Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)
Trinity Berry 11 yrs. old 533-8293 1317 Casey St

Your Idea: Fully describe your concept.
Fishin Silver bow creek from continental drive all the tailings way down. Take out contaminated ~~soil~~ dirt! Please! So I can fish behind my house on 1317 casey street!

Project Location: Describe the project location here and mark it on the map on back.
LAO along SB Creek from the bottom of the mine to where the creek is already remediated.

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
Butte children in perpetuity

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☒ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

- **Wednesday March 14**, 6 – 8 PM, Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
- **Tuesday March 20**, 6 – 8 PM, Butte-Silver Bow Public Archives, 17 W. Quartz St.

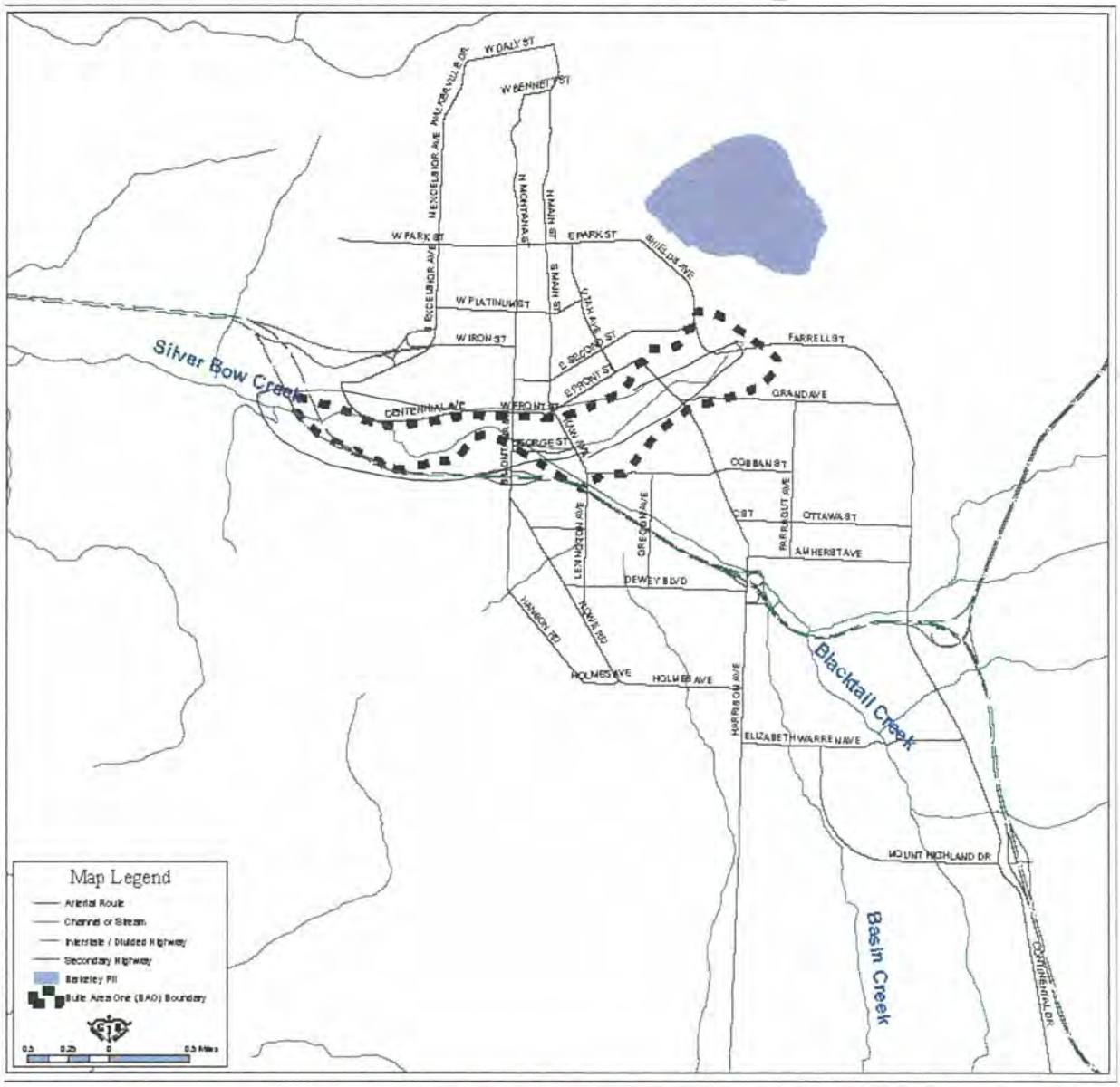
Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Montana Department of Justice
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Your Name and Contact Information: (you may remain anonymous)

George L Parrett 2812 State St. Butte, Mt.

Your Idea: Fully describe your concept.

Building a Carousel that was destroyed by mining at the Columbia Gardens.

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal (for const. of new Carousel) ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. It will provide a recreational site for children of Butte and surrounding area!

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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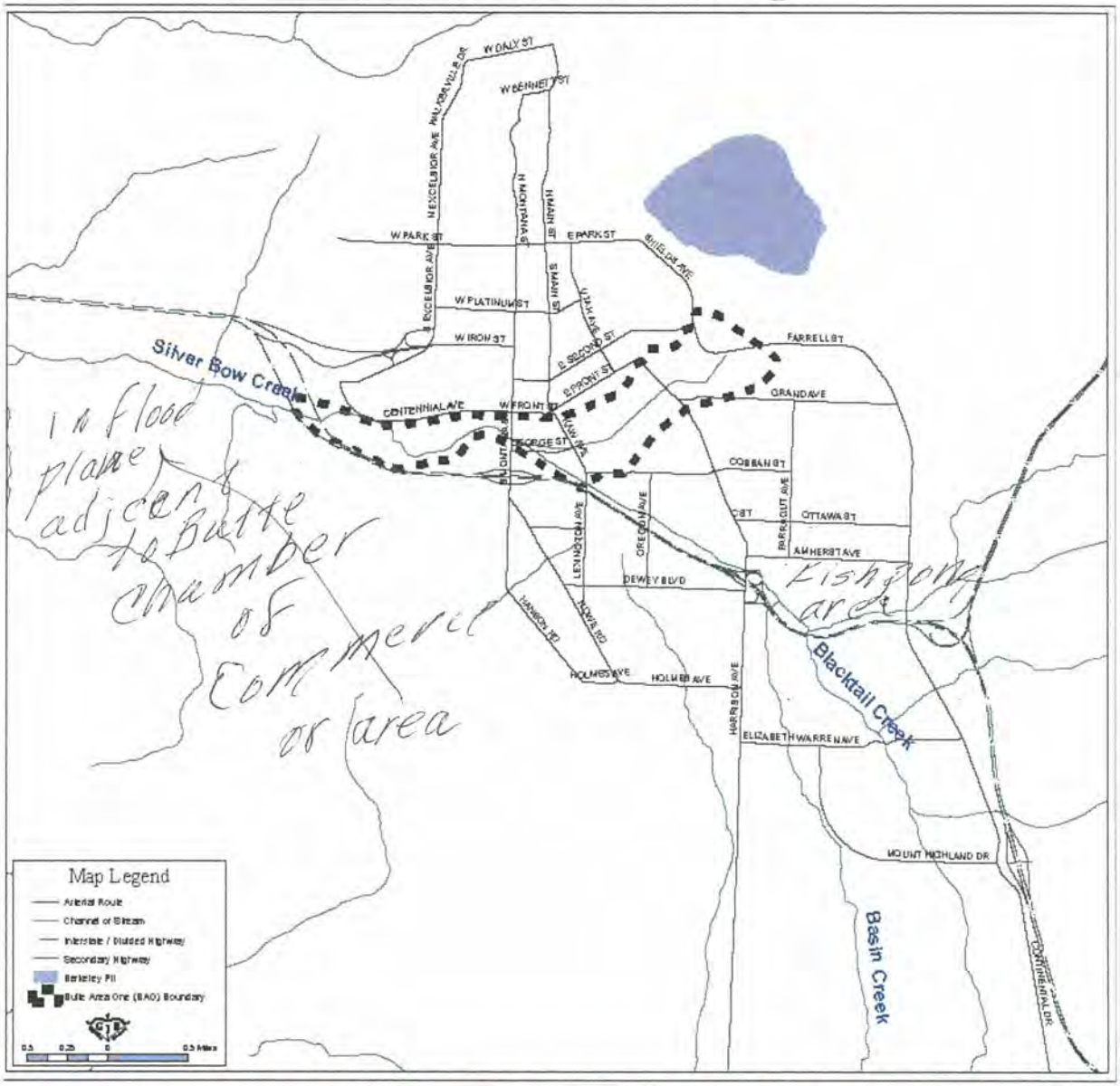

in flood plane adjacent to Butte Chamber of Commerce or area

Fish pond area

Place Stamp Here

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Your Name and Contact Information: (you may remain anonymous)

Tom Buoni - Director Skyline Sportsmen

Your Idea: Fully describe your concept.

10 yrs AGO I Approached Carol Fox Regarding About a fish Pond at the Chamber of commerce — The Soil was tested & found contaminated — Nothing could be done at that time Because it was in Litigation — State / ARCO.

Project Location: Describe the project location here and mark it on the map on back.

Chamber Area - 2 Ponds + Creek exist - If cleaned up it could possibly be a National Fish Pond

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☒ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Replace the creek & Ponds to benefit All of Butte - including kids. Skyline would hold a fish derby every year — possibly July 3

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Chamber has — parking — Bathrooms — Telephone - Bus service Walking. Chamber has been 100% behind us + 2 mayors + City

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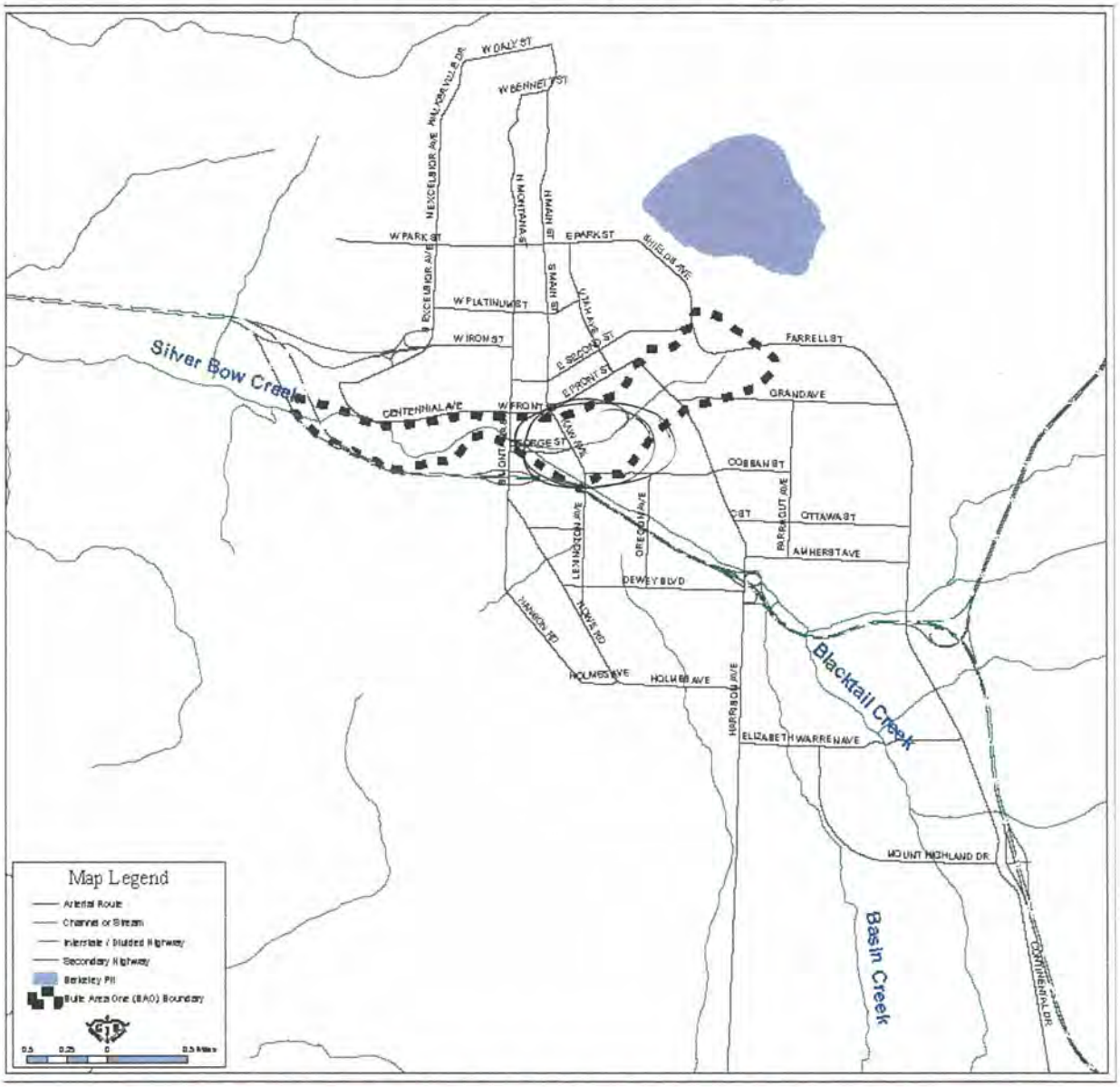

Tom Bucci 723-4753
3460 St Ann 491-2277
Butte

Place Stamp Here

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65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)
Amy Lockmer, Westside HOA PO Box 302 Butte 59703
406-491-1725

Your Idea: Fully describe your concept.
The Westside HOA has a community park area that is an old mine, the Britannia Mine. Nothing can be built on the old mine or the surrounding area because of the mine shaft & cap. The soil does not exceed EPA limits but does not grow any vegetation (even weeds).

Project Location: Describe the project location here and mark it on the map on back.
Britannia Blvd in Westside Subdivision

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☒ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. The benefits in having clean soil to the area will allow for the residents & public to enjoy the area to play on without fear of being coated in chemical laden dust

Estimated Cost: How much would your project cost? ☐ unknown ☒ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

around 1,000-2,000 yards of clean soil probably about $12,000 = $24,000.00 total

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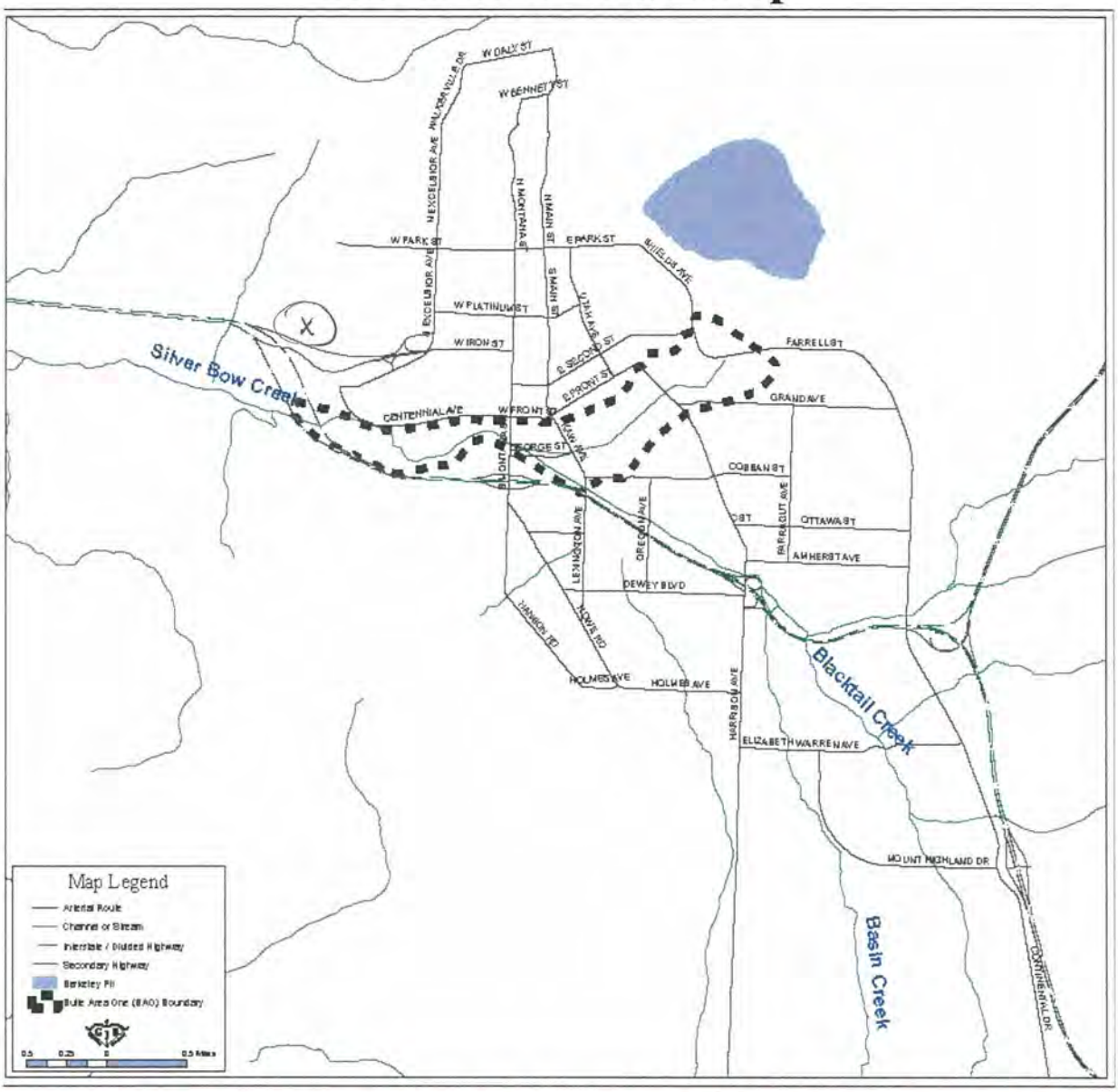

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Your Name and Contact Information: (you may remain anonymous)

Karen Alley 560-5628

Your Idea: Fully describe your concept.

To educate all 8th grade students on watershed and revegetation issues in Butte & Silver Bow Area 1. (Possibly in conjunction with MT Tech)

Project Location: Describe the project location here and mark it on the map on back.

East Middle School Classrooms - 8th grade - Field trips to areas to revegetate & visit areas impacted by mining damage

Project Type: Check the box(es) that is/are most applicable to your idea.

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☒ other Education / Field Trips

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Educate all 8th grade students on revegetation and natural resource damage - Students would take field trips to areas & plant (plants acquired from State Nursery) All citizens of BSB

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K → less than ~~20~~ 10,000

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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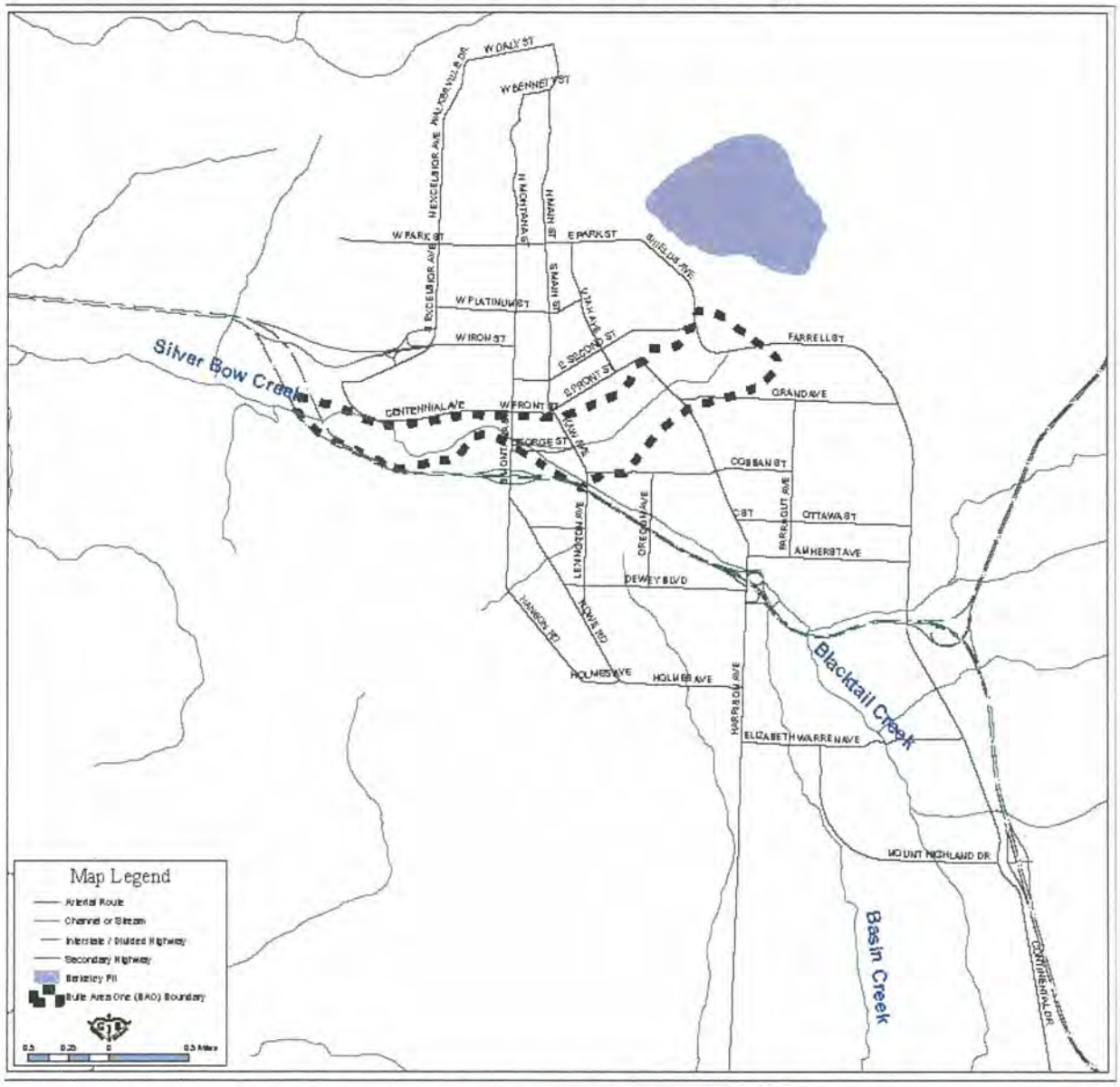

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Your Name and Contact Information: (you may remain anonymous)
Larry Driscoll (see attached)

Your Idea: Fully describe your concept.

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☑ revegetation

☑ recreation/fishing ☐ water system improvement ☑ storm water controls ☑ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☑ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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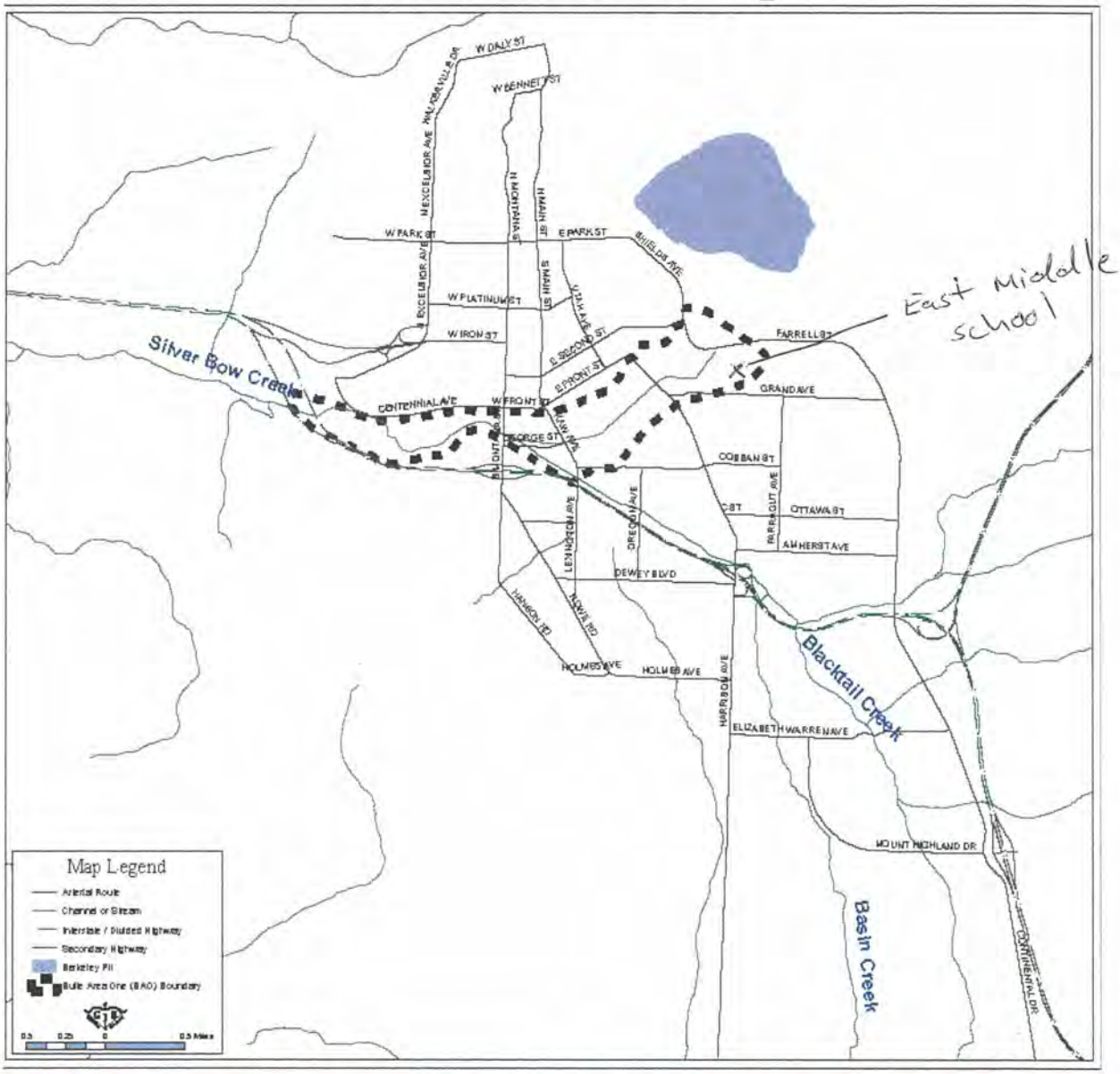


Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Butte Area One Restoration Project Idea Submittal Form

Names and Contact Information:	Larry Driscoll	East Middle School	(406) 533 -2634.
	Cindy Ammondson	East Middle School	(406) 533 – 2600.
	Colleen Mandic	East Middle School	(406) 533 – 2600.
	Lloyd Magnuson	East Middle School	(406) 533 – 2600.
	Karen Alley	East Middle School	(406) 533 – 2600.
	Dianna Widhalm	Butte 4 H Group	(406) 494 -3931

Restoration Concept

Project Need

The United States Department of Agriculture has challenged the country to establish "People's Gardens" in communities. The USDA in collaboration with First Lady Michelle Obama emphasizes the link of gardening, good nutrition and healthy lifestyles. Providing education to young people is essential for these projects. These gardens have 3 components:

1. They incorporate sustainable practices that nurture, maintain, and protect the environment.
2. They benefit the community.
3. They are a collaborative effort involving many groups of students such as clubs, staff and community volunteers.

Purpose of the Project

East Middle School is establishing a "People's Garden". The community will benefit at Harvest time when produce is donated to the local food bank or sold at the local farmers' market. There will be a collaboration of labor through student groups such as Earth Shuttle, the Recycling Club, 4 H and the Garden Club. Students, staff members, and community members will donate time to work the garden. **Sustainable practices** such as using local **mulch recycled from Butte Silver Bow's landfill**, the use of **gathered rainwater from East's expansive roofing system** and producing locally grown items will **emphasize environmental stewardship**. These goals are consistent with the Natural Resource Damage Program of

storm water controls and revegetation. The garden will be constructed and planted in the spring of 2012, followed by a fall harvest.

The garden will provide educational experiences to students regarding nutrition and sustainability, as well as introduce younger generations to agriculture and fresh food. The garden will demonstrate how groups work together to improve the landscape, provide food and promote volunteerism. **The garden represents renewal to an area that has been greatly impacted by environmental issues.** It represents a sense of restoration and environmental stewardship at a local level.

Relevance to Program Goals

Creativity and Innovation

Logistically, the garden will be placed in the outdoor volleyball court located on the back parking lot. Butte Silver Bow County will donate mulch for the project. The court has not been actively used in several years and the garden will be a better land use and promote revegetation. Raised beds will be planted with vegetables that grow well in Butte's high arid elevation. Students will participate in learning activities throughout the summer as they work the garden. They will experience hands on activities as they "toil the soil" and learn agricultural concerns. These will be new experiences for many of our students since many are unfamiliar with agricultural issues of drought, weed infestation bugs etc... Rain water from the extensive roof drainage system will augment the irrigation system. The rain water will be collected with plastic water barrels (50 gallon tanks).

Collaboration

A master gardener, who works with local 4 H students, will provide agriculture direction. The club advisors for the various clubs will provide proven leadership skills and supervision to the volunteer student workers. As mentioned earlier Butte Silver Bow will donate processed inert mulch from the land fill. The Butte School District will provide water and the land for the garden. The Butte Education Foundation has also been approached to help with funding for this project. Budget constraints limit the Butte School District from providing additional funds.

Budget Page

• Gardening equipment and tools.	$100
• Irrigation equipment – hoses, water barrels, sprinkling zone system (1 zone).	$300
• Top Soil	$200
• Seeds	$100
• Rail road ties	$700
• Fencing (quote cost for 70 x 70 ft fence is ($8012) this money would offset the actual fencing price.	$8012
Total =	$9412

These are estimates and could be offset if the Butte Education Foundation provides funding for the project.

The People's Garden Initiative

From Tom Vilsack, Secretary of Agriculture

Last year, I decided to visibly remind folks that gardening is at the front and center of what we do here at USDA. To have 'People's Garden' in every state is a tremendous achievement and just one example of the dedication and commitment of all USDA employees in collaboration with their communities. But the ideas behind the People's Garden were not born here in Washington – and we will continue to ensure that they are adopted and improved upon in communities across the country.

To meet this goal, USDA has challenged all employees to create a 'People's Garden' at their USDA office or in their local communities. USDA is partnering with hundreds of organizations at the local level and most of these partners are recipients of the food grown in the gardens. Last year, with only 124 'People's Gardens', USDA donated over 34,000 pounds of produce to local charities.

USDA agencies are involved in building these gardens, many of which are maintained through the collaboration of multiple agencies with their communities. The locations of these numerous 'People's Gardens' can be viewed online at www.pubinfo.usda.gov/garden via a public map. Information about each garden also can be viewed by clicking on the map markers.

USDA is also collaborating with First Lady Michelle Obama to emphasize the link between gardening and healthy lifestyles, and a key component is educating our youth through the use of gardens. The White House Kitchen Garden and the 'People's Gardens' are an important tool for teaching our children about healthy eating and active lifestyles. These gardens also emphasize community service and civic involvement by donating fresh, healthy and locally grown vegetables to local food pantries.

On Feb. 12, 2009, Secretary Vilsack initiated the removal of more than 1,200 square feet of pavement at USDA (with a jackhammer) to make way for a new People's Garden at headquarters and to initiate a goal of community gardens at USDA facilities around the nation and globally.

Last year, the 'People's Garden' in Washington, D.C. was unveiled and opened to the public as a living exhibit of what USDA does every day. Today, 'People's Gardens' around the country are demonstrating the connections we can make between providing access to nutritious food, while protecting the landscape where that food is grown, serving our communities, and helping those in need. These gardens provide educational opportunities for children and adults about nutrition and sustainability as well as introduce younger generations to agriculture and fresh foods.
Each 'People's Garden' can vary in size and type, but all have a common purpose – to help the community they are within and the environment.

A 'People's Garden' must include the following three components:

1. Benefit your community: Gardens benefit communities in many different ways. They can create spaces for leisure or recreation that the public can use, provide a harvest to a local food bank or shelter, be a wildlife friendly landscape or be a rain garden to absorb storm water run-off and protect the soil from erosion.

2. Be collaborative: The garden must be a collaborative effort between other volunteers, neighbors or organizations within your community. Local partnerships could carry out the mission of a People's Garden.

3. Incorporate sustainable practices: the garden should include gardening practices that nurture, maintain and protect the environment such as:
- Capturing rainwater in rain barrels
- Composting and mulching
- Planting native species
- Encouraging beneficial insects that feed on destructive pests

More information about 'The People's Garden' initiative can be found at www.usda.gov/peoplesgarden or follow the initiative for real-time updates at twitter.com/peoplesgarden. Information also is available on the USDA Facebook page at www.facebook.com/USDA and photos are available at www.flickr.com/photos/usdagov. Blogs from the gardeners involved in these "People's Gardens" are featured each Friday at *www.usda.gov/blog/usda.*

CONTINENTAL FENCE & SUPPLY

2601 Lexington • Butte, MT 59701
Phone (406) 782-4158 • Fax (406) 782-1556

LOCATE NO. _____

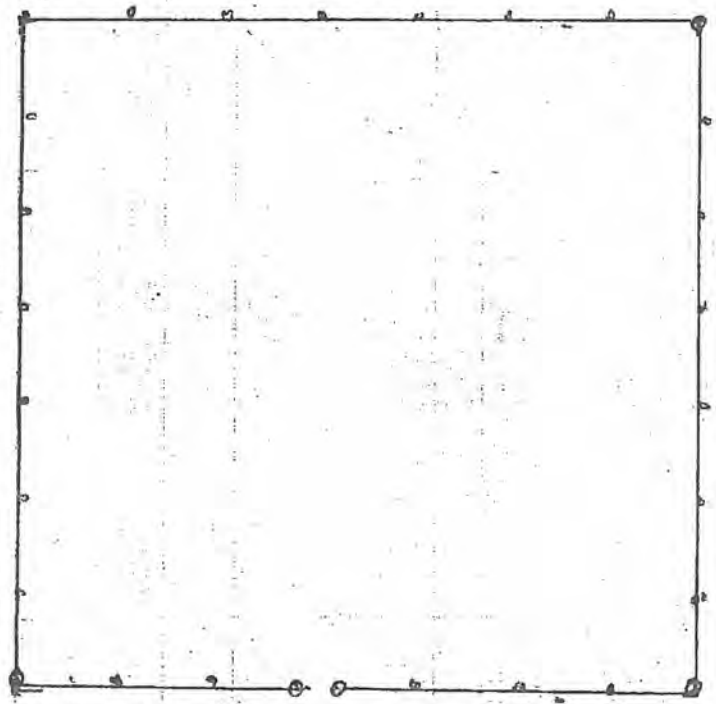
START DATE _____

PROPOSAL

FINISH DATE _____ INVOICE NO. _____

PROPOSAL SUBMITTED TO:	East middle School Larry Driscoll Prin.
STREET	
CITY, STATE, AND ZIP CODE	FAX 533-2627
JOB NAME	WORK
JOB LOCATION	PHONE 533-2634
Proposed Garden Fence	DATE 3-2-12

8' High, 9ga. No Barbwire.



	ITEMS	AMOUNT	LIST	TOTALS
	LINE FENCE GA. 2⅜ X 11' 55-40	276	15.39	4247.64
	GATE POST 2⅜ X 11 55-40	2	93.42	186.84
	END POST			
	CORNER POST 2⅜ X 11' 55-40	4	113.59	454.36
	2⅜ X 2⅜ Brace Kit	10	44.36	443.60
	2⅜ Gate H-W (H-D)	1 set		30.55
	8' X 4' Gate (1⅝ F)			228.50
	TIE-ON HARDWARE			
	TOTAL OF ALL MATERIAL			5591.41
	Less 15 % Material		838.71	4752.70
	POST CEMENT 2 yds		110.00	210.00
	Lift Truck.			200.00
10002	REMOVAL OF OLD FENCE & CLEANUP			
	Dandy Digger			300.00
10005	DRILLING CHARGE Black Top or Cement		?	
10001	FENCE LABOR			2550.00
	TOTAL OF ALL LABOR & MATERIAL			8012.70

Authorized Signature Lyle

BEFORE SIGNING, READ BACK OF PROPOSAL

Signature _____

NOTE: This proposal may be withdrawn by us if not accepted within 30 days

03/06/2012 12:44 FAX 406 782 1556 CONTINENTAL FENCE 002/002

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

Jack Wholand
107 Rampart
Butte MT 59701
Michael Semmens
3416 Hannibal St.
Butte MT 59701
Butte American Legion Baseball

Your Idea: Fully describe your concept.

Civic Center Field replace with a Full Size 533-0539
American Legion Field (baseball) Trees, walking path

Project Location: Describe the project location here and mark it on the map on back.

Civic Center Rd. Location of Park

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation

☒ recreation/~~fishing~~ ☒ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Citizens of Butte Butte Baseball program

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☒ $500K to $1M ☐ $1M to $5M ☐ more than $5M See attached page

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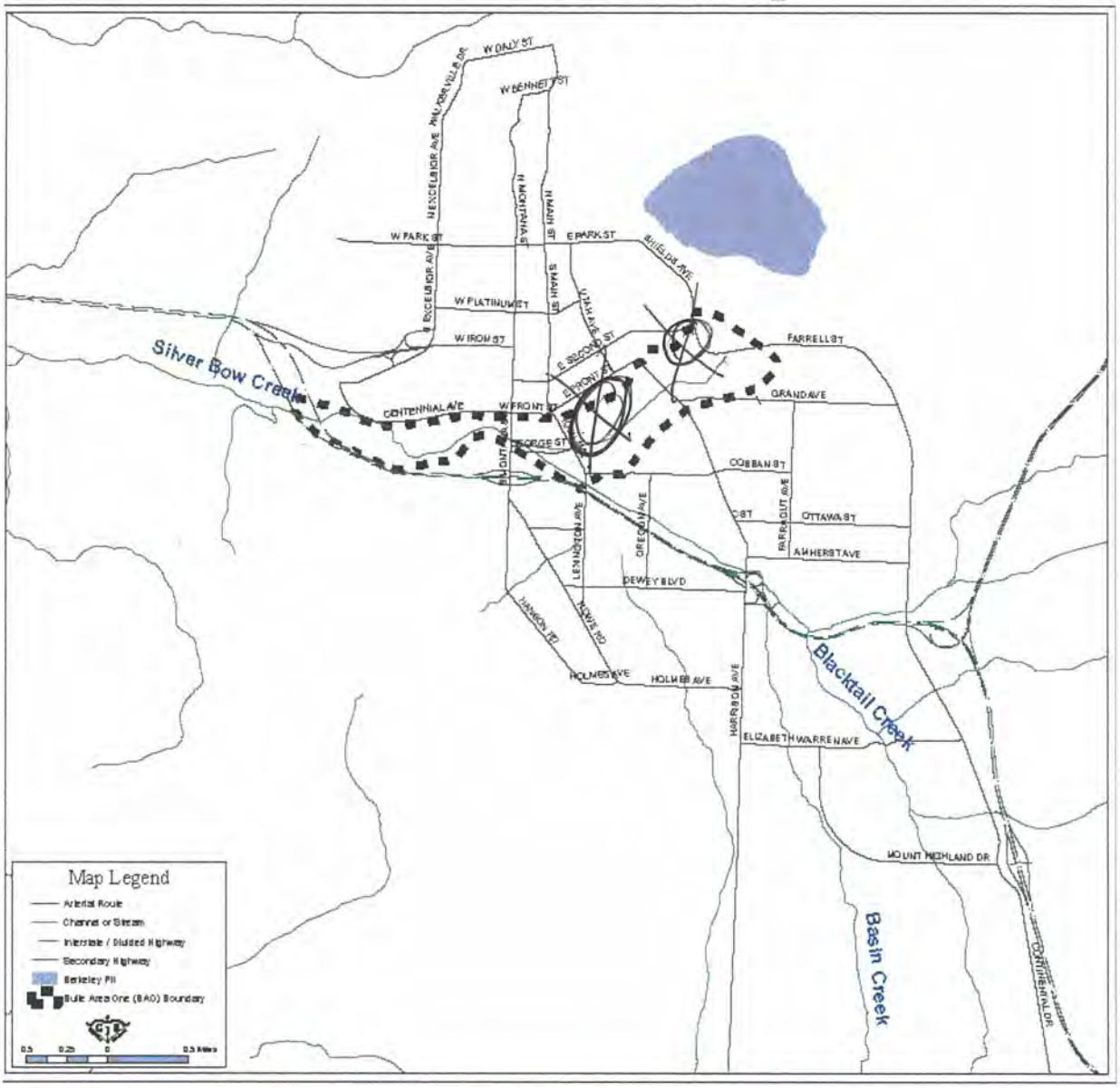
- **Tuesday March 20**, 6 – 8 PM, Butte-Silver Bow Public Archives, 17 W. Quartz St.

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Jack Whelan
107 Rampart Dr
Butte MT 59701
494 - 2542

Mike Semmens
341 Hannibal St
Butte MT 59701
490-4202 / 533 0939

200,000 From Arco as part of the settlement of the Copper Mountain project.

The money was used to replace the sod For Field at Montana Tech

The sprinkling System was replaced

The infield warning track clay was replaced

The stadium was upgraded (purchased seating) (wall maths)

The out Field fence was purchased.

A new hitting Facility was build + club house

The Field drainage System was install

The Field was leveled

The Lighting was upgraded

The total money spent was in excess of $270,000.00

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)
EMMETT RIORDAN

Your Idea: Fully describe your concept.
HOOK SILVER LAKE WATER TO BUTTE DOMESTIC WATER SYSTEM. OPEN UP BASIN CREEK RESERVOIR FOR PUBLIC USE, RECREATION, FISHING, CAMPING ETC.

Project Location: Describe the project location here and mark it on the map on back.
RAMSAY AREA - ASIMI PIPELINE FROM SILVER, CONNECT TO FLEECER - BIG HOLE LINE.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☒ recreation/fishing ☒ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. EXCELLENT DRINKING WATER FOR BUTTE GREAT RECREATION

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☒ more than $5M

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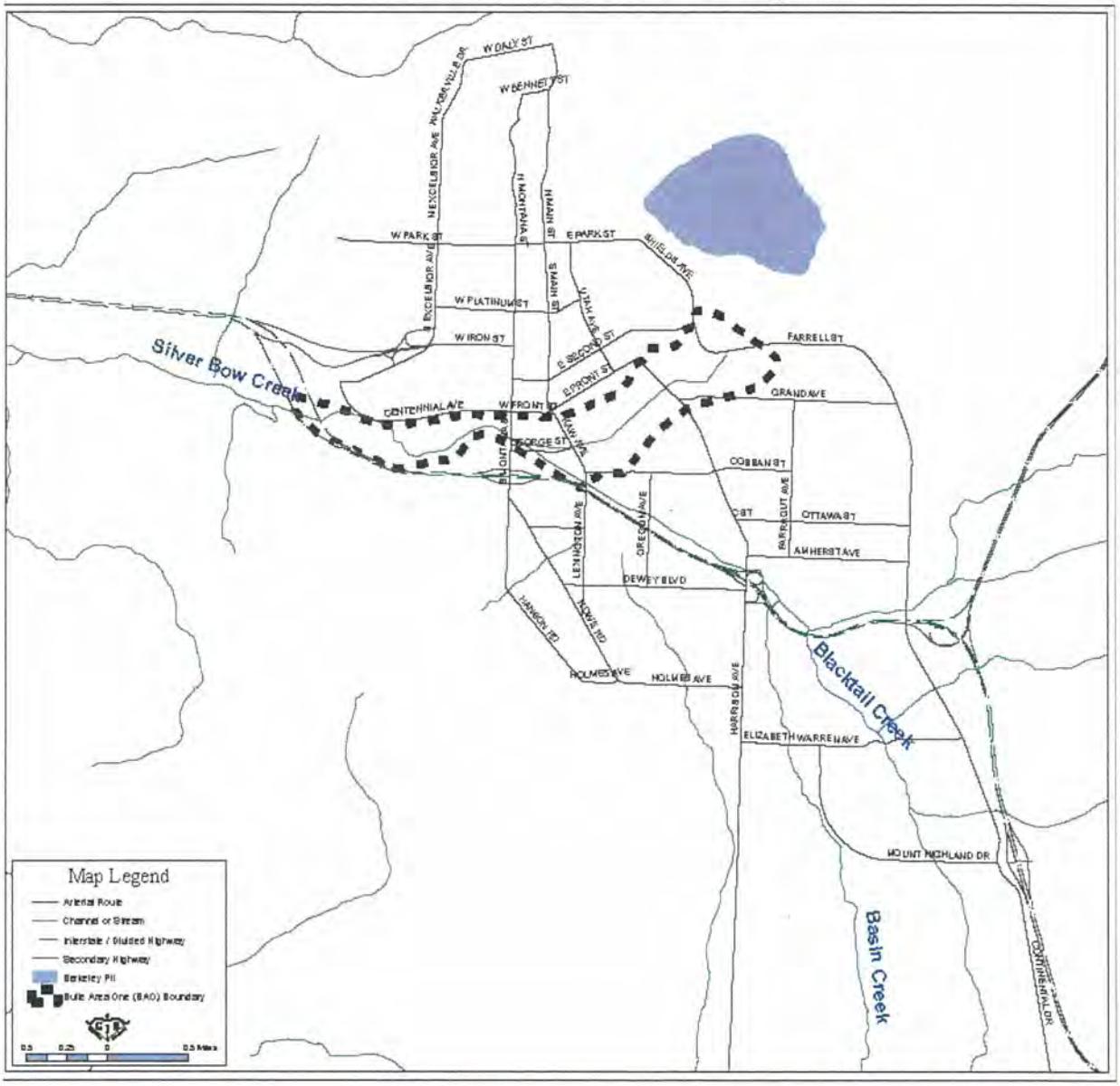
Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Butte Central Education Foundation
East Mercury Street
Butte, MT 59701

February 7, 2012

Butte Natural Resource Damage Restoration Council
Butte, MT 59701

Dear Council Members:

We recently learned from an article in The Montana Standard that your Council is soliciting suggestions for projects that might be eligible for funding from designated Natural Resources Damage Funds. Please consider this letter as an expression of interest from the Butte Central Education Foundation (a 501(C) 3 organization), and the Maroon Activity Center. Unfortunately, previously scheduled events cannot allow us to be in at your February 7 meeting.

