks are technically feasible and the selected approach is likely to achieve the stated objectives. Through a competitive procurement process, B-SB would select an engineering firm to provide planning, design, permitting, and construction oversight followed by the selection of a general contractor for the construction of the proposed pump station. B-SB has the needed experience with large water infrastructure projects of this type to complete the project.</p>
<b>2. Costs: Benefits</b>	<p><u>Net Benefit:</u> Improvements that would assure the Butte's Big Hole water supply system is a safe and reliable drinking water system would derive substantial benefits to Butte and Rocker residents. The existing pump station is over 100 years old and in need of updates. Should the pump station fail, Butte and Rocker would lose their main source of water. Based on a review of the March 2010 application, the NRDP engineering consultant recommended exploring a potentially more cost-effective alternative that would have involved upgrading and maintaining the existing pump house rather than building a new facility.<sup>2</sup> Based on this analysis, and because B-SB's <i>2008 Water Master Plan</i> did not indicate the need for full replacement of the pump house, the NRDP did not recommend the project for funding in its October 2010 <i>Pre-Draft UCFRB Restoration Work Plan</i>. Instead, the NRDP recommended that B-SB conduct a more thorough alternatives analysis and update its <i>2008 Water Master Plan</i>. As further explained under the cost-effectiveness criterion, however, based on supplemental information provided by B-SB during the public comment period, the NRDP concluded that a new pump station is needed and cost-effective and that the project benefits outweigh its costs.</p>

<sup>2</sup> Review of the Big Hole Station Restoration Application, prepared for the NRDP by Dr. Butch Gerbrandt of MT Tech, dated September 2010 and supplement cost analysis dated October 2010 (copy attached).



<b>Summary of RPPC Criteria Evaluation for the Big Hole River Pump Station Replacement Project</b> <b>Applicant: Butte-Silver Bow (B-SB)</b>	
<b>3. Cost-Effectiveness</b>	<p><u>Cost-Effective:</u> Based on additional information provided by B-SB during the public comment period on the <i>2010 Draft UCFRB Restoration Work Plan</i> and November 2010 meetings between NRDP and B-SB staff and engineering consultants, the NRDP concluded that construction of a new pump station is necessary and that it is the only feasible option to secure adequate quantities of water to Butte throughout the year. The supplemental information included a detailed analysis of alternatives that was incorporated as an amendment to B-SB's <i>2008 Water Master Plan</i>, which B-SB adopted in November 2010. The NRDP's consulting engineer's reevaluation of the proposal concluded that the opportunity to continue using the existing pumping station was designed out of the picture when the new diversion dam was designed without a sediment removal feature.<sup>3</sup> The NRDP's draft response to comments document provides the supplemental information provided by B-SB, the NRDP's engineering consultant's reevaluation of that proposal, and an explanation of the circumstances leading to the NRDP's conclusion that full replacement of the pump house is needed.<sup>4</sup></p>
<b>4. Adverse Environmental Impacts</b>	<p><u>Short-term Adverse Impacts with Mitigation:</u> The project does not appear to pose any significant adverse environmental impacts. The application provides a preliminary analysis of potential adverse environmental impacts and indicates that B-SB's completed environmental analysis for the new diversion dam project, which concluded with a finding of no significant impact, included an analysis of impacts of replacing the pump house.</p> <p>This project may have potentially adverse effects to surface water quality due to turbidity caused during construction in the short term. Also, the quantity of water will be potentially adversely affected since extensive dewatering measures will be required to construct a wet well structure. The applicant notes that precautions will need to be taken to prevent damage to partially constructed facilities during high water events.</p>
<b>5. Human Health and Safety</b>	<p><u>No Significant Adverse Impacts:</u> B-SB indicates that no human health and safety impacts will occur, although potentially adverse short term impacts to the human environment may occur during construction, such as dust and noise.</p>
<b>6. Results of Response Actions</b>	<p><u>Consistent:</u> The project will not interfere or duplicate the results of any known EPA Superfund actions.</p>
<b>7. Natural Recovery Potential</b>	<p><u>No Effect on Recovery Period:</u> This replacement project will not affect Butte's aquifer recovery time.</p>

<sup>3</sup> *Further Review of the Big Hole Pump Station Restoration Grant Application*, prepared by Dr. Butch Gerbrant, dated December 2, 2010.

<sup>4</sup> *State of Montana's Response to Public Comments on the Draft 2010 UCFRB Restoration Work Plan*, prepared by the NRDP, dated December 2010.

Summary of RPPC Criteria Evaluation for the Big Hole River Pump Station Replacement Project Applicant: Butte-Silver Bow (B-SB)	
<b>8. Applicable Policies and Laws</b>	<u>Consistent/Sufficient Information Provided:</u> B-SB has provided sufficient information on the applicable requirements needed to complete this project, including identification of the four state permits that may be needed to accomplish this project. B-SB indicates that preserving the old pump house and building a new one would preserve the old pump house historic value. As part of the supplemental information submitted during the public comment period, B-SB provided documentation of a Memorandum of Understanding (MOU) between the U.S. Army Corps of Engineers, the Montana State Historic Preservation Office, and B-SB. <sup>5</sup> This MOU requires B-SB to prepare a maintenance plan for the historic pump station to prevent the structure from falling into disrepair.
<b>9. Resources of Special Interest</b>	<u>Potentially Beneficial Impact:</u> The project is not likely to adversely impact natural resources of special interest or concern given the required permitting needed. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council voted in favor of funding this project as recommended by that Council in its final recommendations (see Appendix B). If funded, the grant agreement would require proper consultation with the Tribes for situations when Tribal resources are encountered during project implementation. The DOI's representative on the Advisory Council also concurred with the final recommendations of the Advisory Council. The DOI's preliminary input suggests that this project be considered in conjunction with the Advisory Council's long range guidance plan currently under consideration by the Trustees (see DOI comments in Appendix B).
<b>10. Project Location</b>	<u>Outside the Basin but Serves the Basin:</u> The Big Hole Pump Station is located 26 miles southwest of Butte and is south of the Continental Divide, which is the Basin boundary. Although the project will be located outside of the Basin, it services water users that reside in the UCFRB and it replaces injured natural resources that cannot be restored in the Basin. Only those improvements to the Big Hole Water system that are required to assure that it is a safe and reliable water supply are eligible for Restoration Funds.
<b>11. Actual Restoration of Injured Resources</b>	<u>No Restoration:</u> This project replaces services of injured groundwater resources that cannot be restored and thus constitutes compensatory restoration.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Same:</u> The project replaces lost services to property owners and other members of the public in Butte who could utilize the bedrock aquifer if it was not injured.
<b>13. Public Support</b>	<u>2 Support Comments:</u> The B-SB Chief Executive and Chairman and the Council of Commissioners submitted a support letter with the application. The B-SB Public Works Departmental submitted a support letter and additional information justifying the project need and urgency during the public comment period. <sup>6</sup>

<sup>5</sup> Ibid

<sup>6</sup> Ibid

Summary of RPPC Criteria Evaluation for the Big Hole River Pump Station Replacement Project Applicant: Butte-Silver Bow (B-SB)	
14. Matching Funds	<u>12.5% cash match:</u> B-SB will contribute a \$500,000 cash match for contracted engineering and construction services. It is possible that B-SB's match will be even greater since supplemental information submitted during the public comment period estimates total project costs to be \$4.5 million instead of the \$4 million indicated in the March 2010 application.
15. Public Access	Not Applicable
16. Ecosystem Considerations	Not Relevant
17. Coordination & Integration	<u>Coordinates:</u> This project coordinates with other B-SB water system improvement projects and B-SB's 2010 amendments to its <i>2008 Water Master Plan</i> that were provided during the public comment period.
18. Normal Government Functions	<u>Within but Augments Normal Government Functions:</u> This project is the responsibility of B-SB since the county owns the water system. The NRDP considers this project as one that augments, not replaces, normal government function because communities typically rely on a combination of grant funds and user fees to fund such projects and because improving Butte's existing drinking water system is an effective way to compensate the community for the pervasive and extensive injuries to the groundwater resources underlying Butte that were covered under <u>Montana v. ARCO</u> . B-SB acquired the public water system in 1992. Other factors to consider in evaluating this criterion for local public water projects are the local match and ratepayer rates. B-SB is contributing 12.5% in cash matching funds. B-SB's combined water and sewer rate of \$51.65, compared to the Department of Commerce's rate of \$58.49. <sup>7</sup> B-SB's flat rate for water only is \$38.15 which is above the Department of Commerce's target rate of \$35.60.

<sup>7</sup> The Department of Commerce uses this target rate to assess whether a community is adequately funding any public facility project in proportion to their financial resources. If the target rate is met, the community is eligible for state grant assistance. Since B-SB provides both a sewer and water system, it is the combined water and sewer target rate that is used to determine eligibility for state grant assistance, and not the water rate.

**University of Montana, Flathead Lake Biological Station**  
**Montana Tech of the University of Montana**  
**Restoration, Nutrients, and Green River Bottoms: Implication for Upper**  
**Clark Fork River Health**

**Project Summary**

The University of Montana (Montana Tech and the Flathead Lake Biological Station (“co-applicants”)) request \$268,367 in Restoration Funds to initiate monitoring of the relationships between nutrients, algae, and river processes that produce and consume oxygen along restored and un-restored portions of Silver Bow Creek and the Clark Fork River. Their goal is to understand how human-based and natural variations in nutrients and metals influence river processes like photosynthesis and respiration. The proposed assessment plans would address both point and non-point sources by monitoring nutrients, algae, and oxygen monthly at five locations on Silver Bow Creek and four locations on the Clark Fork River (Figure 10). The monitoring will be coordinated with ongoing efforts by DEQ and the Tri-State Water Quality Council. Total costs for this 2-year project are \$342,193, with \$73,826 proposed as in-kind matching funds. Of \$268,367 requested in Restorations Funds, \$99,831 is for Montana Tech salaries; \$92,158 for Flathead Lake Biological Station salaries; \$56,378 for supplies, equipment and travel; and \$20,000 for lab costs.

The indicated primary objectives of the proposed monitoring are to: 1) develop a monitoring program to provide spatial and temporal understanding of nutrients influencing habitat quality for controlling the growth of algae; 2) determine which nutrients limit algal growth and where and when the limiting nutrient differs; 3) link nutrients and algal composition to respiration and photosynthesis along the Clark Fork River; 4) address how restoration of the Silver Bow Creek channel and its suitability for fish habitat may be enhanced by effective management of nutrient discharge and anticipate how changes to other point sources may alter production and consumption of oxygen; and 5) link this investigation to ongoing studies of fish biology in Silver Bow Creek.

Past and Current Related Projects

The Montana Department of Environmental Quality (DEQ) and Natural Resource Damage Program (NRDP) have integrated remediation and restoration monitoring plans in effect for Silver Bow Creek and the Clark Fork River. Presently, the DEQ and the U.S. Geological Survey (USGS) monitor at most of the proposed locations, but not as frequently. At Silver Bow Creek, DEQ monitors nutrients and oxygen on a quarterly basis, but the co-applicants propose monthly nutrient measurements. On the Clark Fork River, DEQ will not measure nutrients or oxygen, but will rely on data gathered by the Tri-State Water Quality Council. The Tri-State Water Quality Council monitors for nutrients and field constituents 10 times over the three summer months at one Silver Bow Creek location and four Clark Fork River locations. The USGS also collects nutrient data along the Clark Fork River six to eight times per year.

The co-applicant’s monitoring program will be more rigorous than existing nutrient monitoring programs. They propose monitoring the relationships between nutrients, algae activity, and oxygen availability over a two year period, with some sampling occurring daily. Although some

daily, including diurnal, sampling has been done in previous studies<sup>1</sup> along Silver Bow Creek over short periods of time, this proposal will perform daily sampling over a more extended period of time. Water quality, biomass, and continuous oxygen monitoring will be the first year's focus and these measurements, plus nutrient assays, river metabolism and nitrification, will be the second year's focus. This specific sampling program will provide information to meet the project objectives that cannot be accomplished with just the current sampling being done by other entities at Silver Bow Creek and the Clark Fork River.

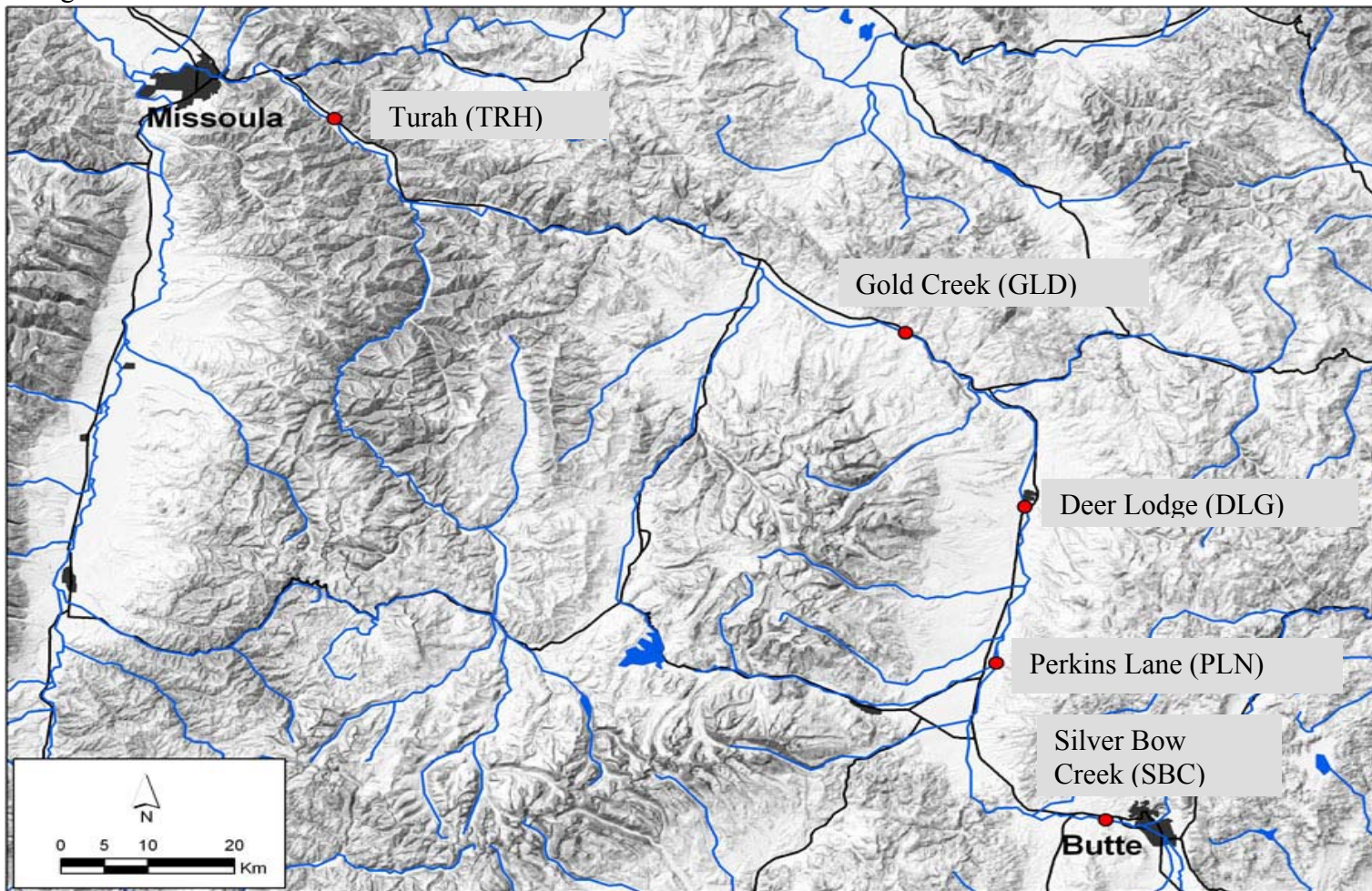
#### Final Funding Decision and Conditions

The Governor did not approve funding of this project. Based on the project evaluation, it was not clear how the information gained from this study would enhance restoration efforts in the UCFRB, which are being monitored effectively under existing plans. This proposal appears to be more of a pure research project than one that will enhance restoration in the UCFRB.

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<sup>1</sup> Gammons, C.H., et al., Diel cycling and stable isotopes of dissolved oxygen, dissolved inorganic carbon, and nitrogenous species in a stream receiving treated municipal sewage, Chem. Geol. (2010), doi: 10.1016/j.chemgeo.2010.07.006; and Plumb, B., 2009. Geochemistry of nutrients in Silver Bow Creek, Butte, Montana. M.S. Thesis, Montana Tech, Butte, MT. p. 82

Figure 10



**Map 1:** Sites proposed for water quality and metabolism monitoring. All locations are sites previously monitored by the Voluntary Nutrient Reduction Program (VNRP) and site labels in Map 1 include in parentheses the abbreviations proposed for this research and the VNRP site number previously applied to each location. Intensive studies of nutrient influences on oxygen production and consumption will be executed at Silver Bow Creek (SBC, VNRP #1) to address point-source influences along the restored channel (see Map #2). Four additional sites are located along the main stem of the CFR including Near Galen (Perkins Lane, PLN, near VNRP #7), Deer Lodge (DLG, #9), Gold Creek (GLC, #11) and Turah (TRH, #13). These stem sites are distributed to capture spatial variation in human (i.e., SBC, WSP, DLG) and natural (GLD, TRH) influence on nutrient abundance and oxygen production.

<b>Summary of RPPC Criteria Evaluation for Restoration, Nutrients, and Green River Bottoms: Implications for Upper Clark Fork River Health</b> <b>Co-Applicants: Flathead Lake Biological Station and Montana Tech both of the University of Montana</b>	
<b>Project Summary</b>	The University of Montana (Montana Tech and the Flathead Lake Biological Station (“co-applicants”) request Restoration Funds to initiate monitoring of the relationships between nutrients, algae, and river processes that produce and consume oxygen along restored and un-restored portions of Silver Bow Creek and the Clark Fork River. The total project costs are \$342,193, with \$268,367 requested in Restoration Funds and \$73,826 in in-kind matching funds.
<b>Final Funding Decision and Conditions</b>	The Governor did not approve funding of this project.
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<u>Reasonably Feasible:</u> There are no significant uncertainties with implementation of the study plan and the project is likely to accomplish its overall goal to understand how human-based and natural variation in nutrients organize river processes and how these processes alter oxygen availability, and the consequent impacts to fishes and other aquatic organisms. The study design is well thought out, utilizes accepted sampling methods and technologies, and the proposed analytical methods are commonly used for this type of monitoring. The co-applicants are well qualified to conduct the proposed study.
<b>2. Costs: Benefits</b>	<p><u>Net Costs:</u> The NRDP considers the costs associated with this monitoring project to outweigh the benefits to be gained from this project. Even though the study would lead to a greater understanding of nutrient/oxygen/biota relationships within Silver Bow Creek and the Clark Fork River, the utility of this greater understanding with respect to achieving restoration goals is not apparent from the application. That significant data gaps exists in scientific understanding about nutrient cycling does not demonstrate that filling all such gaps is necessary to effective restoration decision-making. The co-applicants did not identify a current or anticipated restoration decision to be made regarding the management of nutrients, nor demonstrate how knowledge of nutrient chemistry and biology materially affect the outcome of that decision or why the current knowledge of nutrient chemistry and biology in the Clark Fork River is inadequate for arriving at the proper decision outcome, with respect to restoration goals. Significant remedy and restoration decisions that focus on removal of hazardous substances are currently being made without the need for expanded understanding of nutrient/biota relationships, and it is not clear how those decisions would, or even could, be altered based upon the proposed new information. Moreover, this proposal, if approved, would occur during a period of time when Silver Bow Creek is in various stages of its remediation and restoration and the Clark Fork River is yet to be remediated or restored. A project of this nature would be more helpful once the creek and river have been remediated and restored.</p> <p>It is well understood that excessive nutrient loads are detrimental to beneficial uses of surface water systems, and the adverse effects of excessive nutrients in Silver Bow Creek and the Clark Fork River have been demonstrated in previous studies. The remediation goals for Silver Bow Creek and the Clark Fork River Operable Units include meeting all Montana water quality standards and both the remediation and restoration decisions are adequately informed by the</p>