As you are aware, the Maroon Activity Center is located on East Mercury Street. The Butte Central Education Foundation acquired the property on which the Maroon Activity Center is located in 2002. The total acquisition of property for the Maroon Activity Center facility included an additional fifteen (15) acres of land, which has been developed, into the Torger Oaas Football Field, as well as a significant amount landscaped property.

The Maroon Activity Center and adjacent landscaped properties have been the impetus for much of the development that has occurred on Butte's East Side. We are very proud of our developments, which have all been privately funded. The area has been a significant factor in Butte's economic development, and has served the community well.

Obviously, with this development has come considerable expense in maintenance, including $20,000+ per year fee for irrigating the grassed areas.

In an attempt to reduce the cost of irrigation we had a well drilled and installed the necessary pumping apparatus in 2006 to replace the Butte-Silver Bow Water Utility source. We took this action only after conferring with state and federal agencies that advised us that the groundwater source would be appropriate and safe for irrigation water.

Unfortunately, the groundwater source was later found to be contaminated and exposure to the water was deemed to be unsafe. This necessitated a return to the Butte-Silver Bow Water Utility.

In our view, our development has been the victim of ground water contamination, which was a argument upon which the NRD settlement amount was determined.

The recent decision by t he Butte-Silver Bow Local Government to increase water rates up to 10% per year for the next five years puts us in a difficult position. We simply cannot afford to maintain all of the grassed areas apart from the Torger Oaas Football Field. Accordingly, we will either let a significant amount of the attractive grassed areas go un-irrigated and become a blighted eyesore, or replace the significant grass areas with so-called desert-scaping.

Desert scaping simply means the removal of landscaped grass and the placement of a weed barrier and placement of decorative gravel and low water consuming trees and scrubs. We have observed in the Las Vegas, NV area sites that have undergone a similar transition, and we are convinced that this approach to maintain attractiveness of the current East Mercury Street entrance to Butte's Central Business District is worthy of serious consideration.

An additional factor that would enhance this proposed desert scaping conversion is a substantial reduction in water coming from the Butte-Silver Bow's Water Utility. That water assumingly comes from the Big Hole River. On average we are drawing over 10 million gallons of water a year to irrigate the grassed areas at the MAC site. Our proposed desert scaping would decrease the water usage by 50% to 60%, thereby reducing consumption of 5-6 million gallons per year of Big Hole River water.

Please keep in mind that our plans are primilary and that further professional engineering advice is necessary for us to proceed.

As one of the top private water users in Butte-Silver Bow we would like to pose the following questions:

1. Is this type of project of interest to your Council?

2. If so, are engineering costs eligible for funding? Engineering services are necessary for us to proceed with cost analysis, bidding procedures, and preparation of application documents for funding.

3. What dollar amounts would be considered for such a project?

4. Are matching funds a required?

We are available to discuss this proposed use of your funding source at any time.

Sincerely,

Don Peoples Jr

Butte Central Education Foundation
Don Peoples, Jr.

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

J. R. Bjorkman
Business Manager, Butte School Dist. #1

RECEIVED
SUPT'S OFFICE
SCHOOL DIST. #1
BY

Your Idea: Fully describe your concept.

Develope Recreation area to include a Legion baseball field + high school softball fields.

Project Location: Describe the project location here and mark it on the map on back.

Parrot Tailings behind Civic Center

Project Type: Check the box(es) that is/are most applicable to your idea:

☑ mining waste removal ☑ waste cap improvement ☐ stream restoration ☑ revegetation

☑ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

The youth + Community of Butte. It will restore the area behind the Civic Center + provide the youth + Community of Butte a much needed recreation area for Legion baseball + softball.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☒ $1M to $5M ☐ more than $5M

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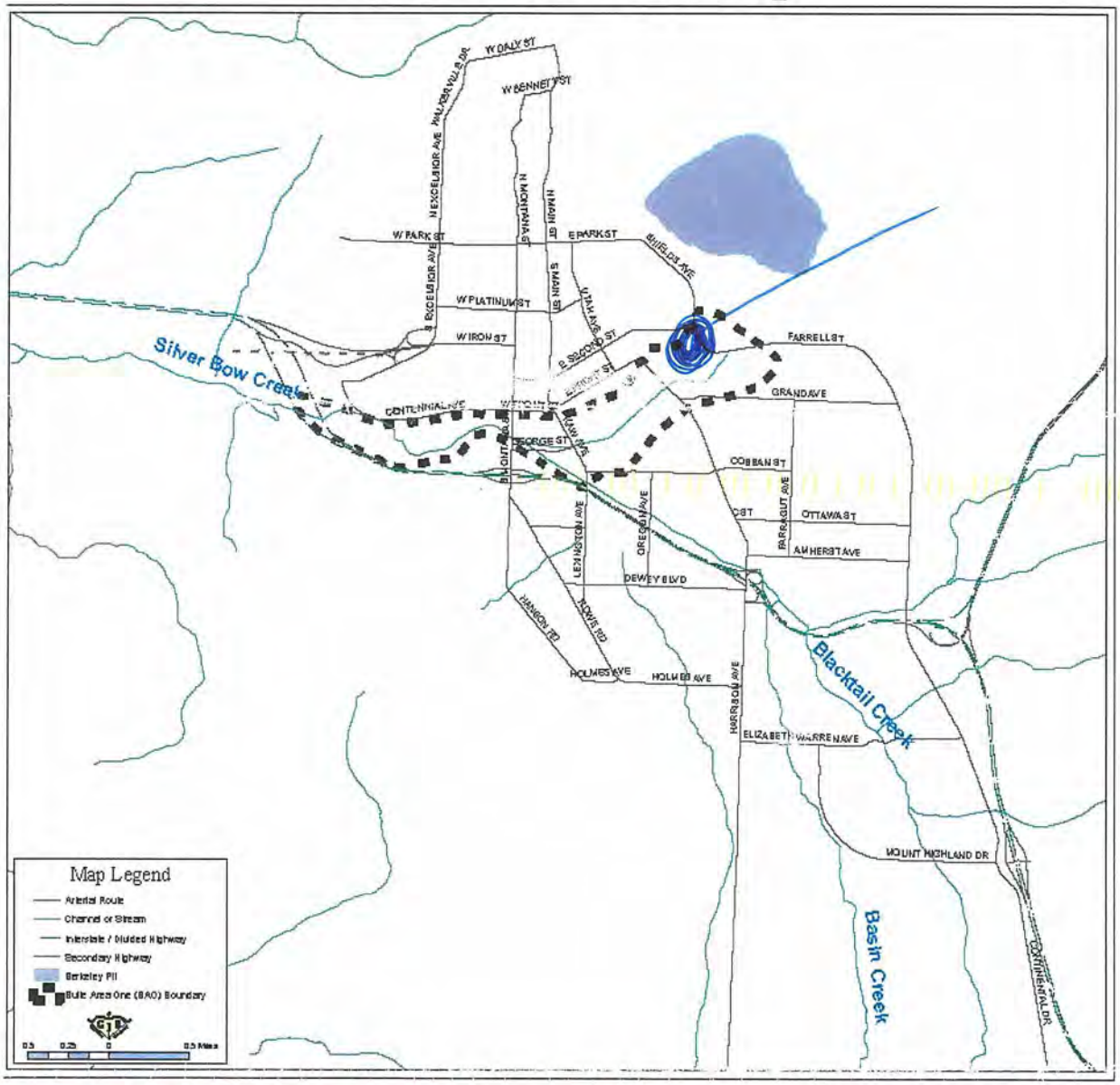
Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



J. R. Richardson
Butte School District #1
111 N. Montana
Butte, MT. 59701

Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Cunneen, Padraig

From: Fritz Daily [buttedaily@bresnan.net]
Sent: Thursday, March 15, 2012 1:37 PM
To: rleeeasy@hotmail.com; lcurran@montanaorthopedics.com; emmett.riordan@northwestern.com; eerickson@wet-llc.com; Okrusch, Chad; mark.gollinger@thepeakinc.com; jmckee@mckeeit.com; Cunneen, Padraig
Subject: Public Comment
Attachments: Columbia Gadens Idea RE_ Mountain Con Cleanup Site.eml; Dear Senator Tester.docx

Fritz Daily
1901 Roosevelt Ave.
Butte, MT 59701

March 15, 2012

Dear Butte Natural Resourced Damage Council Members;

I would like to offer the falling comments on your request for public comment concerning the $28.5 million Butte Priority Soils Settlement approved by Governor Schweitzer. I ask that this email and attachments be made part of the official record.

I would like to go on record as supporting the concept proposed by John McKee of your Committee for cleaning and restoring Butte's portion of Silver Bow Creek. I believe his idea is on target to have a responsibly clean and restored Butte Montana. In addition, I believe with a responsibly restored Mountain Con Mine area, it would be an excellent site for the Butte Carrousel.

Butte's portion of Silver Bow Creek should be a quality meandering creek that will allow for children to play and fish and should provide for other amenities that will allow the adults in the community to enjoy the benefits of the cleanup as well. Anything less should never be accepted!

From attending several of your meetings I am impressed with the quality of the Committee members and I truly believe you "get it" when it comes to the cleanup and restoration of the Butte area. I am confident you will make the right decisions when it comes to responsibly appropriating what I believe are limited resources. I believe you face a very difficult challenge in the fact that the Environmental Protection Agency and the State of Montana have failed the community on cleanup and restoration. Butte, Montana has not received the proper cleanup by the Environmental Protection Agency and the State of Montana as required by the State and Federal laws and the State and Federal Constitution!

I believe timing is of the essence! I believe that Governor Schweitzer is a friend to our community when it comes to cleanup and restoration. I am concerned and not confident at this point that the next Governor candidates share that view.

I believe everyone involved in the process who truly understands the situation knows that the Parrott Tailing, the North Side Tailings, the Digging East, and the contaminated tailings from Butte's Silver Bow Creek must be removed in order to have a responsible cleanup of the area. In addition, the entire Butte Hill needs substantial additional cleanup, Butte's storm sewer system needs substantial work and a quality treatment plant that uses new and innovative technology constructed at the Colorado Tailing area.

With that said, I believe your Committee will need and additional $75 to $100 million to do the proper job. While I realize obtaining those additional dollars will be difficult, I do believe the additional dollars are available. There is

currently $100 million available in the original Natural Resource Damage Settlement and approximately $50 million will be available in the remaining dollars from the Silver Bow Creek cleanup from Butte to the Warm Springs Ponds. I encourage your committee to put together a proposal to acquire the additional necessary funding.

Keep in mind that 88% of the original $770 million dollar Natural Resource Damage Lawsuit was for damages that occurred in Butte, Anaconda and on Silver Bow Creek. I am only proposing using the dollars in this area as a responsible way of appropriating the Natural Resource Damage dollars.

Rather than reiterating my additional thoughts, I am enclosing copies of a letter I mailed to Senator Jon Tester and a series of emails sent between your Committee, Bill Foley of the Montana Standard and me that best explain my thoughts and feelings. I ask that they be included as part of the official record for your proposals.

I thank you for your hard work and dedication on this issue and I am confident you will make the right decisions for Butte Silver Bow.

Sincerely,

Fritz Daily

Cunneen, Padraig

From: Olsen, Sr. Elizabeth, BVM [EOlsen@saintpatrick.org]
Sent: Thursday, June 30, 2011 12:09 PM
To: 'Fritz Daily'
Subject: RE: Mountain Con Cleanup Site

Fritz,

I like what I am reading here. It would be a great boon to Butte to get some semblence of the Columbia Gardens from days past. That was "the Peoples Place" no matter what their economic status. Everyone was welcome. I also like it if the money could be used by Butte for Butte. I have not been to the Site for quite a while. Perhaps, I'll go soon.

Thank you for also having Mary Kay Craig (& vicariously George Waring) on you mailing list. Elizabeth :)

From: Fritz Daily [mailto:buttedaily@bresnan.net]
Sent: Wednesday, June 29, 2011 2:59 PM
To: Julie DalSoglio; Babb, Paul; Okrusch, Chad; mark.gollinger@thepeakinc.com; jmckee@mckeeit.com; Dave Schultz; Cunneen, Padraig; rleeeasy@hotmail.com; steve.gallus@gmail.com; foles74@yahoo.com
Cc: Stella Burke; Ristine Hall; Powers, Dan; Paul Panisko; Olsen, Sr. Elizabeth, BVM; Jim Mischkot; JD Lynch; JAMES J LARKIN; Frank Kriewald; derick.mining@comcast.net; Dave Palmer; Bronko Borozan; Bob Worley; Bob; Bart Mihailovich; amontana@mwt.net; Hoot; 'Gary Briney'; Fraser MacDonald; dfoley@buttechc.com; john.emeigh@lee.net; justin.post@lee.net; Rick Foote and Robin Jordan; PMunday@mtech.edu; Pat Maloney; Paddy Lee; mlucich@buttecvb.com; Mick Ringsak; Michelotti, Jim; Mary Kay Craig; Malloy, Tom; Lombardi, Bill (Tester); Larson, Rick; Kristi Hager; Judd, Steve; John W. Ray; John Amtmann; Joe Shoemaker; Janice Hogan; Gerry.O'Brien@lee.net; Erik Nylund; Dr. Dan Harrington; Don Peoples; Dennehy, Dan; david williams; Dan Hollis; Cindy Shaw; smcarthur@cccscorp.com; Sister Mary Jo; R. Edward Banderob; Jim Kambich
Subject: Re: Mountain Con Cleanup Site

Foles,
I could not agree with you more. ***If nothing else hopefully some of the area could be opened to at least provide the opportunity for retired miners and others who worked at the Butte Mines to enjoy this wonderful area and breath taking view! I would encourage everyone on this email list to express your opinion as Bill Foley has requested.***
I ask all of you to express your opinions and forward this email to others that also may be interested. Especially the Commissioners if someone has their email addresses. ***This email could serve as a great way to start a Superfund dialogue that is so critical if we are to ever have a responsible cleanup and restoration in Butte. I also encourage everyone involved or interested to visit the Site.***

Foles, I am not sure what the holdup is, but as I stated in my earlier email, that is included in this email, I really believe the EPA, ARCO and everyone else involved got this one right. I sincerely hope that the contamination at the Site has been thoroughly removed and we have not left "waste in place" as has been the practice with most Superfund cleanup in Butte.
After visiting the Site, I truly believe this could be the start of a "new era" in Butte Superfund cleanup and future restoration and I congratulate everyone involved for their work on this project..
I also believe it is an opportunity to help the great folks who have done so much work with the Carousel. As I stated in my prior email, if a site for the Carousel has not been chosen this would be great place for the Carousel.
There is currently at least $28.1 million in the Butte Priority Soils Settlement Fund. Butte Priority Soils includes the Butte Hill, Silver Bow Creek flowing through Butte, the Parrott Tailings and other Butte area cleanup sites. There is also over $125 million available in the initial Settlement of the Natural Resource Damage Settlement. In addition, there will be 55 to $65 million available from the cleanup of Silver Bow Creek from Butte to the Warm Springs Ponds. ***The majority of this money should absolutely be spent in Butte to provide the citizens of Butte the cleanup and restoration of the Butte Hill, Silver Bow Creek flowing through Butte and other Superfund areas that we so deserve!***
Butte has received several million for water line replacement and other amenities from this Settlement that added to the monies acquired by Sister Mary Jo and others in the Butte Water Company lawsuit that has definitely helped our community.
I would remind everyone that if it was not for the damages that occurred in Butte, Anaconda and on Silver Bow Creek there would not have been a lawsuit in the first place. 88% of the original damage claim in the Natural Resource Damage Claim was

for damages that occurred in these areas. If we as a community are not careful much of this money will go for things like the purchase of the Spotted Dog Ranch, the acquisition of elk habit and restoring the Mill Town Dam area in Missoula.
Let's not let this happen and miss this "golden opportunity" to respond to Bill Foley's request and hopefully turn Superfund in Butte in a new positive era.
Fritz Daily

----- Original Message -----
From: foles74@yahoo.com
To: Fritz Daily ; steve.gallus@gmail.com ; rleeeasy@hotmail.com ; Cunneen, Padraig ; Dave Schultz ; jmckee@mckeeit.com ; mark.gollinger@thepeakinc.com ; Okrusch, Chad ; Babb, Paul
Cc: Jim Kambich ; derick.mining@comcast.net ; R. Edward Banderob ; Sister Mary Jo ; smcarthur@cccscorp.com ; Cindy Shaw ; Dan Hollis ; david williams ; Dennehy, Dan ; Don Peoples ; Dr. Dan Harrington ; Erik Nylund ; Gerry.O'Brien@lee.net ; Janice Hogan ; Joe Shoemaker ; John Amtmann ; John W. Ray ; Judd, Steve ; Kristi Hager ; Larson, Rick ; Lombardi, Bill (Tester) ; Malloy, Tom ; Mary Kay Craig ; Michelotti, Jim ; Mick Ringsak ; mlucich@buttecvb.com ; Paddy Lee ; Pat Maloney ; Panisko ; PMunday@mtech.edu ; Powers, Dan ; Rick Foote and Robin Jordan ; justin.post@lee.net ; john.emeigh@lee.net ; dfoley@buttechc.com
Sent: Wednesday, June 29, 2011 12:59 PM
Subject: Re: Mountain Con Cleanup Site

I urge all local leaders to ask questions to EPA, ARCO and Jordan Construction as to why the Con Mine trail/part is 2 years behind schedule.
Is it incompetence or blatant milking of Superfund money? The people of Butte and the visitors of Butte deserve answers.
There's no reason the trail, which has been paved for a year, can't be open for the people to enjoy 14 years after the Old Works Golf Course opened in Anaconda.
We can't make aging Butte heroes like John T. Shea wait another year.
Thank you,
Bill

Sent from my Verizon Wireless BlackBerry

From: "Fritz Daily" <buttedaily@bresnan.net>
Date: Thu, 23 Jun 2011 12:15:57 -0600
To: <steve.gallus@gmail.com>; <rleeeasy@hotmail.com>; Bill Foley<foles74@yahoo.com>; Cunneen, Padraig<PCunneen@mt.gov>; Dave Schultz<daveschultz@bresnan.net>; <jmckee@mckeeit.com>; <mark.gollinger@thepeakinc.com>; Okrusch, Chad<COkrusch@mtech.edu>; Babb, Paul<pbabb@co.silverbow.mt.us>
Cc: Jim Kambich<jim.kambich@merdi.org>; <derick.mining@comcast.net>; R. Edward Banderob<glenow@ainet.com>; Sister Mary Jo<mjomcd@bresnan.net>; <smcarthur@cccscorp.com>; Cindy Shaw<wrocshaw@hotmail.com>; Dan Hollis<dlhollis@bresnan.net>; david williams<toko.dave@gmail.com>; Dennehy, Dan<ddennehy@bsb.mt.gov>; Don Peoples<dpeoples@bresnan.net>; Dr. Dan Harrington<dan@itgworld.com>; Erik Nylund<erik_nylund@tester.senate.gov>; <Gerry.O'Brien@lee.net>; Janice Hogan<groundhogan@msn.com>; Joe Shoemaker<jjshoemaker@ft.newyorklife.com>; John Amtmann<jamtmann@mtech.edu>; John W. Ray<speechray@in-tch.com>; Judd, Steve<SJudd@Maryknoll.org>; Kristi Hager<kristi@montana.com>; Larson, Rick<ricklarson@bsb.mt.gov>; Lombardi, Bill \(Tester\)<Bill_Lombardi@tester.senate.gov>; Malloy, Tom<tmalloy@bsb.mt.gov>; Mary Kay Craig<MaryKayCraig@bresnan.net>; Michelotti, Jim<jmichelotti@mtech.edu>; Mick Ringsak<eltonringsak@aol.com>; <mlucich@buttecvb.com>; Paddy Lee<patrickleeinc@usamontana.com>; Pat Maloney<patrick.maloney@northwestern.com>; Paul Panisko<pollock68@hotmail.com>; <PMunday@mtech.edu>; Powers, Dan<dpowers@bsb.mt.gov>; Rick Foote and Robin Jordan<butteweekly@bresnan.net>; Robert McCarthy<bmccarthy@bresnan.net>; Robin Jordon<robinatorj@gmail.com>; Ron Davis<rondavis@kbowkopr.com>; Sam Verona<samv@hotmail.com>; Sesso, Jon<jsesso@bsb.mt.gov>; Stacie

Barry<stacieb@ncat.org>; <statecreekmt-suzzann@yahoo.com>; Stella Burke<sburke@billingscatholicschools.org>; Tammy Yelenich<mylittleguys@hotmail.com>; <thelees@bresnan.net>; Tim Rogers<mrtim59@bresnan.net>; Tucci, Nicholas<NTucci@mtech.edu>; Wally Frasz<wfrasz@bresnan.net>; Barbara Miller<bmiller@montana.com>; <bellecreeke@montana.com>; 'Bill MacGregor'<bmacgregor@montana.edu>; 'Brian Holland'<brianholland@in-tch.com>; Holly Peterson<hpeterson@mtech.edu>; Josh M. Peck<joshmpeck@hotmail.com>; Kim Krueger<Kim_Krueger@Baucus.senate.gov>; Leland Greb<LelandGreb@bresnan.net>; <lstaples@kxlf.com>; Senator Max Baucus<max@baucus.senate.gov>; Ted Duaime - MBMG \(E-mail\)<tduaime@mtech.edu>; <sara@epamail.epa.gov>
Subject: Mountain Con Cleanup Site

Members of the Butte Natural Resource Damage Council and others,
I attended a memorial service for Shannon Lynch yesterday at the High Ore Mine Reclamation Site. I was very impressed with the work that has taken place at the Site.
As a person who has been very critical in the past of the Environmental Protection Agency and The Atlantic Richfield Company I want to commend them for what I believe is a impressive job on reclaiming the Site. I know this Site has been reclaimed in the past and I am not sure of the amount of tailings that were removed or the thoroughness of the cleanup, but I believe they definitely got this one right! I sincerely hope this is the start of what many Butte folks like myself have visioned with reclamation and restoration for years.
I am sure numerous others including the State of Montana and the Butte Silver Bow Local Government officials contributed to the work as well. ***The view from the Site overlooking Butte and the various mountain ranges is an unbelievable site, very impressive.***
I was also impressed with the old mine working that were left in place and they truly add to the mining history of Butte and the beauty of the view.

As we were leaving the Site my wife Gay suggested that "wouldn't this be an excellent place for the Carousel." I agree and that is the purpose of me writing this email. I believe that if a site for the Carousel has not already been chosen, and I don't believe it has, this is tremendous idea.
I also believe this is an excellent opportunity for the Butte Natural Resource Damage Council to take the first steps in using the $28.1 million for the restoration of the Butte Hill. I could vision planting grass and trees at the Site and incorporating many of the flower decorations that were at the Columbia Gardens. Other amenities that could be used by the children and the adults of Butte could be added as well. I truly believe it could actually be a destination site as many Butte folks have talked about for years.
It would also be an opportunity to combine restoration and reclamation dollars at the same time as many Butte folks have advocated for years.
I believe this an opportunity that needs to be explored with the Carousel Committee. These folks have done an excellent job and have worked for years in reclaiming and restoring one of the most important parts of Butte's past, a replica of the Columbia Gardens Carousel. It could also be an addition to the restoration work done at Naranche Stadium as Bill Foley wrote about in his article in the Standard on Tuesday that I believe is so great as well..
Thanks for your time. I hope I am not way off base, and if I can be of further assistance please let me know?
Fritz Daily
Pat, if you could forward this email to Trey Harbert, Julie DalSoglio, others you think might be of interest, and if you have email addresses for any Carousel Committee members, I would appreciate that as well.

This message is intended for the sole use of the addressee, and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If you are not the addressee you are hereby notified that you may not use, copy, disclose, or distribute to anyone the message or any information contained in the message. If you have received this message in error, please immediately advise the sender by reply email and delete this message.

Fritz Daily
1901 Roosevelt Ave.
Butte, MT 59701

August 8, 2011

Senator Jon Tester
Senate Hart Building Suite 724
Washington DC 20610

Dear Senator Tester,

I recently received a copy of a letter you wrote to Julie DalSoglio on April 12, 2011, the Director of the Montana Environmental Protection Agency, Montana Office. As s former seven term Montana Legislator and a person who has actively monitored Superfund activity in Butte for the past twenty-five plus years, I want to commend you for writing this very important and significant letter! The letter addresses cleanup and restoration of Silver Bow Creek flowing through Butte and the Clark Fork River. Your letter is what most folks from Butte and Missoula would consider "spot on!"

Senator Tester, the decisions made on Silver Bow Creek, the Parrott Tailings, the Clark Fork River and the Butte Hill are forever decisions and will have forever consequences! Your recent letter and the article in the August 7, 2011 edition of the Montana Standard concerning this issue clearly demonstrates that even the Environmental Protection Agency themselves believes the decisions made to date are not good decisions and have definitely not been in the best interest of Butte and the entire Clark Fork Basin. I urge you to stay on top of this issue. Without your direct involvement, the current decision makers will continue to make decisions that will have negative consequences for generation to come.

I would like to preface my remarks by stating that I am currently a member of the Silver Bow Creek Headwaters Coalition LLC. Silver Bow Creek Headwaters Coalition LLC has filed a Declaratory Judgment addressing the name change to Silver Bow Creek flowing through Butte. Jim Goetz and Zack Strong of the Goetz, Gallik & Baldwin law firm from Bozeman, Montana represent us in the lawsuit.

In particular, I would like to address your concerns with the issue of cleanup and restoration on Silver Bow Creek flowing through Butte. I have also had the pleasure of discussing this issue with one of your Butte representatives, Erik Nylund, and I want to commend and thank Erik for taking the time to become educated and knowledgeable on this issue.

As you point out in your letter, the Record of Decision contains inadequate and incomplete data. Butte Priority Soils includes Silver Bow Creek flowing through Butte and the Parrott Tailings area around the Butte Civic Center. Since the original Record of Decision was negotiated, the Montana Bureau of Mines and others have conducted substantial new research that seriously questions the reliability of the original data used to make that decision.

Senator Tester, Silver Bow Creek flowing through Butte has not received the quality cleanup and restoration that the residents of Butte deserve. Silver Bow Creek flowing through Butte should receive the

same quality standard of remediation that Silver Bow Creek has received from Montana Street in Butte to the Warm Springs Pond. The people of Butte deserve no less!

Sincerely,

Fritz Daily

Butte's portion of Silver Bow Creek should be a quality meandering creek that will allow for children to play and fish and should provide for other amenities that will allow the adults in the community to enjoy the benefits of the cleanup as well. Anything less should never be accepted!

Senator Tester, I am providing some critical information discovered by the Montana Bureau of Mines and others. I strongly believe it will reinforce the information you have already addressed in your letter to the Environmental Protection Agency concerning the Record of Decision on Butte Priority Soils negotiated in 1996 between the EPA and the Atlantic Richfield Company {British Petroleum}. These are just some of those facts;

- In April 2009, through research by the Montana Bureau of Mines we learned that the **groundwater in the Parrott Tailings Area is more toxic than Berkeley Pit water.** The Record of Decision was negotiated without this critical and valuable information.
- In March 2010, we learned that there was **substantially more water flowing to Silver Bow Creek than originally projected.** An isolation test was conducted to determine the actual amount of flow and from where the water along Silver Bow Creek was flowing. Originally, it was determined that there was approximately 100 gallons per minute flowing into the system. The new data confirms there is now 500+ gallons per minute flowing into the system. The Record of Decision again was negotiated without this critical and valuable information.
- In July 2009, we learned that the Montana Bureau of Mines was **drilling wells in the area to determine the depth and scope of the contaminated tailing in the Parrott Tailings area.** Making the Record of Decision without knowing the depth and scope of the tailing in the area is unconscionable and unbelievable!
- The Montana Bureau of Mines, in February 2011 conducted a pump test that should have been conducted prior to the Record of Decision in 2006. This test confirmed that the groundwater in the Civic Center and Parrott Tailings areas is moving at a rate of 120 to 640 feet per day. **When the decision was made by the EPA to not remove the Parrott Tailings, it was estimated that the groundwater flow above Harrison Avenue was at a rate of 2.5 feet per day.** Below Harrison Avenue, it was estimated that the groundwater was flowing at a rate of 15 feet per day when in fact we now know that it is flowing at a rate of 480 to 1000 feet per day. This is quite a substantial difference. Again, the Record of Decision negotiated without this critical information.
- On September 26, 2006 the Montana Department of Environmental Quality in a letter to the Environmental Protection Agency writes, "DEQ does not concur with the over reaching decision to leave accessible, major sources of groundwater contamination in place. We refer specifically to the Parrott Tailings, Diggings East tailings and the North Side Tailings. Our concern is that leaving these wastes in place poses a significant and

permanent threat to groundwater and to the long-term water quality of Silver Bow Creek." The EPA completely ignored this information in creating the Record of Decision.

- We learned this year of a publication written in August 2005 called **"Cut and Run" written by a reputable group of local Hydrologists and Hydro-Geologists. The publication seriously criticized the Record of Decision on Butte's portion of Silver Bow Creek and the Parrott Tailings area.** This is a quote from that publication; *The U.S. Environmental Protection Agency is prepared to walk away from the nation's largest Superfund site. More precisely, EPA is prepared to allow the responsible party, Atlantic Richfield Company (now British Petroleum/ARCO), to walk away without fully cleaning up the site. As a result, millions of cubic yards of mine tailings, smelting slag and other wastes will drain in perpetuity into the headwaters of the Clark Fork and Columbia Rivers. And the City/County of Butte-Silver Bow will be relegated into an industrial waste heap with dim economic prospects for recovery.* Senator Tester, there is no question these toxic tailings are already re-contaminating Silver Bow Creek, below Montana Street, that the State of Montana has already spent over $40 million to clean.
- ARCO and the EPA continue their **band-aid approach to cleaning and restoring the Creek** by now pouring pink concrete to correct the erosion problems caused by the incompetent decisions already made.
- Experts directly involved in the process believe the "site conceptual model" being developed by Arco detailing the amount of groundwater being captured in the Reverse French Drain System, indicates the system is not collecting the amount of groundwater as Arco and the EPA believed it would. I understand the site conceptual model clearly demonstrates the French Drain is not working near as well at they expected it would.
- I would also point out that the French Drain System designed to capture the contaminated groundwater you identify in your letter has been "jetted" {cleaned} on numerous occasions because of a chemical precipitate blockage. This jetting will be required in perpetuity to keep the French Drain clear. It is reported an obstruction of the French Drain in August 2007, was due to some kind of chemical precipitate adhering to the inside of the pipe and completely plugging off all flow from above Harrison Ave.
- In the spring of 2011, using a blimp, a site test was conducted to determine the flow of a plume contaminating Blacktail Creek in the Oregon Avenue area. The results of this test have not yet been released. It is my understanding that this contamination is coming directly from the Parrott Tailings area. The Montana Bureau of Mines will be conducting a further test in the fall of 2011 to determine that information.

Senator Tester, these are just some of the facts and information I have received and have accumulated since the Record of Decision was negotiated on the Parrott Tailings and Silver Bow Creek flowing through Butte in 2006. All of these issues have been articulated to the Environmental Protection Agency on numerous occasions by many others and me and have been ignored in the decision making process. This is why I strongly encourage you to continue your efforts in uncovering the truth of the situation concerning the contamination of the Parrott Tailings area and of Silver Bow Creek flowing through Butte.

cc Julie DalSoglio, Henry Elson, Paul Babb, Don Peoples and other Butte Residents

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Your Name and Contact Information: (you may remain anonymous)

Richard Gibson 301 N. City Star 59701 723 9639 rgibson@earthlink.net

Your Idea: Fully describe your concept.

Do A Deal w/ ARCO whereby they pay for ≥80% (at least) of cost of Removal of Parrott Tailings as Remedy; The Rest From NRDP. If that is NOT feasible, $32 mill prob. won't be enough. If Parrott tailings are Removed, use BNRC $32 mill to Restore Creek + Surface in That Area (incl. Civic Ctr.: WHAT ever is Left, use for Park/Trail/Interpretation Development in LAO west of MT Street. Northside Diggings East +

Project Location: Describe the project location here and mark it on the map on back.

Parrott tailings + LAO west of MT St. (+ other)

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Restores groundwater Aquifer + restores Recreational opportunity.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☒ more than $5M

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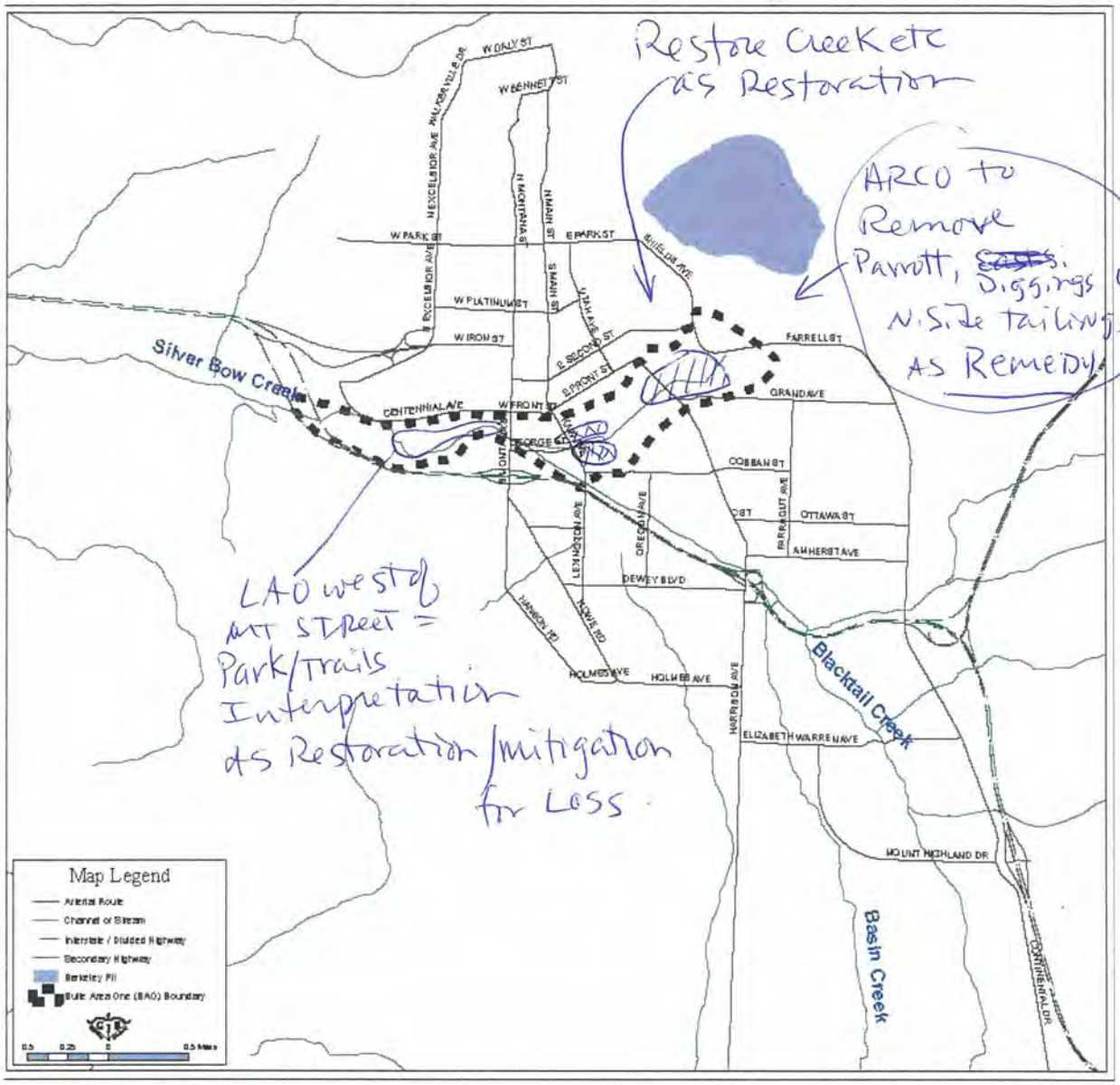
Butte Area One Map



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Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)
Carl Hafer 406 494-2717
6050 Porter

Your Idea: Fully describe your concept.
1. I think there is a possibility to do a great amount of good for the improvement of the water in Silver Bow Creek by upgrading the salinity of water from Basin creek reservoir and the Basin creek watershed
see page 1

Project Location: Describe the project location here and mark it on the map on back.
from the Basin creek reservoir to where the water would dump into Silver Bow creek

Project Type: Check the box(es) that is/are most applicable to your idea:
2.

☐ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
3. This would benefit the area from Highway 2 south of the Interstate of Harrison Avenue to and through the airport towards Elizabeth Warren

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K
4

☐ $100K to $500K ☐ $500K to $1M ☒ $1M to $5M ☐ more than $5M
see additional page

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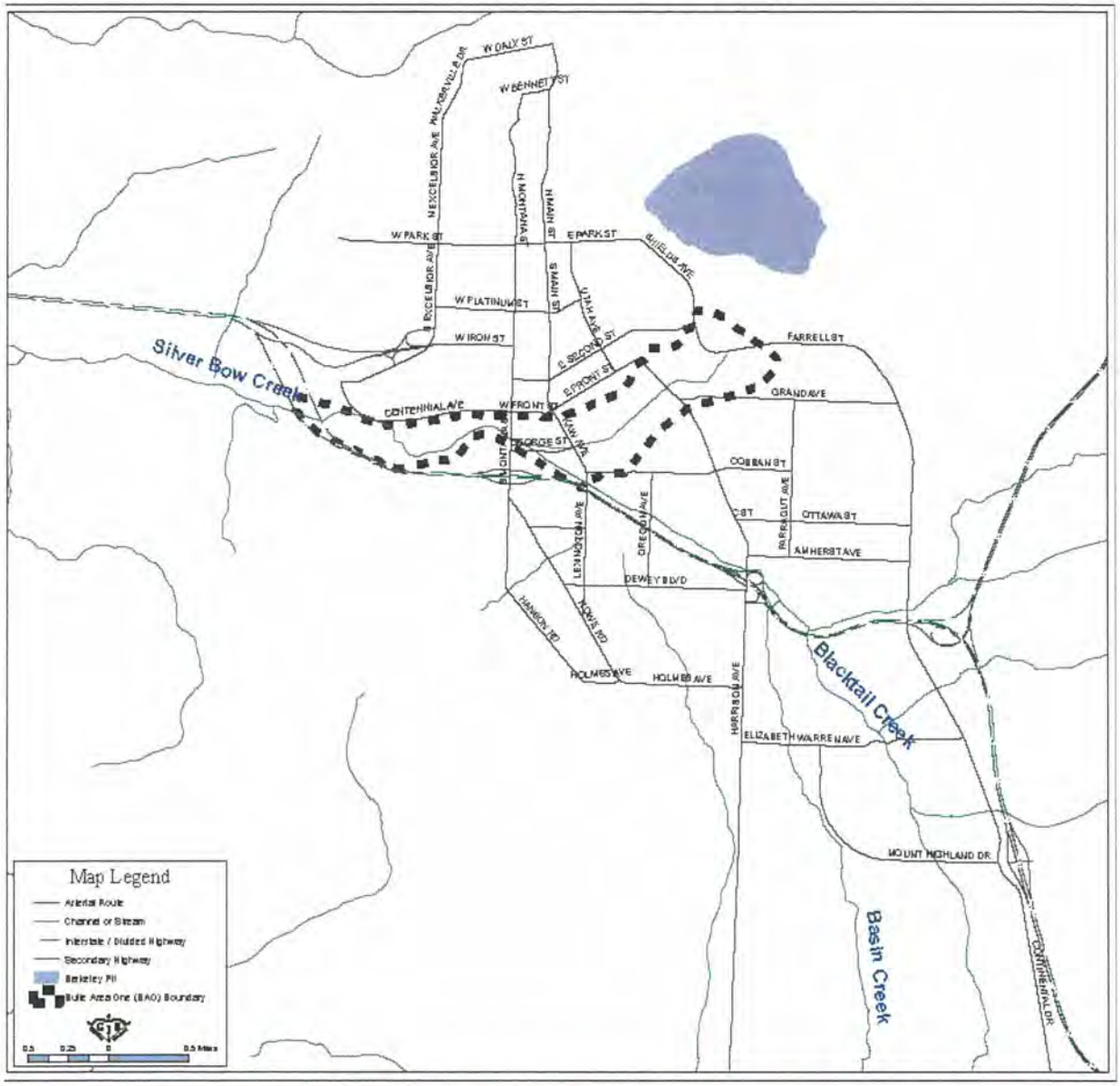

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Butte, Montana 59701

Keefe

4. Estimated Cost.

a. This would depend on the size of the concept. I have contacted the FAA regarding the airport and I feel that they would participate in this.

b. I think that the area just south of the Albany Airport needs to be brought up to grade. It was prior to the early 70's + late 60's that the airport let the prior owner remove a large amount of material which laid away with the actual stream bed, the slope owned by the airport to the west of this area could be pushed in with dozers and regrade the area and the stream bed.

This would benefit the whole area south of the Albany airport + West of Albany which is not being expanded in an orderly ~~manner~~ manner.