<b>Summary of RPPC Criteria Evaluation for Restoration, Nutrients, and Green River Bottoms: Implications for Upper Clark Fork River Health</b> <b>Co-Applicants: Flathead Lake Biological Station and Montana Tech both of the University of Montana</b>	
	<p>numeric standards established by DEQ. While these standards are not being met for nutrients at some areas of these operable units, particularly Silver Bow Creek, the DEQ has administrative orders on consent with Butte-Silver Bow and Powell County requiring upgrades to their waste water treatment plants that will substantially reduce the nutrient discharge from these point sources by 2014. While the baseline information on nutrient cycling to be collected by the proposed study would be beneficial to monitoring the effectiveness of these upgrades, it is not needed to accomplish the upgrades. In addition, further work to address nutrient non-point source issues will be addressed through the DEQ's revised Clark Fork River TMDL, which is expected to be completed in 2014. The cost:benefit relationship for this proposal would have been more favorable, if the project had greater matching funds from entities whose focus is nutrient work.</p>
<b>3. Cost-Effectiveness</b>	<p><u>Potentially Cost-Effective:</u> The alternatives offered by the co-applicants were: 1) monitoring nutrient concentrations only; 2) monitoring nutrients and autotrophic standing stock; or 3) monitoring nutrients and standing stocks and executing bioassays of limiting nutrients. The co-applicants state that these alternatives fall short of providing the most critical aspect for the proposed monitoring, which is the rates of oxygen production and consumption and how they are tied to nutrient abundance. The NRDP agrees with this analysis as it pertains to the goal of gaining a greater understanding of the relationships between surface water, nutrient composition, autotroph communities, and dissolved oxygen availability. However, with respect to the goals of restoration, the NRDP does not believe the project is cost-effective for reasons specified under the cost:benefit criterion.</p>
<b>4. Adverse Environmental Impacts</b>	<p><u>No Adverse Impacts:</u> The project may have a beneficial impact on the environment by providing additional understanding of nutrient impacts in the Basin.</p>
<b>5. Human Health and Safety</b>	<p><u>No Adverse Impacts:</u> The project is not expected to create adverse impacts to human health or safety.</p>
<b>6. Results of Response Actions</b>	<p><u>Positive Coordination:</u> The co-applicants state that the proposed monitoring would be fully coordinated with ongoing remedial monitoring on both Silver Bow Creek and the Clark Fork River. See project summary page for more detail of ongoing monitoring.</p>
<b>7. Natural Recovery Potential</b>	<p><u>No Effect on Recovery Period:</u> The information obtained from this project is not expected to effect the recovery period of Silver Bow Creek or the Clark Fork River.</p>
<b>8. Applicable Policies and Laws</b>	<p><u>Consistent:</u> The applicant has provided sufficient information to establish that no permits are necessary to complete the project.</p>

<b>Summary of RPPC Criteria Evaluation for Restoration, Nutrients, and Green River Bottoms: Implications for Upper Clark Fork River Health</b> <b>Co-Applicants: Flathead Lake Biological Station and Montana Tech both of the University of Montana</b>	
<b>9. Resources of Special Interest</b>	<u>Potential Beneficial Impact</u> : The proposed monitoring has the potential to benefit aquatic resources of special interest to the Tribes and DOI by providing information about the status of injured resources. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council concurred with the recommendation of that Council not to fund this project (see Appendix B). The DOI does not recommend funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within Basin and Proximate</u> : The proposed project takes place entirely within the injured Silver Bow Creek and Clark Fork River sites.
<b>11. Actual Restoration of Injured Resources</b>	<u>No Restoration</u> : The proposed project is not intended to directly restore injured resources. Although the information collected could contribute to restoration of injured resources, this contribution is judged to be minimal as described under the cost:benefit criterion.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Same/Substantially Similar</u> : This project focuses on the impacts of nutrients on the same aquatic resources that were addressed under <u>Montana v. ARCO</u> .
<b>13. Public Support</b>	<u>2 Support Comments</u> : from the Clark Fork Watershed Education Program and the USGS Northern Rocky Mountain Science Center.
<b>14. Matching Funds</b>	<u>22% in-kind match</u> : The co-applicants will waive 80% of the indirect cost rate normally applied to granting agencies, for a matching amount offered of \$73,826.
<b>15. Public Access</b>	Not Relevant
<b>16. Ecosystem Considerations</b>	<u>Positive</u> : The co-applicants state that this project should provide information that may be useful for FWP managers to ascertain fish population trends in the UCFRB. This may be possible; however, it is already presently clear that high levels of ammonia and corresponding low levels of oxygen are affecting fish distribution in Silver Bow Creek. <sup>2</sup>
<b>17. Coordination &amp; Integration</b>	<u>Coordinates/Integrates</u> : The co-applicants have contacted entities who have or are conducting nutrient monitoring in the Clark Fork River, such as DEQ remedy and TMDL program staff, Tri-State Water Quality Council staff, and Dr. Watson from the University of Montana, who has been measuring nutrient levels along the Clark Fork River for over a decade. The co-applicants propose to coordinate with these entities during project implementation and make full use of past nutrient data collected. The co-applicants have also been in contact and propose to coordinate with MSU Silver Bow Creek fish population investigators and coordinate with the Clark Fork Watershed Education Program. Finally, the co-applicants propose to collaborate with CFWEP by serving as field trip station leaders for K-12 students and their teachers to perform inquiry-based science on water quality issues in the Clark Fork River and propose to recruit up to three students per year to be involved in longer-term nutrient studies that would culminate in science fair presentations.

<sup>2</sup> Based on information provided in a phone conversation between Gregory Mullen of NRDP and Trevor Selch, FWP fishery pollution control biologist.

<b>Summary of RPPC Criteria Evaluation for Restoration, Nutrients, and Green River Bottoms: Implications for Upper Clark Fork River Health</b> <b>Co-Applicants: Flathead Lake Biological Station and Montana Tech both of the University of Montana</b>	
<b>18. Normal Government Functions</b>	<u>Outside Normal Government Function:</u> The project activities do not entail those that a governmental entity is obligated by law to conduct or would normally conduct. While state natural resource agencies have some monitoring obligations and funding, the proposed monitoring is well beyond the scope of the routinely-funded agency monitoring efforts.
<b>Monitoring and Research Criteria</b>	
<b>21. Overall Scientific Program</b>	<u>Coordinates:</u> This proposal supplements and builds on the aquatic resource monitoring studies in the Upper Clark Fork River Basin (see criterion #17).
<b>22. Assistance with Restoration Planning</b>	<u>Minor Benefits:</u> The proposed project would provide supplemental information on the status and condition of nutrients and oxygen levels in the surface waters of Silver Bow Creek and the Clark Fork River; however, this information does not appear to be imperative for restoration project planning, selection, or implementation at this time.

## **Knowledge Resource Mining in the UCFRB Rocky Mountain Supercomputer Centers, Inc.**

### **Project Summary**

The Rocky Mountain Supercomputer Centers, Inc. (RMSC) requests \$376,160 in Restoration Funds to assist them with building a federation framework, developing the GIS front-end user interface, and identifying and incorporating five data stores pertaining to the UCFRB Superfund sites into the framework. RMSC proposes \$66,815 in-kind matching funds, for a total project cost of \$442,975. RMSC proposes \$347,600 of the requested funds for contracted services, which includes \$20,000 for administration (6%), \$258,000 for computer processing time and framework development (74%), and \$57,600 for document and database research, document review, quality assurance/quality control (20%).

RMSC believes there is a need for a computer framework to access the large amounts of data collected during the investigation and implementation phases of the Superfund activities in the UCFRB. It proposes to develop a computer framework which will be capable of accessing databases, maintained by others, to fulfill data searches. This is a pilot study to develop a framework, assess and prioritize available databases, and provide data stores for five (5) Superfund sites within the first year. If this pilot study is successful, additional sites may be accessed and made available.

RMSC identifies the following project goals:

- Make use of the State of Montana's High-Performance Computer system to design, implement, and operate a data federation framework;
- Develop a comprehensive data store catalog system for five (5) sites that includes; a taxonomy of data store types, identifies governing documents associated with the data, assesses the quality of the data present in the data stores using a quality assurance/quality control flagging and standards associated with the data collection effort; creates a ranking system of the data stores and informs a selection methodology for inclusion into the data federation framework;
- Develop a GIS user interface to allow end-users geospatially select data from data stores with the UCFRB; and
- Develop an analysis framework that will execute on the high performance computer.

### **Past, Current or Future-Related Projects**

This is the first grant submittal for this project and this applicant. It is a one-year pilot project that, if successful, would likely be subject of additional years of funding requests.

### **Final Funding Decision and Funding Conditions**

The Governor did not approve funding of this project. The project evaluation indicated the project had a large number of uncertainties and questionable need, and consequently, was of questionable benefit to restoration efforts in the UCFRB.

<b>Summary of RPPC Criteria Evaluation for the Knowledge Resource Mining in the Upper Clark Fork River Basin</b> <b>Applicant: Rocky Mountain Supercomputing Centers, Inc. (RMSC)</b>	
<b>Project Summary</b>	<p>The Rocky Mountain Supercomputer Centers, Inc. (RMSC) requests \$376,160 in Restoration Funds to assist them with building a federation framework, developing the GIS front-end user interface, and identifying and incorporating five data stores pertaining to the UCFRB Superfund sites into the framework. RMSC proposes \$66,815 in-kind matching funds, for a total project cost of \$442,975.</p> <p>Application Quality: Poor</p>
<b>Final Funding Decision and Conditions</b>	The Governor did not approve this project for funding of \$376,160.
<b>Criteria Evaluation</b>	
<b>1. Technical Feasibility</b>	<p><u>Uncertain Feasibility</u>: RMSC proposes to access data on federal Superfund sites within the UCFRB from various regulatory agencies, consulting firms, potentially responsible parties, and non-governmental organizations; however, RMSC does not indicate which of these entities are or will be included in the effort. The application does not include documentation that would indicate the willingness of such entities to provide access to their data/databases to RMSC initially or to maintain this data for future availability. Although not indicated in the proposal, RMSC indicated at the 8/16/10 Applicant Symposium that this grant work would develop data stores for only five of the 27<sup>1</sup> UCFRB federal Superfund Operable Unit sites.<sup>2</sup> RMSC indicates that audits and ranking of five online existing databases will be conducted; however, no information is provided about which databases will be accessed and about the basis that would be used to complete the data ranking tasks. RMSC also does not indicate how they will address data that is not in a usable format or structure, what format or structure is required, how a user will be able to access the information gathered by this effort, whether or not there will be a cost to users to access the information or how long-term maintenance of and access to the proposed framework will be handled.</p> <p>Between 1990 and 2005, EPA and ARCO funded DEQ to create and maintain a database of the UCFRB Superfund data. This effort failed due to the large amount of data, various formats of data files and a general lack of need for the database. DEQ indicated that there are few users of this database since most users of this information have access to the data.<sup>3</sup> RMSC does not address this previous work and how their approach will be able to overcome the hurdles encountered with that effort. While RMSC does make it clear that they would be developing data stores that will have access to databases maintained by others, the NRDP believes some of the challenges that lead to</p>

<sup>1</sup> EPA indicated in a 10/8/10 telephone conversations that there are 27 operable units that make up the UCFRB superfund sites.