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Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

John Chebul 494-4490

Your Idea: Fully describe your concept. Cap all open waste areas
Plant trees & Shrubs in reclaimed areas
& also - in parks & fields in Butte area one

Project Location: Describe the project location here and mark it on the map on back.

anywhere in the Priority areas

Project Type: Check the box(es) that is/are most applicable to your idea:

☑ mining waste removal ☑ waste cap improvement ☑ stream restoration ☑ revegetation

☐ recreation/fishing ☑ water system improvement ☑ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Streams & Water supplies
~~bo~~ erosion & groundwater

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☑ $100K to $500K ☐ $500K to $1M ☒ $1M to $5M ☐ more than $5M

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Department of Justice

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Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

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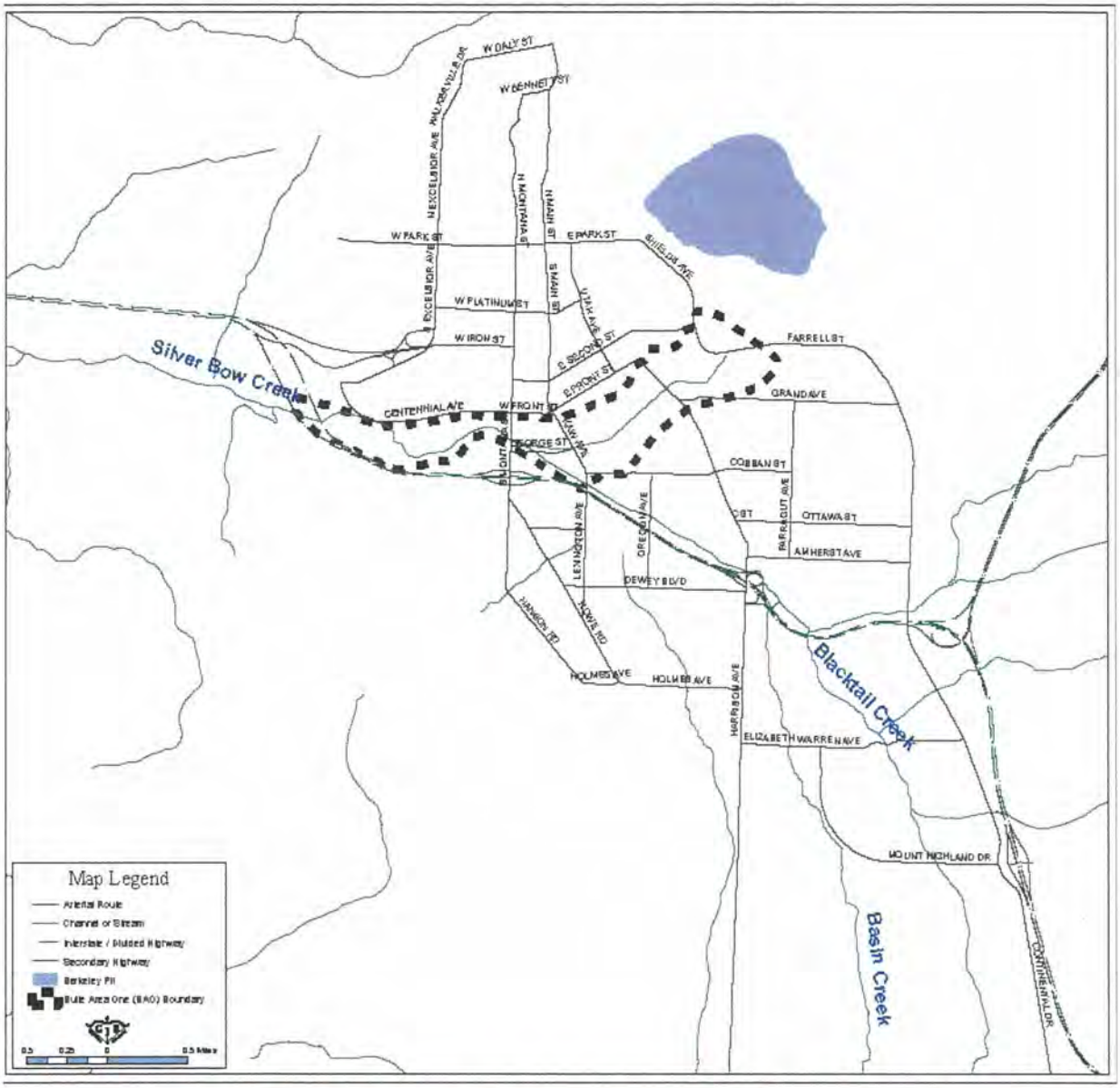

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Your Name and Contact Information: (you may remain anonymous)

Sharon Rolland 494-4493

Your Idea: Fully describe your concept.

Proposal with [illegible]

Project Location: Describe the project location here and mark it on the map on back.

Butte Priority Soil Unit + beyond –

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☒ waste cap improvement ☒ stream restoration ☒ revegetation

☐ recreation/fishing ☐ water system improvement ☒ storm water controls ☒ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Removal of [illegible]

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☒ $100K to $500K ☒ $500K to $1M ☐ $1M to $5M ☒ more than $5M

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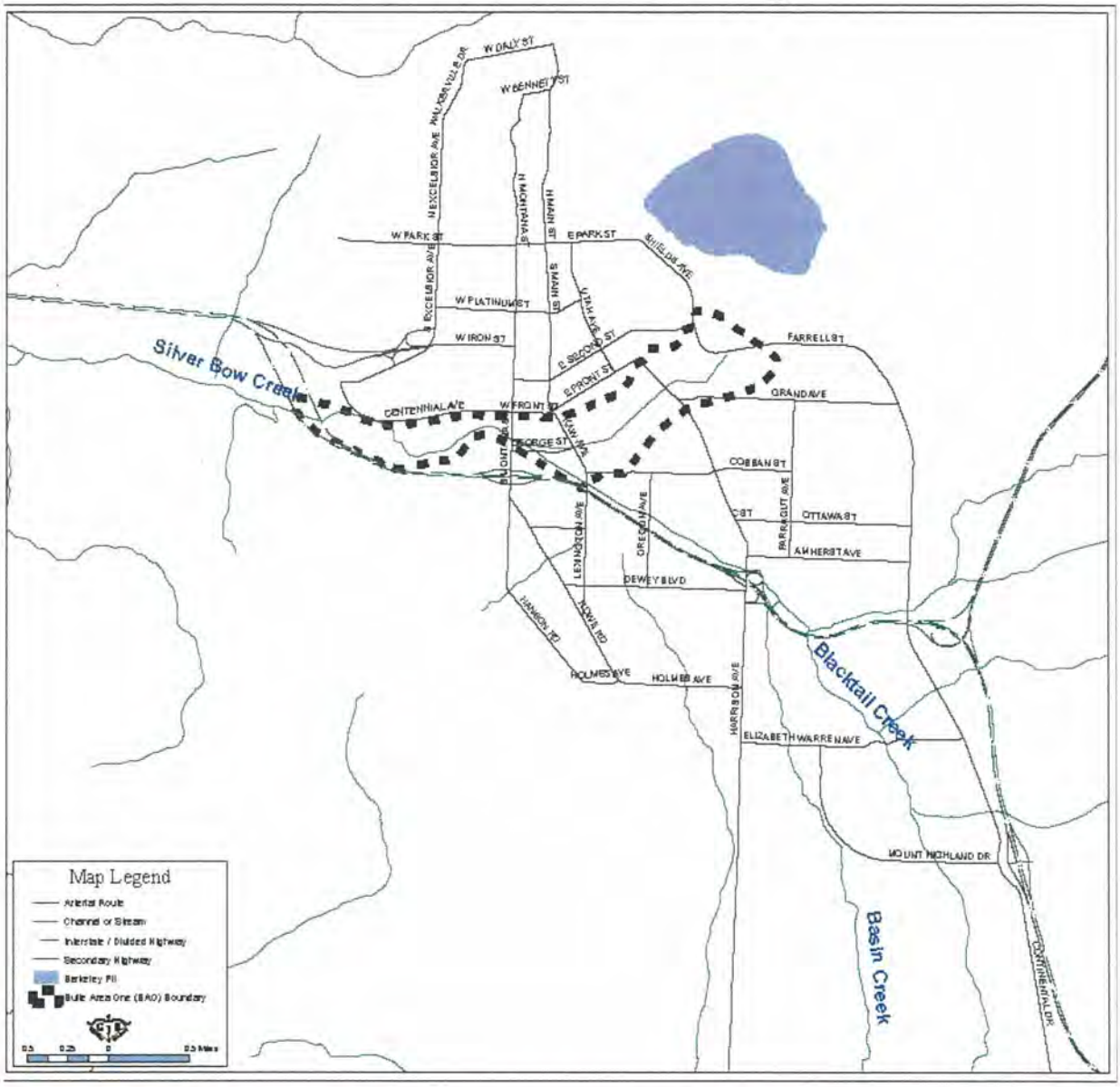

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Your Name and Contact Information: (you may remain anonymous)

Jim Keane

Your Idea: Fully describe your concept.

Remove Dams - possible will be other issues!! The Pit - will

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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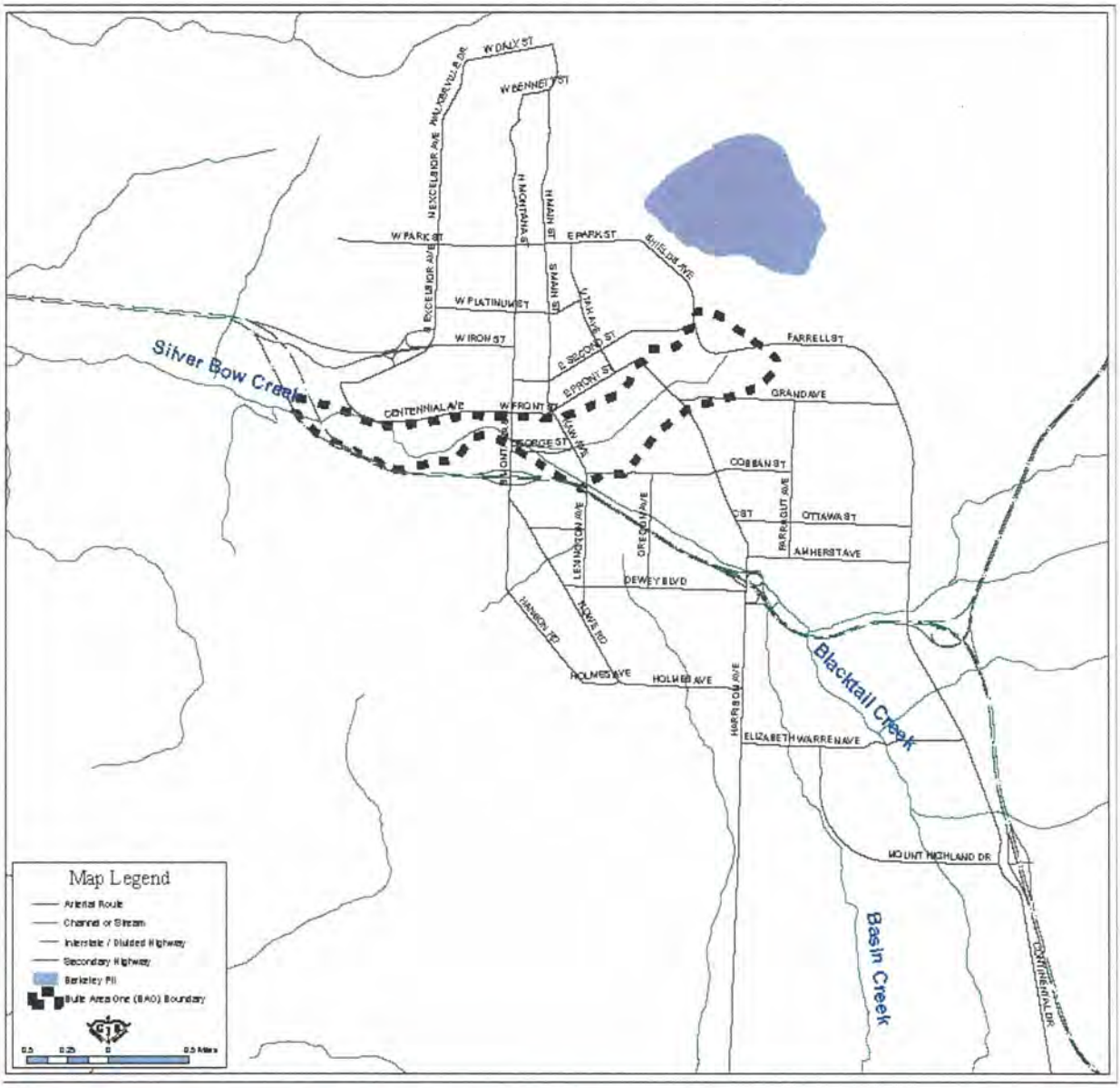

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Your Name and Contact Information: (you may remain anonymous)

Bobbi Stauffer robertastauffer@hotmail.com

Your Idea: Fully describe your concept.

Remove the most contaminated concentration of the Parrot Tailings (ballfield, short of relocating Civic Center) and work with MR to deposit them on Tucin property (most cost-effective solution) with a portion of funds. very important to future health of SBC.

Project Location: Describe the project location here and mark it on the map on back.

only move the County Shops if absolutely necessary if in direct path of voluminous groundwater flow. If not much water under there - leave alone!!!

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☐ revegetation
x waste water system improvement
☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. will benefit all down stream work!! Could perhaps enhance walking trail area w/ additional funds. Could possibly also partner w/ county to address nutrient problem from Metro sewer

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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* Also important to use remainder of Silver Bow Creek clean up money in the immediate area on continued restoration work.

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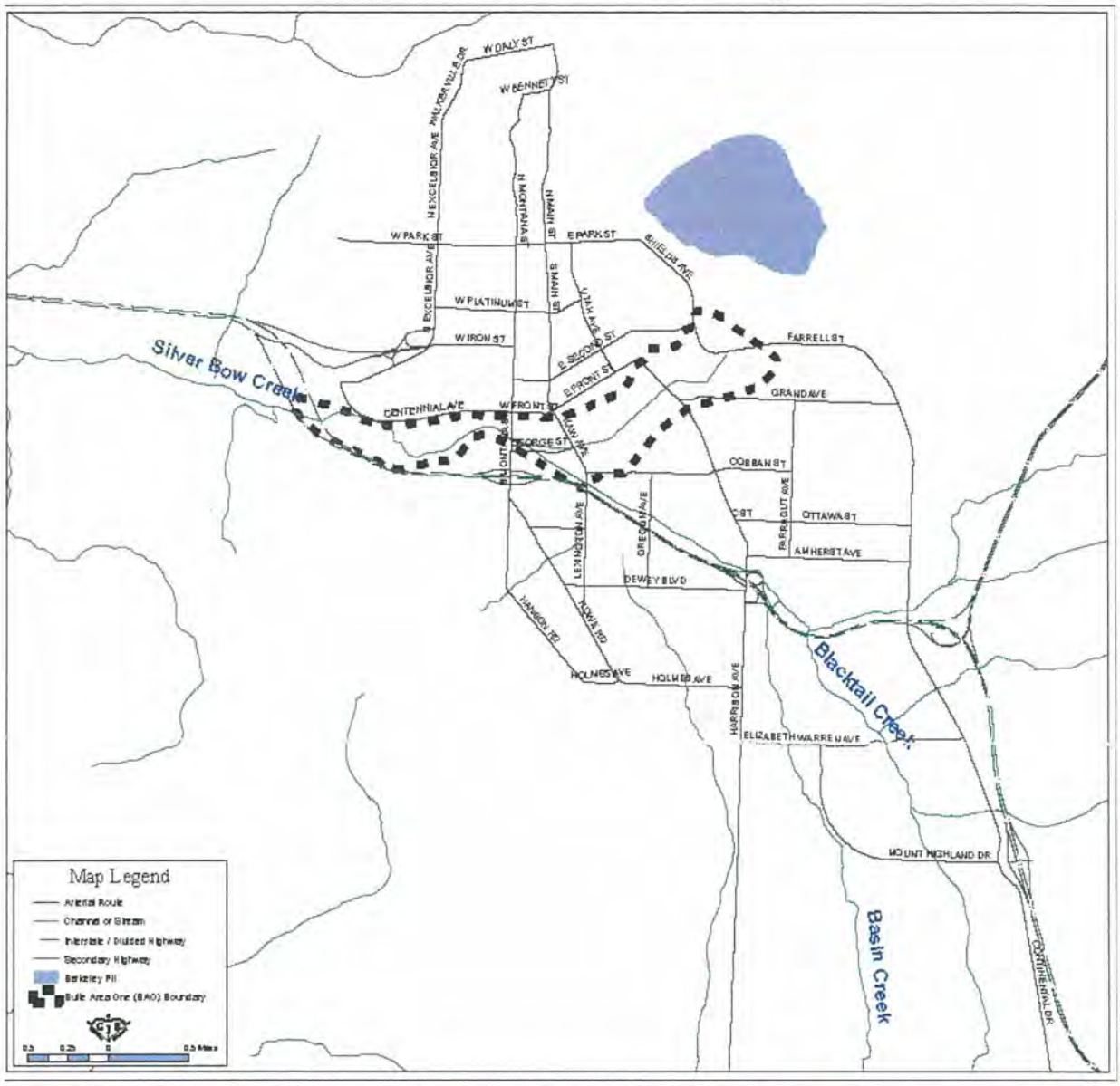

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Your Name and Contact Information: (you may remain anonymous) Noor 782-5166 [illegible]

Your Idea: Fully describe your concept. I want to see the ground water and surface water of SB Creek clean enough to permanently support a healthy fishery – which means Removing all tailings! Since EPA let Arco off the hook - EPA should pay for remediation. Then this restoration $ could be used to restore other areas.

Project Location: Describe the project location here and mark it on the map on back. Parrott Tailings (and others - legend)

Project Type: Check the box(es) that is/are most applicable to your idea:

☑ mining waste removal ☐ waste cap improvement ☑ stream restoration ☑ revegetation

☑ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
Fishery, riparian, humans who love nature & clean env. e.g. IQ > 60

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☒ more than $5M

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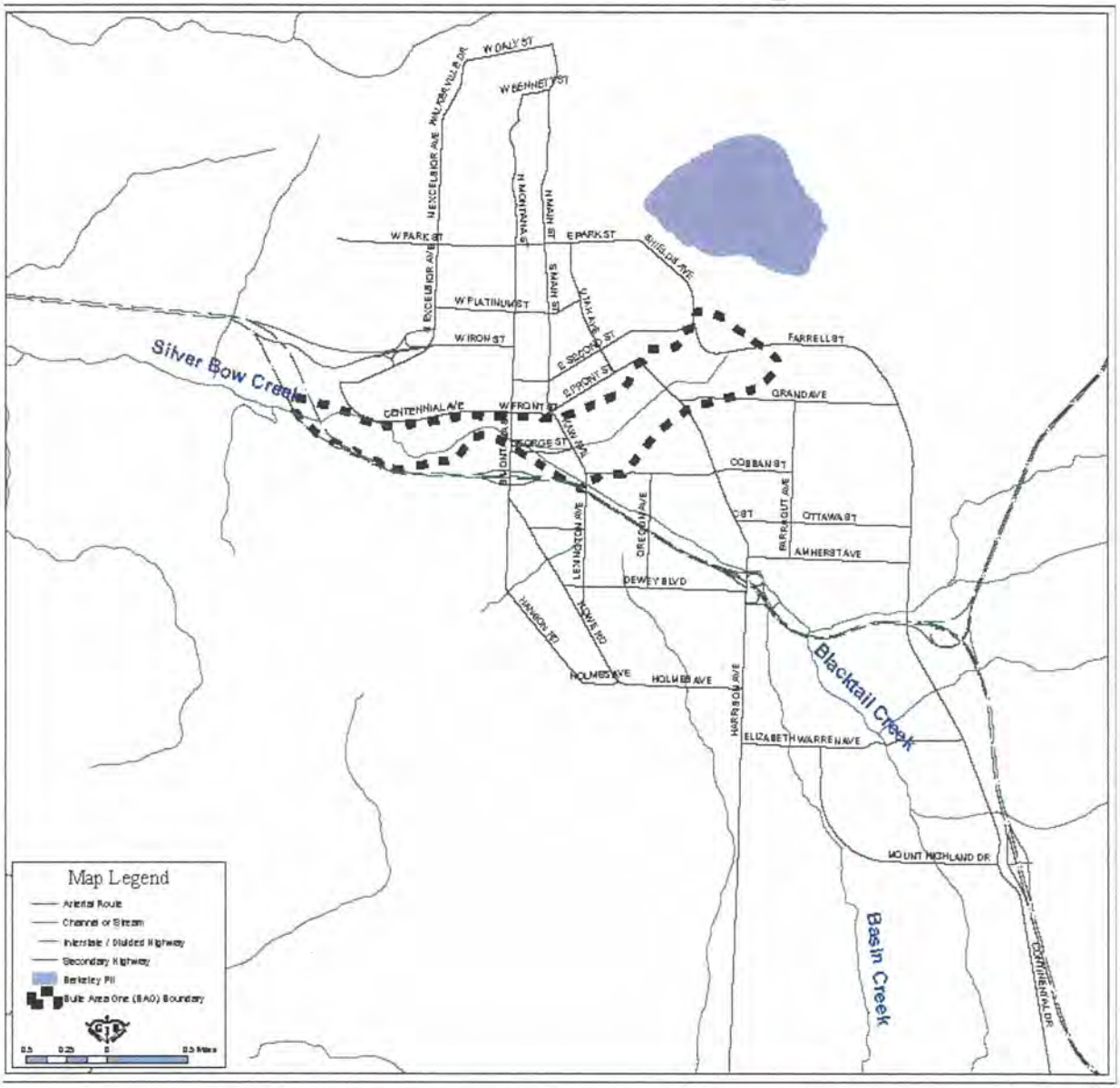

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Your Name and Contact Information: (you may remain anonymous) Noor - 782-3682, nparwaiz@hotmail

Your Idea: Fully describe your concept. It would be nice to have a program avail that would provide clean soil to Butte Citizens in up to an (or flats) so they can safely grow food - (community gardens would fit in here as well)

Project Location: Describe the project location here and mark it on the map on back. Anywhere in Butte where a group wants to start a community garden or for private gardens, if feasible)

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Benefits community of Butte - Those people who wish to garden but have no produce, due to bad residency / sewage soil etc

Estimated Cost: How much would your project cost? ☐ unknown ☑ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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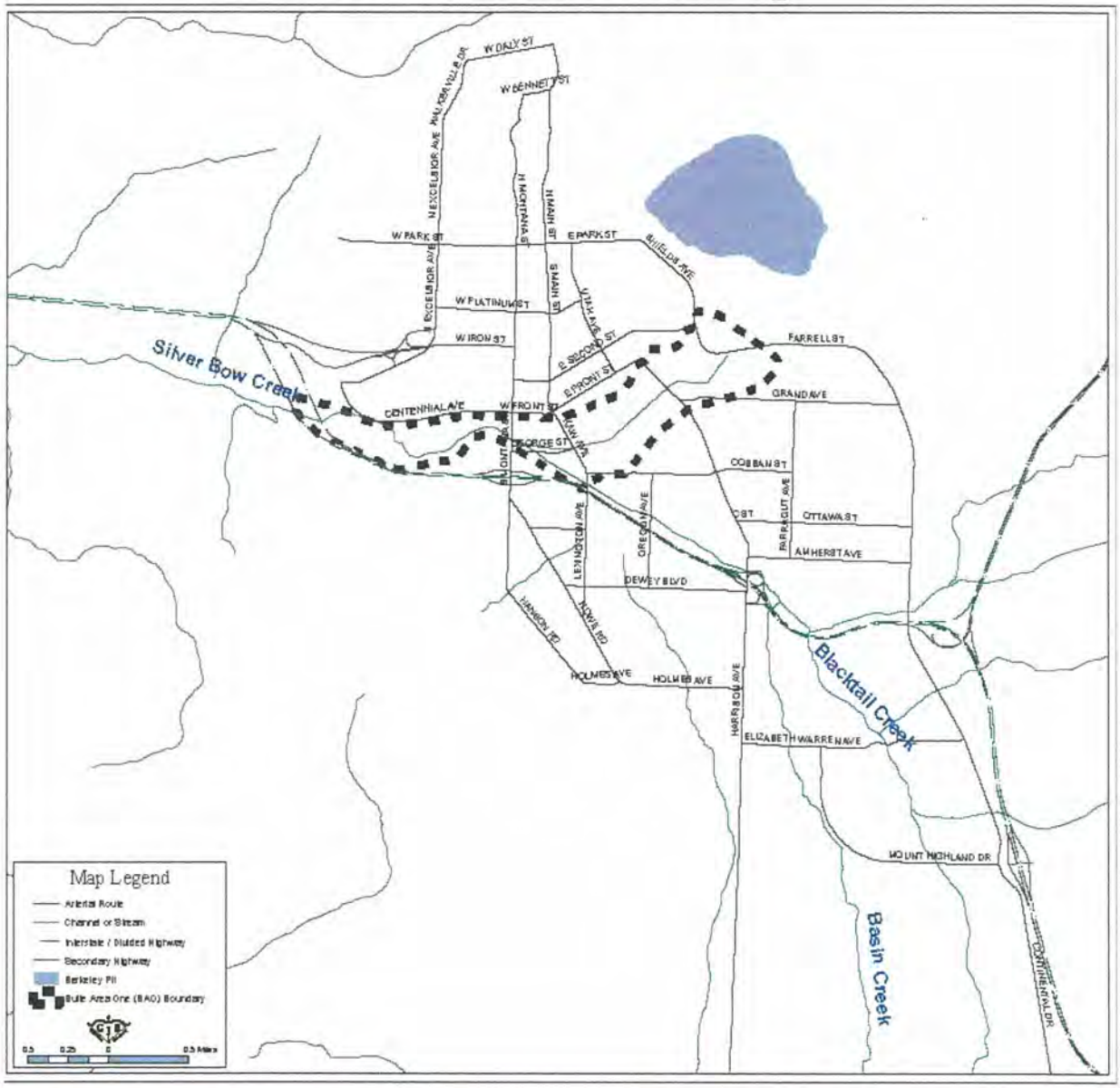
Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



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Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

Your Idea: Fully describe your concept. Capture of sediment from "the hill" should make more use of capturing sediment with Native veg. and use of natural topography – as opposed to engineered (eg pipes/cement) to capture water & percolate run-off into the soil through roots.

Project Location: Describe the project location here and mark it on the map on back. in addition to curbs etc Everything in pipes + runoff flows to/and SB Creek

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☐ water system improvement ☑ storm water controls ☒ other –

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
Eg prevent sediment (re-harvested water) from entering SB Creek

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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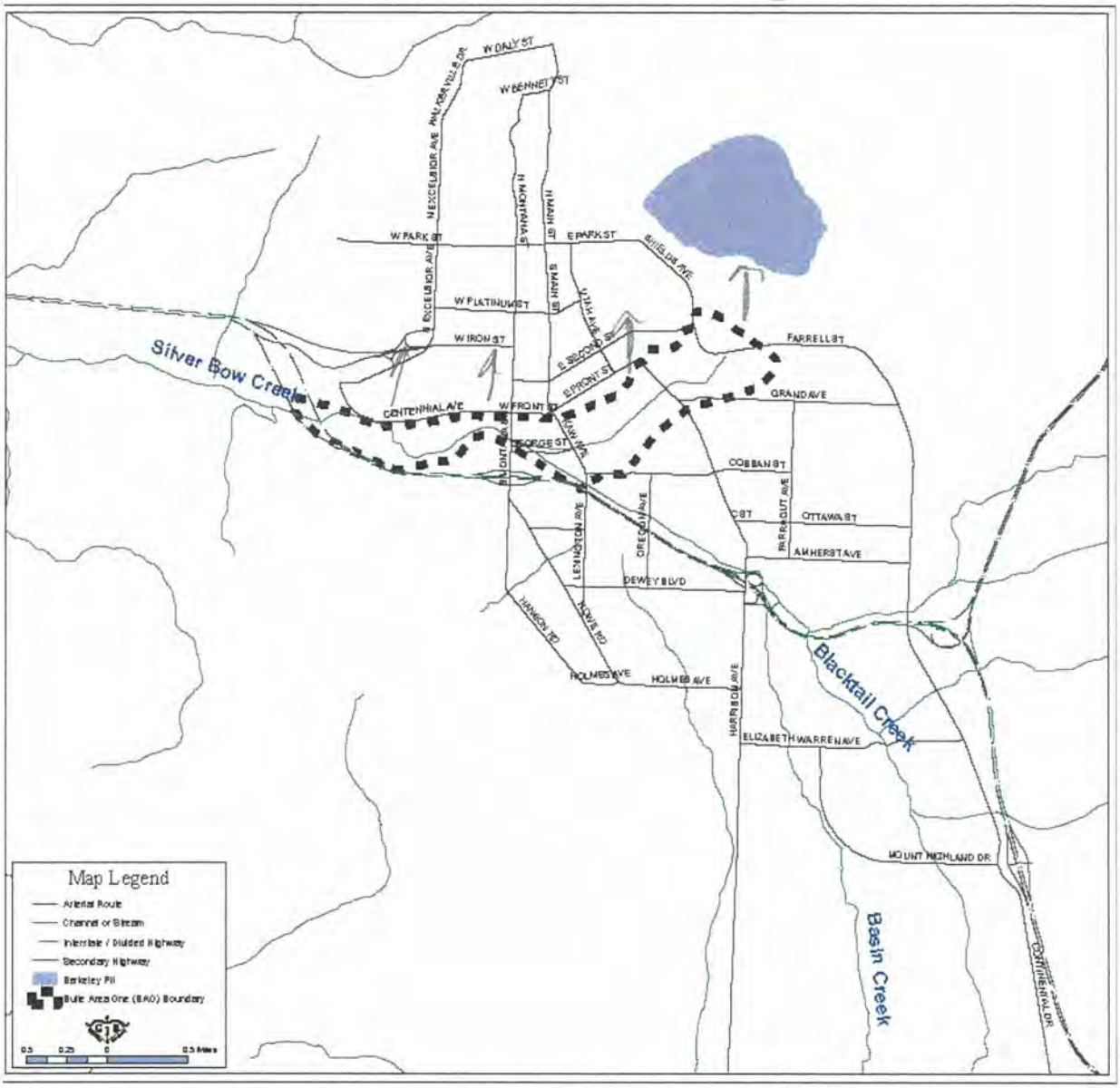

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Your Name and Contact Information: (you may remain anonymous)

Jim Constantine 406-490-7342

Your Idea: Fully describe your concept.

To convert the old reseoir on N. Excel into a winter icepark and + summer water park. This could be used 12 mo out of the year. Summer concerts and bike trails, picnic area etc.

Project Location: Describe the project location here and mark it on the map on back.

Old No. Excel reseoir

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation

☒ recreation/fishing ☒ water system improvement ☒ storm water controls ☒ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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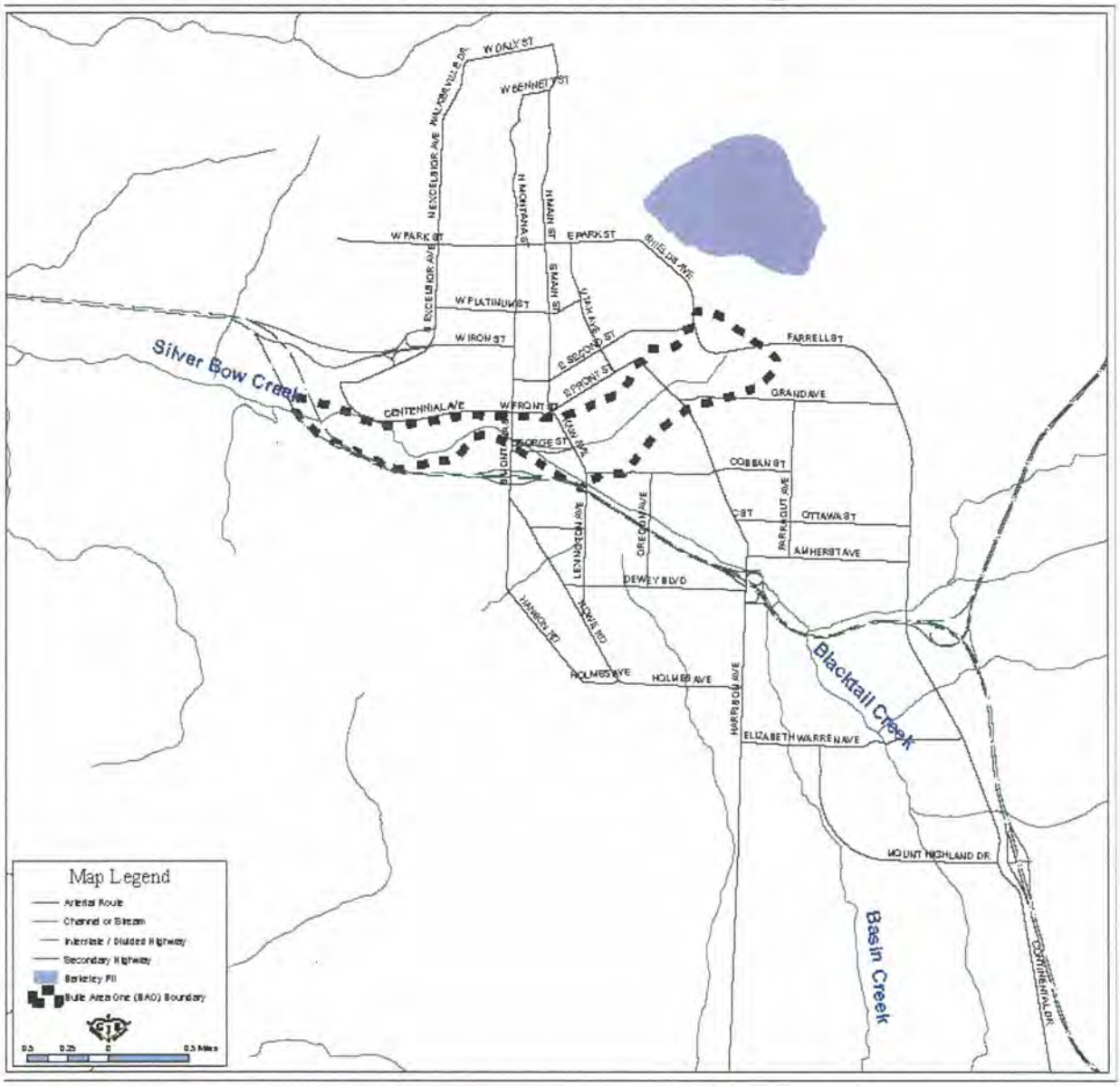

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Your Name and Contact Information: (you may remain anonymous)
Colleen Elliott, 1231 W. Quartz St. cellisott@msteck.edu.

Your Idea: Fully describe your concept.
Collaborate with ARCO to remove the Parrott tailings + restore natural flow to SB Creek.

Project Location: Describe the project location here and mark it on the map on back.
Parrott Tailings, Diggings E, the W Side

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
This will protect the restored reaches of SB Creek & the UCFR from recontamination & pave the way to full recovery of the aquatic ecosystem.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☒ more than $5M

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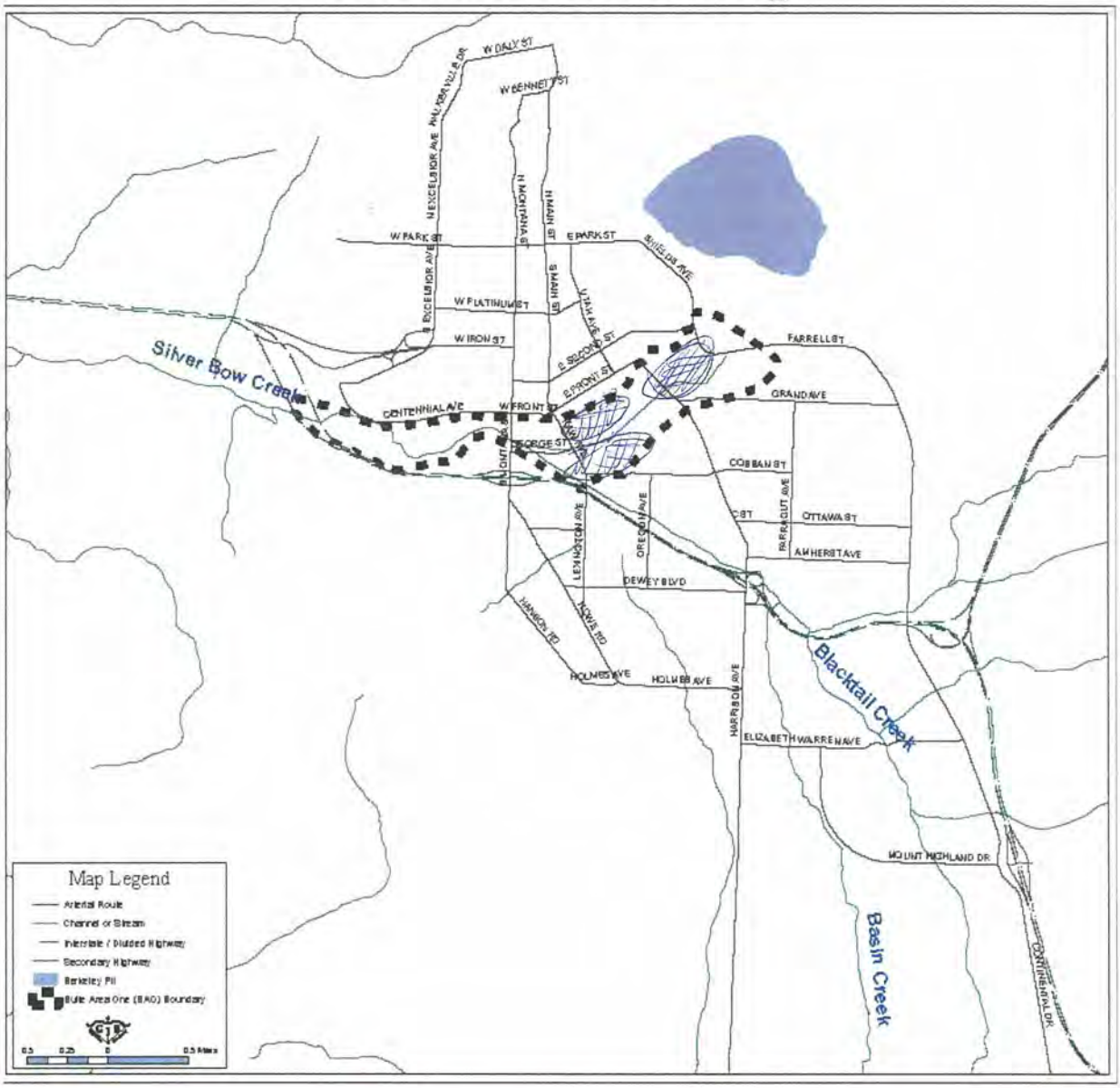

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Your Name and Contact Information: (you may remain anonymous)

Joe Griffin 406 560 6060

Your Idea: Fully describe your concept. Re-establish native vegetation in upper Missoula Gulch with an emphasis on trees and shrubs. Willows in the Gulch bottom, aspens in side gulches, mtn. mahogany on dry slopes etc. Also re-establish grassy areas with local native grasses found on S. side of Timber Butte. Would reproduce grassland ecosystems found on S. side of Timber Butte. This should be considered a 5 to 10 year program that would be coordinated w/ BNRC

Project Location: Describe the project location here and mark it on the map on back.

Existing open space in Missoula Gulch from Lexington Line to Caledonia Street.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☒ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. The idea of using local native vegetation (salt) is based on the concept that natives have persisted through wide fluctuations and should be the most reliable, long-term protection for erosion and stream degradation. Additionally, it would provide public open space.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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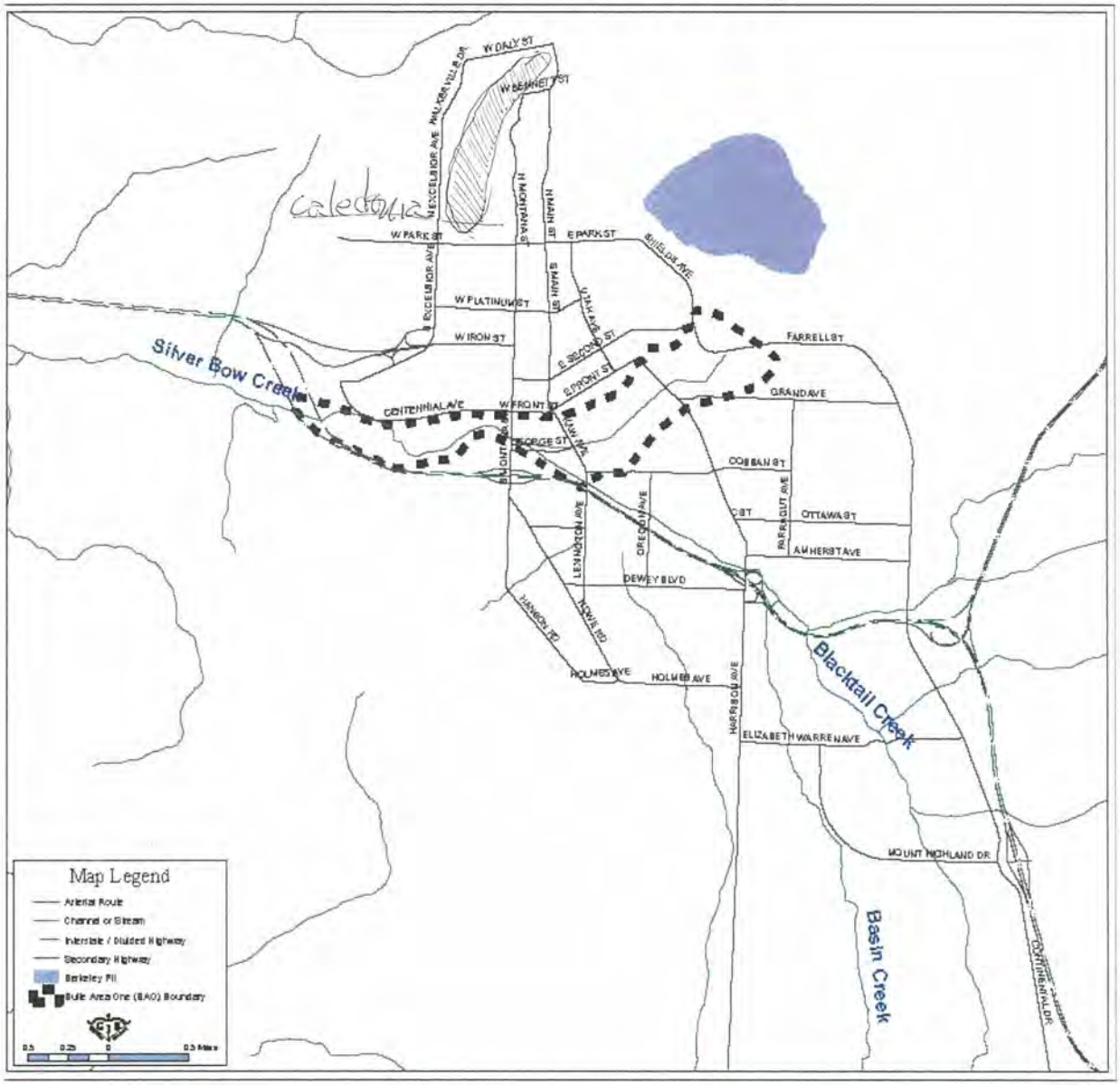

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Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

SUNDAY MARCH 18, 2012

Area Snapshots

Workshop Tuesday on spending $28 million

A workshop to outline the legal requirements that must be met for spending a $28.1 million natural resource damage settlement runs from 6 to 8 p.m. Tuesday, March 20, in the Butte Public Archives, 17 W. Quartz St.

The meeting will help outline the type of projects that would potentially be eligible for funding.

Also, people are asked to submit by April 20 their ideas on how to spend the money. Submittal forms are available online at **https://doj.mt.gov/lands/advisorycouncils/#bnrc**.

The Butte Natural Resource Damage Council will consider the ideas while preparing a draft Butte Area One Restoration Plan, which it hopes to release for public review this fall.

The council hopes to have a final plan on the governor's desk before the end of the year.

For information, contact Pat Cunneen at 533-6882 or email **pcunneen@mt.gov**.

Spirit of
Columbia Gardens Carousel
3100 Harrison Ave.
Butte, MT 5971

Butte Natural Resource Damage Council

W.A. Clark established the Columbia Gardens in the early 1900's for the children of Butte. It was built on 63 Acers to be one of the largest parks in the country at that time. It was designed for picnic areas, play grounds, concessions building, roller coaster, carousel, bi-planes, dance pavillon, greenhouses, and animal zoo.

The Anaconda Mining Company took over the management in 1928 with the agreement to run the facility to maintain and run it for an unlimited time. The A.C.M. began old Pit Mining in the late 1950's. The management had many problems with labor and copper prices in the 1970's and were looking for places to cut costs. A new pit was undertaking in the gulch of the Columbia Gardens in the early 70's and slowly moved to surround the Columbia Gardens.

The gardens recreation area of the Columbia Gardens was closed to the Public by A.C.M. after Labor Day of 1973 for the new Pit. A fire was reported on Nov.12 in the lower Concession Building and Arcade, which slowly consumed the entire structure. The Carousel and Bi-planes were destroyed.

Recently, a friend of mine in Bozeman informed me that he has proof that the fire was deliberately started by two miners, who were brought to the site by a foreman of the A.C.M. and ordered to tear up the arcade walk and set it on fire.

The Spirit of the Columbia Gardens Carousel Group has been carving horses, acquiring equipment , a steel structure frame, and other items to build a new facility. The group has been carving horses carousel panels since 1996. The site for the new facility has been the problem over the past years. We have lost three sites due to circumstances beyond our control.