<sup>2</sup> Phil Curtis of RMSC indicated in a 9/15/10 telephone conversation with Doug Martin of the NRDP that other databases besides Superfund sites could be accessed, e.g., DEQ TMDL monitoring data.

<sup>3</sup> DEQ indicated in a 10/7/10 telephone conversation with Doug Martin of NRDP that there are few requests for information from the EPA and ARCO funded database. DEQ also provided information about the funding and when the database was being updated.

<b>Summary of RPPC Criteria Evaluation for the Knowledge Resource Mining in the Upper Clark Fork River Basin</b> <b>Applicant: Rocky Mountain Supercomputing Centers, Inc. (RMSC)</b>	
	discontinuing the UCFRB Superfund database would exist with this project, such as uncertainty regarding long-term maintenance. Given this, and the lack of preliminary legwork done on this project indicated above, the NRDP considers the feasibility/likelihood of success of this project to be uncertain.
<b>2. Costs:Benefits</b>	<u>Net Costs</u> : Inadequate information is provided to indicate a substantial need for this project. There is no indication a needs assessment was conducted prior to the development of the proposal to determine the usefulness of this tool. The NRDP has not needed such a tool for the State-directed restoration work it is conducting in UCFRB (e.g. at Milltown, Clark Fork River, Anaconda Uplands sites), nor is NRDP aware of any communicated need for such by the various entities applying for or implementing restoration grants. The RMSC does not indicate how this system will be maintained in the long term or how new data gathered after this grant will be added to the framework system, so the long-term benefits are uncertain. RMSC suggested that this proposal would be a pilot effort focused initially on setting up five data stores, with other data stores for other sites to be developed later, with additional funding, if this pilot study proved effective. <sup>4</sup> At a cost of \$442,975 for just this initial pilot effort, the NRDP believes this is a high cost project of questionable use/need.
<b>3. Cost-Effectiveness</b>	<u>Likely Not Cost-Effective</u> : While RMSC states that this type of project would not be possible without the existence of/access to the Supercomputer, it does not provide back-up information or analyses that indicates why this project could not be completed by other existing systems. RMSC maintains that without the proposal, there is insufficient knowledge available to interested parties to quantify how Superfund activities are affecting remediation and restoration goals, but this assertion is unsubstantiated, as addressed under the Cost:Benefit criterion. The no action alternative seems to be more cost-effective based on the lack of demonstrated need and high cost of this proposal.
<b>4. Adverse Environmental Impacts</b>	<u>No Adverse Impacts</u> : No adverse impacts to the environment will result from this project.
<b>5. Human Health and Safety</b>	<u>No Significant Adverse Impacts</u> : This project does not involve any activities that would impact human health and safety. Although not addressed in the application, there would likely be an increase in demand for governmental services to provide data.
<b>6. Results of Response Actions</b>	<u>Consistent</u> : This is a replacement project that will not duplicate or interfere with results of a completed, planned, or anticipated Superfund response actions. Although the proposal relies heavily on remediation data and information, RMSC did not pursue funding from the entities conducting/directing remediation in the UCFRB.
<b>7. Natural Recovery Potential</b>	<u>No Effect on Recovery Period</u> : This project will not directly affect the natural recovery potential.
<b>8. Applicable Policies and Laws</b>	<u>Insufficient Information Provided</u> : RMSC did not address what law, rules, or policies might be applicable to this project, other than noting it would help in responding to Freedom of Information Act requests.

<sup>4</sup>RMSC representatives indicated at the 8/18/10 Applicant Symposium and in a 9/15/10 telephone conversation with NRDP staff that this was a pilot effort to build this project and indicated they would likely request additional funding if this pilot project is successful.

<p align="center"><b>Summary of RPPC Criteria Evaluation for the Knowledge Resource Mining in the Upper Clark Fork River Basin</b></p> <p align="center"><b>Applicant: Rocky Mountain Supercomputing Centers, Inc. (RMSC)</b></p>	
<b>9. Resources of Special Interest</b>	<u>No Impact:</u> The proposal would not adversely impact natural resources of special interest to the Tribes and DOI, whether or not it would be beneficial to these resources is uncertain for reasons indicated previously. Although the Tribes did not comment on this proposal, the Tribal representative on the Advisory Council concurred with the recommendation of that Council not to fund this project (see Appendix B). The DOI does not recommend funding this project as indicated in its comments that are provided in Appendix B.
<b>10. Project Location</b>	<u>Within the Basin and Proximate:</u> This project and the information used from this project will be used within the UCFRB.
<b>11. Actual Restoration of Injured Resources</b>	<u>May Contribute to Restoration:</u> The project may contribute to actual restoration, if the data is accessible and used in restoration projects within the UCFRB, both of which are considered uncertainties.
<b>12. Service Loss/Restored &amp; Service Restoration</b>	<u>Similar:</u> While the project does not restore or replace recreational or ecological services considered substantially equivalent to those lost or impaired services covered under <u>Montana v. ARCO</u> , it has the potential to provide access to information that could assist future restoration or replacement of such services.
<b>13. Public Support</b>	<u>2 letters of support:</u> from the Montana Bureau of Mines and Geology and the Butte Silver Bow Community Development Department.
<b>14. Matching Funds</b>	<u>0.15% (in-kind):</u> The RMSC and the Montana Economic Revitalization and Development Institute will provide \$66,815 as in-kind matching funds. RMSC will contribute in-kind costs associated with CPU hour cycle time and costs associated with using the storage network. The Montana Economic Revitalization and Development Institute will contribute in-kind costs associated with a virtual blade server infrastructure needed at the end of the project to demonstrate and scale the GIS user interface.
<b>15. Public Access</b>	<u>Not Relevant:</u> Public access is not a component of the project, nor is it relevant to the project.
<b>16. Ecosystem Considerations</b>	<u>Not Relevant:</u> Any ecosystem benefits would only be gained if the product of this project were to be utilized by interested users; however, the applicants have not demonstrated this demand.
<b>17. Coordination &amp; Integration</b>	<u>None:</u> While this project has the potential to coordinate/integrate with other restoration work in the UCFRB, such coordination is not evident in the application and is uncertain due to questionable need for this type of project.
<b>18. Normal Government Functions</b>	<u>Outside Normal Government Function:</u> This type of project is not currently funded by any state, local or federal governmental entity. The 2009 Legislature funded the operations of the Supercomputer, but not specific applications such as the one proposed. The Natural Resource Information Service (NRIS) associated with the State Library is capable of completing some of this type of work, but not without funding from an interested party or agency.



## **SECTION 3.0:**

# **Overall Project Ranking & Funding Recommendations**

### 3.0 NRDP PROJECT RANKING

This section indicates the NRDP's overall ranking of projects that were initially presented in the NRDP's October 2010 *Pre-Draft Work Plan* and revised in the Trustee Restoration Council's October 2010 *Draft Work Plan* that was subject of public comment. These rankings were not completely reflected in the Governor's final funding decisions, which are also indicated in this section.

This ranking is based on the criteria evaluations summarized in the individual project evaluation tables contained in Section 2. 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.

The application guidelines provided in Appendix C offer different categorizations for projects on how well they meet or address a particular criterion that the NRDP uses in evaluating and ranking projects. For example, for the technical feasibility criterion, projects are categorized as reasonably feasible, potentially feasible, uncertain feasibility, and not feasible. There are three criteria that dominate the ranking process: cost:benefit relationship, cost-effectiveness, and technical feasibility. Generally, projects that do poorly for one or more of these three criteria will rank lower relative to projects that do well for these three criteria. In considering costs, the NRDP evaluates the project both from the perspective of total costs and costs to the Restoration Funds. There are five criteria that give preference to projects that restore injured natural resources and lost services over projects that replace injured natural resources and lost services. Thus, a restoration project will typically rank higher than a replacement project unless the restoration project has deficiencies from a cost:benefit, cost-effectiveness, or technical feasibility aspect, or for some other criteria deemed important to the project. Two other criterion that can typically greatly influence ranking are the extent to which a project augments normal government function (the greater it augments, the lower its ranking) and the extent to which a project offers matching funds (the greater the match contribution, the higher the ranking). Matching funds are more of a factor with replacement projects than restoration projects because of multiple criteria that give preference to restoration projects over replacement projects, especially in a competitive year when grant cycle requests exceed the funding cap.

Based on the TRC's recommendations reflected in the *Draft Work Plan* that entailed a decision to exceed the \$7.5 million funding cap, the projects are ranked and grouped into four broad categories: 1) highly ranked projects recommended for funding; 2) medium ranked projects recommended for funding; 3) lower ranked projects recommended for funding; and 4) projects not recommended for funding.

**1. Highly Ranked Projects Recommended for Funding:** Racetrack Creek Flow Restoration; Maud S Canyon Trails/Open Space; and Children's Fishing Pond/Hillcrest Open Space.

Ranking Rationale: These three projects are considered to be of net benefit based on the substantial benefits they will derive at reasonable costs. They offer the highest proportionate matching funds of the 12 submittals.

The Racetrack Creek project offers the most substantial restoration benefits of all the projects and ranks well for the multiple criteria that give preference to restoration over replacement projects. The Racetrack Creek project will increase instream flow in lower Racetrack Creek, which is designated as a Priority 1 area in the State's draft tributary prioritization document, and in the dewatered areas of the Clark Fork River, thus improving injured aquatic resources. It involves a substantial 50% cash match.

The Maud S and Children's Fishing Pond projects are primarily replacement recreational service projects that will provide quality recreational and open-space enjoyment opportunities to an anticipated large number of area residents and visiting public, particularly given their locations at the gateway to the Butte urban area. The Maud S proposal will enhance an already-well used recreational trail system and offers a substantial 67% match (45% cash; 22% in-kind). The Children's Fishing Pond project offers both resource and recreational benefits, and provides a new recreational opportunity (fishing pond) that currently does not exist in the Butte urban area. It offers a total match of 39% (38% in-kind match; and 1% cash). The TRC's draft funding recommendation cuts the acquisition and rehabilitation components of the Maud S project, which were not considered necessary, and reduces some of the O&M, restroom, signage, and contingency costs of the Children's Fishing Pond Project. With these cuts, the projects are considered to be of net benefit and cost-effective.

While all three projects are considered reasonably feasible, the NRDP's recommended funding conditions that were adopted by the TRC addressed the uncertainties that exist with each project. All the components of the Racetrack Creek project are considered to be outside normal government function, whereas the two recreational projects have some components that augment normal government function.