At this time we are requesting the funds to proceed with new the new carousel facility for the people of Butte. We have estimated our cost to be $1,5000.00. The original Columbia Gardens was destroyed deliberately by the Mining. Therefore: We are requesting the funds from the Council necessary to construct the spirit **Columbia Gardens Carousel.**

Submitted by:

Spirit of Columbia Gardens Board

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Columbia Gardens Carousel
3100 Harrison Ave.
Butte, MT 5971

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Submitted by:

Spirit of Columbia Gardens Board

Harold Godtland <godtland@bridgemail.com>

Photo of the contract miner who was ordered to burn Columbia Gardens

1 message

merv olson <mervisaway@gmail.com> Sun, Mar 18, 2012 at 6:55 PM

To: Pete Carol Godtland <godtland@bridgemail.com>

100_2403.JPG

100_2402.JPG

Pete and Carol: These are pictures of Mr George Myers with Merv Olson,former pastor of Gold Hill Lutheran Church who told him that he was ordered by a "Dusty"Southwick, his Anaconda foreman to use a D-8 Cat and push together the boardwalks at Columbia Gardens and start the fire the night the Gardens burned.

Pete: the one thing I am concerned about is I would not want a hoard of newspaper people descending on him in the Nursing Home. The Company obviously picked 2 contract miners who were not from Butte to perform the task.

One comment that was made by George was the story that as they pushed the board walks together he got off the Cat and was looking for coins the children had lost through the board walks. The foreman came by and ordered him to put the dirt beneath the board walks in a truck and dump in the foreman's back yard so he could sift through the dirt. Doesn't that sound-like a Butte story?

Good to see you folks at JoAnn's party. The Butte Hill was something to drive over this afternoon but we are home safe and only rain here.

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

Dr. John Ray 915 W. Galena

Your Idea: Fully describe your concept.

Removal of Parrot Tailings

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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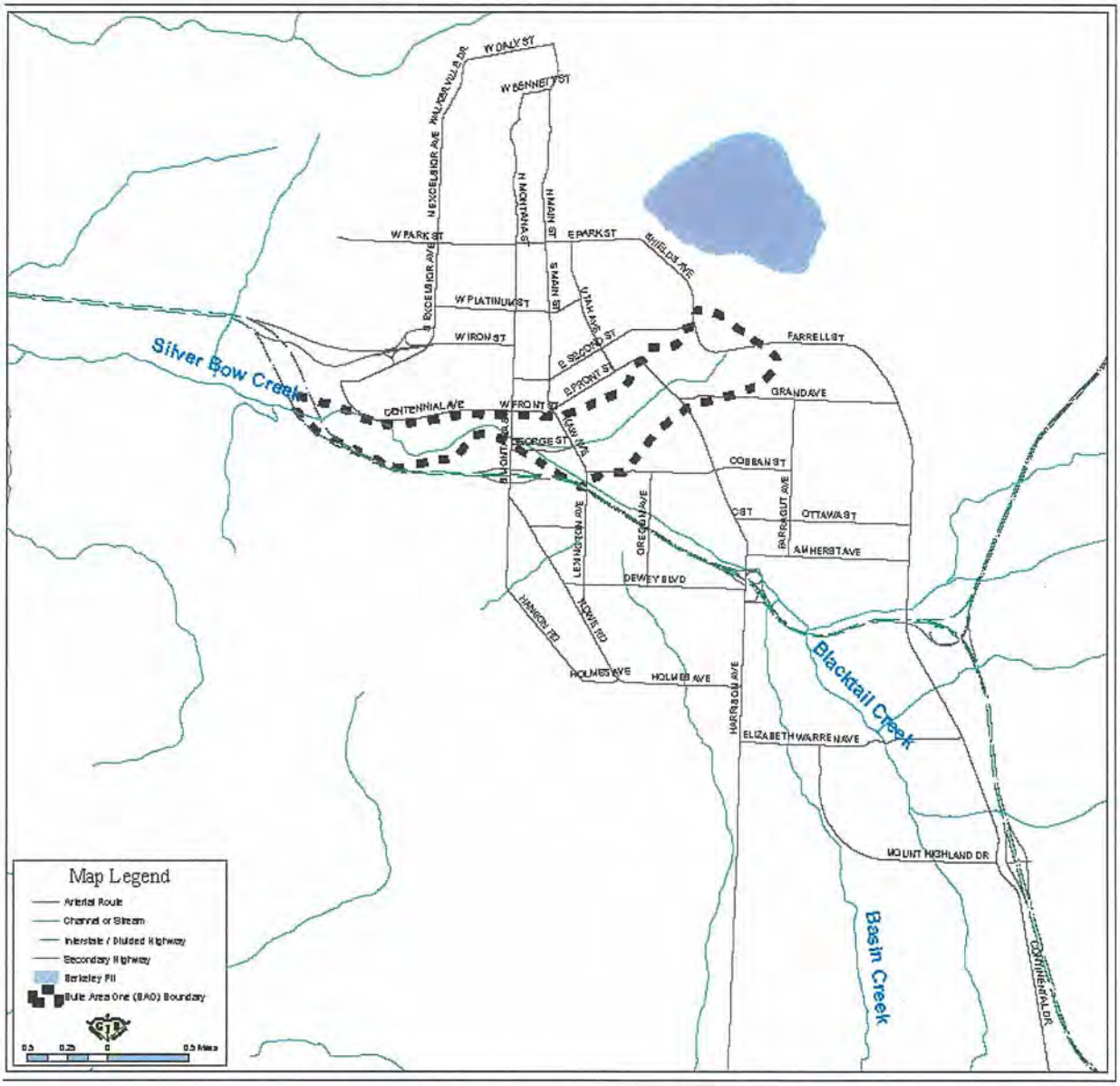

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Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Cunneen, Padraig

From: John Ray [bodinman2003@yahoo.com]
Sent: Tuesday, March 20, 2012 9:01 AM
To: Elizabeth Erickson; Cunneen, Padraig
Cc: John Ray
Subject: Parrott Tailings should be removed through NRDP funds
Attachments: Parrott Tailings--Precautionary Principle.doc

Please share the following, plus attachment, with the relevant decision makers.
Dr. John W. Ray

The Parrott Tailings should be removed under the NRDP.
The Parrott Tailings should have been removed under Superfund remediation but the EPA, misguidly, failed to do so. So the burden falls on the NRDP.

Reasons:
1. It is obvious that the data upon which the original decision to leave the Parrott Tailings in place has significantly changed over the past five years. New data calls into serious question the assumptions and the protectiveness of leaving the Parrott Tailings in place.
2. The Parrott Tailings are a significant threat to human health and the environment of the kind that calls for removal under RESTORATION. Butte's natural environment cannot be restored if this significant threat is left in place. Contaminated ground water under the Parrott Tailings is more polluted than the water in the Berkeley Pit. The Parrott Tailings are the major source of groundwater contamination.
3. A waste-in-place remedy places a particular burden on the EPA to justify to a high level of certainty the protectiveness of leaving the Parrott Tailings in place. It is obvious that the EPA lacks any degree of certainty, given new data generated in the last five years that the Parrott remedy is at all protective of human health and the environment. I have been amazed at how extensive is EPA's uncertainty regarding the Parrott Tailings.
4. Leaving the Parrott Tailings in place is directly contrary to the Superfund mandate for permanent remedies that reduce the toxicity, mobility and volume of contaminants. I can't see how anyone could seriously argue that leaving the Parrott Tailings in place is a real cleanup.
5. The original decision to leave the Parrott Tailings in place was a political not a good science decision. The EPA was more concerned about the cost of the remedy to the PRPs than protecting public health and the environment.
6. The decision to leave the Parrott Tailings in place is non-responsive to public input asking that the Tailings be removed.
7. The decision to leave the Parrott Tailings in place is contrary to the precautionary principle and the principle of pollution prevention which are part of Superfund law and policy of which natural resource damage claims are a part.
8. The models the EPA used to justify leaving the Tailings in place are problematic. Nor has there been any rerun by EPA of the models.

9. Given the proximity of the Parrott Tailings to low income concentrations of Butte residents, leaving the Tailings in place violates environmental justice.
Given EPA's failure to remove the Parrott Tailings as part of remediation, this health threat must be addressed under restoration.
I HAVE ATTACHED A DOCUMENT THAT MORE FULLY ARGUES THAT THE PARROTT TAILINGS SHOULD BE REMOVED.
Dr. John W. Ray

Precautionary Principle, Pollution Prevention and the Parrott Tailings

Submitted by:
Dr. John W. Ray
915 West Galena St.
Butte, Montana 59701

CERCLA's purpose is to ameliorate or prevent actual or potential threats to human health and the environment emanating from toxic material or hazardous materials. Article II, section 3 of the *Montana Constitution* provides that "All persons are born free and have certain inalienable rights. They include the right to a clean and healthful environment..." and Article IX of the Montana State Constitution holds: "The State and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations." MDEQ's Mission is: "to protect, sustain, and improve a clean and healthful environment to benefit present and future generations."

In interpreting the meaning of Articles II and IX of the Montana Constitution, the Montana State Supreme Court in *Montana Environmental Information Center v. Department of Environmental Quality and Seven-Up Pete Joint Venture* (No. 97-455, 1999 MT 248, 296 Mont. 207, 988 P.2d 1236) found that **Pollution Prevention** and the **Precautionary Principle** were part of the Montana Constitution's guarantee to citizens of a clean and healthy natural environment, i.e. these principles are part of Montana law. The Court found that "the right to a clean and healthful environment is a fundamental right. . . ." In analyzing the discussion and debate at the 1972 Montana Constitutional Convention, the Court determined that it was the clear intent of the participants that the environmental rights guaranteed in Articles II and IX were interrelated and that these two Articles espoused the principles of pollution prevention and the precautionary principle. For example, the Court cites Delegate McNeil who said in discussing how Articles IX's subsections (1) and (3) were related: "It goes further than that and directs the Legislature to provide remedies to prevent degradation. **This is anticipatory**." (*Emphasis supplied.*) It was also clear during the discussion and debate during the Montana Constitutional Convention that the delegates intended the environmental provisions of the Constitution to mandate an "improvement" of the natural environment. The Court stated: " In doing so, we conclude that the delegates' intention was to provide language and protections which are both anticipatory and preventative. The delegates did not intend to merely prohibit that degree of environmental degradation that can be conclusively linked to ill health or physical endangerment. Our constitution does not require that dead fish float on the surface of our state's rivers and steams before its farsighted environmental protections can be invoked...." The Montana Supreme Court's decision is an unambiguous and binding statement that the **Principles of Pollution Prevention and the Precautionary Principle/Rule** must direct the administration and implementation of **ALL** state laws, rules, and regulations. **These principles are state ARARS that must be applied to the issue of removing the Parrott Tailings.**

Black's Law Dictionary also provides guidance as to the meanings of the concepts articulated in the Montana Supreme Court case above quoted.
Black's defines **potential** as "Existing in possibility but not in act." **Threat** is defined as a "menace." **Imminent** is defined as: "Near at hand; mediate rather than immediate, close rather than touching, perilous." **Substantial** is defined as of "Importance." Certainly, toxics left in place at the Priority Soils site would present a potential threat and a substantial, imminent threat as defined in *Black's Law Dictionary*.

The Pollution Prevention Principle/Standard warrants total removal of the Parrott Tailings as part of the Priority Soils Remedy.

The goal of Montana's pollution prevention program is to "prevent pollution before it occurs. Pollution prevention is the highest step of the waste reduction hierarchy and occurs prior to the other steps of recycling, treatment, or disposal." (MDEQ, *What is Pollution Prevention*?) **See also**: *MCA 2003*, 75-10-601; 75-1-602, 8 (b) (iii) and 75-1-103 (1) and (2) (a)

The Federal Pollution Prevention Act of 1990 established as national policy the mandate that: "Pollution should be prevented or reduced at the source wherever feasible." According to the EPA, pollution prevention means "source reduction" which is defined in the Pollution Prevention Act as any type of action which: "reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment or disposal" and "reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants." Pollution Prevention and the Precautionary Principle are also a part of several other federal laws: CERCLA, Clean Water Act, Toxic Substances Control Act, NEPA, RCRA, EPCRA, and the Clean Air Act. For a more detailed discussion of the role of pollution prevention and the precautionary principle in federal environmental law see: *Advancing Environmental Justice through Pollution Prevention: A Report developed from the National Environmental Justice Advisory Council-A Federal Advisory Committee to the U.S. Environmental Protection Agency*, June 2003. As this report makes clear, there is an intimate relationship between environmental justice, pollution prevention, and the use of the precautionary principle, all of which are EPA policy mandates.

The point of Montana law and federal law is that it is better to prevent pollution before it harms public health and the environment rather than treat or mitigate the effect of pollutants after they are released. The medical motto: *Primum non nocere* (First, do no harm.) would apply to pollution prevention. Given the serious nature of the pollutants found at the Parrott Tailings site, the pollution prevention principle would warrant the total removal of the Parrott Tailings **now** rather than waiting for these contaminants to be released and then trying to treat them later. Given the serious nature of the pollutants found at the Parrott Tailings site, the pollution prevention principle would warrant removing as much of the contaminants as possible so as not to threaten future generations. Leaving the Parrott Tailings waste-in-place is a serious threat-in-place.

The Precautionary Principle/Standard warrants removing the Parrot Tailings now as part of the Priority Soils remedy.

The essence of the precautionary principle is that government should act before harm to human health and the environment occurs from the releases of toxic substances. The precautionary principle "dictates that indication of harm, rather than proof of harm, should be the trigger for action." (Sandra Steingraber, *Living Down Stream: An Ecologist Looks at Cancer and the Environment*, p. 270.) If there is a reasonable suspicion that harm to human health and the environment could occur from the release of a toxic substance, government should step in and fix the problem before its hurts people and the environment. The 1998 Wingspread Statement on the Precautionary Principle states: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically." Former EPA director Christine Todd Whitman stated: "policymakers need to take a precautionary approach to environmental protection. . .. We must acknowledge that uncertainty is inherent in managing natural resources, recognize it is usually easier to prevent environmental damage than to repair it later, and shift the burden of proof away from those advocating protection toward those proposing an action that may be harmful." If there is a strong suspicion that something bad is going to happen, government has an obligation to stop it prior to it's occurring. The precautionary principle is really grounded in old common sense sayings: "An once of prevention is worth a pound of cure." "Better safe than sorry." "A stitch in time saves nine." "Look before you leap."

The President's Council on Sustainable Development supports the precautionary principle. The Council declared: "Even in the face of scientific uncertainty, society should take reasonable actions to avert risks where the potential harm to human health or the environment is thought to be serious or irreparable." The American Public Health Association has passed a similar resolution concerning chemical exposure. (Resolution 9606)

The U.S. Court of Appeals for the District of Columbia Circuit upheld the EPA's use of the precautionary principle in *Ethyl Corp. v. U.S. Environmental Protection Agency* (541 F. 2d 1, 6 ELR 20267 (D.C. Cir.), cert denied, 426 U.S. 941 (1967) This was the case which supported the banning of leaded gasoline by the EPA. The banning of lead additives to gasoline was an example of the precautionary principle in action. "The U. S. Court of Appeals for the D.C. Circuit upheld the U.S. Environmental Protection Agency's decision to take a precautionary approach and ban lead anyway, even in the absence of scientific evidence adequate to demonstrate exactly what the risks from the lead were or what the benefits of removing it would be. As it turned out, banning leaded gasoline was the single most important contributor to the virtual elimination of lead from air and from most children's blood." (Charnley and Elliott, *Risk Versus Precaution: Environmental Law and Public Health Protection*, Environmental Law Institute, March 2002)

There is ample support for the precautionary principle from international organizations and treaties, to many of which the United States is a signatory. For example, the Rio Declaration from the 1992 United Nations Conference on Environment and Development, also known as Agenda 21, stated: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." The United States signed and ratified the Rio Declaration. The precautionary principle is also part of the following: Ozone Layer Protocol, Second North Sea Declaration, United Nations Environment Programme, Nordic Council's Conference Declaration of October 18, 1989, PARCOM Recommendation 89/1, Third North Sea Conference, Bergen Declaration on Sustainable Development, Second World Climate Conference, Bamako Convention on Transboundary Hazardous Waste into Africa, OECD Council Recommendation of January 1991, Maastricht Treaty on the European Union, Climate Change Conference, UNCED Text on Ocean Protection, and the Energy Charter Treaty.

The Pollution Prevention Standard and the Precautionary Principle/Standard are ARARS for Parrott Tailings

In effect, the provisions of the Montana Supreme Court decision *Montana Environmental Information Center v. Department of Environmental Quality and Seven-Up Pete Joint Venture* (No. 97-455, 1999 MT 248, 296 Mont. 207, 988 P.2d 1236 as well as the other citations listed above become ARARs which must be met for the Priority Soils Operable Unit. This point is clearly articulated in: *United States v. Akzo Coating of America, Inc.* No. 88-CV-73784-DT (719 F. Supp. 571, 30 ERC 1361) (E.D. Mich. August 9, 1989) ARARs do not have to be numerical standards but can be found in the law of the state. The Akzo court found: "CERCLA envisions a substantial and meaningful role for the individual states in the development and selection of remedial actions to be taken within their jurisdictions. CERCLA also accommodates the environmental standards and requirements of the state in which a site is located." "Congress has not. . .displaced state regulation. . . ." "CERCLA does not expressly preempt sate law. . . ." With specific regard to numerical standards that court found: "Although the state law does not contain specific numerical standards, it is, as the State contends, legally enforceable and of general applicability. The EPA's own publication (EPA, *Superfund Program; Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements; Notice of Guidance,* 52 Fed. Reg 32495, 32498 (Aug. 27, 1987) recognizes that general requirements having no specific numerical standards to be enforceable ARARs. General State goals that are duly promulgated (such as a non-degradation law) have the same weight as explicit numerical standards. . . ." The Court cites numerous other cases to support it conclusion.

What are ARARS for Purposes of the Parrott Tailings?

According to the *CERCLA/Superfund Orientation Manual* (EPA/542/R-92/005, October 1992), ARARs are defined as "Any standard, requirement, criterion, or limitation under a

The Precautionary Principal and the Principal of Pollution Prevention, which are both part of Montana law and federal law and which are, in effect, ARARs, demand that the waste-in-place remedy be rejected in favor of the maximum removal of contaminants at the Parrott Tailings. Leaving waste in place really is leaving an unacceptable and unwarranted threat in place.

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)
Al Luebeck Phone: 406-494-2262
2710 Amherst Ave, Butte

Your Idea: Fully describe your concept. Purchase the 42 acre tract of land on the East Ridge which was the formersite of a proposed tramway to the Lady of the Rockies statue. This is a hidden gem, a green spot of open space with intact scenic and natural values close to town. IF it is not placed in public ownership, it will be developed for housing.

Project Location: Describe the project location here and mark it on the map on back.
On East Ridge at end of State Street, one half mile east of the Burlington Northern railroad track.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☒ stream restoration ☐ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. This would benefit hikers and bikers seeking recreation and exercise in a very pleasant natural setting just minutes from town. It would replace recreational and natural resource values damaged by mining. Would protect a small stream and aquifer.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

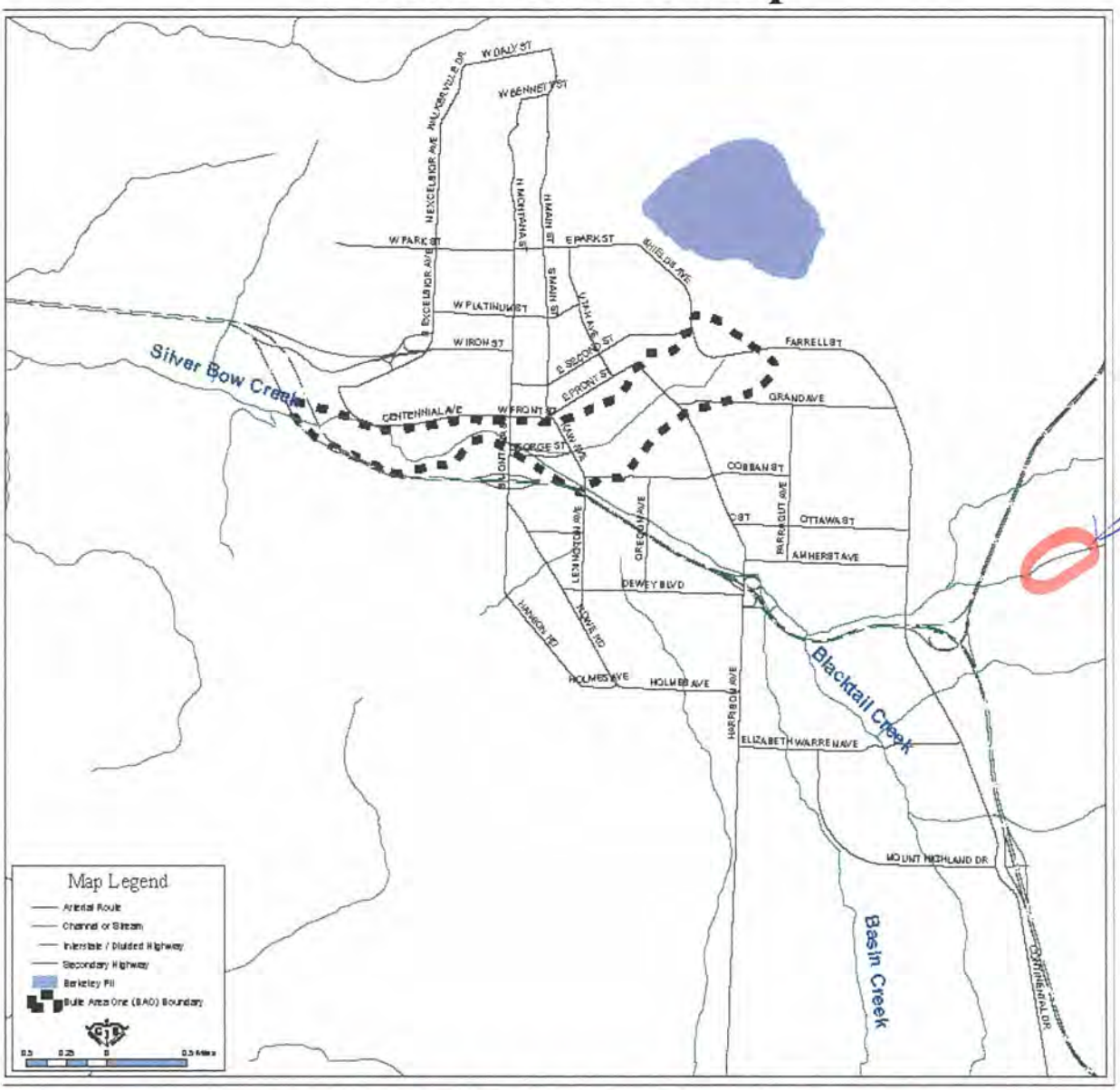
☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

- **Wednesday March 14**, 6 – 8 PM, Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
- **Tuesday March 20**, 6 – 8 PM, Butte-Silver Bow Public Archives, 17 W. Quartz St.

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

Lee Miller 406-593-4417 322 N. Alabama Butte, MT 59701

Your Idea: Fully describe your concept.

finish and connect the walk/bike trail off MT St. and up to the Copper Way -

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☑ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Recreation improves quality of life - This priority follows goal safe drinking H_2O

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☒ $1M to $5M ☑ more than $5M

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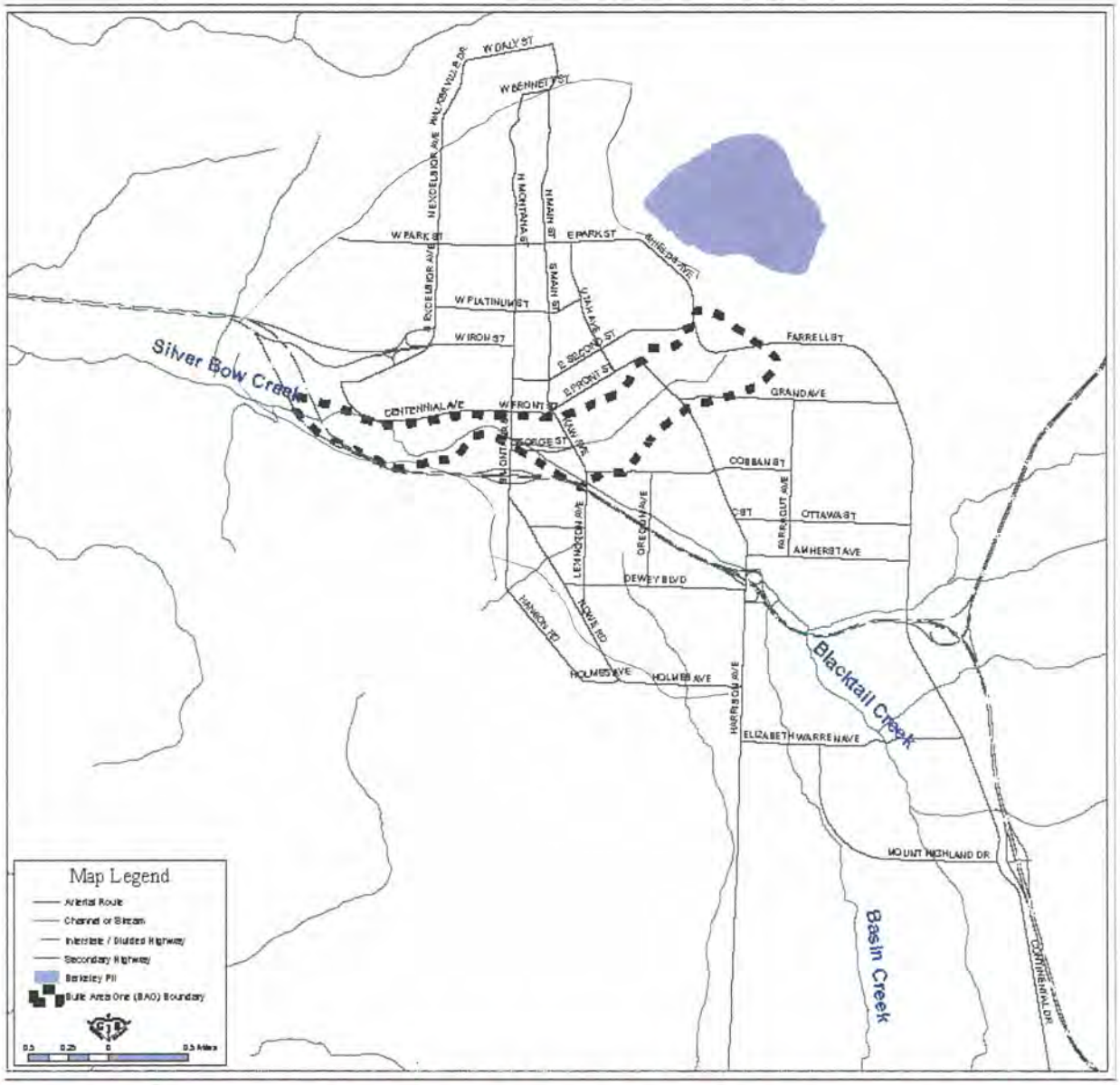
Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



Miller
322 N Alabama St
Butte, MT 59701

1 miller @ buttepublic library.info

Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

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A **Your Name and Contact Information:** (you may remain anonymous)

B **Your Idea:** Fully describe your concept. See attached outline.

C **Project Location:** Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

D **Project Benefits:** Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

E **Estimated Cost:** How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Mission Statement

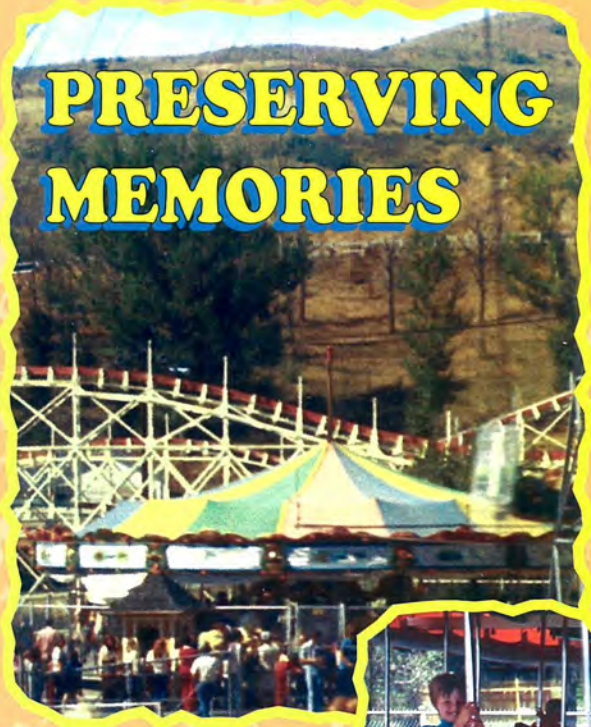
The mission of the Spirit of the Columbia Gardens Carousel project is to bring Butte people together to construct and operate a hand-carved carousel reminiscent of what we remember about the Columbia Gardens

THE FOCUS OF THE PROJECT IS:

- *Reclaim, restore and preserve an important part of Butte history*
- *Teach the dying art of hand-carving horses and other embellishments and learn the technical aspects of building a carousel for our community*
- *Enhance the quality of community life by providing present and future generations with a unique opportunity to enjoy the simple pleasure of having fun together*
- *Provide the starting point for future parks and recreation facilities as well as to enhance the existing tourism attractions in Butte and surrounding areas*

3100 Harrison Avenue
Butte, MT 59701
406-494-7775

PRESERVING MEMORIES



Photos courtesy of the Butte Silver Bow Archives

Spirit of the COLUMBIA GARDENS CAROUSEL

A beautiful hand-carved carousel for the children of Butte and the surrounding areas

The Carousel Organization

Butte's History is full of Dreamers, none more dedicated than those who undertook the project known as the "Spirit of the Columbia Gardens Carousel". These Dreamers remembered a time of great joy for children, families, teens, and visitors of the Mining City that came to an abrupt halt in 1973 when the beautiful Columbia Gardens Amusement Park was closed so the mining in the area could proceed.

These Dreamers with the "can do" spirit had the desire to reclaim, restore, and preserve the Spirit of the Columbia Gardens with a monumental task of building their dream, a carousel for the children of Butte.

In 1996 the dream was shared with the people of Butte and neighboring communities and the Spirit of the Columbia Gardens Carousel Foundation was formed into a non-profit organization. Most of the work has been done by volunteers who shared the "dream". Their skills in woodworking, carving, sanding, painting, fund-raising, art design, mechanics, business, and media, as well as their enthusiasm for the project have caused the "dream" to approach "reality". The gift shop attendants have helped by keeping the shop open from 12-4 daily.

Memories of a time, place, a family, a friend, a group, or a class have been forever memorialized with the sponsorship of all 36 horses and 12 rounding boards by area families, businesses, and groups.

The children of Butte collected one million pennies to sponsor two of the horses. The 24 mirror frames that attach to the rounding boards have been constructed. New platforms for the floor of the carousel have been constructed by the Anaconda Job Corp. A used carousel frame has been purchased and the mechanical group has worked to restore it.

In order for a dream like this to become "reality" finding locations often become problems. The Butte Plaza Mall has provided the carving space and the corral space for the completed horses. The most complex problem has been a permanent site for the carousel. A committee has been formed to find a suitable location and the plans have been developed for the building to house the carousel. Several sites have been considered and two sites are being explored at present.

If you are interested in this worthy project or if you have a memory to share, please stop by the carving/gift shop or the corral located in the Butte Plaza Mall.

SPIRIT OF COLUMBIA GARDENS CAROUSEL

MEMORIAL AND DONATION PROGRAM

THE SPIRIT OF THE COLUMBIA GARDENS IS A NON-PROFIT FOUNDATION. ALL MEMORIALS OR DONATIONS ARE TAX DEDUCTABLE

MAIL TO:
SPIRIT OF COLUMBIA GARDENS CAROUSEL
P.O.BOX 782
BUTTE, MT 59703

MEMORIAL

IN LOVING MEMORY OF: _____ AMOUNT OF: _____

ACKNOWLEDGEMENT SENT TO: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

DONORS NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

DONATION

NAME: _____ AMOUNT OF: _____

ACKNOWLEDGEMENT SENT TO: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

SPIRIT OF COLUMBIA GARDENS
CAROUSEL
P.O. BOX 782
BUTTE, MT
59703

A. Contact person: George L. Parrett -President 2912 State St. Butte 494-2559

DECRIPTION OF OUR CONCEPT

B. A beautiful handcarved carousel for the children of Butte and surrounding area. Started seventeen years ago by a group of local craftsmen and woman. We continue to seek out the most beautiful area to finally locate the carousel. With your cooperation we will reclaim the land south of George Street between Mt. Street and the Butte Chamber of Commerce.
We will revegetate the area and construct our building on a knoll above the flood plane in the center of the area.. Parking lots will be on the north and south side of the building. The walking trails surrounding the area will be restored. We have been granted access to the property by Butte Silver Bow.

C.Location and map **SEE EXHIBIT 1**

D. Project Type: 1. mining waste removal 2 revegetation 3. water system improvement 4. replace a small portion of the Columbia Gardens that was totally destroyed by mining. 5. clean up the mine waste that spread into area and contaminated the ground water

E. Project Benefits:

The project will return the area to prexisting condition while enhancing recreational activities to the children of Butte and surrounding area who contributed greatly to the initial financing of the carousel with the $10,000 donation from their "Pennies for Ponies" project in 1997.
Because of the location adjacent to Butte Chamber of Commerce and of the highway interchange, it will encourage tourists to make Butte a destination instead of just a drive through. IT WILL BE WIN WIN PROJECT FOR OUR WHOLE COMMUNITY

SPIRIT OF COLUMBIA GARDENS
CAROUSEL
P.O. BOX 782
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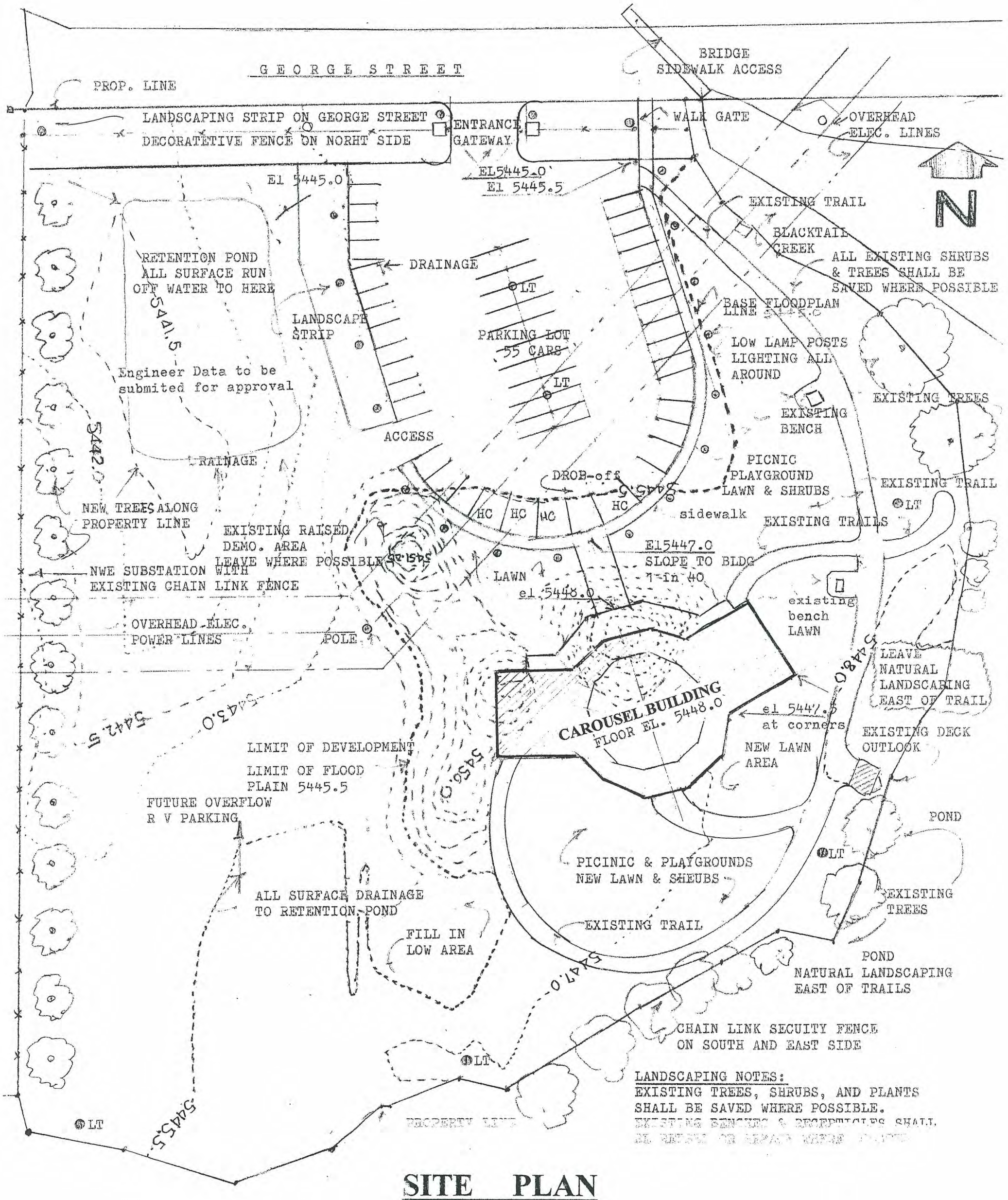
PAGE 2 NRA FORM

Estimated Cost:

Estimated cost of our project is $1,5000,000 – a large portion to be used to restore power, sewage, and electricity to the site.

C- Exhibit I



SITE PLAN

SPIRIT OF COLUMBIA GARDENS CAROUSEL

GEORGE STREET – WEST OF MONTANA STREET

BUTTE-SILVER BOW, MONTANA 59701

Harold P. Godtland, Inc.

Architect

795 East Front Street

Butte, MT 59701

Butte Area One Restoration Project Idea Submittals

In response to a request by the BNRC to submit ideas for BAO, I have the following list of ideas to submit. I understand that some of these ideas may have already been thought of, and redundant, may not be applicable in your view, or possibly not achievable. That being said, I believe they are applicable and submitting them for your review. Each item listed is submitted individually with an Idea Submittal form.

1. Remove contaminated soils from BAO.
2. Storm water retention pond at the Center of BAO.
3. Treat ground water from BAO.
4. Rocker storm water system.
5. Little Basin Creek drainage multi-faceted enhancement.
6. Remove irrigated land (parks/sports complexes) from city water system.
7. BAO replacement lands North of Ramsay.
8. Replace culverts on Pony Express Trail/Browns Gulch Creek.

Kind Regards,

Mike Flanick

(1)

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

Mike Flanick, 533-9530
PO Box 37, RAMSAY, MT 59748

Your Idea: Fully describe your concept.

Remove Tailings. See Attached

Project Location: Describe the project location here and mark it on the map on back.

Butte Area One

Project Type: Check the box(es) that is/are most applicable to your idea:

☑ mining waste removal ☐ waste cap improvement ☑ stream restoration ☑ revegetation

☑ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See Attached

Estimated Cost: How much would your project cost? ☑ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

- **Wednesday March 14**, 6 – 8 PM, Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
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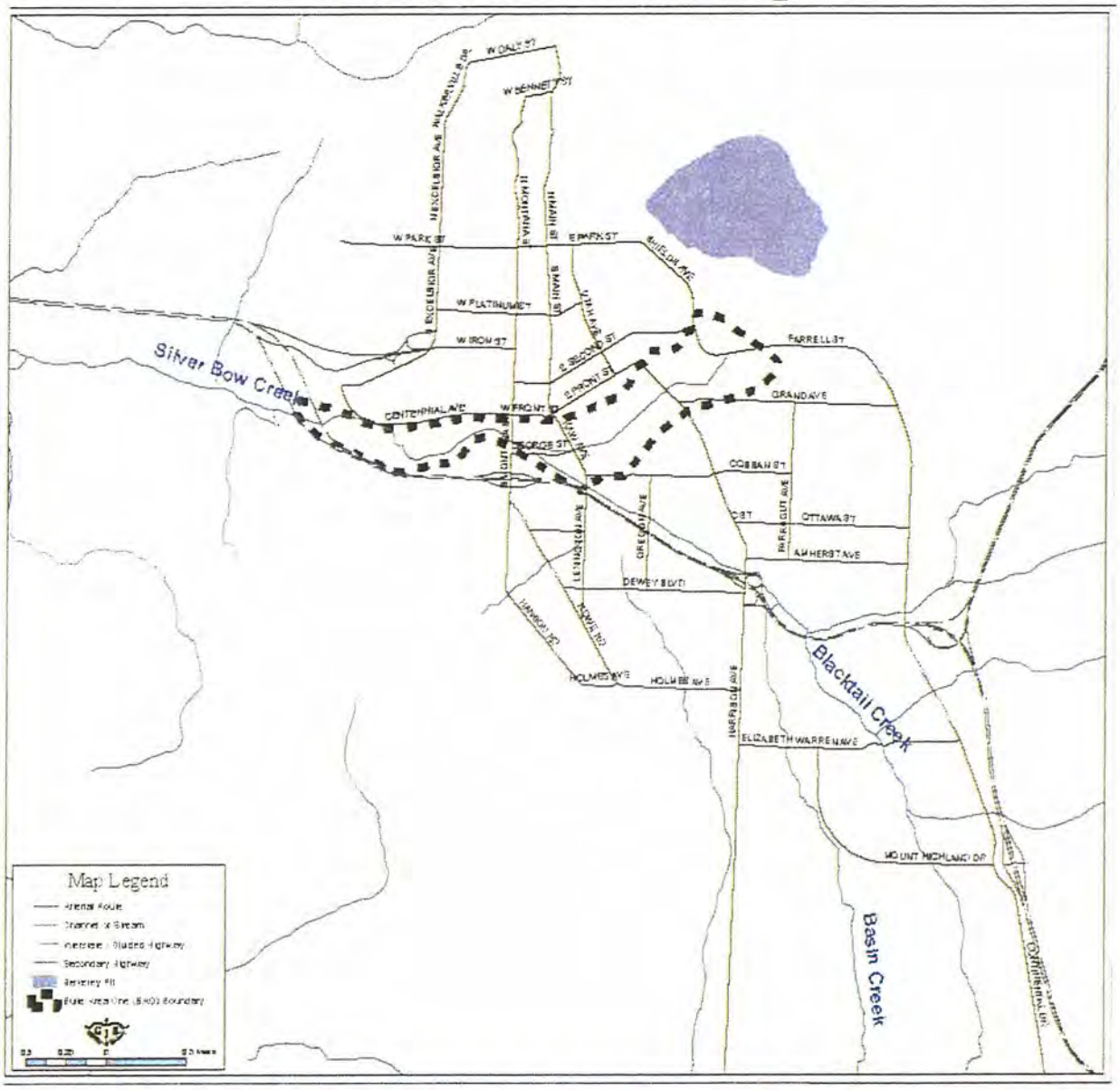
Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



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Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

IDEA: #1

Remove the contaminated soils throughout BAO. Replace with clean fill dirt in much the same fashion that was done on the rest of Silver Bow Creek.

Project Benefits:

- Contaminant removal will clean up the area directly and reduce its impact on the ground water and downstream surface water for years to come.
- Provides for hiking, birding, fishing type recreation.
- This benefits the entire community and visitors, and all communities downstream.

(2)

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)
Mike Fkrick, 533-9530
PO Box 37, RAMSAY, MT 59748

Your Idea: Fully describe your concept.
Construct a storm water Retention pond at the center of BAO.
See Attached.

Project Location: Describe the project location here and mark it on the map on back.
Center of BAO, located in the Silver Bow Creek Stream Channel just before the confluence with Blacktail Creek.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☑ stream restoration ☑ revegetation

☑ recreation/fishing ☐ water system improvement ☑ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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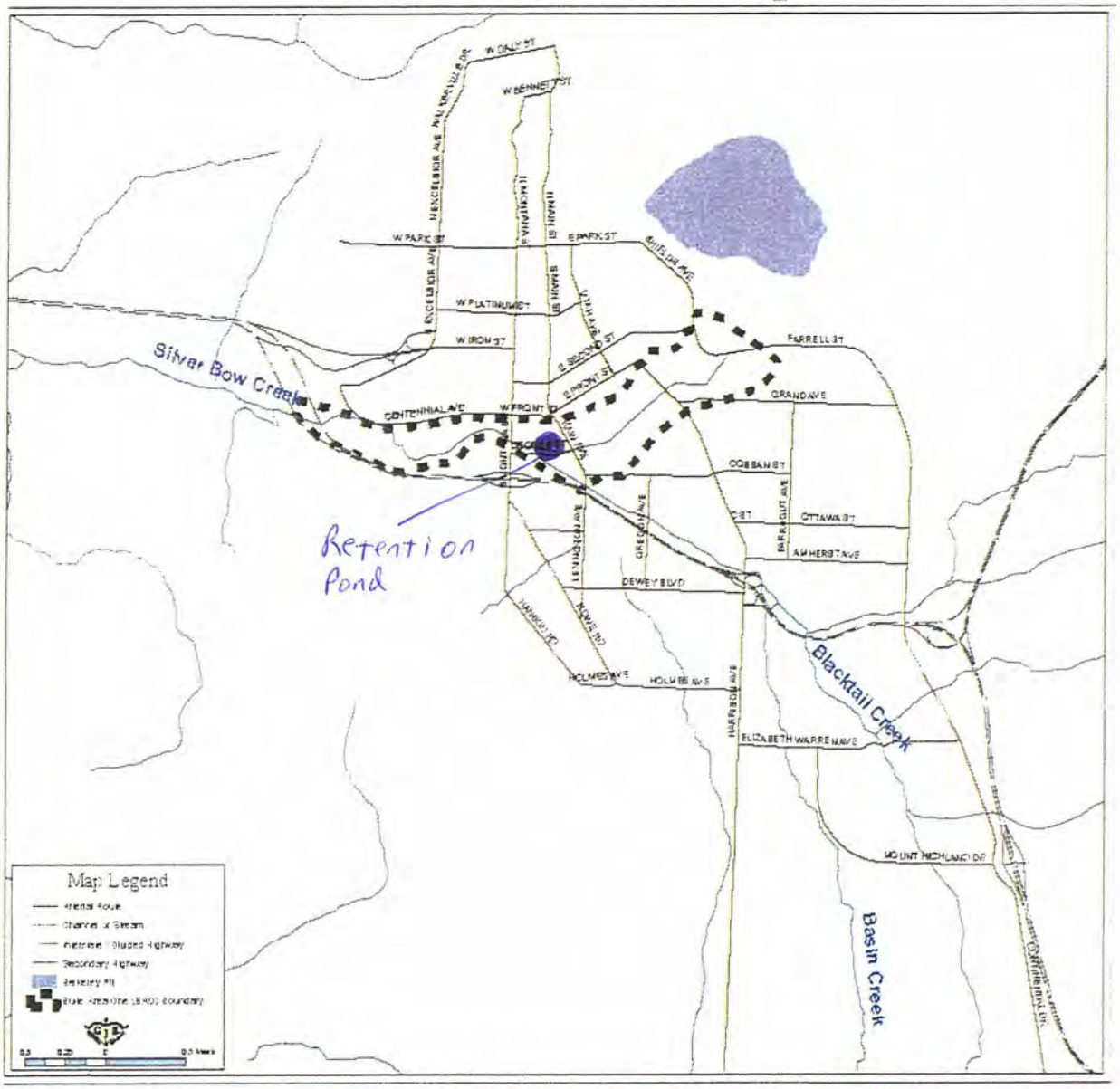
Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

IDEA: #2

Place a storm water retention style pond with a graduated outlet located in the stream channel just before the confluence with Black Tail Creek. Maintain the retention pond as a small recreational fishing pond with makeup water fed from treated water from Idea 3.

Project Benefits:

- Provides for hiking, birding, fishing type recreation.
- The pond near the end provides an opportunity for sediment to settle out from storm runoff that enters the stream channel. Butte Silver Bow has very little in the way of storm water controls, and this would provide a control point for a large area of the town. Thus protecting and maintaining a high quality fishery downstream.
- This benefits the entire community and visitors, and all communities downstream.

(3)

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

Mike Flanick 533-9550
PO BOX 37, RAMSAY

Your Idea: Fully describe your concept.

Ground Water Treatment Facility.
See Attached.

Project Location: Describe the project location here and mark it on the map on back.

Well Described in the Presentation.

Project Type: Check the box(es) that is/are most applicable to your idea:

☑ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☑ recreation/fishing ☑ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See Attached

Estimated Cost: How much would your project cost? ☑ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

IDEA: #3

Build a treatment facility for the groundwater in BAO. The treated water can be utilized in one or two ways. It can be discharged into the Silver Bow Creek streambed and provide makeup water to pond in Idea 2, or utilized to irrigate parks or sports fields and remove these spaces from the city water system. This Idea is tied to Idea number 6 and number 7. Idea number 7 can be utilized, in part, for long term funding of treatment plant expenses.

Project Benefits:

- Reduces the spread of contaminated water by drawing groundwater toward the well pump.
- Adds water to Silver Bow Creek to increase stream flows and improve fishery.
- Provides irrigation water for irrigated county lands and can remove these properties from the city water system. This in turn reduces the city/county's use of surface water providing increased stream flows for local fisheries.
- This benefits the entire community and visitors, and all communities downstream.

(4)

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

Mike Flanick

Your Idea: Fully describe your concept.

Rocker Storm Water System.
See Attached

Project Location: Describe the project location here and mark it on the map on back.

The town of Rocker

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☑ recreation/fishing ☐ water system improvement ☑ storm water controls ☑ other Economics, Community Image

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See Attached

Estimated Cost: How much would your project cost? ☑ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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IDEA: #4

Provide a storm water system in the town of Rocker, including curb, gutter, drain pipes, and retention ponds. The town of Rocker is an industrial mining town that has been around longer than the town of Butte. It has dirt streets that are lined with old railroad tracks and was once full of industrial mining activity. Rocker is also growing very rapidly, and even the newly developed areas do not appear to have any storm water controls. These dirt streets and residential and commercial lots drain directly into the newly reclaimed Silver Bow Creek affecting the fishery directly below BAO. This project would entail installing possibly 2 to 3 retention ponds with graduated outlets. These would be fed by a storm water piping system with curb and gutter directing the water into the system, as well as natural drainage ditches. See attached Plat for potential layout.

The natural drainages that come through Rocker drain a large area that the retention ponds would also catch. The entire area between Big Butte and Browns Gulch road drains through here, as well as the area between the old highway and the interstate. There is an old smelter along the old highway, and many many old piles of mine tailings West of Big Butte. All of this runoff comes through Rocker and should be caught before flowing into Silver Bow Creek just below BAO.

Project Benefits:

- Protection of the improving fishery from sediment and contaminants, from residential lots and streets of Rocker.
- This will have a positive impact on the ecosystem health of Silver Bow Creek.
- As a launching point to our newly restored Silver Bow Creek, this will have long lasting economic impacts to Silver Bow County by creating a more inviting and aesthetically pleasing community for people to stop, eat, drink and visit in their recreational activities. Rocker is the only place many travelers ever stop in Butte Silver Bow to stretch their legs and take a walk. It is a reflection of and many travelers first impression of Butte.
- This benefits the entire community, visitors, and all communities downstream.

Natural Drainage

Natural Drainage

Proposed curb & gutter layout

Proposed Retention Ponds

(5)

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

Mike Flanick

Your Idea: Fully describe your concept.

Little Basin creek multi-faceted enhancement.
See Attached.

Project Location: Describe the project location here and mark it on the map on back.

Near Intersection of Little Basin Creek Road and Beef trail Road.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☑ recreation/fishing ☐ water system improvement ☑ storm water controls ☑ other Recreation/Hunting

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See Attached.

Estimated Cost: How much would your project cost? ☑ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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pcunneen@mt.gov

IDEA: #5

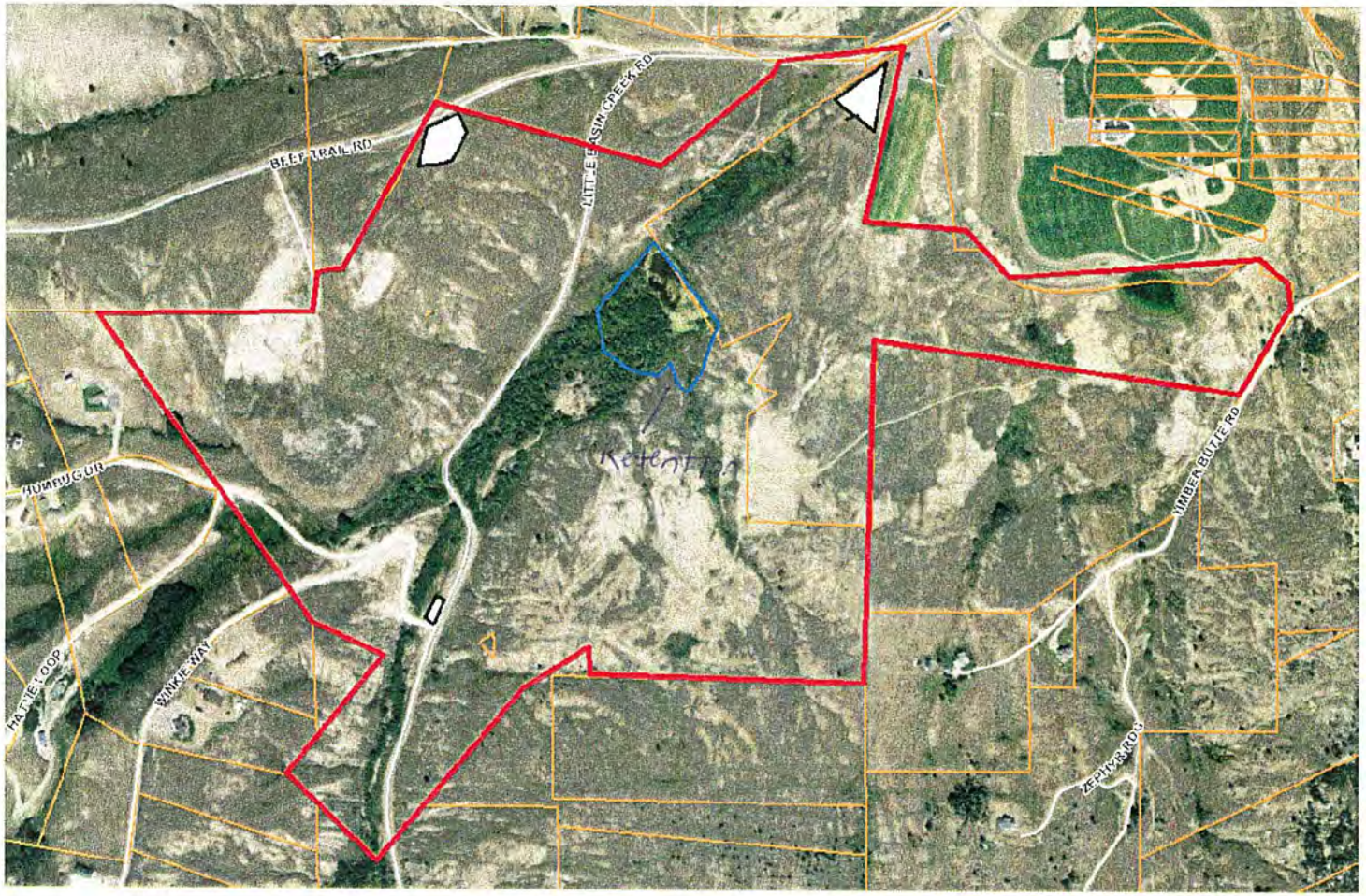
There is approximately 230 acres of county land that straddles Little Basin Creek Road and is bordered by Beef Trail Road and humbug Drive. This area could be enhanced to provide protection of downstream fisheries, replacement of aquatic recreational activities such as fishing and waterfowl hunting, and replacement of lost recreational activities such as hunting. This is an ideal location to provide waterfowl and archery hunting opportunities that were injured in BAO. These activities are often overlooked when considering lost or damaged resources. In fact many traditional activities such as this are often prohibited in replacement or reclaimed areas.

1. All of the area West of Little Basin Creek has been subdivided into residential parcels with no storm water or run off controls. A lot of sediment washes off of the roads and lots into the stream every year. A pond could be expanded and developed to act as a retention pond for sediment to settle out.
    a. This pond would act as a storm water control.
    b. None of the proposals ever seem to consider the lost waterfowl hunting as a recreation. Waterfowl hunting should be allowed in this area as a replacement to this lost resource. There are no houses within shotgun range of this property and it would be an ideal location. This would also help keep the local waterfowl population in check and from over running city parks as they have done in many communities.
2. The west portion of this property consists of an old landfill. This property could have fencing upgrades to have it clearly defined and keep stock out. This property is also overrun with weeds, which go to seed and are carried downstream spreading into all of the newly reclaimed Silver Bow Creek Riparian areas. The weeds need to be controlled to prevent this from happening to protect the aquatic resources. A parking lot could be added for birders, bikers, hikers, and hunters.
3. Replacement of injured hunting resource: The entire area could be utilized as a replacement of injured hunting resource and could be accessed for waterfowl and archery deer hunting which often is overlooked as an injured resource. These would also provide a added benefits of waterfowl and deer population control. Deer and Moose populations are increasing within the urban area and are causing impacts, see attached article. This idea would provide a replacement of the injured resource and at the same time a control to avoid issues they see in communities such as Helena with excessive numbers. See included article as example of increasing interaction with urban area wildlife.
    a. As a revenue source, hunting leases could be sold, raffled, or auctioned on a seasonal basis to offset maintenance costs of the property or go toward operation of the water treatment facility in Idea 3.

Project Benefits:

- Protection of the improving fishery from sediment and contaminants, from residential lots and subdivision roads.
- An expanded pond size will provide more fishing opportunity to replace those lost or injured.

- This will have a positive impact on the ecosystem health of Silver Bow Creek.
- This will benefit hunters by replacing a lost or injured resources.
- This will benefit the community by keeping wildlife numbers in check.
- This benefits the entire community, visitors, and all communities downstream.



— Area Boundary

— Proposed Retention Pond

— Proposed Parking Lots

The MONTANA STANDARD
mtstandard.com
First Best

Truck hits moose on Harrison

By John Grant Emeigh of The Montana Standard | Posted: Tuesday, March 27, 2012 2:00 am

A southbound pickup truck hit a bull moose on Harrison Avenue near Wal-Mart Saturday evening.

Police say the moose walked in front of a red 1997 GMC pickup truck in the 3900 block of Harrison Avenue about 9:25 p.m.

A game warden with Montana Department of Fish, Wildlife and Parks was called to the scene and shot the seriously wounded animal, according to the Butte police report. Warden Regan Dean said the moose was a young bull, weighing 500 to 600 pounds, and had just shed its antlers.

Dean said the animal was alive after being hit, but was too badly hurt to be saved.

"You could've walk up to it and touched it if you wanted and the moose wouldn't move," Dean said.

Dean said he quickly put the animal out of its misery.

"It's a sad thing," he said.

The driver of the truck wasn't injured, police said.

Earlier that same day, about 1:45 p.m., a motorist hit a deer at Meadowlark and Arizona in south Butte. The seriously wounded deer also had to be shot. No injuries were reported to the driver.

John Grant Emeigh may be reached via email at john.emeigh@lee.net.

(6)

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

mike Flanick, 533-9530, PO Box 37 Ramsay

Your Idea: Fully describe your concept.

Remove irrigated lands from city water system

See Attached

Project Location: Describe the project location here and mark it on the map on back.

All over town

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☑ recreation/fishing ☑ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See Attached

Estimated Cost: How much would your project cost? ☑ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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pcunneen@mt.gov

IDEA: #6

Remove any large parks or sports complexes irrigation systems from the city water system. Install wells to provide irrigation to these areas. This Idea would provide increased stream flow for fisheries because it will reduce the demand on the city water system. As a side benefit it will also save the water department money by not having to treat water to drinking standards just to irrigate a field. The money saved by the water department could be re-directed to expenses for the water treatment plant in Idea 3.

Project Benefits:

- Benefits fisheries through increased stream flows during the summer months.
- This benefits the entire community, visitors, and all communities downstream.

(7)

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

Mike Flanick, 533-7530, PO Box 37, Ramsay

Your Idea: Fully describe your concept.

BAO Replacement Lands North of Ramsay
And revenue source.

Project Location: Describe the project location here and mark it on the map on back.

2 miles North of RAMSAY

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☑ recreation/fishing ☐ water system improvement ☐ storm water controls ☑ other
Long term funding, Protection, and Replacement.

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See Attached

Estimated Cost: How much would your project cost? ☑ unknown ☐ less than $100K

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IDEA: #7

BAO Replacement Lands North of Ramsay:

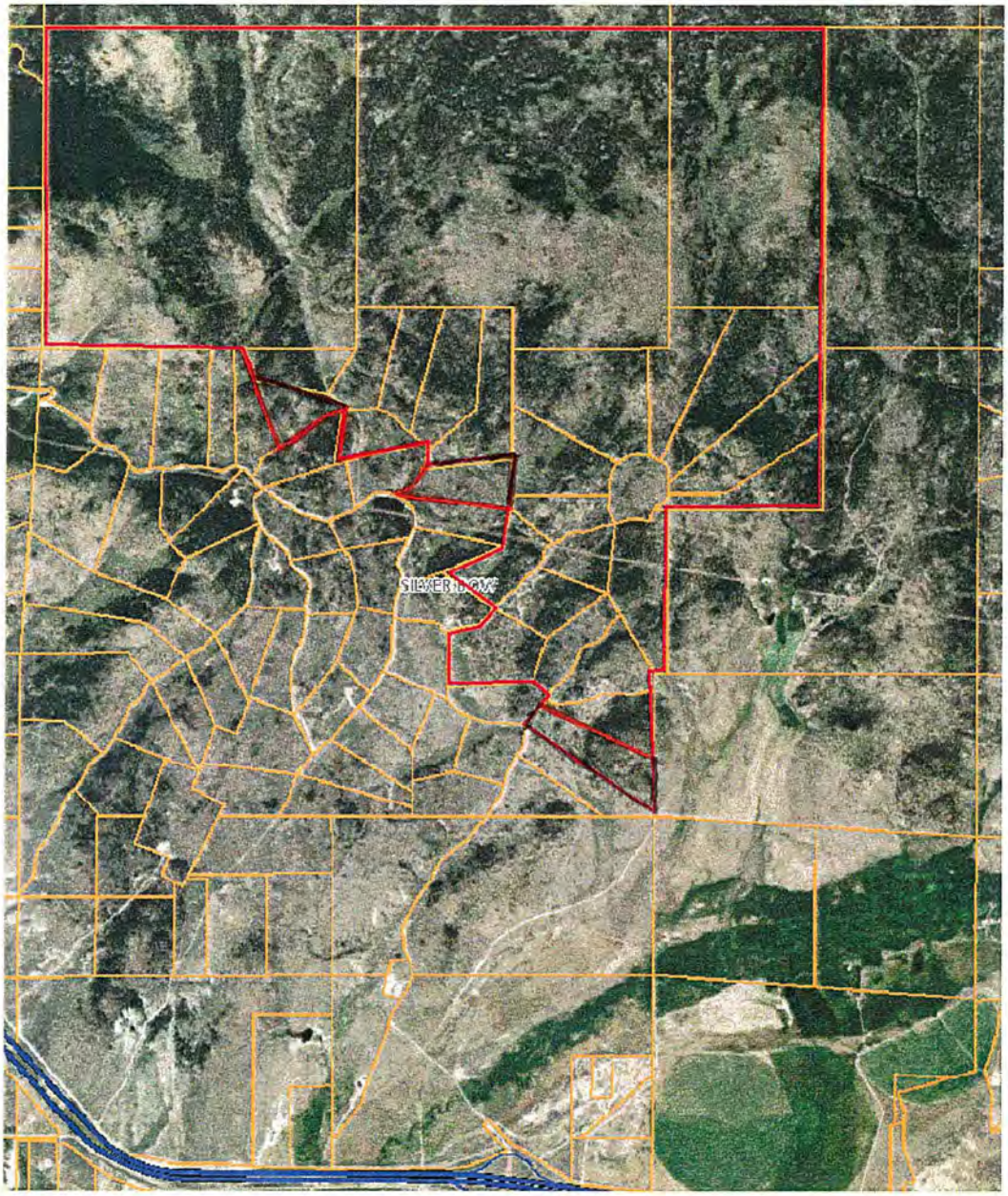
There is approximately 2,185 acres of ranch land available for sale North of Ramsay (see attachments). This land could be acquired primarily as a replacement of lost or injured resources, in addition to maintaining trout populations, long term support of water treatment plant. These properties contain large swaths of drainage bottoms made up of grassy meadows, much like would have existed in Butte Area One.

1. The property is made up of 3 adjoining listings. If negotiated down, and grants received from the likes of the elk foundation and the nature conservancy, the impact to the BAO resources could be minimal for an approximately 4 to 1 replacement ratio.
2. One thing pointed out during the workshop was imagine the area in 1865 before the impacts of mining had occurred. Agriculture and ranching existed in Montana before mining, and they primarily occupied valley bottoms and riparian areas such as BAO. In doing so, I would imagine people homesteading for agricultural purposes. Yet, this is often overlooked as a lost or injured resource. This property could be utilized to replace this lost resource, and grazing rights could be leased to generate income for the indefinite expenses of the treatment plant, in much the same fashion that state lands generate revenue for the school system.
3. Fisheries and Storm Water: Approximately 1350 acres of this Idea have been preliminarily approved for a residential development. It is phase III of a three phase development. This area drains into Browns Gulch Creek and on into Silver Bow Creek just downstream of the BAO. None of this development has any storm water controls in place, or planned. Residential developments are often a major contributor of sediment and pollutants to waterways. Acquiring this property to limit the residential development will protect the fishery that is adjacent to Butte Area One.
4. Again, reflecting on the period pre 1865, hunting and trapping were a major mainstay of the region for both sustenance and economics right in the heart of Butte Area One itself. These properties would be a 100 to 1 replacement of that lost and injured resource. In addition to replacing this injured hunting/trapping resource, a pre-determined number of hunting leases could be offered for each season, and those funds redirected for property maintenance and on-going water treatment expenditures. This land is a prime replacement from a hunting perspective. Wildlife, including elk, do not just winter or summer here, they occupy these properties in strong numbers all year long.
5. In support of water treatment, these properties could be used as a long term revenue resource to support water treatment in 4 long term renewable and sustainable ways.
    a. Grazing leases as mentioned in number 2.
    b. Hunting leases as mentioned in number 4.
    c. Camping rentals. There are one or two existing cabins that could be rented out on short term basis, much like the forest service rents out their cabins. Camping spots for tent trailer camping could also be rented out.

d. Timber harvest. These properties are heavily timbered predominantly with Douglas Fir, a commonly used species in building materials. Its forests have also spread greatly in the last 50 years encroaching on traditionally sagebrush grass lands. Sales could be made at sustainable rates and intervals to provide revenue, protect grasslands, and reduce fire severity, which also further protects the watershed and fishery.

Project Benefits:

- Benefits fisheries by protecting watershed.
- Provides a 4 to 1 replacement of terrestrial area of BAO.
- Provides long term revenue source for ground water treatment.
- This benefits the entire community, visitors, and all communities downstream.


SILVER HOME

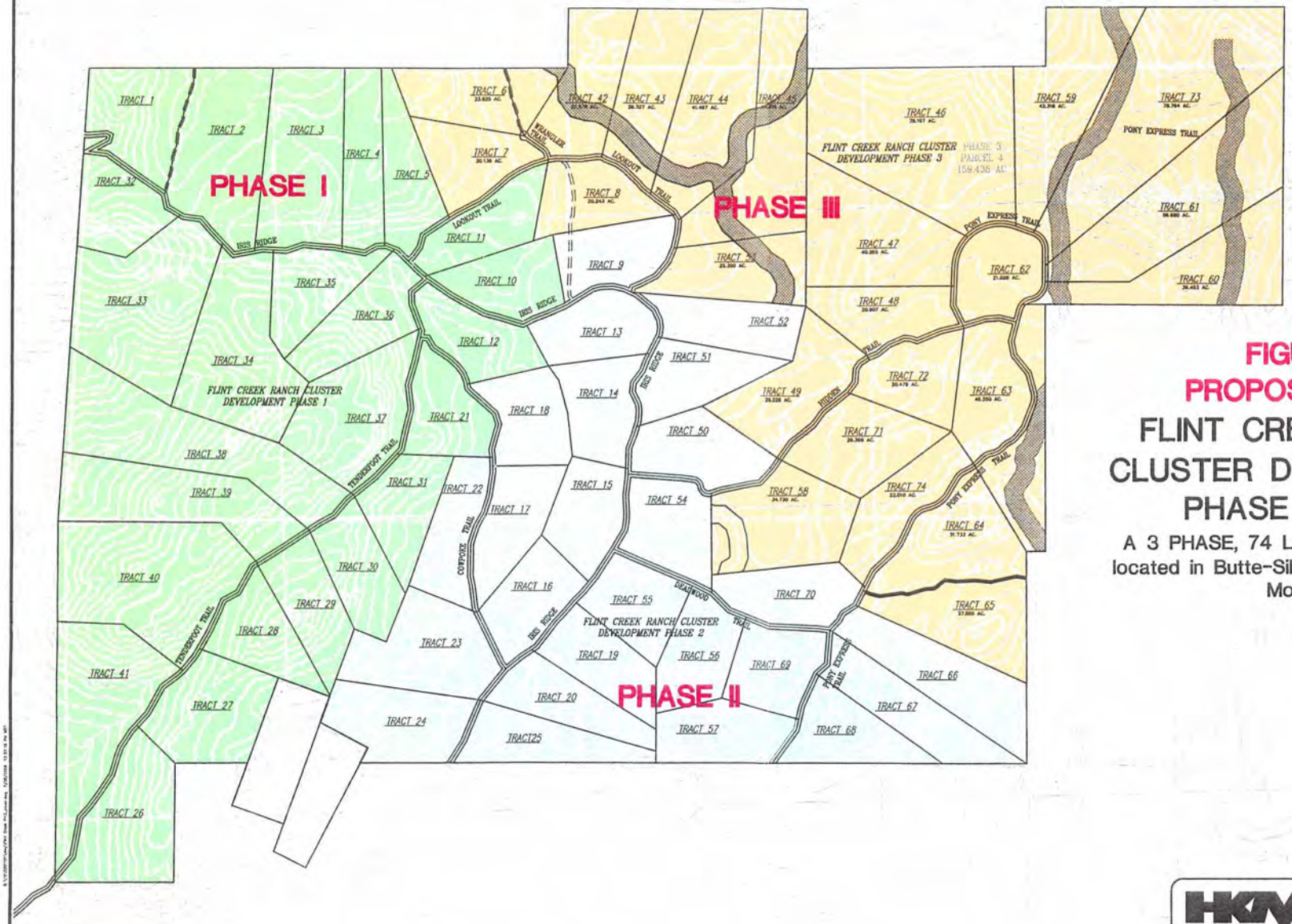


FIGURE 1
PROPOSED PLAT
FLINT CREEK RANCH CLUSTER DEVELOPMENT PHASE I, II, & III

A 3 PHASE, 74 Lot Major Subdivision, located in Butte-Silver Bow City-County, Montana

HKM ENGINEERING
130 N. Main St. Suite 100
PO Box 3588
Butte, MT 59701-2839
Phone: (406) 723-8213
Fax: (406) 723-8328

FLINT CREEK RANCH CLUSTER DEVELOPMENT PHASE I, II, & III

CLIENT: Ameriment Inc. | DATE: AUG 2008

LOCATION: Butte-Silver Bow City-County, Montana

DRAWN BY: KB/RB | SCALE: 1"=500' | PLAT NO. ____

PROJECT: 1502008 Flint Creek PKG_ORIGINAL WALL Mapdoc | SHEET: 1 OF 1

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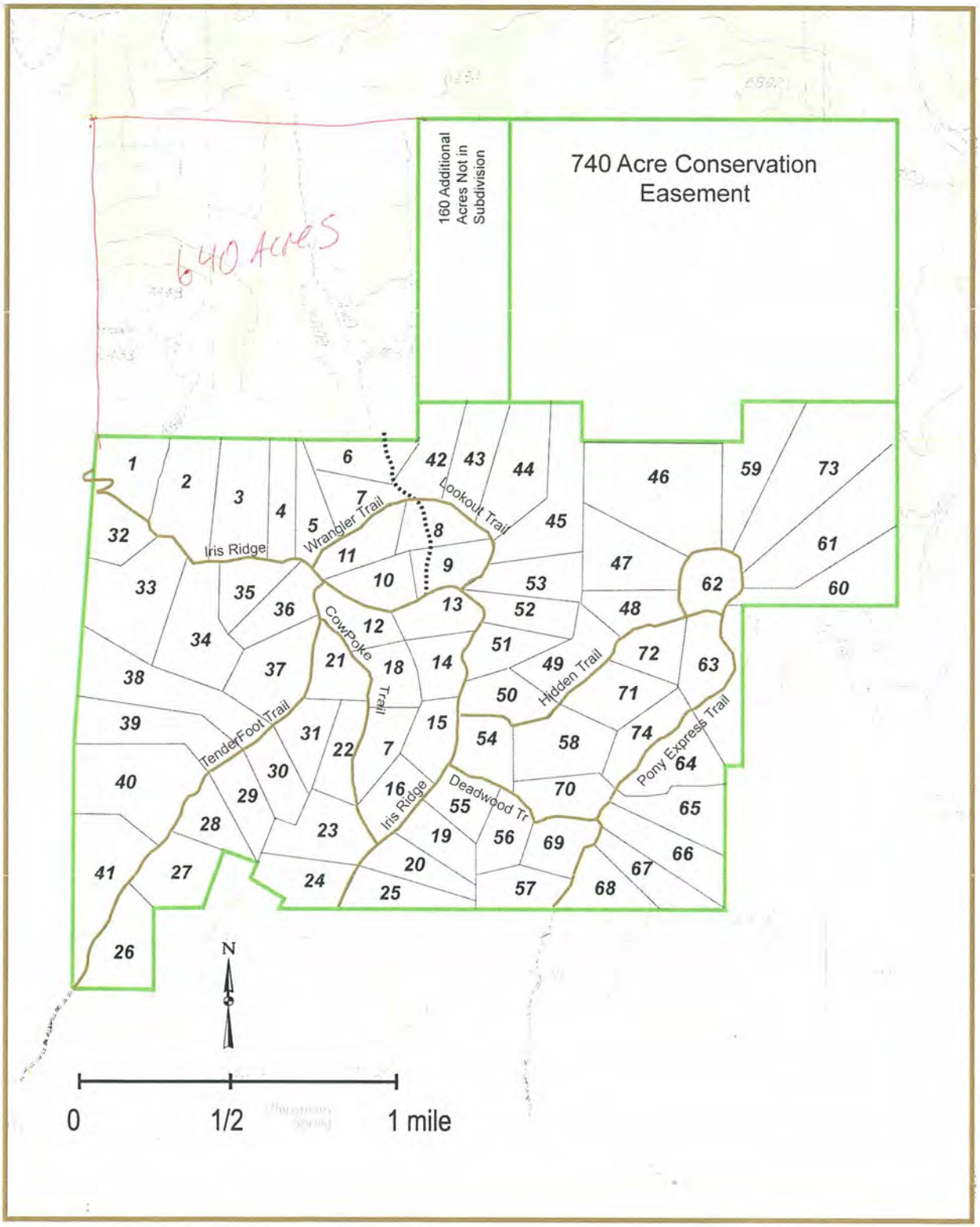
FLINT CREEK RANCH
BUTTE-SILVERBOW COUNTY



(8)

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

Mike Flanick

Your Idea: Fully describe your concept.

Replace culverts with a bridge on Pony Express Trail

Project Location: Describe the project location here and mark it on the map on back.

Browns Gulch Creek just above confluence w/ Silver Bow Creek
See Attached

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☑ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See Attached

Estimated Cost: How much would your project cost? ☑ unknown ☐ less than $100K

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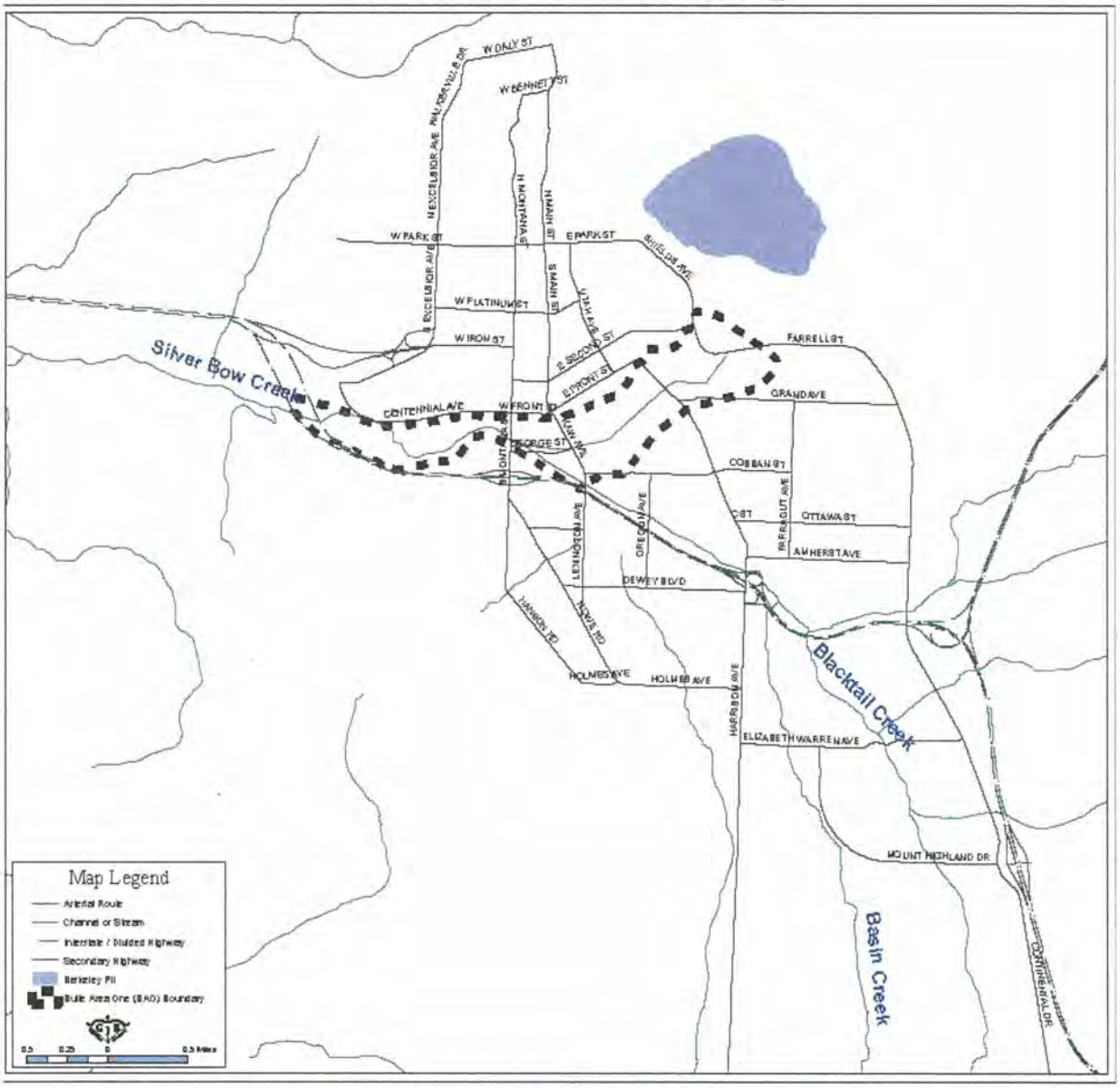


Place Stamp Here

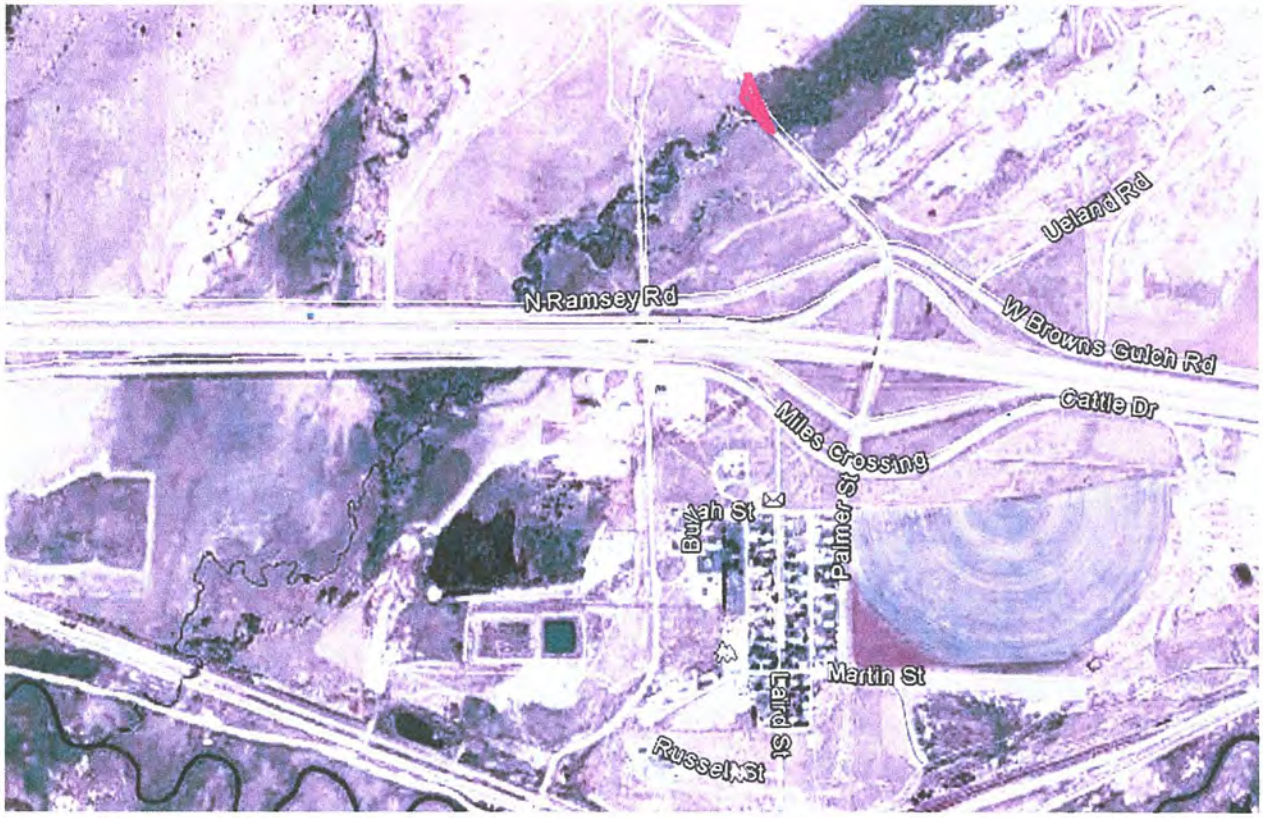
Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

IDEA: #8

Replace culverts where Pony Express Trail crosses Browns Gulch Creek with a bridge. Bridges provide a more natural stream bed for fish to migrate along. By removing the culverts, you will improve the fishery and improve recruitment of fish from tributaries of Silver Bow Creek. Parking could be added on one side to allow people to access the small stream. See location map below.

Project Benefits:

- Benefits the fishery.
- This benefits the entire community, visitors, and all communities downstream.



Butte Urban Bird Sanctuary, Avian Park, and Water Recreation Area

A proposal to

Butte Natural Resource Damage Restoration Council

for

Butte Area One Restoration Project

by

Charlie O'Leary

and

Noorjahan Parwana

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 M claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by Dec. 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)

Charlie O'Leary 782-6504 stagtownranch@gmail.com
NOORJAHAN PARWANA 782-3682 nparwana@hotmail.com

Your Idea: Fully describe your concept.

Please refer to attached proposal

Project Location: Describe the project location here and mark it on the map on back.

Please refer to attached proposal

Project Type: Check the box(es) that is/are most applicable to your idea:

☑ mining waste removal ☐ waste cap improvement ☑ wetland stream restoration ☑ revegetation
☑ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Citizens & children of Butte

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K
☑ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

- **Wednesday March 14**, 6 – 8 PM, Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
- **Tuesday March 20**, 6 – 8 PM, Butte-Silver Bow Public Archives, 17 W. Quartz St.

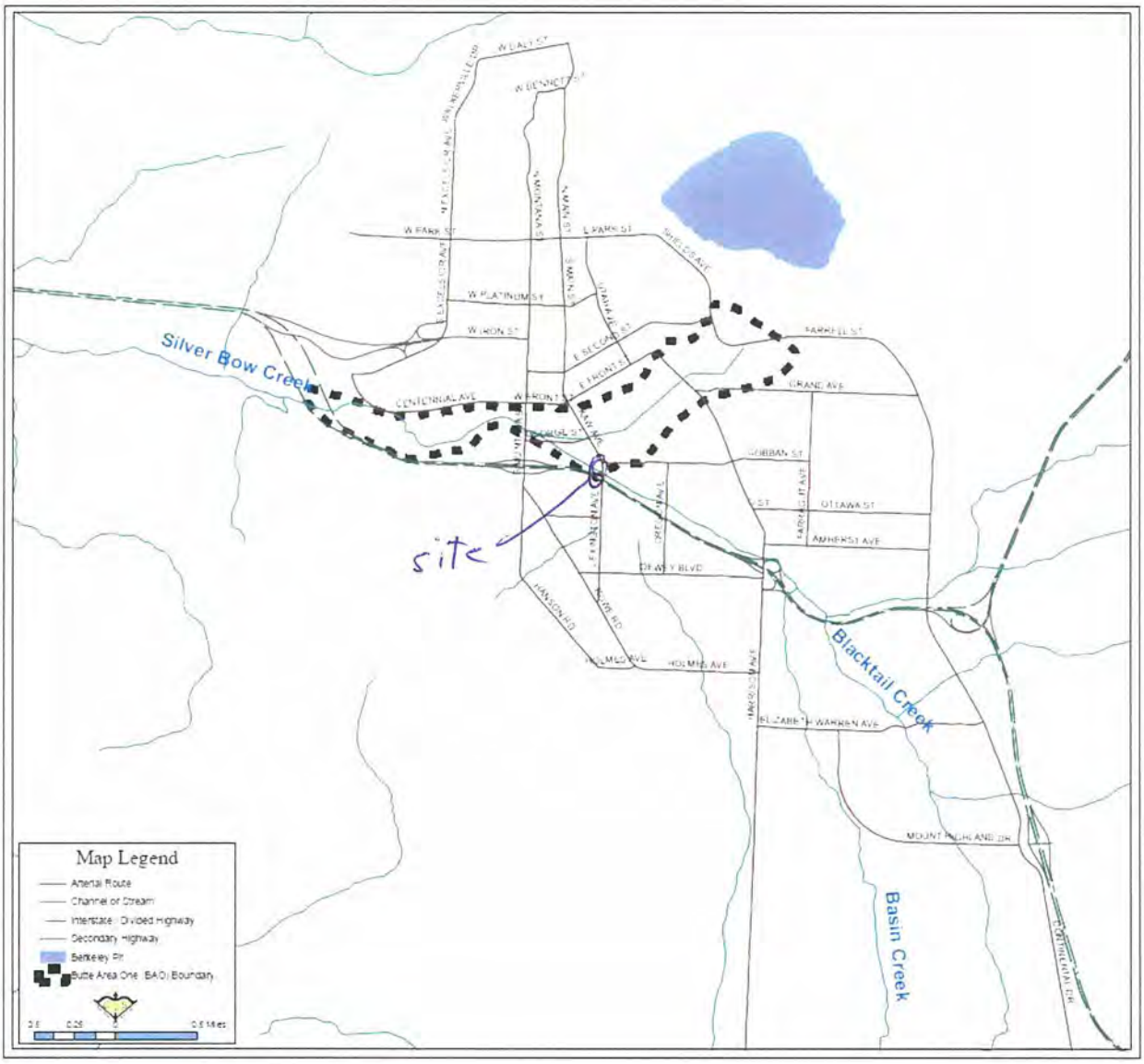
Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

BUTTE AREA ONE RESTORATION PROJECT IDEA

Butte Urban Bird Sanctuary, Avian Park, and Water Recreation Area

Project site location and description:

Butte is home to an amazing wetland that is teeming with birdlife that are visible to hundreds of people every day who travel the stretch of Interstate 15/90 between the Montana Street exit and the Harrison Avenue exit. This is important year-round habitat for many native waterfowl, especially geese and ducks, and it is seasonal nesting habitat to many other species including several grebes, American Coot, Great Blue Heron, Red-winged Blackbirds, and shorebirds (refer to ATTACHMENT I). The wetland is a mosaic of open water and cattails. Willow, primarily sandbar willow, form a fringe surrounding the wetland. Other native shrubs and trees at the site include cottonwood, red osier dogwood, and Rocky Mountain juniper on dry slopes. The wetland is readily accessible and is actively used by people in the area.