Governor's Final Funding Decision: The Governor approved funding of the Racetrack Creek Flow Restoration, Maud S Canyon Trails/Open Space, and the Children's Fishing Pond/Hillcrest Open Space projects at the amounts recommended by the Trustee Restoration Council. These approved amounts, as well any approved funding conditions applicable to these projects, are indicated in the criteria evaluation narratives contained in section 2.

**2. Medium Ranked Projects Recommended for Funding:** Big Hole Transmission Line (Year 4); 2010 Cottonwood Creek; 2010 Native Plant Materials; and Anaconda System-wide Metering.

Ranking Rationale: Except for the Big Hole Transmission Line project, which is considered to be of net benefit, projects in this category generally rank lower than the three projects in category #1 because they offer benefits considered to be commensurate with costs.

Replacement of the Big Hole Transmission Line, which delivers up to 70% of Butte's water supply and is in serious disrepair, offers substantial benefits to Butte and Rucker residents and compensatory restoration for the lost use of Butte's bedrock groundwater, which cannot be restored. Benefits include improved delivery of a reliable drinking water source; reduced demand on water resources; reduced water pumping, treating, and transportation costs; reduced repair costs; and improved flows and fire protection. It offers cash matching funds of 20%. The NRDP ranked this project lower than the other projects considered of net benefit primarily due to its proportionate lower matching funds and greater

augmentation of normal government function than the other three higher ranked projects. It ranks higher than the other three projects in this medium-ranked category, which are considered to be of commensurate benefit.

The 2010 Cottonwood Creek project will enhance instream flow, fish passage, and riparian habitat in Cottonwood Creek through improvements in stock watering and grazing management, irrigation practices and culvert and diversion design. The project would improve aquatic resources in a priority tributary identified in the State's draft tributary prioritization document and may contribute to restoration of the injured Clark Fork River fishery. This project offers matching funds of 37% (34% cash; 3% in-kind).

The 2010 Native Plant Materials project, recommended for full funding by the NRDP, will continue a past funded effort to develop and release a seed supply of native plant species that are best adapted to the climatic and acidic/heavy metal soil conditions of the UCFRB, particularly the Anaconda Uplands area. Although widespread use of seed material produced through past efforts has yet to occur, the promotional outreach focus and its opportune timing associated with expanded remediation and restoration efforts in the next decade make it a project of at least commensurate benefit, with greater benefit possible if substantial demand for the seed product results. The project can contribute to the restoration of injured aquatic and terrestrial habitat in the Basin. It involves in-kind match of 24%.

The Anaconda Metering project, which involves installation of a fully-metered system, is estimated to accomplish water savings of at least 20%. The NRDP judged benefits to be at least commensurate, with potential net benefits to occur if water savings exceed the proposed 20%, which is likely based on results of full metering for similar sized communities. The NRDP ranked the Metering project lower than Cottonwood and Native Plant Materials project, which were also judged to be of commensurate benefit, because the other projects rank better for the multiple criteria giving preference to restoration of injured resources over replacement, had more matching funds, and augmented normal government function to a lesser degree.

Governor's Final Funding Decision: The Governor approved funding of the Big Hole Transmission Line (Year 4), 2010 Cottonwood Creek, and 2010 Native Plant Materials projects as the amounts recommended by the TRC. These approved amounts, as well any approved funding conditions applicable to these projects, are indicated in the criteria evaluation narratives contained in section 2. The Governor did not approve funding of the Anaconda System-wide Metering project.

**3. Lower Ranked Projects Recommended for Funding:** Butte Waterline (Year 10), Anaconda Waterline (Year 9), and Big Hole Pump House Station Replacement Project.

Ranking Rationale: The waterline replacement projects, both of which were judged to be of commensurate benefit, generally ranked lower than the medium-ranked projects because they have less matching funds and augment normal government function to a greater extent.

The Butte and Anaconda Waterline projects will enhance existing water supplies from uncontaminated sources and are an effective way to compensate these communities for the pervasive and extensive injuries to area groundwater resources. Benefits include improved fire protection; reduced pumping, treatment, repair, and property damage costs that result from reduced leakage; and reducing the need to seek additional water main replacement. They are reasonably feasible and considered to offer benefits that are commensurate with their costs, thus ranking lower than projects considered to be of net

benefit. Without full metering, the amount of water savings achieved through these waterline replacement projects is undefined, making the cost-effectiveness of these projects difficult to judge. However, ADLC is pursuing system-wide metering with its other 2010 request that is recommended for funding and B-SB proposes to add 500 meters in connection with its waterline replacement activities, plus the NRDP's funding condition is aimed at implementing water rates conducive to metering. The waterline projects augment normal government function to a greater extent than other projects that ranked higher, except for the Big Hole Transmission Line project, which offers a greater magnitude of benefits and has greater matching funds than these two waterline projects. The NRDP ranked these two waterline projects below the Anaconda Metering project because the Metering project was judged to have a more favorable cost:benefit relationship based on predicted overall water savings. Relative to each other, the NRDP ranked the Butte Waterline project higher than the Anaconda Waterline project because the Butte Waterline project offers greater matching funds (10% cash match) compared to Anaconda Waterline project (7.3% cash and 0.4% in-kind) and the Butte community currently has a greater proportion of metered users (50% in Butte compared to 12% in Anaconda).

The Big Hole Pump Station project involves replacing the antiquated Big Hole River Pump Station that delivers water from the Big Hole River Diversion Dam to the water treatment plant at Feeley Hill for transmission to Butte and Rucker for domestic water uses. The Big Hole River supplies two-thirds of the city's water supply and serves as Rucker's main water source. In the October 2010 *Pre-draft and Draft UCFRB Restoration Work Plans*, the NRDP did not rank the Big Hole Pump Station Project because it was not recommended for funding, primarily because the March 2010 application lacked a thorough analysis of alternatives and was inconsistent with B-SB's 2008 *Water Master Plan*. However, during the public comment period B-SB provided supplemental information that rectified these inadequacies. This information sufficiently justified the need for a new pump station and included an adequate analysis of alternatives as an amendment to the 2008 *Water Master Plan*. Through the review of this information and further information exchanges with B-SB, the NRDP concluded the project is cost-effective and of net benefits. The NRDP categorized this project in the lower ranking category primarily due to the inadequacies with the original application.

Governor's Final Funding Decision: The Governor approved funding of the Butte Waterline (Year 10), Anaconda Waterline (Year 9), and Big Hole Pump House Station Replacement projects at the amounts recommended by the Trustee Restoration Council. These approved amounts, as well any approved funding conditions applicable to these projects, are indicated in the criteria evaluation narratives contained in section 2.

#### **4. Projects Not Recommended for Funding:** Restoration, Nutrients, and Green River Bottoms; Knowledge Resource Mining.

Ranking Rationale: These projects are not ranked because they are not recommended for funding.

The Nutrient Research project involves monitoring of the relationships between nutrients, algae, and river processes that produce and consume oxygen along restored and un-restored portions of Silver Bow Creek and the Clark Fork River. This research would increase knowledge about how human-based and natural variations in nutrients and metals influence river processes, like photosynthesis and respiration. This research project is not recommended for funding, primarily because it is not clear how the information gained from this research will enhance restoration efforts in the UCFRB, which are being monitored effectively under existing plans.

The Knowledge Resource Mining in the UCFRB project involves building a federation framework, developing a GIS front-end user interface, and identifying and incorporating five data stores pertaining to the UCFRB Superfund sites into the framework. The project is not recommended for funding because of the large number of uncertainties and questionable need associated with this application and its questionable benefits to restoration efforts in the Basin.

Governor's Funding Decision: The Governor did not approve funding for the Restoration, Nutrients, and Green River Bottoms and the Knowledge Resource Mining projects.

### **Funding Cap Considerations**

In December 2009, the Advisory Council recommended and the Trustee Restoration Council adopted a \$7.5 million funding cap for the 2010 grant cycle. In the 2010 *Pre-Draft Work Plan*, the NRDP made recommendations based on not exceeding this cap. In its draft recommendations reflected in the 2010 *Draft Work Plan* and final funding recommendations to the Governor, the TRC recommended total funding that exceeded the funding cap. The Governor approved a total funding of \$13,045,902 that exceeded the funding cap.

### **Funding Conditions**

The project evaluations in Section 2 provide project-specific funding conditions approved by the Governor. In addition, pursuant to the *RPPC*, three funding conditions apply to all projects. First, the applicant must enter into a grant agreement with the NRDP which provides the details of how the project will be funded in accordance with the final Restoration Work Plan approved by the Governor. Second, funding should be contingent on the NRDP's approval of the final design for various components of the projects. Third, 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.

# **APPENDIX A:**

## **Project Budget Tables**



2010 Application		BUDGET SUMMARY FORM -- Racetrack Creek				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES			\$15,000.00	\$15,000.00	\$15,000.00
2	FRINGE BENEFITS					
3	CONTRACTED SERVICES					
4	SUPPLIES AND MATERIALS					
5	COMMUNICATIONS					
6	TRAVEL					
7	RENT AND UTILITIES					
8	EQUIPMENT					
9	MISCELLANEOUS	\$500,000.00	\$500,000.00		\$500,000.00	\$1,000,000.00
TOTAL		\$500,000.00	\$500,000.00	\$15,000.00	\$515,000.00	\$1,015,000.00

In electronic form this spreadsheet will automatically calculate the expense totals from the Budget Detail Form.