The wetland covers an area of approximately 52 acres. Its legal description is as follows: S.E. Corner Section 24 T3N-R8W. It lies in the Butte Urban Corridor just south of Interstate 15/90, west of Kaw (aka Lexington) Avenue, north of Greenwood Street, and east of South Main Street (refer to ATTACHMENT II). Its current ownership of the larger wetland area is by Arco Environmental Remediation, LLC. It is our hope that this property will be transferred to Butte-Silver Bow upon the successful completion of a consent decree between Arco and the county. The land is proposed to be designated Open Space Developable under the Open Space Ordinance now being considered by BSB Planning Department.

A smaller pond on the northwest corner of the wetland is separated from the major wetland by a causeway that was likely constructed using metals laden mine tailing. This smaller pond has a three-way ownership (1) Arco (2) BSB and (3) private individuals who live adjacent to the pond. Any development or activity that would be part of a public park plan would first need to be discussed with the private landowner to solicit their support, and hopefully, donation of the parcel.

This is the largest body of water within the urban corridor but is currently inaccessible due to its ownership, except by trespass. Current conditions show significant human use by foot and ATV. The area is in need of cleanup of windblown garbage, tires, discarded asphalt and concrete, and old fencing.

Need for Restoration

The unnamed wetland is spring-fed and indirectly connected to Grove Gulch Cr. which flows seasonally south of this pond in a northeasterly direction to its confluence with Silver Bow Creek at Interstate 15/90. There is no published data on the water quality or condition of soils in and around the wetland, however a Montana Bureau of Mines and Geology scientist has sampled the wetland discharge on the south side of Blacktail Creek near the Visitor Center and found elevated metals concentrations. Further, an abandoned access road that forms a causeway across the western portion of the wetland was constructed out of mine tailings and may be partial source of the elevated metals concentrations in the water. Removal of mine tailings is likely to be required to bring this site into compliance with the Federal Clean Water Act and other EPA human and environmental health standards.

Probable contaminated soils would have to be removed as part of this project.

Concept/Public Benefit:

This project proposal would take an area that is neglected and not utilized by the community and convert it into a beautiful showcase to those traveling through, not to mention a wonderful park and recreational area that would provide bird watching, educational, picnicking, walking, and biking opportunities in the heart of town. Assuming water quality and wildlife concerns are met, this area may also provide fishing opportunities and a kayak/canoe practice area. This park would be a wonderful amenity to neighborhoods south of the Interstate. There are few public parks within walking/biking distance in this area. The opportunities for biological study by area school children would be greatly enhanced by a nature park in close proximity to the urban area. Educational materials such as the one provided (ATTACHMENT III) would enhance the experience of the avian park/sanctuary.

The wetland must be maintained first and foremost as a bird sanctuary. The bird watching opportunities here are tremendous and we propose multiple bird watching stands be constructed where people could sit and observe birds with binoculars, spotting scopes, and cameras. We would recommend a bird biologist be consulted on all aspects of park design and development so that the wonderful habitat that exists is not disturbed and so the best viewing opportunities can be developed. Biologist, educator, and bird enthusiast, Gary Swant, has offered his services as an advisor on this project.

In discussions with residents of this neighborhood, we have discovered enthusiasm for this idea. There are residents who have been birwatching here for decades and who have expressed concern that the water quality is deteriorating related to algal growth and that the number and variety of birds using the wetland has declined alarmingly over decades. Water quality/bird use issues could well be connected.

Interpretive signs would provide education about birds and wetland systems. Another interpretation could be a comparison between this water body, which may not have been compromised over the last 100 years by mining, and other waterways to the north that were. With views to uptown Butte, the East Ridge, and Berkeley Pit, there is lots of opportunity for interpretation of Butte's history of mining, reclamation, high elevation ecology, and historic preservation. We envision a covered kiosk and picnic table to serve as a storm shelter. All amenities would be universally accessible.

This location off Greenwood Avenue would be an ideal site for a parking area with walk –in viewing stands beyond. Landscaping and native plant restoration would beautify the neighborhood and would increase the attractiveness of the area to highway travelers.

In addition the area has the potential for a pleasant walking or biking experience. Connection to the walking path on the north side of the Interstate would need to be studied, but that would no doubt be desirable. The slightly elevated pipeline along the southern wetland boundary could connect the

greenway trail from the Visitor Center by way of the pedestrian sidewalk on Lexington. Access to the park for vehicles would be from Greenwood Avenue on the southwest corner and a foot and bike path would be available from East Josette Avenue. A paved parking lot could be built to accommodate approximately 10 vehicles and a school bus. Restroom facilities could be considered but maintenance and vandalism would be important concerns. The area would be non-motorized beyond the parking lot. The parking lot could be lit for security if necessary and if it is not objectionable to the neighbors. Even parking lot lighting could be educational since shielded solar lighting could be employed with interpretation about energy conservation and light pollution. Naturally, we would want to encourage recycling at this public location.

The area lends itself to urban canoe and kayak practice and would afford the opportunity for younger boaters to practice their skills without the need for significant travel to outlying water bodies such as Georgetown Lake or Delmoe Lake. A minimal boat launch could be constructed on the northwest shore to access the smaller western pond currently separated from the larger wetland by a causeway. This option would permit boating while protecting bird security in the larger wetland to the east. The small pond is shielded from the larger wetland by a dense barrier of sandbar willow. Kayak/canoe opportunities would be restricted to the small pond and would never be allowed in the larger pond that has breeding bird habitat. Use of the pond for this purpose would have to be evaluated against water quality issues. Finally, last, but most importantly, the citizens who own a portion of the pond would have to approached to determine if they would support this idea and would be willing to donate or sell their portion of ownership to the county for the purposes of creating this avian park.

There seems to be good public support for the project (please refer to ATTACHMENT IV).

A nice trail location already exists (left) and a small pond at the western end of wetland could accommodate kayakers and canoers with little disturbance to bird life.

Partners and Advisors:

Gary Swant has expressed support of the project and is willing to provide his expertise in designing the project so that it protects bird habitat needs while providing the best bird watching values to the community. Gary Swant taught biology and field ecology at the high school level for 25 years and developed a county wide Environmental Center program for students in fifth through twelfth grades. In addition, he taught summer classes in field ecology for the University of Montana, and Montana School of Mining and Technology. He has been an active member of several educational organizations including holding offices in the Montana Environmental Education Association and the Montana Energy Education Council, Montana Environmental Education Association, and the Montana Energy Education Council. He currently owns and operates GoBirdMontana LLC which is a bird guide and consulting service. He has conducted numerous avian field projects for MTFWP at Warm Springs, Mt Haggin, Fleecer and Marias Wildlife Management Areas. Swant also has a monthly article on birds of the Upper Clark Fork Valley on the Outdoor Page of the Montana Standard.

Andrea and Donald Stierle are very excited about the project and offer their support as community members, scientists and birding naturalists. Andrea has a B.A in Biology/Chemistry and a doctorate in Organic Chemistry. Don Stierle has a BS in Chemistry and a doctorate in Organic Chemistry. Together, the Stierles have isolated a compound that targets HIV-AIDS from a bacterium growing in a Bermudian Sponge, a fungus that produces taxol in the bark of a yew tree (named after Andrea), and possible therapeutic agents that could fight cancer, autoimmune disorders and migraine headaches from microbes isolated from the not-so healing waters of the Berkeley Pit. Don was a Professor of Organic Chemistry and Andrea an adjunct at Montana Tech for 29 years. They are currently Research Professors at the University of Montana in Missoula. They are scientific advisors for the Butte-based Clark Fork Watershed Education Committee and the Science Mine. Both are avid birders and earned their Master Naturalist certifications in 2011. They work as Volunteer Naturalists in the Schools and Andrea developed birding workshops for teachers through the Southwest Montana Science Partnerships Program. Andrea is also a member of the Butte-Silver Bow Planning Board and the St. James Hospital Executive Board.

Others: We would invite many other groups and individuals to participate in this project, including CFWEP, the local Audubon chapter, school teachers, and others.

Anticipated Budget:

The following budget is a best guess estimate.

Activity	Cost
Surveying and document recording	$12,000
Removal and replacement of toxic soils	150,000
Trail building and fencing	20,000
Signage (interpretive and regulatory)	4,000
Bird watching stands, observation deck, covered picnic area	10,000
Vegetation enhancement (weed control, landscaping, native plantings)	5,000
Educational materials (bruchures)	3,000
Parking lot construction, development, paving, and lighting	15,000
Kayak/Canoe ramp (reinforced concrete) (optional)	5,000
Restroom facilities (vault toilet) (optional)	2,000
Clean up	1,000
Future operations & management	10,000
Consulting fees	5,000
TOTAL	**$242,000**

We anticipate being able to raise money for some of the expenses from sources such as:

- MFWP Living With Wildlife funds, Future Fisheries program, and Parks program
- MDEQ for energy efficient lighting and recycling bins
- Audubon Society and Native Plant Society
- DNRC HB233 or RDG programs
- MT Department of Agriculture Weed program
- Local businesses and citizens (cash and in-kind)

ATTACHMENT I – Bird List
ATTACHMENT II – Site & Potential Development Map
ATTACHMENT III – Sample Informational Brochure (courtesy Gary Swant)
ATTACHMENT IV – Public Support Signature Pages

ATTACHMENT I

List of birds that use and or breed in the proposed bird sanctuary site.
Courtesy Gary Swant

Legend:
B – most likely breeds in the area or could with habitat enhancement
b - possibly breeds
T - transient/migration use in spring and fall
W – Dec 15 – Mar 15
Y – year around
C – common
U – uncommon
R – Rare

Waterfowl

1. Snow Goose – t U
2. Ross's Goose – t U
3. Canada Goose – B Y C
4. Trumpeter Swan - t R
5. Tundra Swan – t U
6. Wood Duck – b U
7. Gadwall – B C
8. Eurasian Wigeon - t R
9. American Wigeon – B C
10. Mallard – B Y C
11. Blue-winged Teal – B U
12. Northern Shoveler – B C
13. Northern Pintail – t C
14. Cinnamon Teal – B C
15. Green-winged Teal – B C
16. Canvasback - B C
18. Redhead – B C
19. Ring-necked Duck – b C
20. Greater Scaup – t R
21. Lesser Scaup – B C
22. Bufflehead – B C
23. Common Goldeneye - B W C
24. Barrow's Goldeneye - B U
25. Hooded Merganser – t U
31. Common Merganser – t U
33. Ruddy Duck – B C

Partridge, Grouse, etc.

34. Gray Partridge –Y U

Grebes

35. Pied-billed Grebe – B U
36. Horned Grebe – t U
37. Red-necked Grebe – t U
38. Eared Grebe – b U *
39. Western Grebe – b U

Cormorants

40. Double-crested Cormorant – t U

Herons, Bitterns

41. Great Blue Heron – C

Hawks, Eagles

42. Northern Harrier –Y C
43. Sharp-shinned Hawk – Y U
44. Red-tailed Hawk – Y U

Falcons

45. American Kestrel – B C
46. Merlin - W U

Rails

47. Virginia Rail – b U
48. Sora – B C
49. American Coot – B C

Cranes

50. Sandhill Crane –U

Plovers
51. Semipalmated Plover – t U
52. Killdeer – B C

Avocets, Stilts
53. Black-necked Stilt – t U
54. American Avocet – t C

Sandpipers, Snipe, Phalaropes
55. Spotted Sandpiper – B C
56. Solitary Sandpiper – t U
57. Greater Yellowlegs – t C
58. Willet – t R
59. Lesser Yellowlegs – t C
60. Semipalmated Sandpiper – t U
61. Least Sandpiper – t C
62. Baird's Sandpiper – t C
63. Pectoral Sandpiper – t U
64. Stilt Sandpiper – t R
65. Short-billed Dowitcher - t R
66. Long-billed Dowitcher – t C
67. Wilson's Snipe – b C
68. Wilson's Phalarope – b C

Gulls, Terns, Jaegers
69. Franklin's Gull – t U
70. Bonaparte's Gull – t U
71. Ring-billed Gull – C
72. California Gull - U
73. Herring Gull – t U
74. Caspian Tern - t R
75. Black Tern – t U
76. Common Tern – t U
77. Forster's Tern – t U

Pigeons, Doves
78. Rock Pigeon – Y C
79. Eurasian Collared-Dove - Y C
80. Mourning Dove – C

Owls
81. Great Horned Owl –Y U

Nightjars
82. ___ Common Nighthawk – U

Hummingbirds
83. Calliope Hummingbird - t C
84. Rufous Hummingbird – b C

Kingfishers
85. Belted Kingfisher - B Y C

Woodpeckers
86. Red-naped Sapsucker - C
87. Downy Woodpecker – Y U
88. Hairy Woodpecker – Y U
89. Northern Flicker – Y C

Tyrant Flycatchers
90. Western Wood-Pewee – U
91. Willow Flycatcher - B C
92. Least Flycatcher - B U
93. Western Kingbird – U
94. Eastern Kingbird - b C

Swallows
95. Tree Swallow – B C
96. Violet-green Swallow – t U
97. Northern Rough-winged Swallow – b C
98. Bank Swallow – C
99. Cliff Swallow – U
100. Barn Swallow - b C

Shrikes
101. Northern Shrike – W U

Vireos
102. Warbling Vireo – b C

Crows, Ravens, Jays, etc.
103. Black-billed Magpie – B Y C
104. American Crow – U
105. Common Raven – B Y C

Chickadees
106. Black-capped Chickadee – B Y C
107. Mountain Chickadee – Y U

Wrens
108. House Wren – U
109. Marsh Wren – B C

Bluebirds, Thrushes
110. Mountain Bluebird – t U
111. American Robin – b C

Mimic Thrushes
112. Gray Catbird – b C

Starlings
113. European Starling – Y C

Waxwings
114. Bohemian Waxwing – W U
115. Cedar Waxwing – Y U

Warblers
116. Yellow Warbler – b C
217. Yellow-rumped Warbler – C
118. Northern Waterthrush – U
119. MacGillivray's Warbler – U
120. Common Yellowthroat – B C
121. Wilson's Warbler – b U

Tanagers
122. ____ Western Tanager - U

Sparrows, etc.
123. American Tree Sparrow - W U
124. Vesper Sparrow – b U
125. Savannah Sparrow – b C *
126. Song Sparrow – b C
127. White-crowned Sparrow – t U
128. Dark-eyed Junco – Y U

Grosbeaks
129. Lazuli Bunting – b U

Blackbirds, Orioles
130. Red-winged Blackbird – B Y C
131. Western Meadowlark – b C
132. Yellow-headed Blackbird – B C
133. Brewer's Blackbird – b C
134. Common Grackle – b C
135. Brown-headed Cowbird – b C
136. Bullock's Oriole – b U

Finches
137. Cassin's Finch - U
138. House Finch – B Y C
139. Common Redpoll – W U
140. Pine Siskin – b Y C
141. American Goldfinch – B Y C
142. Evening Grosbeak – Y U

Weaver Finches
143. House Sparrow – B Y C

ATTACHMENT II
Site & Potential Development Map

Bird Observation Deck or Viewing Stand

Picnic Kiosk

Parking Lot

Kayak and Canoe Launch

Walking and Biking Path

Restoration and Landscaping

ATTACHMENT III

Sample Informational Brochure

courtesy Gary Swant

Legend: *(in order of occurrence behind species name)*

Season of Occurrence:

Sp:	Spring
S:	Summer
F:	Fall
W:	Over winter
Y:	Year around
t:	Transient/migrant

Breeding:

B:	Breeds
b:	Probably breeds

Relative Abundance:

A:	Abundant *(see every trip)*
C:	Common *(see most trips)*
U:	Uncommon *(often not seen)*
R:	Rare *(not seen every year)*

Habitat:

S/G:	Sagebrush/Grasslands
R/C:	Riparian/Cottonwood Gallery
Wt:	Wetlands
All:	All habitats
#:	Not found in 2011 surveys, but Montana Natural Heritage Program show species to be in the area, or at other times of the year.

Data based on field observations by Gary Swant, GoBirdMontana, LLC, June—September 2011

Additional data secured from the Montana Natural Heritage Program.

Waterfowl

1. ___ Canada Goose: S U Wt
2. ___ Mallard: S U Wt
3. ___ Common Merganser: S U Wt

Partridge, Grouse

4. ___ Gray Partridge: Y B C S/G
5. ___ Ring-neck Pheasant: Y B U S/G
6. ___ Sharp-tailed Grouse: Y B C S/G
7. ___ Wild Turkey: Y B R G R/C

Pelican

8. ___ American White Pelican: S t R Wt

Hawks, Eagles

9. ___ Northern Harrier: Y R S/G
10. ___ Sharp-shinned Hawk: Y R S/G R/C
11. ___ Cooper's Hawk: Sp S F U R/C
12. ___ Swainson's Hawk: Sp S F S/G
13. ___ Red-tailed Hawk: Y B C R/C
14. ___ Rough-legged Hawk: W C S/G #

Falcons

15. ___ American Kestrel: Sp S F C S/G R/C
16. ___ Merlin: Y U R/C
17. ___ Prairie: Y U S/G R/C #
18. ___ Peregrine: Y t R R/C #

Shorebirds

28. ___ Spotted Sandpiper: S b U Wt
29. ___ Long-billed Curlew: Sp S B C S/G

Gulls, Terns

30. ___ Ring-billed Gull: Sp S U S/G Wt
31. ___ Caspian Tern: S U G/S Wt

Pigeons, Doves

32. ___ Rock Pigeon: Y B U S/G R/C
33. ___ Mourning Dove: Sp S F B A S/G R/C

Owls

34. ___ Great Horned Owl: Y B C R/C
35. ___ Snowy: W R t S/G #
36. ___ Short-eared: Sp S b R S/G #

Nighthawk

37. ___ Common: S R S/G

Kingfisher

38. ___ Belted Kingfisher: S F b R Wt #

Woodpeckers

39. ___ Red-napped Sapsucker: S U R/C
40. ___ Downy: Y b U R/C
41. ___ Hairy: S t R R/C
42. ___ Northern Flicker: Y B A S/G R/C

Flycatchers

46. ___ Olive-sided: S F t R R/C
47. ___ Western Wood-Pewee: Sp S F B C R/C
48. ___ Willow: Sp S B U R/C
49. ___ Least: Sp S B R/C
51. ___ Dusky: Sp S F t S/G R/C
52. ___ Say's Phoebe: Sp S F B S/G R/C
53. ___ Western Kingbird: S b U S/G
54. ___ Eastern Kingbird: Sp S F B C S/G R/C

Shrikes

55. ___ Northern: W C S/G R/C #
56. ___ Loggerhead: Sp S b U S/G

Vireos

57. ___Warbling: Sp S b U R/C #
58. ___Red-eyed: Sp t R R/C

Crows, Ravens, Jays, etc.

64. ___Black-billed Magpie: Y B C All
65. ___Common Raven: Y B C R/C

Larks

59. ___ Horned Lark: Sp S F B A S/G

Swallows

60. ___ Tree: Sp S B C R/C
61. ___ Violet-green: Sp t R S/G R/C
62. ___ Northern Rough-winged: Sp S B S/G R/C
63. ___ Bank: Sp S B S/G Wt

Chickadees

66. ___Black-capped: Y B C R/C

Nuthatch

67. ___Red-breasted Nuthatch: Y B U R/C
68. ___Brown Creeper: Y t R R/C #

Wren

69. ___House: Sp S F B A S/G R/C
70. ___Marsh: Sp S F B C Wt

Bluebirds, Thrushes

71. ___Mountain Bluebird: Sp S F B C S/G R/C
72. ___Townsend's Solitaire: Y b U R/C
73. ___American Robin: Sp S F B C All

Thrashers

74. ___ Brown: Sp S B U S/G R/C

Mimids

75. ___Gray Catbird: Sp S F B C R/C

Starlings

76. ___European: Y B A All

Pipet

77. Sprague's: Sp S B C S/G

Waxwings

77. ___Bohemian: W C R/C #
78. ___Cedar: Sp S F B A S/G R/C

Warblers

79. ___ Orange-Crowned: Sp S F b U R/C
80. ___ Yellow: Sp S F B C S/G R/C
81. ___ Cap May: S F t R R/C
82. ___ Yellow-rumped: Sp F t C R/C
83. ___ Blackpoll Warbler: Sp F t R R/C
84. ___ American Redstart: Sp F t R R/C
85. ___ Ovenbird: Sp F t R R/C
86. ___MacGillivary's: Sp F t R R/C
87. ___Common Yellowthroat: Sp S F B C R/C
88. ___Wilson's: Sp S F B C S/G R/C

Tanagers

89. ___Western: Sp t R R/C #

Sparrows

90. ___ Spotted Towhee: Sp S F B C S/G R/C
91. ___ American Tree : W C S/G R/C #
92. ___ Chipping: Sp F t R R/C
93. ___ Clay-colored: SP S B C S/G R/D
93. ___ Brewer's: Sp S B C S/G
94. ___ Vesper: Sp S F B A S/G
95. ___ Lark Sparrow: Sp S F B A S/G R/C
96. ___ Savannah: Sp S F B C S/G
97. ___ Grasshopper: Sp S C S/G R/C
97. ___ Song: Sp S b U S/G R/C
98. ___ Lincoln's: Sp S t R S/G
99. ___ White-crowned: Sp F t U R/C
100. ___Snow Bunting: W U S/G #

Longspurs

100. ___ Lapland: W U S/G #
101. ___ Chestnut- Collared: Sp S B C S/G

Grosbeaks, Buntings

102. ___Black-headed Grosbeak: Sp S F b U R/C
103. ___Lazuli Bunting: Sp F t R R/C

Blackbirds

104. ___Red-winged: Sp S F B C Wt
105. ___Western Meadowlark: Sp S F B A S/G
106. ___Brewer's: Sp S B C G Ri
107. ___Common Grackle: Sp t U S/G
108. ___Brown-headed Cowbird: Sp S b C S/G

Finches

109. ___American Goldfinch: Sp S F C S/G R/C

Field Notes

Brochure Designed by
Gary D. Swant
GoBirdMontana, LLC

Marias River WMA

Bird Checklist

Marias River WMA encompasses 5,845 acres with an average elevation of 3,290 feet. It is located south and West of Shelby. From I-15, Exit 358 east to Marias Valley Road, North 3.5 miles, turn west on Hjartarson Road for 10.2 miles, then south 2.5 miles. Open April 1 – January 15.

Cautions—Hjartarson Road can be difficult to traverse when wet in the spring. Rattlesnakes and Grizzle Bears can be present. No motorized vehicles allowed on site.

For more information:
Allison J.P. Begley, FWP—Biologist
2300 Lake Elmo Drive
Billings, MT 59105
(406) 247-2966
Email - abeglley@mt.gov

Montana Fish, Wildlife & Parks

October, 2011

Local Support for Restoration and Park Development

Dear BNRC, The undersigned individuals wish to share their support for the reclamation and development of a bird watching and canoe/kayak use park at the site of the "cattail swamp" south of the Interstate and west of Kaw Ave.

Name	Town	I Watch/Photograph Birds	Kayak	Canoe
Joe Griffin	Butte	✓		✓
Bill Mayberry	Butte	✓		✓
Dirk Gibson	Butte	✓		✓
Mike Stitzky	Butte	✓		
MARK REAVIS	BUTTE	✓	✓	✓
Nicole VonGaza	Butte	✓	✓	
Mitzi Rossillon	Butte	because it's a good idea		
Donald Stierle	Butte	✓	✓	✓
Kieran ONeill	Butte	✓	✓	✓
Linda Borton	Butte	✓	✓	
Debbie Stitzky	Butte	✓	✓	
Sheila Youngblom	Butte	✓		
Andrea Stierle	Butte	✓ - I'd like to help!		
Sherry Vogel	Butte	✓		✓
[illegible]	Pipestone	✓		✓
Kristi Oheare	Butte	✓		

Local Support for Restoration and Park Development

Dear BNRC, The undersigned individuals wish to share their support for the reclamation and development of a bird watching and canoe/kayak use park at the site of the "cattail swamp" south of the Interstate and west of Kaw Ave.

Name	Town	I Watch/Photograph Birds		Kayak	Canoe	
Noor Parwana	Butte	✓			✓	
Gregory Williams	Butte	✓				lives in neighborhood
Lindsay Stewart	Butte	✓				
RAY THOEN	BUTTE	✓				
PAT ACKERMAN	Butte	✓				
Darrell L. McDonald		✓				
[illegible]	Butte	✓			✓	
Rosalie Sladek	Butte	✓			✓	
Mary [illegible]	Butte		Redulla ~~Irene~~		✓	
Michael [illegible]	Butte	✓	Tierney			
[illegible]	Butte	✓	Volunteer Help	✓	✓	
James M. Sladek	Butte	✓		✓	✓	

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)
J.P. Gallagher - Whittier School Principal
wk: 406-533-2891 cell: 406-491-5868 2500 Sherman Butte, MT 59701

Your Idea: Fully describe your concept.
Improve all green areas and recreation areas of Whittier School and Park areas. The Whittier Wildcat Garden needs a permanent fence. Park area needs improvements including fence repair and improve green area. All playground equipment needs repair + upgrade.

Project Location: Describe the project location here and mark it on the map on back.
1 Full City Block surrounded by streets Ottawa, Sherman, Yale, and Sheridan.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☒ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
The whole community of Butte would benefit from this project. The park and playground equipment are used year round by the community. The garden educates and improves the Whittier School and surrounding community.

Estimated Cost: How much would your project cost? ☐ unknown ☒ less than $100K

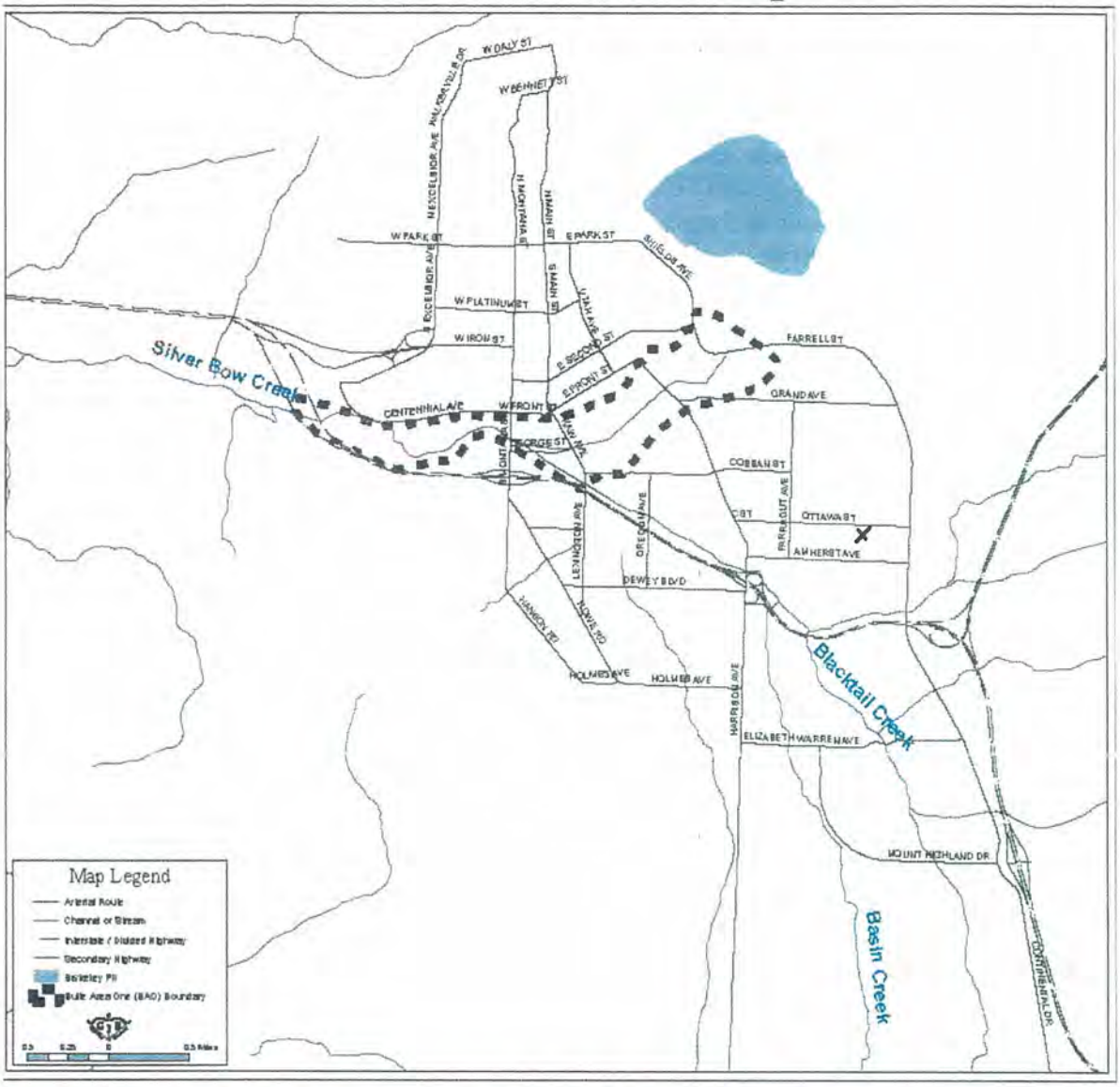
☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

- **Wednesday March 14**, 6 – 8 PM, Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
- **Tuesday March 20**, 6 – 8 PM, Butte-Silver Bow Public Archives, 17 W. Quartz St.

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Butte Area One Map



J.P. Gallagher - Principal
Whittier School
2500 Sherman

Butte, MT 59701

Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

Butte Urban Forestry Board 723-0217

Your Idea: Fully describe your concept.

See attached sheet.

Project Location: Describe the project location here and mark it on the map on back.

McCrudd Park

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☑ revegetation

☐ recreation/fishing ☐ water system improvement ☑ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See attached sheet.

Estimated Cost: How much would your project cost? ☐ unknown ☑ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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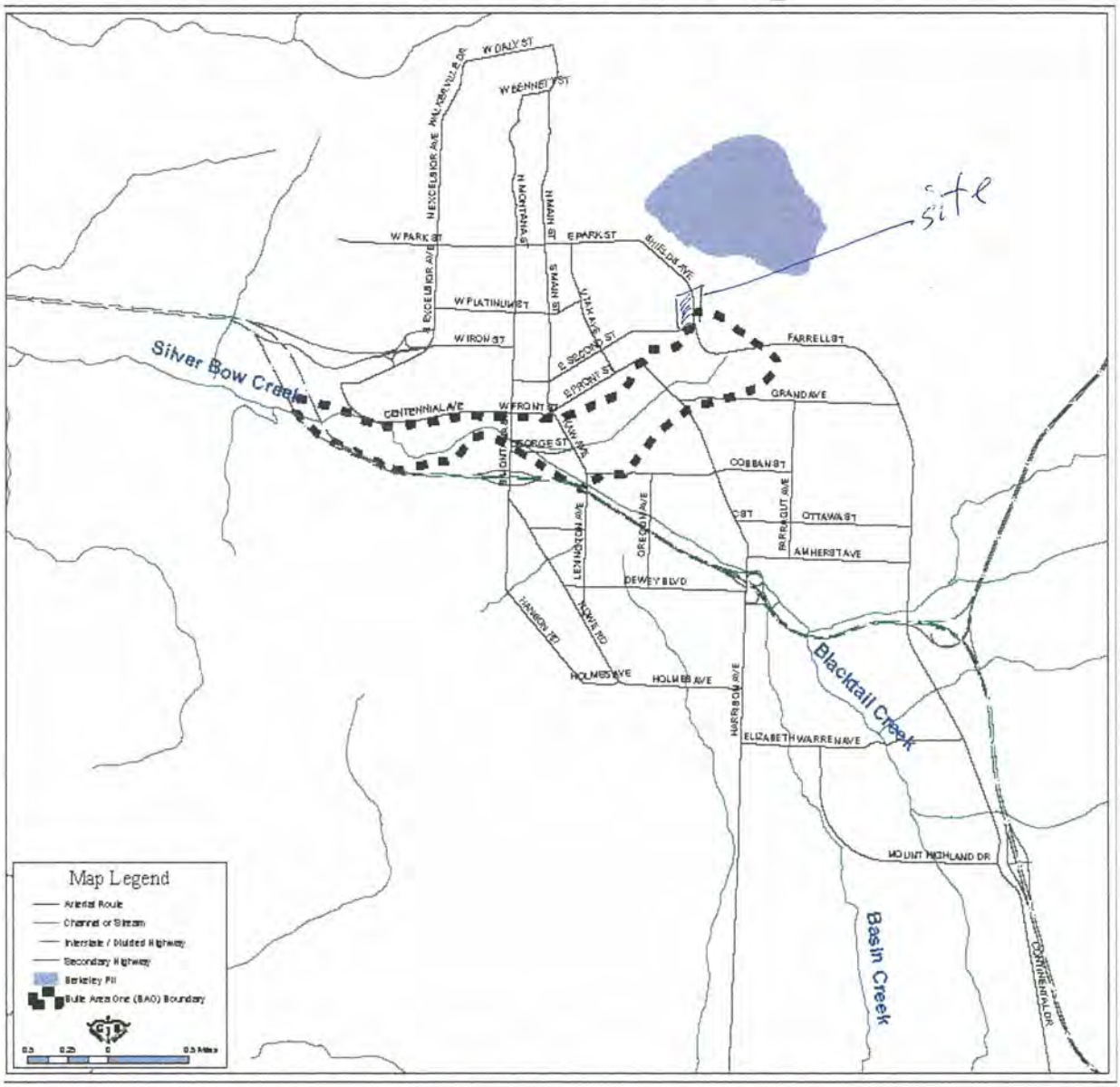
Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Proposal
to the
Butte Natural Resource Damage Restoration Council
from the
Butte-Silver Bow Friends of the Urban Forest

The B-SB Urban Forestry Board was created in June of 1989 by Ordinance #354 which states "The objective of the Board is to establish a local Urban Forestry Program designed to mitigate past mining and smelting damage to native and ornamental trees and shrubs through the planting of trees and other vegetation, especially in those areas where damage is most evident."

An area where damage is evident is McGruff Park located just west of Shields Ave. near the headquarters of Montana Resources, and immediately adjacent to the Butte Area One boundary.

McGruff Park is 2.3 acres and has only 15 trees on it and only a couple of small shrubs. McGruff Park is used as the location for the Crime stopper's National Night Out safety and crime prevention yearly event and is the home to B-SB's skateboard park. McGruff park appears to be almost barren due to the lost native vegetation in the area.

Runoff from the park flows southwesterly directly towards the site of the Parrot tailings. Increased vegetation in the park may reduce the storm water run off and the ground water flows toward the tailings.

We have consulted with the Chairperson of the Parks and Recreation Board and we are in agreement that the park could use 30-50 more trees and some perimeter shrubs and hedges. Currently there are no trees in the area of the skateboard park. Our estimate of the cost for the replacement of native vegetation in this area is $16,000.

The entire Butte Community would benefit from this revegetation project.

Respectfully submitted by the Butte Urban Forestry Board, Janel Madrazo, Chairperson

George Everett	Sharon Chebul	Mark Syverson
Charlie O'Leary	Phil Cammack	Chris Douglass

April, 4, 2012

Pat Cunneen
Butte Natural Resource Damage Restoration Council
65 E. Broadway
Butte, MT 59701

Dear Mr. Cunneen,

At the regular meeting of the Butte Silver Bow Urban Forestry Board on March 20, we welcomed a presentation by Tom Malloy of the Butte Silver Bow Planning Department about their recent proposal to the Butte Natural Resource Damage Restoration Council (BNRC) titled "Butte Tree Planting Project: Species Diversification on the Hill." We also had the opportunity to hear additional detail about this project through a presentation by Jon Sesso.

After listening to the details of the proposed project, we would like to express our strong support for this project as an important and much needed pathway to environmental restoration at the same time it will enhance the quality of life for residents of Butte.

We urge the BNRC to select and support this project as a priority for the funds that have been set aside to help restore the Butte Hill.

If we can elaborate on our support for this project, please don't hesitate to contact me at 491-4968 or cedarlakemt@msn.com.

Sincerely,

Janel Madrazo

Janel Madrazo
Chair
BSB Urban Forestry Board

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 M claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by Dec. 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)
Butte Restoration Alliance

Your Idea: Fully describe your concept.

This project would look to provide alternative water sources at several mine yards that have been re-developed to provide recreation and open space opportunities. The project would complete a study to determine if a clean water source would be available to drill a well to irrigate reclaimed mine yard areas.

If clean water was able to be utilized on-site the project would drill and develop an irrigation system in the mine yards including The Original, MT Con, Stewart, Anselmo, and other mine yards identified for restoration and development. Park areas such as Stodden Park use onsite wells to irrigate park areas to reduce overall park operation costs and the reliance on Big Hole River water.

Using on-site water for irrigation would allow for improved plant growth and additional vegetation to be planted on mine sites to enhance restoration activities and improve recreation opportunities by making more areas of the mine sites available for recreation use. Improving vegetation growth potential would improve waste caps placed in the mine yard areas.

Project Location: Describe the project location here and mark it on the map on back.

Mine Yards: MT Con, The Original, Stewart, Anselmo, and other mine yards identified for restoration and development.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☒ waste cap improvement ☐ stream restoration ☒ revegetation
☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Butte Area One Map

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Overall the project will benefit the entire community of Butte as it would provide additional restoration of mine yard vegetation and reduce the reliance on Big Hole River water which increases the operation costs to maintain the mine yards.

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K ☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)
Butte Restoration Alliance

Your Idea: Fully describe your concept.

Removal of the Parrott Tailings should be considered remedy and not restoration.

Since the ROD was issued, a significant amount of new data has become available which questions if the selected remedy for this area was correct. Specifically, NRD funded work identified gaps in data defining the boundary of the tailings and the nature of overburden. Published studies such as MBMG (2004, 2010a, and 2010b) and personal communications from MBMG scientists indicated that assumptions about the volume and transmissivity of the Parrott Tailings are flawed. New data shows the Parrott Tailings is impacting surface water in areas not considered in ROD remedy selection and that contamination from the Parrot tailings in the intermediate alluvial aquifer is travelling parallel to, and confined from the MSD capture system. Recent monitoring activities in the area suggest a worsening of water quality in the plume associated with the Parrott tailings and that the plume has migrated farther than expressed in the feasibility studies.

Most of the new data strongly suggests the foundations of past decisions concerning the ROD remedy for the MSD including the 2004 Focused Feasibility Study for the MSD (CDM, 2004) and the Groundwater Technical Impracticability Evaluation (ARCO, 2005) contain significant errors regarding site characterization and remedy feasibility. Many feel the EPA has lacked transparency regarding effectiveness of voluntary actions implemented within Lower Area One and the EPA has been asked to reconsider removal of remaining waste to protect down-gradient surface and groundwater.

Project Location: Describe the project location here and mark it on the map on back.
Parrott Tailings
Project Type: Check the box(es) that is/are most applicable to your idea:

Butte Area One Map

☒ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

This project will benefit the entire community of Butte as it would protect soil and water quality from future contamination with the removal of the Parrott Tailings. The project would ensure surface water quality is preserved along with the intermediate alluvial aquifer. Based on recent studies removal of the Parrott Tailings would keep the plume from migrating further and contaminating down gradient surface and groundwater.

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☒ more than $5M

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Place Stamp Here

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Your Name and Contact Information: (you may remain anonymous)
Butte Restoration Alliance

Your Idea: Fully describe your concept.

The Blacktail Creek Restoration Project would implement recommendations from the 2005 Silver Bow Creek Watershed Restoration Plan and 2009 Current Status of Blacktail Creek, Recommendations for Habitat Improvement, and Suggested Implementation Plan. Blacktail Creek habitat is identified in Table 8.1 as Final Ranking #4 and #16 in the Silver Bow Watershed Restoration Plan. It would also replace lost recreation opportunities by providing public access to portions of Blacktail Creek owned by BSB by constructing a trail and interpretation system beginning at the north end of the Butte Country Club and continuing south to connect with the Continental Drive trail near the High Altitude Speed Skating Center.

In 2009 Mile High Conservation District and BSB contracted with Pioneer Engineering to complete a habitat assessment of 6.3 miles of Blacktail Creek from the Nine Mile to the northern end of the golf course and the crossing with Interstate 15/90. The 2009 field investigations were to identify future project that would achieve the following:

1. Reestablish fisheries for westslope cutthroat trout;
2. Enhance stream flows; and
3. Contribute to a functioning channel and habitat system.

As the study progressed the two primary effects on the creek and overall habitat quality were 1) historical diversion of the creek; and 2) varied land management practices of the 70-plus landowners along the creek.

The projects would implement recommendations from the 2009 study related to improving substrate quality, improving stream flow conditions, addressing fish barriers, improving land use practices, increasing woody plan densities within the riparian corridor, and physically manipulating the channel.

Butte Area One Map

BSB acquired 11 acres open space land on the south boundary of the Country Club. The long-term plan with the acquisition was to protect riparian areas and provide a public walkway and interpretation areas along the creek to connect to the Continental Drive trail. BSB has additional open space parkland to contribute to this project.

Project Location: Describe the project location here and mark it on the map on back.
Blacktail Creek from Nine Mile (junction of MT Hwy 2 and Continental Drive) to Silver Bow Creek

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☒ stream restoration ☐ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

The project would benefit Blacktail Creek and implement recommendations from the the 2005 Silver Bow Creek Watershed Restoration Plan and 2009 Current Status of Blacktail Creek, Recommendations for Habitat Improvement, and Suggested Implementation Plan. It would provide restoration of fishery habitat, stream flow, stream function and habitats. Working closely with landowners to make improvements without significantly impacting private land activities would be a primary objective.

Overall the project will benefit the entire community of Butte as it would restore Blacktail Creek to improve fishery/riparian habitat and replace lost natural resource recreation opportunities for the community. It would also provide connectivity to the restoration of Silver Bow Creek.

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K

☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

April 19, 2012

Mr. Pat Cunneen
BNRC
Thornton Building
65 E. Broadway Street
Butte, MT 59701

Subject: McDonough Property
1015 S. Montana Street

Dear Mr. Cunneen:

My property is located south and west of KXLF TV and Summit Beverage. I have attached a map of my property marked in "yellow".

There is a storm water culvert that comes off the Butte hill and dumps onto my property; from there it runs free through my property.

I have talked to ARCO, EPA, and Butte-Silver Bow for years about this problem to no avail. I ask your agency to take a look at this and fund a plan to correct this problem.

I can meet with your members to show them the site at any time.