## Maud S

2010 Application		APPROVED BUDGET SUMMARY FORM				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES			\$43,150.00	\$43,150.00	\$43,150.00
2	FRINGE BENEFITS					
3	CONTRACTED SERVICES	\$62,040.00	\$88,895.00		\$88,895.00	\$150,935.00
4	SUPPLIES AND MATERIALS					
5	COMMUNICATIONS					
6	TRAVEL					
7	RENT AND UTILITIES					
8	EQUIPMENT					
9	MISCELLANEOUS			\$250.00	\$250.00	\$250.00
TOTAL		\$62,040.00	\$88,895.00	\$43,400.00	\$132,295.00	\$194,335.00

## Fishing Pond – approved budget

2010 Application		APPROVED BUDGET SUMMARY FORM, As approved by the Governor				
EXPENSE CATEGORY		UCFRB RESTORATIO N FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES	\$62,400.00		\$14,525.00	\$14,525.00	\$76,925.00
2	FRINGE BENEFITS	\$22,465.00		\$5,229.00	\$5,229.00	\$27,694.00
3	CONTRACTED SERVICES	\$1,077,135.00	\$20,000.00	\$8,500.00	\$28,500.00	\$1,105,635.00
4	SUPPLIES AND MATERIALS	\$38,000.00		\$23,600.00	\$23,600.00	\$61,600.00
5	COMMUNICATION S					
6	TRAVEL					
7	RENT AND UTILITIES					
8	EQUIPMENT			\$5,000.00	\$5,000.00	\$5,000.00
9	MISCELLANEOUS			\$693,282.00	\$693,282.00	\$693,282.00
TOTAL		\$1,200,000.00	\$20,000.00	\$750,136.00	\$770,136.00	\$1,970,136.00

2010 Application		BUDGET SUMMARY FORM -- Big Hole Transmission Line				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES					
2	FRINGE BENEFITS					
3	CONTRACTED SERVICES	\$450,000.00	\$690,000.00		\$690,000.00	\$1,140,000.00
4	SUPPLIES AND MATERIALS	\$2,310,000.00				\$2,310,000.00
5	COMMUNICATIONS					
6	TRAVEL					
7	RENT AND UTILITIES					
8	EQUIPMENT					
9	MISCELLANEOUS					
TOTAL		\$2,760,000.00	\$690,000.00		\$690,000.00	\$3,450,000.00

In electronic form this spreadsheet will automatically calculate the expense totals from the Budget Detail Form.

2010 Application		BUDGET SUMMARY FORM -- Cottonwood Creek				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES	\$25,292.00	\$3,000.00		\$3,000.00	\$28,292.00
2	FRINGE BENEFITS	\$1,000.00				\$1,000.00
3	CONTRACTED SERVICES	\$258,604.52	\$153,934.56	\$4,000.00	\$157,934.56	\$416,539.08
4	SUPPLIES AND MATERIALS	\$250.00				\$250.00
5	COMMUNICATIONS	\$500.00				\$500.00
6	TRAVEL	\$4,000.00				\$4,000.00
7	RENT AND UTILITIES					
8	EQUIPMENT					
9	MISCELLANEOUS					
TOTAL		\$289,646.52	\$156,934.56	\$4,000.00	\$160,934.56	\$450,581.08

In electronic form this spreadsheet will automatically calculate the expense totals from the Budget Detail Form.

2010 Application		BUDGET SUMMARY FORM -- Native Plants				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES	\$167,929.00		\$7,000.00	\$7,000.00	\$174,929.00
2	FRINGE BENEFITS	\$28,500.00				\$28,500.00
3	CONTRACTED SERVICES	\$39,850.00				\$39,850.00
4	SUPPLIES AND MATERIALS	\$3,000.00		\$5,000.00	\$5,000.00	\$8,000.00
5	COMMUNICATIONS			\$7,000.00	\$7,000.00	\$7,000.00
6	TRAVEL	\$8,000.00		\$5,000.00	\$5,000.00	\$13,000.00
7	RENT AND UTILITIES			\$12,000.00	\$12,000.00	\$12,000.00
8	EQUIPMENT	\$1,000.00		\$44,000.00	\$44,000.00	\$45,000.00
9	MISCELLANEOUS	\$4,000.00		\$1,000.00	\$1,000.00	\$5,000.00
TOTAL		\$252,279.00		\$81,000.00	\$81,000.00	\$333,279.00

In electronic form this spreadsheet will automatically calculate the expense totals from the Budget Detail Form.

2010 Application		BUDGET SUMMARY FORM - Anaconda System-wide Water Metering Project				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES			\$25,917.84	\$25,917.84	\$25,917.84
2	FRINGE BENEFITS			\$8,293.71	\$8,293.71	\$8,293.71
3	CONTRACTED SERVICES	\$3,622,708.00	\$125,350.00	\$94,400.00	\$219,750.00	\$3,842,458.00
4	SUPPLIES AND MATERIALS					
5	COMMUNICATIONS					
6	TRAVEL					
7	RENT AND UTILITIES					
8	EQUIPMENT					
9	MISCELLANEOUS					
TOTAL		\$3,622,708.00	\$125,350.00	\$128,611.55	\$253,961.55	\$3,876,669.55

In electronic form this spreadsheet will automatically calculate the expense totals from the Budget Detail Form.



2010 Application		BUDGET SUMMARY FORM -- Butte Waterline				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES		\$59,750.00		\$59,750.00	\$59,750.00
2	FRINGE BENEFITS					
3	CONTRACTED SERVICES	\$1,747,246.00	\$87,500.00		\$87,500.00	\$1,834,746.00
4	SUPPLIES AND MATERIALS	\$70,300.00	\$54,700.00		\$54,700.00	\$125,000.00
5	COMMUNICATIONS					
6	TRAVEL					
7	RENT AND UTILITIES					
8	EQUIPMENT					
9	MISCELLANEOUS					
TOTAL		\$1,817,546.00	\$201,950.00		\$201,950.00	\$2,019,496.00

In electronic form this spreadsheet will automatically calculate the expense totals from the Budget Detail Form.

2010 Application		BUDGET SUMMARY FORM - Anaconda Cross Streets (Updated PER Phase II) Water Main Replacements				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES			\$6,353.48	\$6,353.48	\$6,353.48
2	FRINGE BENEFITS			\$2,033.11	\$2,033.11	\$2,033.11
3	CONTRACTED SERVICES	\$2,644,390.00	\$209,500.00	\$2,500.00	\$212,000.00	\$2,856,390.00
4	SUPPLIES AND MATERIALS					
5	COMMUNICATIONS					
6	TRAVEL					
7	RENT AND UTILITIES					
8	EQUIPMENT					
9	MISCELLANEOUS					
TOTAL		\$2,644,390.00	\$209,500.00	\$10,886.59	\$220,386.59	\$2,864,776.59

In electronic form this spreadsheet will automatically calculate the expense totals from the Budget Detail Form.

2010 Application		BUDGET SUMMARY FORM -- Big Hole Pump Station				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES					
2	FRINGE BENEFITS					
3	CONTRACTED SERVICES	\$3,500,000.00	\$500,000.00		\$500,000.00	\$4,000,000.00
4	SUPPLIES AND MATERIALS					
5	COMMUNICATIONS					
6	TRAVEL					
7	RENT AND UTILITIES					
8	EQUIPMENT					
9	MISCELLANEOUS					
TOTAL		\$3,500,000.00	\$500,000.00		\$500,000.00	\$4,000,000.00

In electronic form this spreadsheet will automatically calculate the expense totals from the Budget Detail Form.

2010 PROJECT BUDGET SUMMARY FORM (All Years) -- Green River Bottoms							
EXPENSE CATEGORY			UCFRB RESTORATIO N FUND	MATCHING FUNDS			TOTAL
				Cash	In-Kind	Subtotal	
1	YEAR 1	SALARIES AND WAGES	\$30,252.00				\$30,252.00
	YEAR 2	SALARIES AND WAGES	\$31,462.00				\$31,462.00
	SALARIES AND WAGES SUBTOTAL		\$61,714.00				\$61,714.00
2	YEAR 1	FRINGE BENEFITS	\$14,860.00				\$14,860.00
	YEAR 2	FRINGE BENEFITS	\$15,584.00				\$15,584.00
	FRINGE BENEFITS SUBTOTAL		\$30,444.00				\$30,444.00
3	YEAR 1	CONTRACTED SERVICES	\$10,000.00				\$10,000.00
	YEAR 2	CONTRACTED SERVICES	\$10,000.00				\$10,000.00
	CONTRACTED SERVICES SUBTOTAL		\$20,000.00				\$20,000.00
4	YEAR 1	SUPPLIES AND MATERIALS	\$5,000.00				\$5,000.00
	YEAR 2	SUPPLIES AND MATERIALS	\$5,000.00				\$5,000.00
	SUPPLIES AND MATERIALS SUBTOTAL		\$10,000.00				\$10,000.00
5	YEAR 1	COMMUNICATIONS	\$100.00				\$100.00
	YEAR 2	COMMUNICATIONS	\$100.00				\$100.00
	COMMUNICATIONS SUBTOTAL		\$200.00				\$200.00
6	YEAR 1	TRAVEL	\$5,000.00				\$5,000.00
	YEAR 2	TRAVEL	\$5,000.00				\$5,000.00
	TRAVEL SUBTOTAL		\$10,000.00				\$10,000.00
7	YEAR 1	RENT AND UTILITIES					
	YEAR 2	RENT AND UTILITIES					
	RENT AND UTILITIES SUBTOTAL						
8	YEAR 1	EQUIPMENT	\$36,178.00				\$36,178.00
	YEAR 2	EQUIPMENT					
	EQUIPMENT SUBTOTAL		\$36,178.00				\$36,178.00
9	YEAR 1	MISCELLANEOUS	\$58,553.00		\$40,834.00	\$40,834.00	\$99,387.00
	YEAR 2	MISCELLANEOUS	\$41,278.00		\$32,992.00	\$32,992.00	\$74,270.00
	MISCELLANEOUS SUBTOTAL		\$99,831.00		\$73,826.00	\$73,826.00	\$173,657.00
YEAR 1 TOTAL			\$159,943.00		\$40,834.00	\$40,834.00	\$200,777.00
YEAR 2 TOTAL			\$108,424.00		\$32,992.00	\$32,992.00	\$141,416.00
ALL YEAR TOTAL			\$268,367.00		\$73,826.00	\$73,826.00	\$342,193.00

In electronic form this spreadsheet will automatically calculate the expense totals from the following Budget Detail Form.

2010 Application		BUDGET SUMMARY FORM -- Supercomputer				
EXPENSE CATEGORY		UCFRB RESTORATION FUND	MATCHING FUNDS			TOTAL
			Cash	In-Kind	Subtotal	
1	SALARIES AND WAGES					
2	FRINGE BENEFITS					
3	CONTRACTED SERVICES	\$347,600.00		\$65,165.00	\$65,165.00	\$412,765.00
4	SUPPLIES AND MATERIALS					
5	COMMUNICATIONS	\$6,560.00				\$6,560.00
6	TRAVEL	\$2,000.00				\$2,000.00
7	RENT AND UTILITIES					
8	EQUIPMENT	\$20,000.00		\$1,650.00	\$1,650.00	\$21,650.00
9	MISCELLANEOUS					
TOTAL		\$376,160.00		\$66,815.00	\$66,815.00	\$442,975.00

In electronic form this spreadsheet will automatically calculate the expense totals from the Budget Detail Form.

# **APPENDIX B:**

## **Input from Advisory Council, DOI, and Tribes**

**NOTE: The Tribes did not submit a comment letter on the 2010 grants. However, the Tribal representative on the Advisory Council did vote in concurrence with the final recommendations of that Council that is reflected in the summary memo contained in this Appendix.**

# UPPER CLARK FORK RIVER BASIN

## REMEDATION AND RESTORATION

### ADVISORY COUNCIL

Bill Rossbach, Chair  
Missoula

Maureen Connor  
Phillipsburg

Kay Eccleston  
Anaconda

Roy O'Connor  
Missoula

Jim Kambich  
Butte

Jon Krutar  
Ovando

Mike McLean  
Anaconda

Mick Ringsak  
Butte

Richard Oppen, Director  
Dept. of Environmental  
Quality

Joe Maurier, Director  
Dept. of Fish, Wildlife and  
Parks

Mary Sexton, Director Dept.  
of Natural Resources and  
Conservation

Bud Moran, Chairman  
Confederated Salish &  
Kootenai Tribes

Laura Rotegard  
U.S. Dept of Interior

TO: Fellow Members of the Trustee Restoration Council

FROM: Bill Rossbach, Chair

DATE: December 20, 2010

RE: Advisory Council's Final Recommendation on 2010 grants

The Advisory Council met on December 15, 2010 to decide on its final recommendation for 2010 grant proposals to forward for consideration by the Trustee Restoration Council. The Council's deliberations were focused primarily on reconsideration of the \$3.5 million request from Butte-Silver Bow for the Big Hole Pump Station Replacement Project. After consideration of supplemental information provided by Butte-Silver Bow on this project during the public comment period and staff input, the Council voted unanimously in favor of a motion to recommend funding for this project, with the understanding that the funding would come from the groundwater allocation to Butte-Silver Bow, recommended in the Advisory Council's proposed Long Range Guidance Plan. That Plan proposes 36% of the UCFRB Restoration Funds be allocated to groundwater projects, with 75% of that allocation for Butte-Silver Bow's groundwater projects.

Following action on the Big Hole Pump Station project, the Council next voted unanimously to reiterate the Council's draft funding recommendations on the other 2010 proposals. The attached table summarizes the Advisory Council's final recommendations.



Advisory Council's Final

<b>Large Grant Cycle Requests</b>	<b>Requested Restoration Funds</b>	<b>Draft Funding Recommendations</b>
<b>Projects Recommended for Funding</b>		
Racetrack Creek Flow Restoration	\$500,000.00	\$500,000.00
Maud S Canyon Trails/Open Space (Revised Request)	\$115,598.00	\$62,040.00
Children's Fishing Pond/Hillcrest Open Space	\$1,566,998.00	\$1,200,000.00
Big Hole Transmission Line (Year 4)	\$2,760,000.00	\$2,760,000.00
2010 Cottonwood Creek	\$289,647.00	\$289,647.00
2010 Native Plant Materials	\$252,279.00	\$252,279.00
Anaconda Metering	\$3,622,708.00	\$3,622,708.00
Butte Waterline (Year 10)	\$1,817,546.00	\$1,817,546.00
Anaconda Waterline (Year 9)	\$2,644,390.00	\$2,664,390.00
Big Hole River Pump Station Replacement	\$3,500,000.00	\$3,500,000.00
Total Recommended for Funding		<b>\$16,668,610.00</b>
<b>Projects Not Recommended for Funding</b>		
Restoration, Nutrients and Green River Bottoms	\$268,367.00	\$0.00
Knowledge Resource Mining in the UCFRB	\$376,160.00	\$0.00

# UPPER CLARK FORK RIVER BASIN

## REMEDATION AND RESTORATION

### ADVISORY COUNCIL

Bill Rossbach, Chair  
Missoula

Maureen Connor  
Phillipsburg

Kay Eccleston  
Anaconda

Roy O'Connor  
Missoula

Jim Kambich  
Butte

Jon Krutar  
Ovando

Mike McLean  
Anaconda

Mick Ringsak  
Butte

Richard Oppen, Director  
Dept. of Environmental Quality

Joe Maurier, Director  
Dept. of Fish, Wildlife and Parks

Mary Sexton, Director Dept. of  
Natural Resources and  
Conservation

Bud Moran, Chairman  
Confederated Salish & Kootenai  
Tribes

Laura Rotebard  
U.S. Dept of Interior

TO: Fellow Members of the Trustee Restoration Council

FROM: Bill Rossbach, Chair  
UCFRB Remediation and Restoration Advisory Council

DATE: October 22, 2010

SUBJECT: Summary of Advisory Council's funding recommendation  
on 2010 grant proposals

The Advisory Council met on October 20, 2010 to decide on its draft funding recommendations for the 2010 grants proposals to forward for consideration by the Trustee Restoration Council. Attached is a summary of the motions passed at this meeting that includes a summary table on the Advisory Council's funding recommendations. I look forward to providing more information about the Advisory Council's deliberations and decisions on the 2010 grant proposals at our October 26<sup>th</sup> meeting.

The most significant decision made by the AC was to recommend approval of all of the projects "Approved" by the NRDP staff, including those that were not recommended by the staff solely on the basis of the arbitrary \$7.5 million funding cap that was established for this year. Most critically, the AC unanimously recommends full funding of the Anaconda water metering project, and the continuation of the next phases of the Butte and Anaconda waterlines projects which were approved by the NRDP and indisputably met all the established funding criteria, but were not recommended because of the cap.

When the funding cap was established nearly a year ago we were in very different circumstances. At that time we were operating without any kind of guidance plan or long term allocation proposal for the use of the settlement funds. Because work had not even begun on developing a plan and because we all knew of the difficulty that prior councils had in reaching an agreement on a plan, it was reasonable to be conservative in developing a cap, particularly since last year and for several years previously, the cap had been very high, exceeding \$15 million. We were all dissatisfied with the unplanned, ad hoc, project by project process for the annual funding cycle and did not want to continue funding projects without a better idea of whether and how project proposals fit into the long term big picture of the best uses of the limited settlement funds.

This year then is a time of transition. Due to the incredibly hard and good faith work of this AC we now have out for public comment very specific guidelines for long term allocation of the settlement funds. We also have a specific plan for how to expedite and streamline the long term uses of the funds allocated for groundwater projects in Butte and Anaconda. We expect that NRDP staff will develop specific procedures to implement the Long Range Guidance Plan if it is adopted so that in the future we will not have to continue with the unplanned, unguided, project by project funding procedures now used.

On the basis of the foregoing then, the Advisory Council determined that arbitrarily cutting off funding for the indisputably recommended Butte and Anaconda waterline projects would be very counterproductive and unreasonable. These are phased, long term projects which are all prioritized and included in the previously developed master plans for these communities. Because they are phased projects, to cut off funding now will result in considerable cost increases due to disruption in the construction scheduling and the loss of coordination with other ongoing infrastructure projects. As such, since these projects would be clearly approved as part of an eventual streamlined groundwater master plan process, that has been recommended in the Long Range Guidance Plan, and within the recommended 36% groundwater allocation, that it made no sense to discontinue funding at this time. On this basis full funding of these waterline metering and construction projects was unanimously recommended by the AC. It is clear, however, that the primary reason the AC made these recommendations and that the votes were essentially unanimous was the understanding and expectation that in future years and funding cycles we would be operating with specific allocations in place and more streamlined procedures, particularly for the groundwater projects in Butte and Anaconda.

The AC also recommended some increases in two other projects also recommended by the NRDP staff: to maximize the benefits of all year, instream flow restoration and improvement in Cottonwood Creek and to provide what we considered, after public hearing, a more reasonable amount for operation and management and bathroom facilities for the Butte Children's fishing pond project.

## Summary of Advisory Council decisions at October 20, 2010 meeting

- I. Motion made by Maureen Connor that the rankings of projects as presented for funding by NRDP staff (Racetrack, Maud S Canyon, Children's Fishing Pond, Big Hole Transmission, Cottonwood Creek, Plant Materials, and Anaconda Metering) be accepted by the Advisory Council and recommended to the Trustee Council with the following understandings and changes:
- a) It is understood that funding and funding conditions recommended by the staff are included, with the following changes and clarifications listed next:
  - b) For the Racetrack Project: Change the funding condition with regards to payback of Restoration Funds from "that the Restoration Fund be reimbursed by \$500,000 if the CFC transfers the water right or changes its use from instream flow" to "that the Restoration Fund be reimbursed by \$500,000 if the use of the water right is changed from instream flow.
  - c) For the Maud S Project: Clarify that the funding condition regarding NRDP review and approval of the final trail design only means that NRDP will review the design for consistency with the scope of the approved project, which is the same condition set forth in the RPPC design review requirements on all projects.

Mick Ringsak seconded this motion and it carried unanimously with the representative of the Tribes and Jon Krutar abstaining.

- II. Motion by Maureen Connor that the AC recommend to the TRC that instead of the amounts specified in the NRDP staff recommendations: a) that the Children's Fish Pond receive \$1.2 million in funding; and b) that the Cottonwood Creek project receive full funding requested by the applicant, provided that NRDP staff obtains sufficient information to confirm the benefits from the pivot irrigation portion of the proposal.

Jim Kambich seconded the motion and it was passed unanimously with the representative of the Tribes abstaining.

- III. Motion by Maureen Connor that the remaining unfunded, but approved, projects (the 25% portion of the Anaconda Water Metering, the Butte Waterline, and the Anaconda Waterline) be fully funded as presented by the applicants, be approved by the AC and recommended to the TRC, to be funded from the 36% GROUNDWATER allocation that is set forth in the recommendations from Long Range Fund Guidance Allocation Plan, with the 75% (Butte) 25% (Anaconda) shares of that 36%.

Mike McLean seconded the motion and it was carried unanimously with Mick Ringsak abstaining.

- IV. Motion by Maureen Connor that the AC recommend to the TRC that NRDP staff prepare for consideration by the AC the non-grant, streamlined process for funding groundwater projects by March 1, 2011, for a June 1, 2011 implementation. The AC understands that this process proposal will be subject to a public comment period and TRC approval and

contemplates that the Butte Water System Master Plan that will be presented through this non-grant streamlined process shall include a proposal for improvement of water delivery from the Pumphouse.

Mike McLean seconded the motion and it carried unanimously.

- V. Motion made by Mike McLean to clarify Motion III that the AC recommends full funding of the Anaconda Waterline project, as proposed by the applicant.

Roy O'Connor seconded and the motion carried unanimously.

Below is a table that provides the AC's approved recommendations as well as the requested amount for comparison purposes.