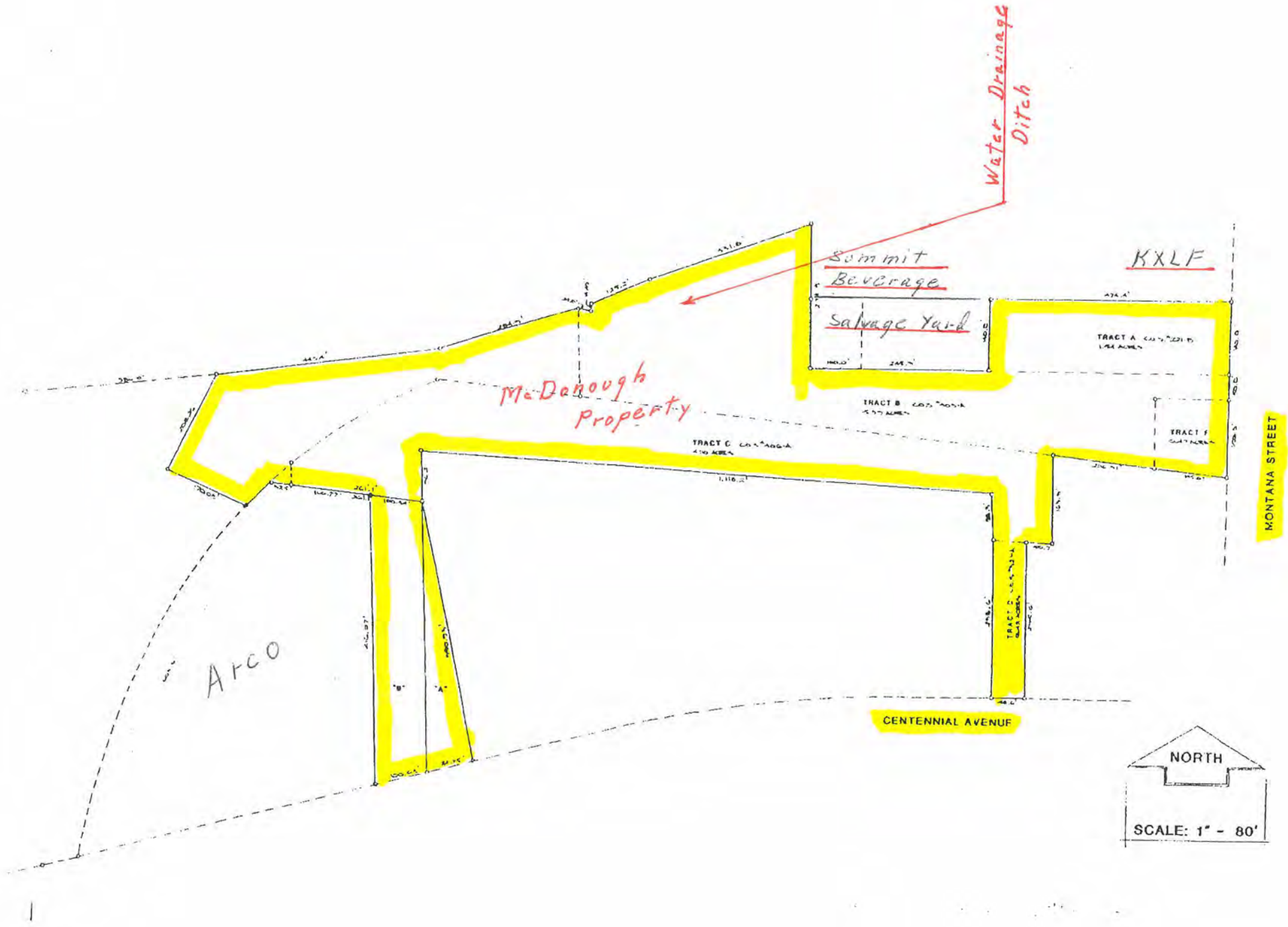
Thanks for your time, and I look forward to discussing this issue with you.

Sincerely:

Bob McDonough

Bob McDonough
406-491-1805 Cell

Cc: Elizabeth Erickson
Chairwoman


Water Drainage Ditch
Summit Beverage
Salvage Yard
KXLF
McDonough Property
TRACT A
TRACT B
TRACT C
TRACT D
TRACT E
TRACT F
MONTANA STREET
CENTENNIAL AVENUE
Arco
NORTH
SCALE: 1" - 80'

April 19, 2012

Mr. Pat Cunneen
Butte Natural Resource Damage Restoration Council
65 E. Broadway Street
Butte, MT 59701

Dear Mr. Cunneen:

I would like to address two issues that I believe would be the best use for the Restoration Funds being considered by your Board and then passed to Governor Schweitzer. The first issue would be the storm-water run-off from the Butte hill onto private property owners. My parents own land on Montana Street at 1015 S. Montana Street that extends back to the west and boarders the ARCO settling ponds above Centennial. In fact, they owned the land before and sold it to ARCO for these ponds, and this last spring sold another 3.75 acres of land at 1300 S. Montana Street to ARCO for the same issues.

My parent's property has a storm-water ditch that was diverted onto them and not free-flowing, and it needs to be addressed. There are probably numerous other property owners in Butte who face the same issue. It is vital to the watershed of Butte-Silver Bow as well as public health to clean these areas with funds designated for clean-up and restoration; it also allows property owners to develop properties and put them onto Butte-Silver Bow tax-rolls.

My parents have not received a definitive answer or have had a reasonable discussion for solutions with Butte-Silver Bow, the EPA, or ARCO. I would ask this plan at least lay out the process for everyone in Butte-Silver Bow that owns private property that is affected by storm-water runoff that they neither created or facilitated.

I also would like to strongly encourage the removal of the Parrot tailings from their current location and deposited in the Opportunity Repository. These tailings must be removed and the area remediated to promote health, public safety, a healthy watershed, and economic development to our area. I am strongly opposed to giving the entire fund of money towards the effort of revamping Butte-Silver Bow's water-system as is being proposed by the Butte-Silver Bow Public Works Department.

Thanks for your time and the opportunity to share my concerns.

Sincerely:

Brendan R. McDonough
1911 Argyle Street
Butte, MT 59701

Cunneen, Padraig

From: Brendan R McDonough [bmcdonough@bresnan.net]
Sent: Friday, April 20, 2012 11:26 AM
To: Cunneen, Padraig
Subject: Butte Natural Resource Damage Program
Attachments: Butte BNRC - Brendan Letter.doc

Pat:

I would like to submit this letter in regards to your collection of ideas, proposals, and projects for the BNRC. Thank you for your time and please confirm a receipt of the letter.

Brendan

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

Kathleen Hadley, National Center for Appropriate Technology
P.O. Box 3838, Butte, MT 59701; 494-4572 email kathyh@ncat.org

Your Idea: Fully describe your concept.

The National Center for Appropriate Technology proposes a pilot project which would provide the citizens of Butte tools they need to help restore Butte's surface, groundwater and vegetation resources. NCAT would provide a series of educational workshops, trainings and demonstrations where local citizens could learn how to implement water and soil conservation methods in their homes and businesses. Our goal is to give citizens the tools and resources they need so each person can help to make a difference by conserving and helping restore the communities damaged natural resources. NCAT proposes to offer five natural resource educational and demonstration opportunities with the goal of enlisting at least 500- 1000 community members in one or more of these opportunities:

1. Community Rainwater Catchment:

NCAT will offer a series of classes to teach community members how to save, hold, and use rainwater for everyday uses as well as for gardening purposes during the driest of the summer months. We would purchase simple 55 gallon rain barrels and the appropriate material to construct basic water catchment systems, which will then be offered to each community member who attends the educational workshop at our facilities. NCAT will offer follow up technical assistance and expertise so that these systems may be properly set up and maintained. These systems not only conserve water but ensures that less water drains into the Butte storm system, which can protect the storm water system from accruing pollutants (as cited in the Butte Silver Bow's Municipal Storm Water Engineering Standards document).

2. Home Water Conservation Kits:
NCAT will distribute kits to homeowners, renters and small businesses to help Butte citizens reduce water use in their households. The kits will include a short publication explaining the basics of home and business water conservation practices, and simple tools that are easy to install like low-flow showerheads and faucets.

3. Community Composting:
Similar to our community rainwater catchment project, the community compost project would use existing facilities at NCAT to offer workshops to community members on how to properly compost food and yard waste in Butte, and how compost can aid not only in waste reduction and soil improvement, but in water retention and control. Community members will either receive help in setting up their own home-scale thermophilic compost or vermicompost bins, or they will be enrolled in a program to drop off household compost waste at NCAT, which will quickly become compost that will be made available to the community participants for their lawns and gardens.

4. Community Demonstration: Native Shelterbelts Around NCAT:
It does not take a landscape architect or native plant specialist to see that there are very few remaining native shrubs, trees, and herbaceous species in Butte's landscape. By putting a shelterbelt consisting of native shrubs and trees around NCAT's properties, we will be working towards the creation of a native ecosystem that will attract beneficial micro and macro organisms and that will not require additional care and irrigation after the initial set up. This shelterbelt could serve as a microcosmic example of Butte's original landscape, and we have a unique opportunity to educate community members on our native ecosystem through interpretive signage and through tours and workshops. This would also complement the youth fishing pond project that will be adjacent to the eastern boundary of NCAT property and will add to the educational experience of an agriculture/wildlife interface for residents who utilize the youth fishing pond and/or the small scale intensive agriculture training program at NCAT,

5. Community Demonstration: Xeriscape on NCAT's Front Yard
A xeriscape is an alternative landscaping system that relies on native plants and design techniques that use natural resources, so that the landscape requires very little attention and little or no irrigation. We propose that the grass will be replaced with a native prairie grass that has much deeper roots effectively requiring no watering during the summer, and acting as a natural form of soil tillage. A meadow of native herbaceous species and pollinators will be incorporated into the landscape effectively attracting beneficial butterflies and bees while also building an aesthetically pleasing landscape that not only requires little irrigation, but conserves water.

These five projects are utilitarian in nature. They provide opportunities for Butte community members to get involved with and help to restore the damaged natural resources within the community by taking actions within their own home or business to: reduce water consumption, reduce the storm water load, improve community soils one yard at a time, help build compost and new soils and participate in creating a healthier environment for the community. .

Project Location: Describe the project location here and mark it on the map on back.

The project is the entire Butte community, training location is at NCAT, 3040 Continental Dr.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation
☐ recreation/fishing ☒ water system improvement ☒ storm water controls ☒ other

Other – soil improvement

Estimated Cost: How much would your project cost? ☐ Unknown ☐ less than $100K
☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

- **Wednesday March 14**, 6 – 8 PM, Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
- **Tuesday March 20**, 6 – 8 PM, Butte-Silver Bow Public Archives, 17 W. Quartz St.

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

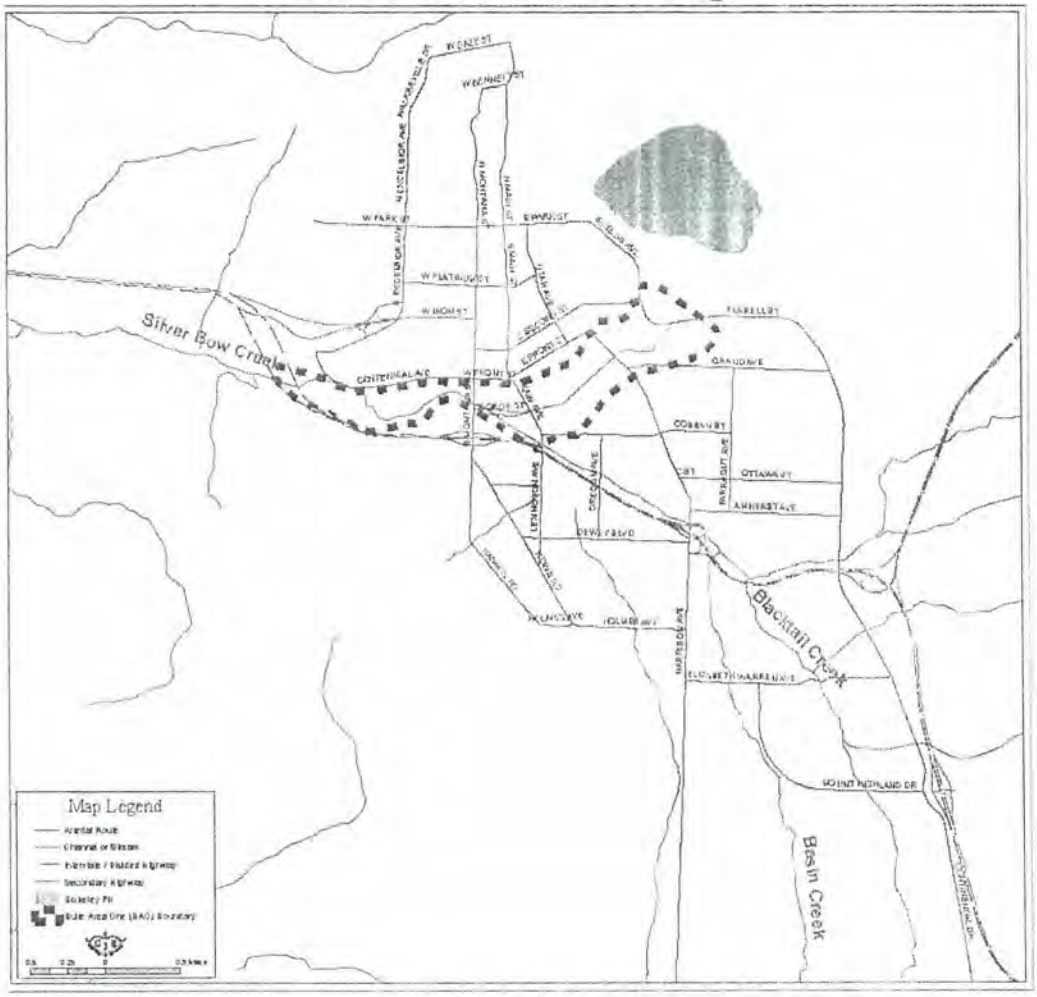
Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

The project is the entire Butte community, training location is at NCAT, 3040 Continental Dr

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Cunneen, Padraig

From: Kevin Curtis [kandacurtis@yahoo.com]
Sent: Friday, April 20, 2012 2:09 PM
To: Cunneen, Padraig; Cunneen, Padraig
Subject: Butte Area One Restoration Project Idea.
Attachments: Butte Area One Restoration Project Idea.docx; BAO-Idea-Submittal-Form-final.pdf

Mr Cunneen,
Attached are both my idea for the Butte Area One Restoration Project and the official form.
I am sending it via e-mail just in case the hard copy I dropped off at your office is not located in time for the deadline.

Thank you for all you do,
Kevin D. Curtis
1117 N. Emmett
Butte, MT
406-782-4149

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)
Kevin D. Curtis, 406-782-4149, Butte MT

Your Idea: Fully describe your concept.
Please see attachment : Butte Area One Restoration Project Idea.docx in email.

Project Location: Describe the project location here and mark it on the map on back.
All of Butte Area One

Project Type: Check the box(es) that is/are most applicable to your idea:

[X] mining waste removal [X] waste cap improvement [X] stream restoration [X] revegetation

[X] recreation/fishing [X] water system improvement [X] storm water controls [X] other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. All of Butte will benefit. The idea creates millions of dollars for Butte Silver-Bow.

Estimated Cost: How much would your project cost? [ ] unknown [ ] less than $100K

[ ] $100K to $500K [ ] $500K to $1M [ ] $1M to $5M [X] more than $5M ~$30 Million

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State of Montana
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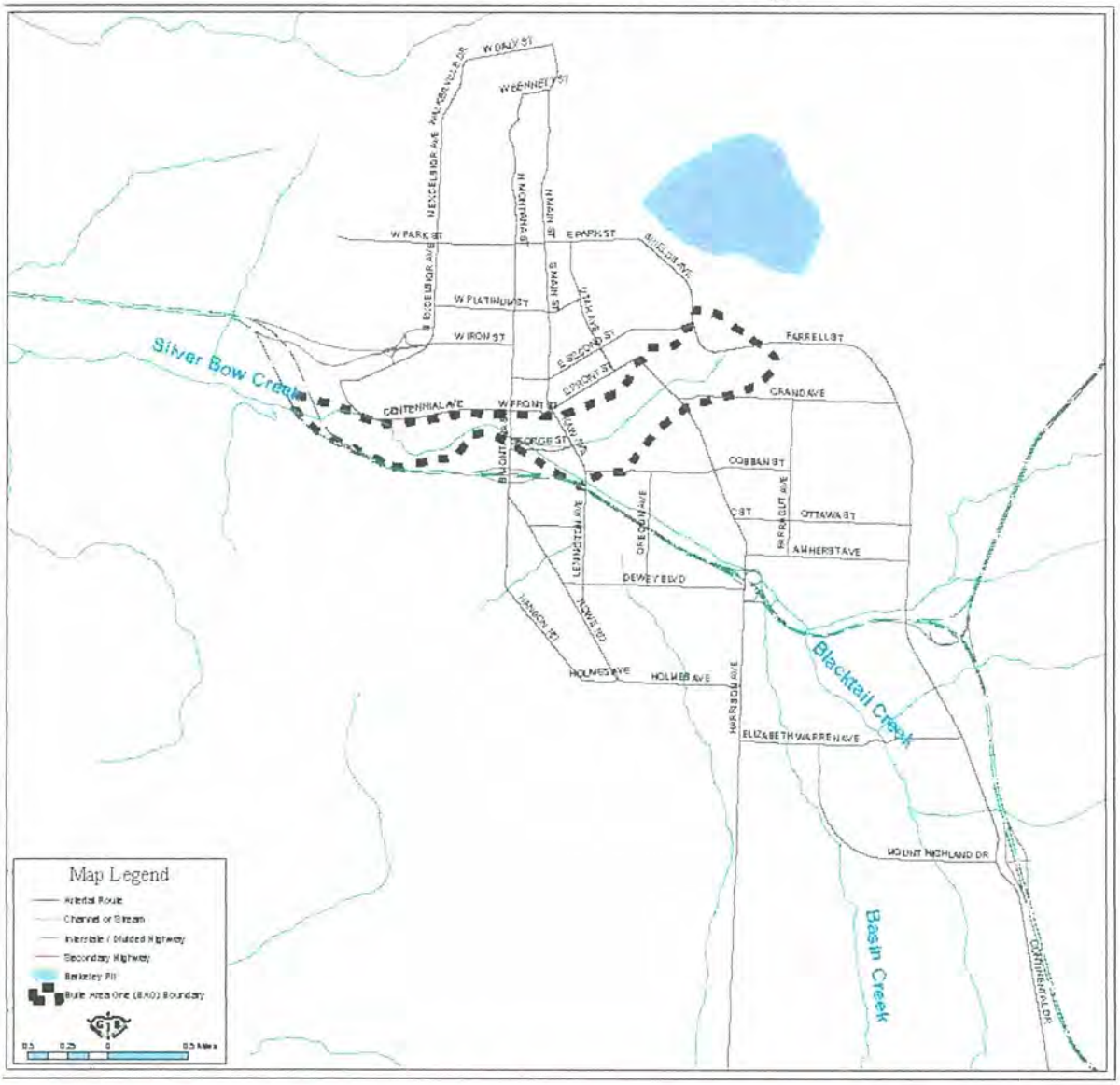
pcunneen@mt.gov

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Butte Area One Restoration Project Idea.

Butte Silver-Bow spends $5 Million a year in power bills to heat and light our school and government buildings. **That's $5 Million of tax payer's money sent directly out of state each and every year**. And that number will rise every year as power becomes more expensive.

The BNRC should spend the restoration money in a way that would benefit Butte **in perpetuity**.

The money should be spent to buy and install wind turbines on reclaimed land in and around Butte. The energy created would totally offset the massive power bills and free up millions and millions in tax dollars that would otherwise go out of state.

After six years the project would **recoup all costs** and **profits** would be realized. During the first six years Butte Silver-Bow will be **saving $5 Million** a year in power bills freeing up tax dollars to spend on infrastructure, **clean-up**, health programs, or whatever the people decide. After the initial six years, in addition to no power bills, Butte Silver-Bow would see **huge profits** which could be used to **lower taxes**, **improve the water system**, attract new business, and improve schools. The profits also could be **used for clean-up projects** for ever.

This is an idea that will **benefit Butte Silver-Bow in perpetuity**. I have seen this very idea work first hand in Denmark, where many municipalities have invested in themselves in this way with great success.

This idea, in my opinion, would be the most bang-for-the-buck. This is an idea that would serve us well for the next 100 years and longer as the benefits snowball.

Kevin D. Curtis
406-782-4149
Butte MT

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)
Robert E Olson 617 N Henry Butte, MT 59701 406 560-3791

Your Idea: Fully describe your concept.
To clean up the Blacktail and Bell creek area by Father Sheeran Park To Restore an area that has been constantly used and abused for many years. I would like to return it to or closely to its origion

Project Location: Describe the project location here and mark it on the map on back.
Just off Interstate 90/15 close to the Butte Plaza mall

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☒ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
Project Benefit are price less any time you can repair and restore something to it origin everyone would benefit and because of its location It is seen by everyone traveling by

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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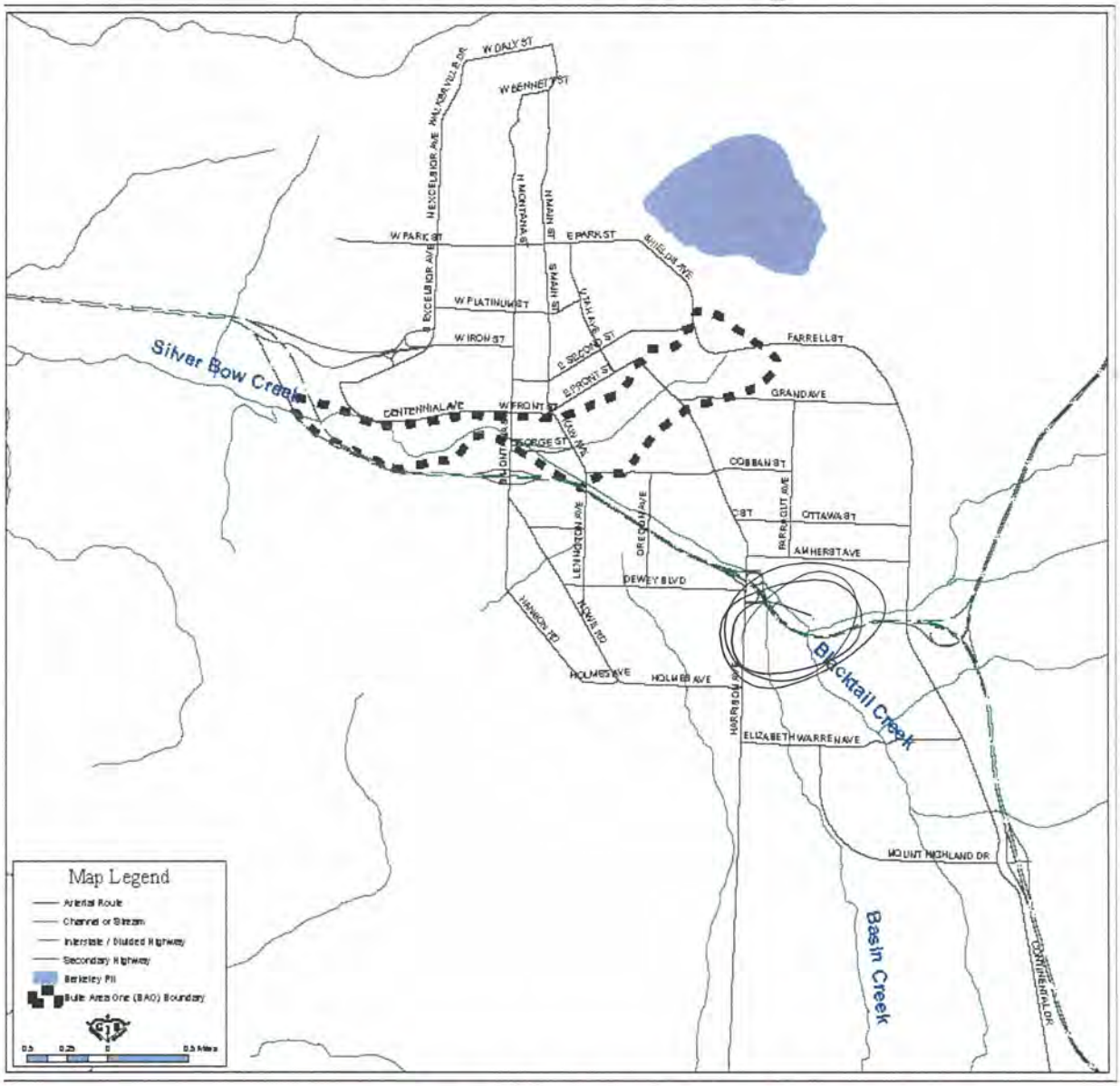

Robert Olson
617 W Henry
Butte, MT 59701

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)
Robert Elson, George Grant chapter of TU. 6.7 N Henry Butte MT 59701

Your Idea: Fully describe your concept. I would like to see a fish pond on Green gulch. I would like to incorporate bike trails and connect these trails to others in the area. The Pond itself would be a kids fishing Pond and would be stocked or annually Basse

Project Location: Describe the project location here and mark it on the map on back.
This Pond is located West of Coppy MT Baseball Fields The Pond is in Green Gulch

Project Type: Check the box(es) that is/are most applicable to your idea: I would like to reclaim the area back clean up all of the contaminated area returning it to a more natural state

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☒ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. I would hope that it returns that area to its orginal condition before mining and all of its continuing issues

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☒ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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State of Montana
Department of Justice

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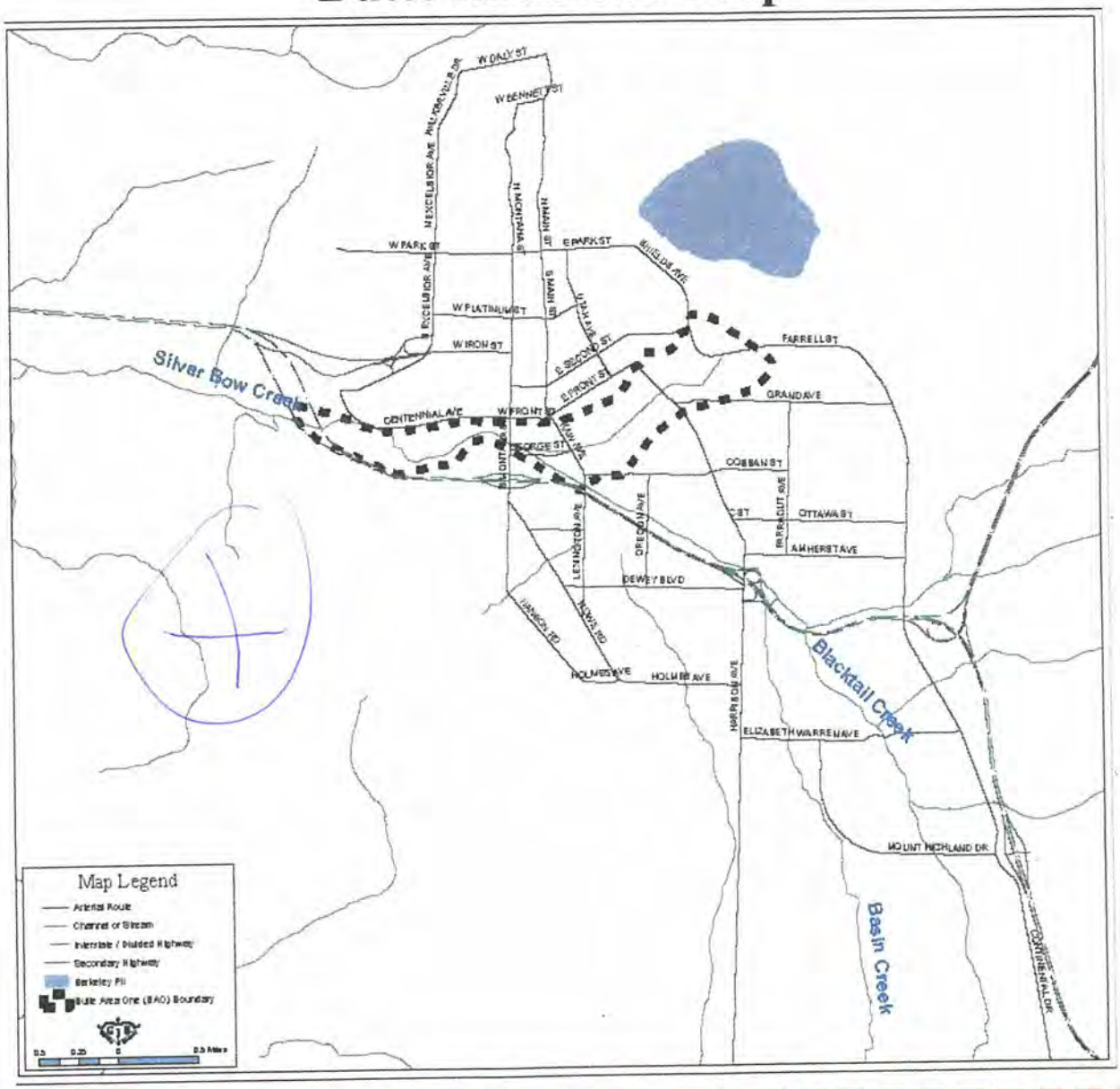
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



Schr + Olson
617 N Harrison
Butte, MT 59701

GREAT FALLS MT 59401
APR 19
PM
2012

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)
Robert Olson President of Sage Grant chapter of Rocky Mountain Elk Foundation
617 W Henry Butte, MT 59701

Your Idea: Fully describe your concept.
To totally restore this area when ground water has been an on going problem by reducing the area we could improve water quality that flows down the canyon

Project Location: Describe the project location here and mark it on the map on back.
This area is swamp area just South of I-90 I5 between Kaw and Oregon Ave

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☒ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
This project is in the heart of the Butte Area is was what everyone drives by sees when they travel by and hopefully stay in our community

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☒ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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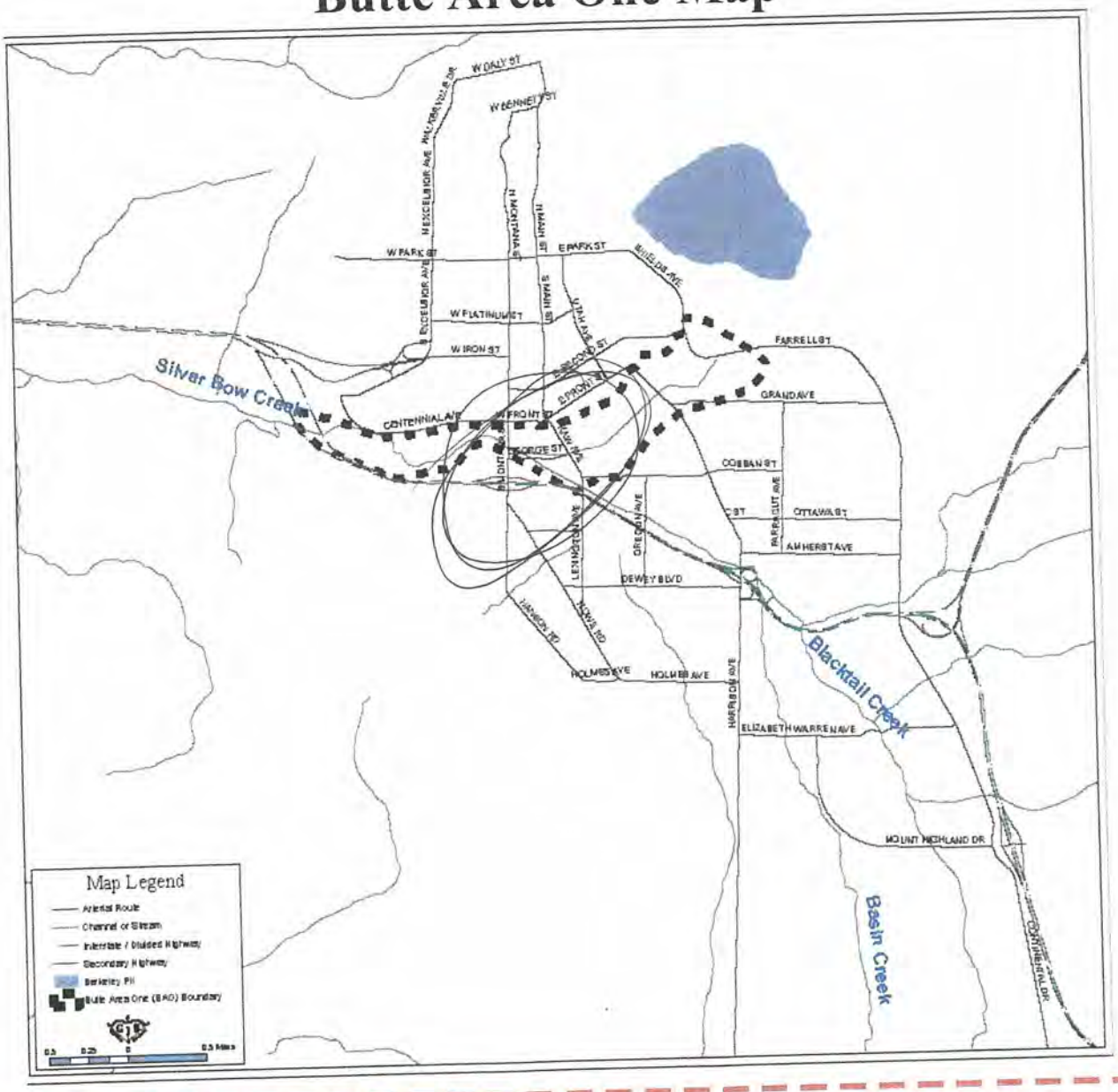


Olson
617 N Harvey
Butte MT 5970

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Prototype Phase II Restoration of Mine Covers

A Grant request to the BNRC

April 20th, 2012

For an amount of $ 206,823.09

Submitted by: Norman DeNeal
2001 Porter Avenue
Butte, Montana 59701-6243
(406) 723-6656
normandeneal@hotmail.com

Prototype Phase II Restoration of Mine Covers

Submitted by: Norman DeNeal
2001 Porter Avenue
Butte, Montana 59701-6243
(406) 723-6656
normandeneal@hotmail.com

The idea: A prototypical native restoration of a mine cover to illustrate what a mine cover could naturally look like 50-100 years from now.

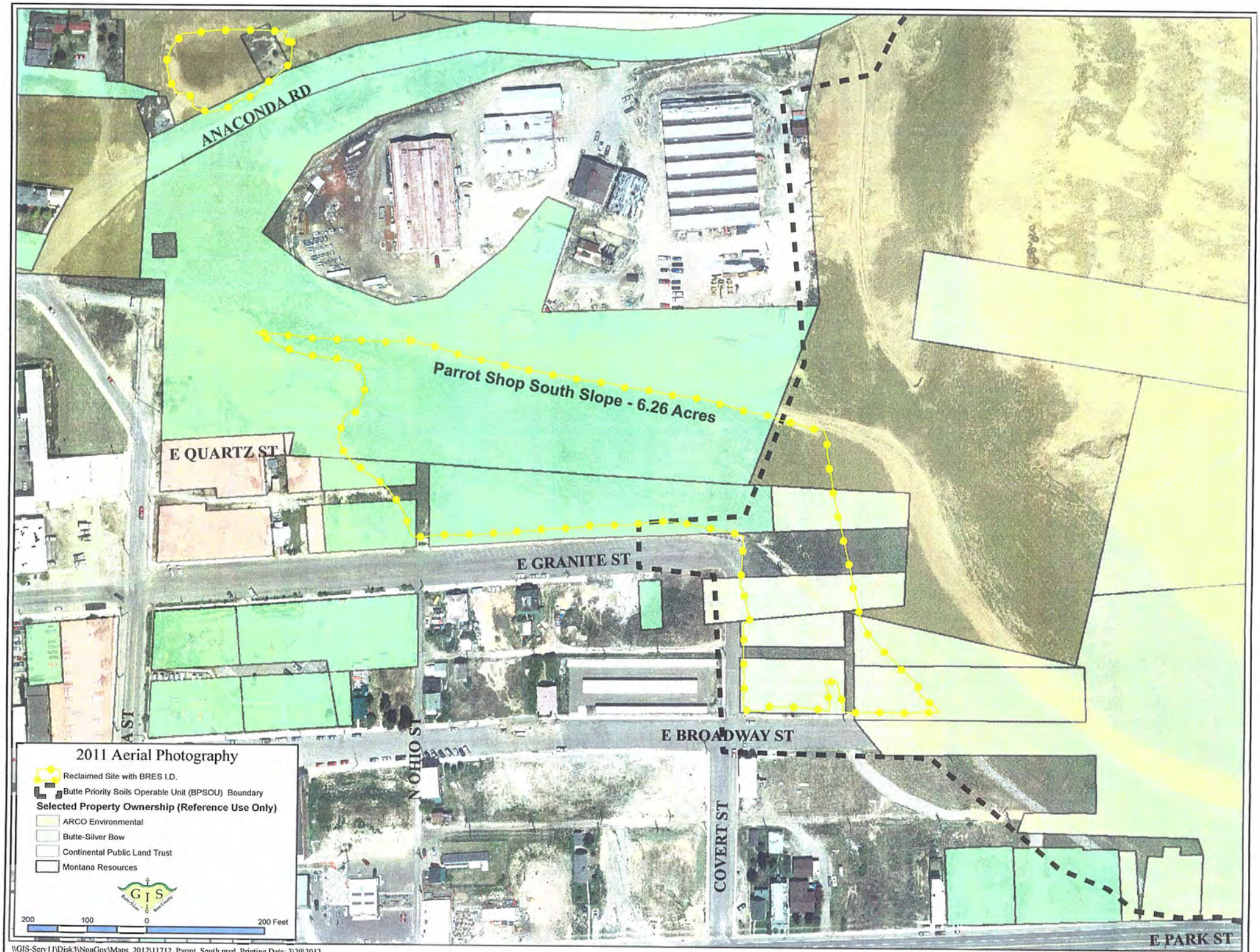
Location: The 6.26 acre Parrot south slope mine cover next to the present Helsinki Bar. The cover is east of Arizona Street to eat of Covert Street and north of Granite Street and north of Broadway. (see attached map).

Project type: Waste cap improvement, water system improvement, storm water control, recreation, and possible later historic interpretation.

Project benefits: (More details on pages 2-3)

1. Restoration of the native landscape that existed before mining in Butte
2. This would have only native plantings (with the exception of some Swedish aspen) that would be done on a mine cover that needs no additional costly soils that would ordinarily be needed for most other tree plantings
3. A refuge for browsing animals that move through the corridor from the Pilot of Butte Mine through to Montana Resources (presently there are deer, moose and fox that travel this corridor, most poached, though a few legally hunted)
4. A prototype of how other mines covers could be further vegetated at a lower cost than some other proposed ideas.
5. When established the landscape would provide better water retention less runoff than the present (though largely successful) grass cover
6. An excellent use of Montana Tech's native forbs/flowering plants in an area that will have water ensuring an excellent survival rate
7. Ensured success in that plantings would be done over a 3 year period (1/3 of the area planted for the first 3 years) to guarantee that any failures of application would appear in the first two years. Nevertheless, experience has already shown that everything anticipated has already been successfully achieved on other sites.
8. This location could possibly later be used to interpret the ethnic legacy of Finntown which was in this exact area. At that point the presently fenced area could be opened to the public as a recreation area. The plantings are specifically reminiscent of the native landscape of Finland
9. Plantings would be protected from vandalism by a present chain link fence that surrounds the area on 3 sides
10. BP-ARCO has agreed to amend their reclamation of the south toe of the cover along Granite Street to accommodate the planting of 30 Swedish aspen
11. Though this is proposed as a 12 year project with the use of city water, at the end of the 12 years the additional water will not be needed. The landscape would be self sustaining as is the native landscape north of Walkerville

Estimated cost: $ 206,823.09


ANACONDA RD
Parrot Shop South Slope - 6.26 Acres
E QUARTZ ST
E GRANITE ST
E BROADWAY ST
N OHIO ST
COVERT ST
E PARK ST
2011 Aerial Photography
Reclaimed Site with BRES I.D.
Butte Priority Soils Operable Unit (BPSOU) Boundary
Selected Property Ownership (Reference Use Only)
ARCO Environmental
Butte-Silver Bow
Continental Public Land Trust
Montana Resources
GIS
200 100 0 200 Feet
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PROJECT NARRATIVE

James Cook, who was one of the placer miners who came through Butte in 1864, noted in a journal the flora of the Butte landscape both along Silver Bow Creek and the Hill above the valley floor. Noted was there were large groves of aspen that extended south from present Walkerville down south through Dublin Gulch as far as Copper Street. There was also a mix of a few conifers, lodgepole pine and Douglas fir. It is this lost landscape that this proposal seeks to replace. And though the latter conifers may be tried since they have naturally grown along mine dumps in north Walkerville, they are problematic on the proposed Parrot site. Nevertheless, there are "smart" trees and "dumb" trees. The former are trees whose roots will avoid contaminated soils, and grow horizontally only along "clean" soils. Our native aspen (Populus tremuloides) are such trees. Indeed, they will grow in "clean" soils and avoid deeper contaminated soils. A case in point are aspen growing in Old Lexington Gardens near the Finlen Hotel that are growing in only 4 inches of soil avoiding the lead and mercury contaminated mill waste underneath. A closely related species (Populus tremula, var. erecta) Swedish aspen has a similar habit. It is these two species that will be the dominant plantings in this proposal. The advantage of this plan is that no further costly cover soil remediation is needed (Benefit #3). The Swedish aspen are not native. Nevertheless, they are proposed for two reasons: first that they are architectural (tall and columnar) that will define a path (or allee), and secondly they are reminiscent of the landscape of Finland that would be useful if this site is later developed into a public area interpreting the ethnic legacy of Finntown. The Swedish aspen would be placed along both sides of the culvert drain area that runs mostly east-west on this Parrot site. The culvert could act as the main trail/walking path through the site. A few other Swedish aspen would be placed along a present catch basin on the north side of Granite Street on the south toe of the cover.

Native aspen available as seedlings at a current cost of $1.10 each (though listed in the budget as $1.35 each to cover an anticipated cost increase through 2016), would be placed with 8 foot spacing. Within 4-6 years after being planted the aspen would sucker, increasing their spread. The native aspen are available through the Montana DNRC fields near Missoula, and delivered to Butte without cost. 4,941 native aspen trees would eventually be ordered over a three year period.

Swedish aspen are a different story. They are not grown by the MT DNRC, and would have to be ordered through a commercial wholesale nursery. They are only sold as larger trees, and thus the far greater cost per tree.

Additionally, native flowering planting are anticipated along the outside edges of the aspen. Mostly these would be fireweed, goldenrod, larkspur and sunflowers, rabbit rubberbrush and sage. Though both the aspen and flowering plants would require additional water to establish, after the 12 year period of this proposal, they would be able to maintain themselves without additional water, and the poly pipe could be easily removed.

Water would be delivered via an emitter system and through poly pipe lines that would not be buried thus preserving the present grasses that would be undisturbed. Aspen would only cover 2/3rds of the site leaving random fields of grass exactly similar to the way any native landscape would recover after a natural disaster such as a forest fire (or in this case mine reclamation). What is proposed here is basically how the Butte reclaimed landscape would look if Nature were to reclaim the land in 50-100 years.

Water for this project would come from a fire hydrant on North Arizona Street at Quartz Street. A temporary hose and meter hookup would be used similar to hookups for residences done when water main construction prohibits normal distribution to homes/businesses. Though there are hydrants along Granite and Broadway, too much pressure would be lost in pushing the water up to the top of the Parrot site. Water costs are based on increased water needs over the first 3 years of the project and taking into consideration a 10% increase of water costs for the first 3 years of the project.

Labor costs are based on an average 21/2 hours/day 7 days a week for a 6 month growing period for one employee. Nevertheless, more hours and workers would be needed in the spring and in the first three years of the project. But the average work hours would be the noted 2.5 hours/day. Included in the labor costs are standard Workers' Comp, through the Montana State Fund, and a 2.6% cost for Unemployment Insurance.

Though an option, there is a request for a wood chipper. This would provide cover compost and enhanced soils that would amend the present 2-3% organics in the mine cover soil. Amended soil and compost would provide additional water runoff protection. Furthermore, there would be 4 sites (including a drop off point on North Arizona at the Parrot site) where present yard waste that is not taken to the local landfill (because many residential occupants don't want to go through the trouble of delivering their waste as far as Rocker) could be collected for the wood chipper. This would not compete with yard waste taken to the landfill , or even yard waste taken to the "Alley Rally" site near NCAT, but collect much waste that ordinarily is picked up and not separated in normal garbage collection. Signage would be placed at collection sites and the program could be called "Waste into Reclamation" or something similar.

Though this is envisioned as a 12 year project, the final product will be self sustaining. Tree planting would be completed within the first three years, other native plants would be planted over the remaining nine years. The other native plants would be planted in areas where grasses would be removed to allow a few years of no competition by the present grasses. Though after the other native plantings are established, the native plants can then tolerate grasses growing within and among them. At the end of the 12 year period the aspen would be mature enough with a large enough canopy not to need auxiliary water, and the other native plants would naturally spread to maintain a natural ecological equilibrium.

Although the Parrot site is the chosen site for this project for the reasons given earlier, the theme of this proposal, namely to establish enhanced native plantings on a presently reclaimed area with soils and nearby water access, the project could be located elsewhere such as along walking trails, or the barren slope immediately east of the Berkeley Pit viewing access tunnel (which does not have adequate soils). Thus this proposal could be used as a guide noting an approximate cost per acre of $ 33.038.32/acre.

There is much detailed information that is not noted here. The present budget is based on the best estimates available at this time with hopefully all contingencies considered. Though for unanticipated costs a possible reasonable grant request could be for $225,000.

If you have questions, observations, or comments do not hesitate to contact me at your convenience.