<b>Large Grant Cycle Requests</b>	<b>Requested Restoration Funds</b>	<b>AC Funding Recommendations (10/20/2010)</b>
<b>Projects Recommended for Funding</b>		
Racetrack Creek Flow Restoration	\$500,000.00	\$500,000.00
Maud S Canyon Trails/Open Space (Revised Request)	\$115,598.00	\$62,040.00
Children's Fishing Pond/Hillcrest Open Space	\$1,566,998.00	\$1,200,000.00 <sup>1</sup>
Big Hole Transmission Line (Year 4)	\$2,760,000.00	\$2,760,000.00
2010 Cottonwood Creek	\$289,647.00	\$289,647.00 <sup>2</sup>
2010 Native Plant Materials	\$252,279.00	\$252,279.00
Anaconda Metering	\$3,622,708.00	\$3,622,708.00 <sup>3</sup>
Butte Waterline (Year 10)	\$1,817,546.00	\$1,817,546.00 <sup>3</sup>
Anaconda Waterline (Year 9)	\$2,644,390.00	\$2,644,390.00 <sup>3</sup>
<b>Total</b>	<b>\$13,569,167.00</b>	<b>\$13,148,610.00</b>
<b>Projects Not Recommended for Funding</b>		
Restoration, Nutrients and Green River Bottoms	\$268,367.00	\$0.00
Big Hole River Pump Station Replacement	\$3,500,000.00	\$0.00
Knowledge Resource Mining in the UCFRB	\$376,160.00	\$0.00

<sup>1</sup> For the Children's Fishing Pond project, the Advisory Council recommends additional funding of \$155,299 more than that recommended by the NRDP, which would increase funding for the restroom component and O&M components beyond that recommended by the NRDP.

<sup>2</sup> For the Cottonwood Creek project, the Advisory Council recommends full funding, which was \$171,962 more than recommended by NRDP and covers the costs of the pivot irrigation portion of the project, subject to NRDP receiving sufficient information to confirm the benefits of this project portion.

<sup>3</sup> Advisory Council's motion #3 and #4 set forth that its recommendations are for full funding of the waterline and metering projects as requested by the applicants.



**United States Department of the Interior**

**NATIONAL PARK SERVICE**  
Grant-Kohrs Ranch National Historic Site  
266 Warren Lane  
Deer Lodge, Montana 59722

A-2219

October 25, 2010

Carol Fox  
Restoration Program Chief  
Natural Resource Damage Program  
P.O. Box 201425  
Helena, MT 59620-1425

Dear Carol,

The United States Department of the Interior (USDOI) has reviewed the following applications submitted for funding through the 2010 Upper Clark Fork River Basin Restoration Fund Grant Program. Twelve projects were evaluated based upon the following criteria:

- 1) How the projects might impact DOI properties, trust resources, or legislative responsibilities, and
- 2) The Upper Clark Fork River Basin Restoration Plan Procedures and Criteria.

Although the aforementioned plan must be followed through this year's grant process, DOI continues to support the adoption of a long range restoration priorities and fund allocation plan as soon as possible. The comments and discussion's held at the Advisory Council's meeting on October 20<sup>th</sup>, 2010, further supports the urgency that a specific long range plan be adopted.

Our comments on the reviewed applications are as follows:

**Racetrack Creek Flow Restoration Project**

**Requested Funds:** **\$500,000.00**  
**NRDP Funding Recommendations:** **\$500,000.00**

This project would provide 433 acre-feet per year from a stored water right for instream use that is currently being held as an irrigation water right. The lower portion of Racetrack Creek has been listed as a priority one area in the draft final of the Prioritization of Tributaries in the Upper Clark Fork River Basin for Fishery Enhancement (which is currently under public comment). The ability to release this water when areas of Racetrack Creek needs it the most, is an important first step in restoring trout habitat, and fishing opportunities within the tributary, as well as within the Clark Fork River.

DOI supports the full funding recommendations of the NRDP.

### **Maud S Canyon Trails and Open Space Project**

**Requested Funds:** \$115,598.00  
**NRDP Funding Recommendations:** \$62,040.00

This project would extend an existing trail system, and create an open space area just East of Butte. Completion of the trail system would enhance recreational opportunities within the area, which supports DOI interests.

DOI supports this project for partial funding as recommended by the NRDP.

### **Children's Fishing Pond/Hillcrest Open Space Project**

**Requested Funds:** \$1,566,998.00  
**NRDP Funding Recommendations:** \$1,044,701.00

DOI supports this project as recommended by the NRDP, and furthermore supports the additional monies recommended through the AC meeting motion to increase the funding recommendation to \$1,200,000.00. Several aspects such as the fishing pond, stream restoration, and the educational component of this project are in the interest of the DOI.

### **Big Hole Transmission Line - year 10**

**Requested Funds:** \$2,760,000.00  
**NRDP Funding Recommendations:** \$2,760,000.00

DOI continues to support the replacement of the existing transmission line that feeds the city of Butte's water supply.

DOI supports the full funding recommendations of the NRDP.

### **2010 Cottonwood Creek**

**Requested Funds:** \$289,647.00  
**NRDP Funding Recommendations:** \$117,995.00

DOI supports the recommendations of the NRDP, as well as the full funding recommendations put forth in a separate motion at the AC meeting on Oct. 20<sup>th</sup>, 2010. At this time, there are requests for a review of additional information given to us by the applicants. Conditions of full funding may change based on NRDP's recommendations on the new information that was provided.

### **2010 Native Plant Materials**

**Requested Funds:** \$252,279.00  
**NRDP Funding Recommendations:** \$252,279.00

Continuing support of a seed supply of native plant species specifically adapted to the climate of the Clark Fork Basin region is and will continue to be important during remediation and restoration

efforts within the basin. Specifically, the Grant-Kohrs Ranch National Historic Site will be looking at sources for seed procurement as the remediation efforts moving down the Clark Fork River approaches cleanup on the ranch.

DOI supports the full funding recommendations of the NRDP.

**Anaconda System - Wide Metering Project**

<b>Requested Funds:</b>	<b>\$3,622,708.00</b>
<b>NRDP Funding Recommendations:</b>	<b>\$2,723,025.00</b>

This project would provide conservation of water through management, and also provide information on overall water use in Anaconda. Replacement of the water mains continues to show vast improvements in recovering lost water due to leakage, and with the new information presented at the Oct. 20<sup>th</sup> AC meeting, DOI would recommend approval of this project as recommended by the NRDP. Furthermore, DOI would request that the additional motion to approve full funding of this project and other Anaconda water projects connected to the lost services of groundwater be approved to expedite the process, and allow Anaconda to decide on these issues based on their master plan, along with the guidance of a specific long range plan if approved.

**The following projects or portions of projects were not recommended for funding due to the funding cap of \$7.5 million.**

**Anaconda System - Wide Metering Project**

<b>Requested Funds:</b>	<b>\$3,622,708.00</b>
<b>NRDP Funding Recommendations:</b>	<b>\$899,683.00</b>

See above for comments.

**Butte Waterline - year 10**

<b>Requested Funds:</b>	<b>\$1,817,546.00</b>
<b>NRDP Funding Recommendations:</b>	<b>\$1,817,546.00</b>

DOI continues to support Butte's waterline replacement, and furthermore supports the continuing effort to adopt a specific long range plan in an effort to expedite future allocations for groundwater loss in this area.

**Anaconda Waterline - year 9**

<b>Requested Funds:</b>	<b>\$3,622,708.00</b>
<b>NRDP Funding Recommendations:</b>	<b>\$2,344,390.00</b>

DOI continues to support Anaconda's waterline replacement, and furthermore supports the continuing effort to adopt a specific long range plan in an effort to expedite future allocations for groundwater loss in this area.

---



**The following projects were not recommended by the NRDP for funding regardless of the \$7.5 million cap.**

**Big Hole River Pump Station Replacement Project**

DOI continues to support the efforts to replace or fix the water supply infrastructure for the city of Butte. This is another project that would be best suited under the direction of Butte's master plan, in conjunction with a long range guidance plan that is currently being reviewed for adoption.

**Knowledge Resource Mining in UCFRB**

This project does not seem to offer any quantifiable information that would in turn help in restoration efforts within the Clark Fork River Basin, and does not serve any DOI interests at this time.

**Restoration, Nutrients and Green River Bottoms**

At this time there is enough sampling and monitoring being performed along the Silver Bow and Clark Fork River, and therefore this project does not seem to enhance the efforts currently being performed enough to warrant a recommendation. This project also does not serve any DOI interests at this time.

Sincerely,

/s/signed Laura Rotegard

10/25/10

Laura Rotegard  
LR/em

Cc: Karen Nelson, USFWS  
Eric Mason, CERCLA Project Manager, NPS  
Cynthia Staszak, Acting Deputy State Director, Division of Resources, BLM

# **APPENDIX C**

## **Application Review Guidelines**

# UCFRB RESTORATION GRANTS

## 2010 APPLICATION REVIEW GUIDELINES

### Introduction

The January 2007 *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. In addition, certain projects may have unique aspects for a certain criterion for which none of the broad categories provided herein are appropriate.

### 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.

**Potentially Feasible:** Projects in this category have a few uncertainties that could be significant but it appears they can be resolved and the project can 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 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.

**Uncertain:** There are some uncertainties to the project that lend variability to the cost:benefit relationship or there is an insufficient basis upon which to judge this relationship.

### **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, based on available information, the State concludes that the selected alternative is likely to be cost-effective.

**Potentially Cost Effective:** There are some unknowns regarding the project such that the State can not definitively conclude whether it is or is not cost-effective, but the applicant proposed an adequate approach to reach a cost effective alternative.

**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 Information)

**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: For projects on the Big Blackfoot River watershed outside of the Milltown Dam area 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. 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.

**Outside But Serves the Basin:** While the project is located outside the Basin, it services users inside the Basin.

**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/Substantially Similar:** 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. This category would apply to

projects in the Silver Bow Creek watershed that are consistent with the priorities established in the *Silver Bow Creek Watershed Restoration Plan*.

**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. This category would apply to projects in the Silver Bow Creek watershed that are inconsistent with the priorities established in the *Silver Bow Creek Watershed Restoration Plan* and for which insufficient justification has been provided on why it should be funded anyway.

**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?

**Below Fair Market Value:** Documentation indicates property is being acquired below fair market value.

**At Fair Market Value:** Documentation indicates the property is being acquired at fair market value.

**Above Fair Market Value:** 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, focusing 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 of either injured resources or replacement natural resources?

**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

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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)**

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#### **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**