BUDGET

Water delivery system

2" poly pipe	$1280.00	
1" poly pipe	1758.00	
1/2" poly pipe	9318.00	
Bubblers for Swedish aspen	376.00	
Emitting system for native aspen	344.00	
Filter and regulators	344.00	
Emitters	49.41	
Feed line from emitters	494.10	
Connectors for poly pipe	274.00	
Valves	102.00	
Connectors and hose from hydrant to water delivery system	117.00	14,556.51

BUDGET SUMMARY	
Water delivery system	**$14,556.51**
Trees/plant material	**21,169.31**
Yard waste chipper (optional)	**4,026.81**
Water	**44,985.00**
Labor	**122,085.46**
	$ 206,823.09

Trees/plant material

Native aspen: 4941 at 1.35/tree at 8 foot intervals for 67% of the total 6.26 acres	6670.00	
Swedish aspen 376 trees at 10 foot intervals @ 38.15/ea. for 4 foot		
1/2" caliper trees (7 gal pots)	14,342.31	
Other plant material from seed	157.00	21,169.31

Water

5 1/2 months from May 15th to Oct 31st

2013	1175.00	
2014	2585.00	
2015	3785.00	
2016	4160.00	
2017	4160.00	
2018	4160.00	
2019	4160.00	
2020	4160.00	
2021	4160.00	
2022	4160.00	
2023	4160.00	
2024	4160.00	
2025	4160.00	44,985.00

Labor

2.5 hours a day for 6 months 7 days/week at 13.85/hr with 3.5% annual COLA increase

2013	6988.00			
2014	17233.00			
2015	7486.00			
2016	7748.00			
2017	8019.00			
2018	8300.00			
2019	8571.00			
2020	8891.00			
2021	9202.00			
2022	9616.00			
2023	9826.00			
2024	10203.00			
2025	10559.00			
		112,624.00		
Workers' Comp (through MT State Fund)		6,533.24		
Unemployment Ins.		2,928.22	122,085.46	TOTAL: **$ 206,823.09**

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)
JIM RICKARD / JOHN RIORDAN
490-7679 949-7528
Your Idea: Fully describe your concept. DESIGN & BUILD A LIFT STATION (SEWAGE) WITH A PIPELINE TYING INTO AN EXISTING B.S.B. SEWERLINE SOUTH OF MT TECH. TO SERVE THE MINING MUSEUM

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☒ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. THE WORLD MUSEUM OF MINING HAS AN AGING & SUSPECT SEPTIC SEWER SYSTEM. BY REPLACING THIS SYSTEM IT PROTECTS SILVERBOW CREEK RESTORED CORRIDOR AS IT IS UPSTREAM
Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

- **Wednesday March 14**, 6 – 8 PM, Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
- **Tuesday March 20**, 6 – 8 PM, Butte-Silver Bow Public Archives, 17 W. Quartz St.

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

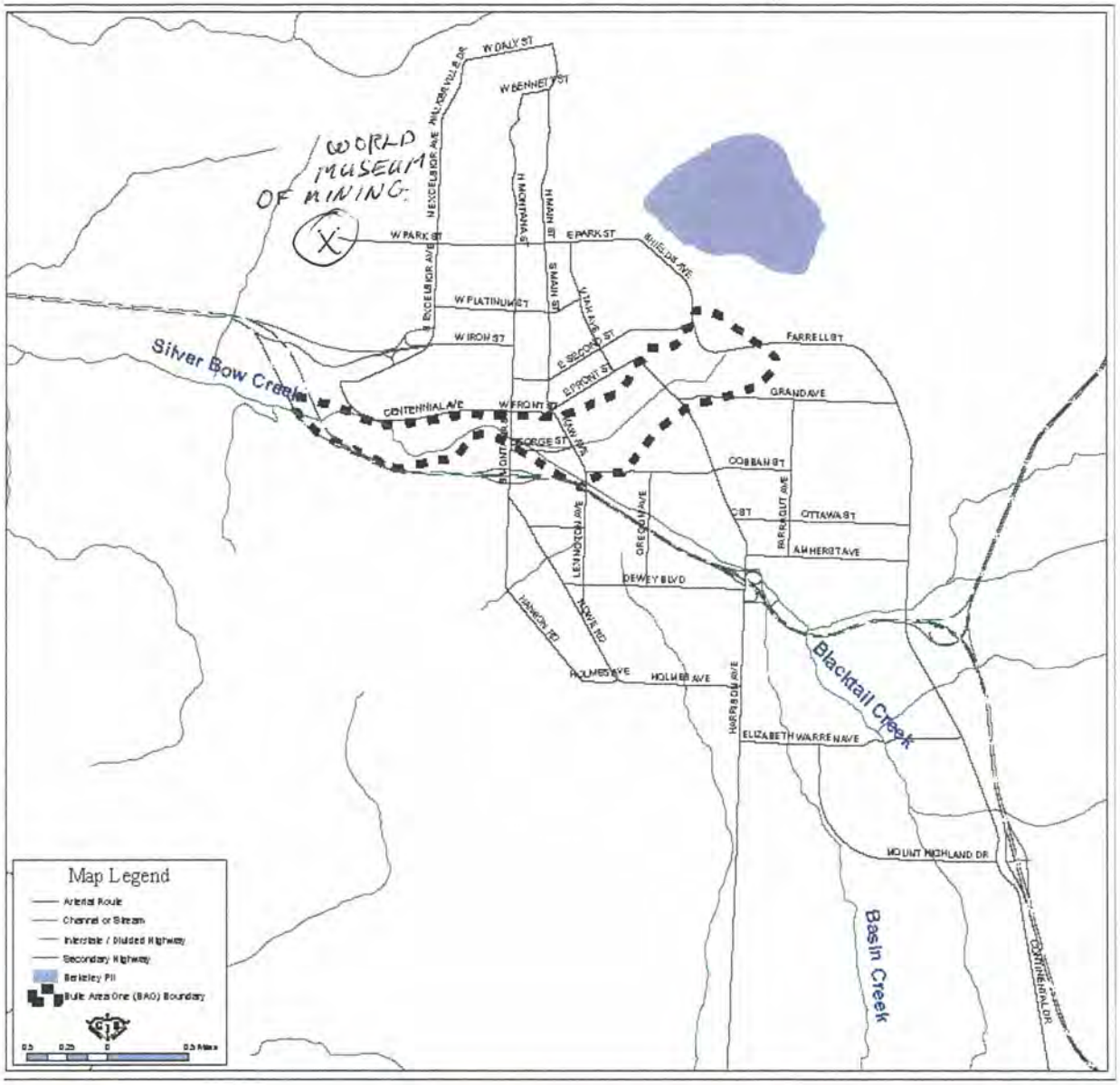
Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

X = Location + Down flow from Museum location + the Former Orphan Girl Mine

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

THE WORLD MUSEUM OF MINING
BUTTE, MONTANA USA EST. 1879

WHERE HISTORY TELLS A STORY

John Riordan, Business Agent
International Union of Operating Engineers Local 400
58 W Quartz St
Butte MT 59701

Dear Mr. Riordan,

Thank you for meeting with representatives from the World Museum of Mining (WMM).

Construction of the WMM began in 1965 by volunteers who had the foresight to recognize a vital piece of Butte's history should be preserved. The museum was operated by volunteers until the early 1990's when the first director was hired. Construction of the museum and any necessary maintenance was completed as time, labor and materials were available, essentially piece by piece, and section by section. Now, almost 50 years later the museum is faced with infrastructure concerns/issues.

The WMM has an aging and suspect sewer system and restrooms that do not adequately serve 15,000+ visitors, volunteers and staff. In order to continue the advancement of the museum while preventing possible contamination to the Silver Bow Creek and Butte Hill area, the WMM is requesting your assistance to design and build a lift station and pipeline that will tie into the existing Butte Silver Bow sewer line south of the Montana Tech campus. This in turn would allow for the construction of heated, ADA compliant restroom facilities with the waste properly disposed of.

As discussed, the WMM is a nonprofit organization that operates on a tight budget comprised of income from gate admissions, gift shop sales, memberships, donations and grants. The WMM is staffed by a small professional staff year round and a handful of seasonal employees during the open season, April - October. The income generated at the WMM sustains operations but is not enough to make the necessary infrastructure improvements required to maintain a safe, healthy environment for our visitors, employees and volunteers.

In addition to the sewer system I believe it is vitally important that we work together to explore the storm water runoff from the former Orphan Girl mine yard. Our current parking lot is gravel with no means to direct the water to a controlled destination. The excess water flows over the land. The potential for environmental damage/pollution from the runoff can be detrimental to the clean up that has occurred along the Silver Bow Creek.

Additionally, the WMM sits directly above a portion of the newly constructed Greenway Trails Project which was partially funded by the NRD. Having a reliable means to dispose of waste material and drainage basins to prevent potentially contaminated material from reaching the trail is vital.

I look forward to working with you and representatives from Butte's local unions!

Sincerely,

Tina Davis
Executive Director

cc: Jim Rickard, Montana Labor – Management Alliance
Cinda Seys, Butte Silver Bow Safety & Risk Manager

WATER & ENVIRONMENTAL TECHNOLOGIES

Consulting Scientists & Engineers
480 East Park
Suite 200
Butte, MT 59701

Phone: (406) 782-5220
Fax: (406)723-1537

April 16, 2012

World Museum of Mining
155 Museum Way
P.O. Box 33
Butte, MT 59701

Re: Mining Museum Infrastructure Upgrades

Dear World Museum of Mining Board of Directors,

At the request of the World Museum of Mining (WMOM) Board of Directors, Water & Environmental Technologies (WET) has prepared a conceptual plan and cost estimate for infrastructure improvements at the WMOM facility in Butte, MT (**Figure 1**). The museum does not currently have adequate facilities to accommodate visitors during the peak season (summer); as a result, improvements to the existing sanitary sewer system and parking lot area are proposed. These improvements will allow the WMOM to provide more reliable services to its visitors, while also improving water quality through the removal of historic drainfields and retention of runoff peak flow. Details of the proposal are included in this document along with an attached cost estimate.

Existing Utilities and Background

The WMOM has City water available at the site; however, due to distance and grade issues it is currently is not connected to the Butte sanitary sewer system. The facility has three public restrooms and one utility sink located on the site, which are treated through three septic tank and drainfield applications; however, the systems have been altered on multiple occasions and location/details of these changes are not well documented. Two of the restrooms are seasonal and are shut down in the winter due to freezing lines, and there is no restroom in the gift shop. Existing infrastructure at the WMOM is shown in **Figure 2**.

In 2008, Butte Silver Bow asked WET to research alternatives for wastewater extension at the WMOM. Gravity sewer connection to the BSB system was technically unfeasible and was thereby not evaluated. As a result, WET evaluated on-site subsurface wastewater treatment upgrade/replacement, and two types of low pressure sewer systems. WET recommended the Effluent Sewer system by Orenco based on site conditions, topography, and location of the nearest sewer line. The 2008 report completed for BSB is included as **Attachment A**.

Proposed Sanitary Sewer Upgrades

In order to adequately provide reliable sanitary sewer service to the WMOM for visitors and employees, WET recommends the following upgrades to the sanitary sewer system:

- Three pre-cast concrete restrooms units;
- New underground plumbing from restrooms to a central location;
- An Orenco Effluent Sewer System to handle sewer effluent;
- Effluent line from the Orenco system to the nearest BSB sanitary main, which is located in the south Montana Tech HPER parking lot; and
- Decommission existing septic systems.

The proposed sanitary sewer layout is shown in **Figure 3**. WET has specified the Cortez pre-cast model from CXT Pre-Cast Products, as they have been used with success at other public park and recreation locations in the Butte area. Information on these units is included in **Attachment B**. The pre-cast bathroom units will replace the existing bathroom and septic systems, with an additional unit installed at the gift shop. This restroom will also be available to recreational users of the Greenway Trail, which is located near the WMOM parking lot. The three pre-cast units will be connected with gravity pipe to a central location where the Orenco Effluent Sewer System will be installed. The effluent sewer alternative will include a watertight tank for primary treatment and a patented Biotube® Pump Vault to filter out solids. The Orenco system will also require a 2-inch low pressure line, which can be installed just below the frost line, and includes two clean-outs.

An Orenco representative identified a pump and Effluent Sewer tank that would accommodate the estimated wastewater volume from the WMOM based on the daily average of 100 visitors per day and an assumed peak of 200 visitors per day. Utilizing the DEQ Circular 4 estimate of 5 gpd per visitor, the systems would be required to accommodate 500 and 1000 gallons per day, respectively. The PF50 Series pumps adequately convey wastewater flow and provide the total dynamic head required to reach the sewer main. The tank volumes account for at least a three day holding capacity in the event of a power outage. A backup pump is also included for redundancy.

The 2-inch low pressure effluent line would be installed from the WMOM property along the existing street right of way south of the HPER complex, to an existing BSB manhole in the lower HPER parking lot. BSB Metro Sewer personnel have reviewed the proposed alignment and will allow the line to be connected at the manhole. This line will need an easement from Montana Tech.

Parking Lot Improvements

The WMOM currently has access from the east and north to the facility; however, segments of the access roads nearest the WMOM and the entire parking lot area are unpaved. This leads to drainage problems and erosion in the area, which eventually reaches Silver Bow Creek. In order to eliminate these issues as well as improve accessibility to the facility, the WMOM proposes the following parking lot upgrades:

- Pave the current dirt/gravel portions of the WMOM access roads and the upper WMOM parking lot (Figure 3).
- Install include curb and gutter and ditches to route storm water runoff to a central detention pond. This pond will retain peak flows from the area and eliminate erosion and drainage problems in the area.

Cost Estimate

The estimated cost to complete the World Museum of Mining infrastructure improvements is **$435,333.60**. Major tasks are included below:

Task 1. Sanitary Improvements:	$316,231.00
Task 2. Parking Lot Drainage Improvements:	$ 47,547.00
Engineering & Oversight (10%):	$ 36,377.80
Contingency (10%):	$ 36,377.80
Total Cost:	**$436,533.60**

The WMOM Board of Directors has committed to provide project administration and oversight for the project as an in-kind service. Estimated at 5% of the construction cost the in-kind total will be $18,188.90. The WMOM has discussed the potential for additional in-kind services by contractors and suppliers. Any in-kind services would result in a reduction in requested grant funds. Lastly, the WMOM Board is planning to apply for a matching grant through the State of Montana's Reclamation and Development Grants Program (RDGP). If successful, the WMOM would cost share the project between the two grant programs.

If you have any questions, please contact me at (406) 782-5220.

Sincerely,

Josh Vincent, PE
Principal Engineer

Figures:

1. Site Location Map
2. Existing Utilities
3. Proposed Improvements

Attachment:

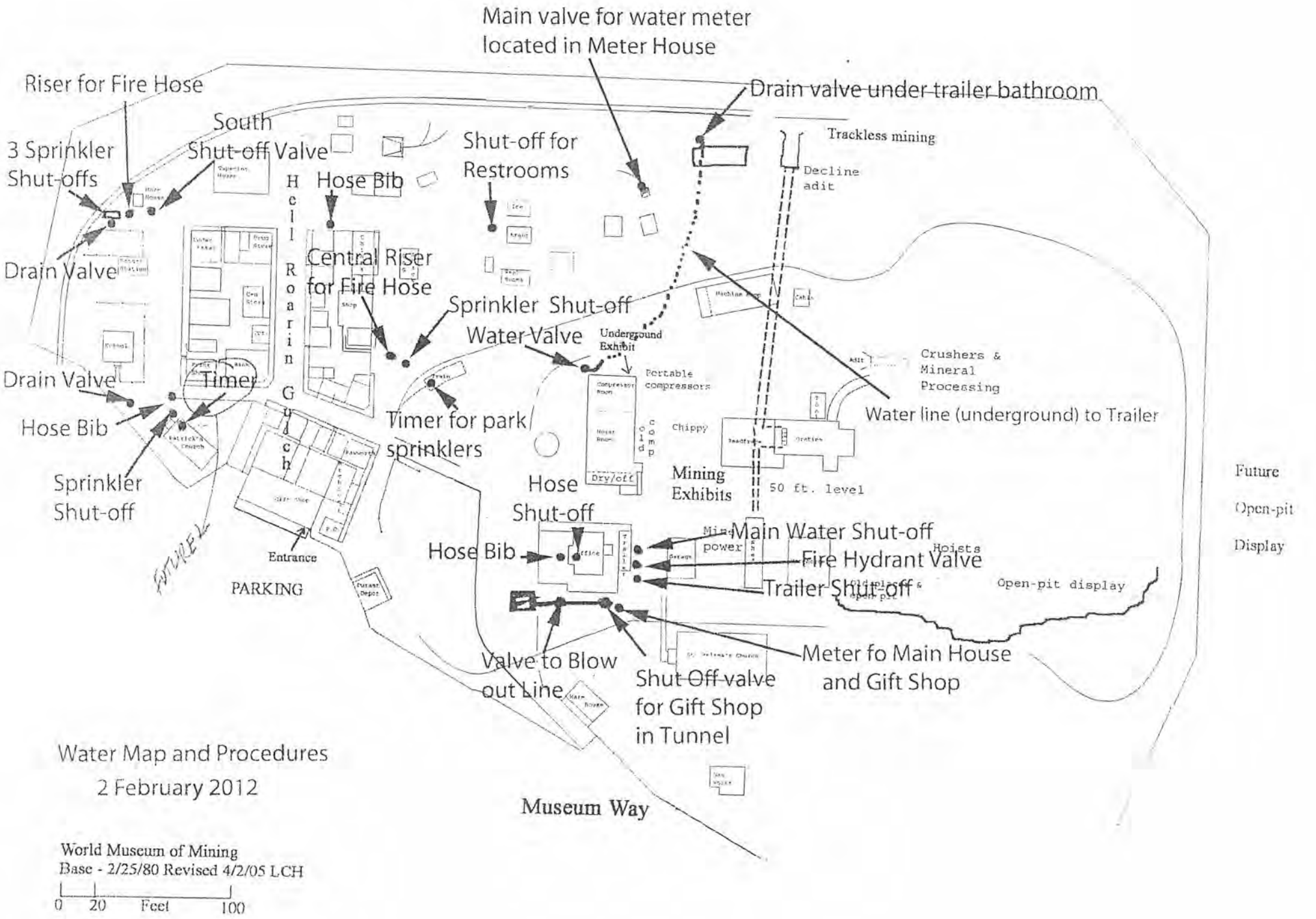
A. 2008 Sewer Evaluation Report
B. Cost Estimates and Drawings for Orenco Effluent Sewer
C. CXT Precast Cortez Restroom Cost Estimate and Specifications

FIGURES

ATTACHMENT A.
2008 SEWER EVALUATION REPORT

ATTACHMENT B.
ORENCO EFFLUENT SEWER INFORMATION

ATTACHMENT C.
CXT PRE-CAST COTREZ BATHROOM INFORMATION


Main valve for water meter located in Meter House
Riser for Fire Hose
Drain valve under trailer bathroom
South Shut-off Valve
3 Sprinkler Shut-offs
Shut-off for Restrooms
Trackless mining
Decline adit
Hell Roaring Gulch
Hose Bib
Central Riser for Fire Hose
Drain Valve
Sprinkler Shut-off Water Valve
Underground Exhibit
Portable compressors
Crushers & Mineral Processing
Drain Valve
Timer
Timer for park sprinklers
Water line (underground) to Trailer
Hose Bib
Chippy
Sprinkler Shut-off
Hose Shut-off
Mining Exhibits
50 ft. level
Future Open-pit Display
Main Water Shut-off
Hose Bib
Fire Hydrant Valve
Trailer Shut-off
Hoists
Open-pit display
Entrance
PARKING
Valve to Blow out Line
Shut-Off valve for Gift Shop in Tunnel
Meter fo Main House and Gift Shop
Museum Way
Water Map and Procedures
2 February 2012
World Museum of Mining
Base - 2/25/80 Revised 4/2/05 LCH
0 20 Feet 100

World Museum of Mining
Effluent Sewer Cost
April 16, 2012

Task Description	Estimated Quantity	Units	Unit Cost	Total Cost
Task 1. Sanitary Improvements				
CXT Cortez Precast Bathroom	2	LS	$40,927.00	$81,854.00
CXT Cortez Precast Bathroom - Heated	1	LS	$49,877.00	$49,877.00
Bathroom Foundation Construction	3	LS	$3,000.00	$9,000.00
Bathroom Installation - Montana Crane	1	LS	$6,000.00	$6,000.00
Plumbing Hardware Installation	3	LS	$2,500.00	$7,500.00
Electrical Hardware Installation	3	LS	$2,000.00	$6,000.00
Orenco Effluent Sewer System	1	LS	$18,000.00	$18,000.00
Gravity Sewer Connections - On-Site	500	LFT	$75.00	$37,500.00
Low Pressure Effluent Sewer Line - To BSB Main	1,300	LFT	$75.00	$97,500.00
Surface Restoration - MT Tech Property	1	LS	$3,000.00	$3,000.00
			Task 1. Total	**$316,231.00**
Task 2. Parking Lot and Drainage Improvements				
Parking Lot Grading	1	LS	$5,000.00	$5,000.00
Parking Lot Construction - Asphalt	422	SYDS	$26.00	$10,972.00
Curb and Gutter	863	LFT	$25.00	$21,575.00
Culvert/Ditch Installation	1	LS	$5,000.00	$5,000.00
Storm Water Pond	1	LS	$5,000.00	$5,000.00
			Task 2. Total	**$47,547.00**

Project Cost:	**$363,778.00**
Engineering/Oversight (10%):	**$36,377.80**
Contingency (10%)	**$36,377.80**
Grand Total:	**$436,533.60**
Admininstration (5% - In-Kind):	$18,188.90

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 M claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by Dec. 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)

Interim Greeley Neighborhood Community Coalition
Attn: Steve McGrath
2601 Grand Ave
Butte, MT 59701
Phone: 406-422-3253
E-mail: smcgrath@mtech.edu

Your Idea: Fully describe your concept.

It is the proposal of the Greeley Neighborhood Community to remediate, restore and revitalize the portion of the Horse Canyon Creek. Historically, Horse Canyon Creek carried Montana natural drainage waters as a tributary of Silver Bow Creeks. Implementation of this proposal would consist of three phases:

Phase 1: ***Remediation*** *– testing for and removal of contaminated soil, as a part of the next phase of the West Side Soils Operable Unit of the Silver Bow Creek/Butte Area Superfund site, (See US EPA letter of Jul 18, 2011 to be attached.).*

Phase 2: ***Restoration*** *– replacement of contaminated soil with soil that is conducive to healthy vegetation and introduction of native planting with additional landscaping which will protect the structural integrity of Farrell Street.*

Phase 3: ***Revitalization*** *– Building a View Point Park on the east remnant of Farrell Street, the street that leads to the Columbia Gardens. A site where with temporary un-obstructive signage similar to what is located at other restoration sites the stories of: The Summit Valley, Lady of The Rockies, Columbia Gardens, The Lost Neighborhoods, Railroading Over The Rockies, The Active Mine (Montana Resource's Continental Pit - Moving Mountains to Connect a World), Ecological Friendly Handling of Mine Tear, No-Ecological Friendly Handling of Mine Tear In The Past (Berkeley Pit), Ecological Friendly Montana Resource's Modern Concentrator, Introduction to Historic Butte-Anaconda Region.*

Volunteer services facilitate proposal will be provided and solicited by Interim Greeley Neighborhood Community Coalition.

Montana State University has also provided support for project. Please see attached:

Project Location: Describe the project location here and mark it on the map on back.

The proposed site of this project would be the portion of the Horse Canyon Creek located adjacent to Farrell Street, on the eastern side beginning at Texas Street and continuing on to Continental Drive to Grand Ave. West and East of the BNSF railroad track, east of Continental Drive. This is a distance of approximately 1.5 miles in length. (See

Attachment 1)

Project Type: Check the box(es) that is/are most applicable to your idea:

■ mining waste removal ■ waste cap improvement ■ stream (bed) restoration ■ re-vegetation

☐ recreation/fishing ☐ water system improvement ■ storm water controls ■ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

The Horse Canyon Creek Project proposal would benefit the Greeley Neighborhood Community and the entire Greater Butte Silver Bow Community by:

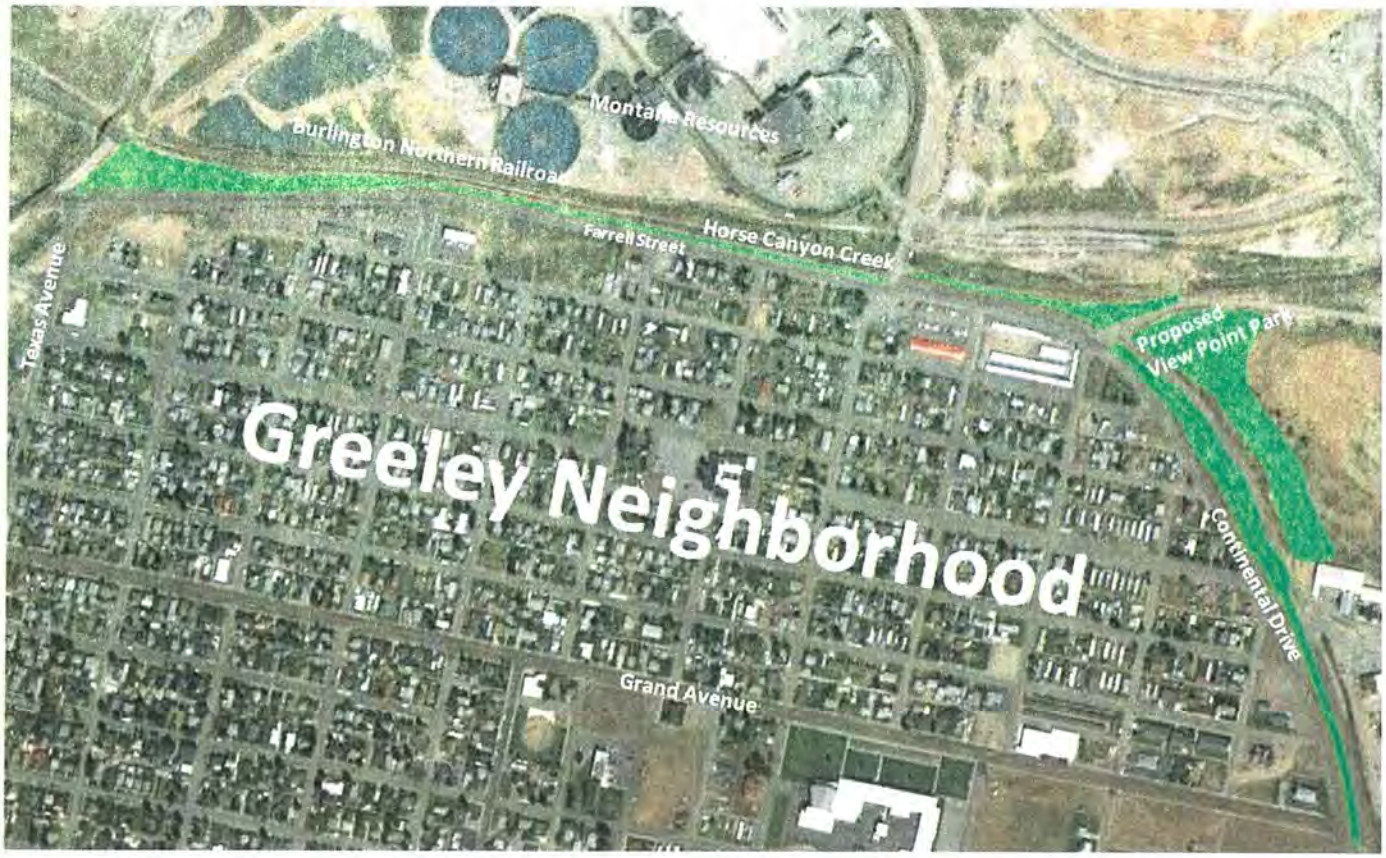
- *Removing and/or encapsulating contaminated soil from area, using native planting to restore area to pre-mining state.*
- *Creating an esthetic greenway promoting cooperative living between active mining operations and residential neighborhoods.*
- *Restoring an existent stream bed to better handle natural storm water runoff.*
- *Encouraging on going community involvement in revitalization of the Greeley Neighborhood and Greater Butte Silver Bow by developing an attractive and meaningful introductory and interpretive View Point Park depicting the entrance into historic uptown butte.*

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K

■ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Proposed Site Map for Horse Canyon Creek Project
Attachment 1



MSU proposes to engage in the conceptual design of the project in the following manner:
First Step, MSU First Semester: Ground Proofing

1. CDC provides two architecture students to help establish the base nature of the project by researching the history, regulation, and surroundings of the project along with establishing the ground contours for the extent of the project by converting the data cloud collected in item 2 below into a digital mesh to use as a background for design in the Second Step.
2. CDC collaborates with the MSU Billings College of Technology to photographically document the site using 3-D photography and Geographic Information Systems (GIS) based technology to create a cloud of data points that in turn will be converted to a digital mesh in item 1 above.

Second Step, MSU Second Semester: Conceptual Design

1. An interdisciplinary team consisting of architecture, landscape architecture, and civil engineering students will be organized to develop design alternatives for the project. The team will explore the project as it relates to brownfield site issues, contaminates present, hydrology, plant materials, cultural resources, manmade structures, urban planning impacts, and remediation strategies.
2. The objective of the conceptual work will be to build consensus among local community groups and residents surrounding the area for a master plan to develop the Horse Canyon Creek bed area so that it becomes an attractive gateway to the Butte-Anaconda Regional Historic District and amenity for the residents of the area while creating a more healthy local living environment while enhancing the health of drainages downstream from the site.

Third Step: Implementation (a suggestion)

1. In the event that a professional design team is selected to execute the final design work outlined in the first two Steps, it is hoped that MSU students might have some continued input on the direction and progress of the project through a collaboration or internship with the professional design team.

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 M claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by Dec. 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)

Hoffman Families
Phone: 406-490-0772
E-mail: dhoffman@cccscorp.com

Your Idea: Fully describe your concept.

It is proposed to remediation and restoration the North Side Tailings by removing the contaminated soil.

Project Location: Describe the project location here and mark it on the map on back.

The proposed site of this project would be the land north of George St., south of Casey St. and east of Kaw Ave.

Project Type: Check the box(es) that is/are most applicable to your idea:

■ mining waste removal ■ waste cap improvement ☐ stream (bed) restoration ■ re-vegetation
☐ recreation/fishing ☐ water system improvement ■ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
The North Side Tailings Project proposal would benefit the Neighboring Community and Butte Residents in general:

- *Removing and/or encapsulating contaminated soil from area, using native planting to restore area to pre-mining state.*
- *Removing the contaminated soil would benefit both the surface and ground water in the area. This area is in close proximity to the Silver Bow Creek and the adjoining Belle Creek. Removing contaminated soil would prevent any future run off/ground water issues that could contribute to future contamination of these areas.*
- *Protecting the community children from harmful effects of heavy metals and other toxins. Children residing in the area have for generations used the area as a Moto-Cross or BMX Track. The children also revert to using the Diggings East Tailings as a track. At the very least a sign should be placed in the area warning the children and parents of the potential harm present in the area.*
- *Neighboring area residents would not be subjected to the harmful dust that is produced in the area.*

Estimated Cost: How much would your project cost? ■ don't know ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 M claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by Dec. 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)

Deeanna Queer/Travis Hettick/The Steele Family/KOA Kampgounds-Butte
Phone: 406-490-5758
E-mail: dhoffman@cccscorp.com, thettick@cccscorp.com

Your Idea: Fully describe your concept.

It is proposed to remediation and restoration the East Diggings Tailings by removing the contaminated soil.

Project Location: Describe the project location here and mark it on the map on back.

The proposed site of this project would be the land south of George St. and east of Kaw Ave.

Project Type: Check the box(es) that is/are most applicable to your idea:

■ mining waste removal ■ waste cap improvement ☐ stream (bed) restoration ■ re-vegetation
☐ recreation/fishing ☐ water system improvement ■ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
The East Diggings Project proposal would benefit the Neighboring Community and Butte Residents in general:

- *Removing and/or encapsulating contaminated soil from area, using native planting to restore area to pre-mining state.*
- *Removing the contaminated soil would benefit both the surface and ground water in the area. This area is in close proximity to the Silver Bow Creek and the adjoining Belle Creek. Removing contaminated soil would prevent any future run off/ground water issues that could contribute to future contamination of these areas.*
- *Protecting the community children from harmful effects of heavy metals and other toxins. Children residing in the area have for generations used the area as a Moto-Cross or BMX Track. Previously, city officials have used heavy equipment to tear down the tracks on East Diggings Tailings. This had little effect and the children subsequently created new tracks. The children also revert to using the North Side Tailings as a track. At the very least a sign should be placed in the area warning the children and parents of the potential harm present in the area.*
- *Neighboring area residents would not be subjected to the harmful dust that is produced in the area. Residents use the area consistently as walking and dog walking trail.*

Estimated Cost: How much would your project cost? ■ don't know ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 M claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by Dec. 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)

Interim Greeley Neighborhood Community Coalition
Attn: Deeanna Queer
2601 Grand Ave
Butte, MT 59701
Phone: 406-490-5758
E-mail: dhoffman@cccscorp.com

Your Idea: Fully describe your concept.

Construction and/or replacement of storm water system, curbs and gutters in the Greeley Area.

This area is in dire need of an effective storm sewer system. A neighborhood study on the Greeley Area in 2010 cited:

"Greeley area lacks adequate storm water collection system. The streets are paved, but do not have curb and gutter throughout most of this neighborhood. There are random sections of curb but not enough to effectively collect or distribute storm water. The area is predominately flat and the undirected storm water ponds in the graveled boulevards until it is absorbed in the gravels or evaporates."

This particular area is in close proximity to the Silver Bow Creek. The existing system possibly ties into the Silver Bow Creek. The additional water collects as surface water, and seeps into ground water, due to the inadequate storm sewer system, should be additional water flow that is incorporated into the Silver Bow Creek.

Project Location: Describe the project location here and mark it on the map on back.

The proposed site of this project would be the area east of Texas Ave.; west of Continental; south of Farrell St.; north of Grand Ave.

Project Type: Check the box(es) that is/are most applicable to your idea:

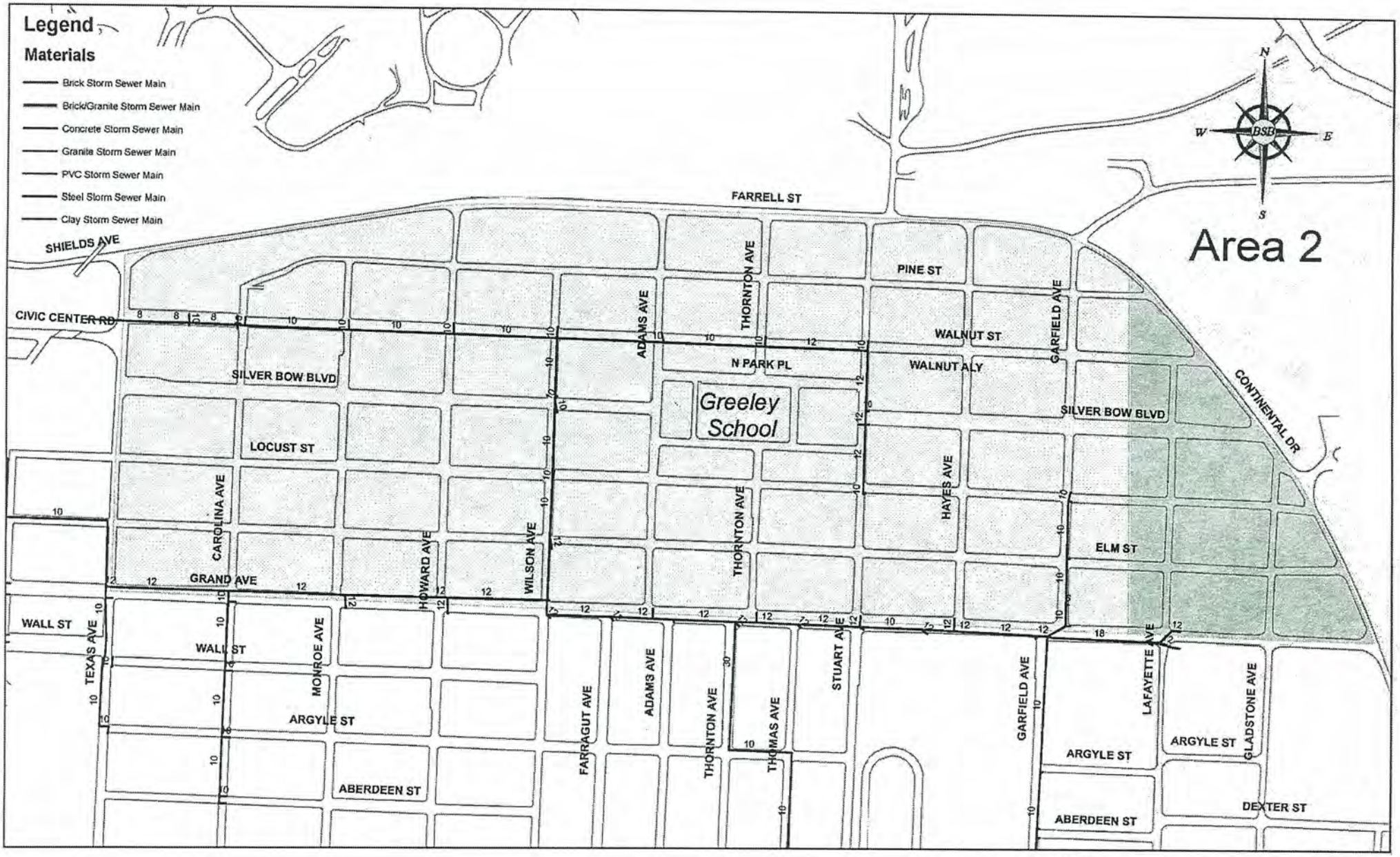
☐ mining waste removal ☐ waste cap improvement ☐ stream (bed) restoration ☐ re-vegetation
☐ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

This project would benefit the Greeley Area Residents by:

- *Distribute storm water properly, which will eliminate the pooling of surface water in neighborhood resident's property causing premature rotting and general damage.*
- *Prevent further damage to the area road systems*
- *Eliminate additional contaminated ground water.*

Estimated Cost: How much would your project cost? ☒ don't know ☐ less than $100K ☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M



Greeley Neighborhood Storm Sewer System

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)

Kristin Snyder Douglass, MT Tech

Your Idea: Fully describe your concept.

Provide native plant diversity through Dispersal Islands

Project Location: Describe the project location here and mark it on the map on back.

On "caps" and disturbed areas as coordinated through BSB

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☒ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Will lead to reduced sediment to streams/SO will help protect the caps by reducing erosion, will promote greater stability & healthier ecological function.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☒ $1M to $5M ☐ more than $5M

over 10 years

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- **Wednesday March 14**, 6 – 8 PM, Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
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Natural Resource Damage Program
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Department of Justice

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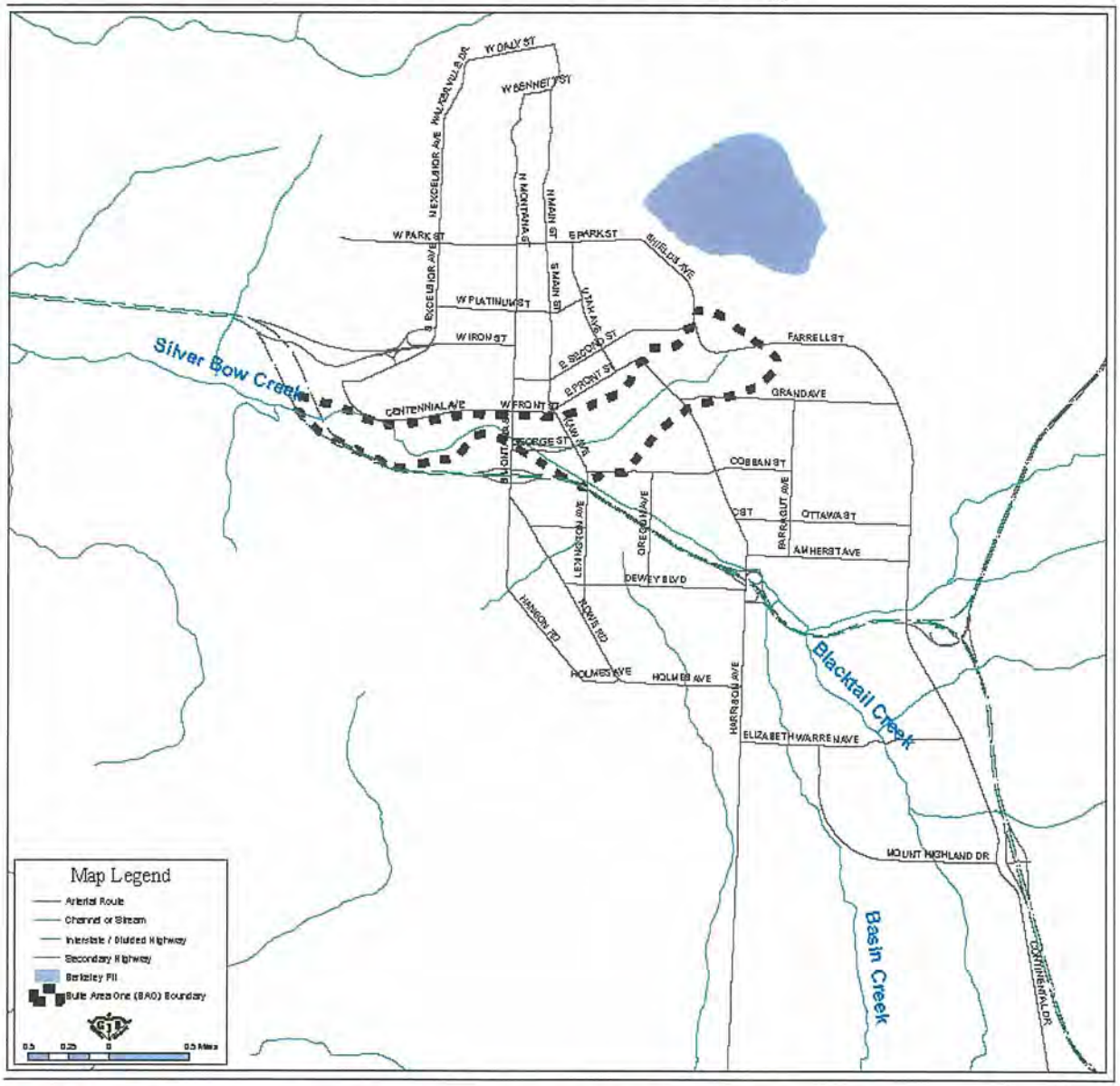
Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



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Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

REQUEST FOR CONSIDERATION OF CONTINUED FUNDING

Submitted by Kriss Douglass

18 April 2012

-- Total budget expected to be approximately $250,000 per year

This is a request for continued funding of the project, "Restoring Native plant diversity in the Upper Clark Fork Basin; A demonstration project using novel techniques to produce sustainable and weed resistant natural plant communities." We will finish the Demonstration Project December 2012 and submit a final report.

In 2013 we will begin full application of the project. This project will help stabilize the caps reducing the movement of sediment and mine waste contamination into surface water.

This project was funded in 2008 by NRDP for three years. Primarily because of much reduced expected costs for soil, and successfully re-directing that money toward salaries, we are able to extend the project through year four, December 2012.

We hope to extend the project for at least another ten years.

GOALS

DISPERSAL ISLANDS, WITH AND WITHOUT FORB SODS

Our 'selling point' was production of Dispersal Islands. As maintenance of the caps and other restoration activities proceed, we will continue to establish dispersal islands as sources for increasing the native plant diversity on remediated sites and also to enhance projects including the planned Fishing Pond Park area.

During the past three years we prepared 14 sites. Some are dispersal islands centered on forbsods, some are interplantings (planting forbs and shrubs among grass plants on the caps) of tubelings and cubelings to determine if these approaches are successful approach to increasing diversity; some are straight seeding on bare, prepared sites, and some are interseeding into the current grass covered remediated sites. We have learned and modified our approach as we observe these sites and will have full descriptions in our final report at the end of 2012.

FORB SOD PRODUCTION

Producing forbs in sods enables us to baby young plants through the early stages of establishment. Putting forb sods on the ground produces an immediate "meadow" which acts as an island to produce seeds which will disperse into the adjacent sites and eventually increase the diversity of vegetation. Forb sods in many cases enhance our ability to create Dispersal Islands.

SEED COLLECTION

In the past 4 years we have collected seeds locally from 130 species of forbs, 38 species of shrubs, 7 species of trees and 20 spp. of grass. These seeds require particular cleaning and storage.

BREAKING DORMANCY OF COLLECTED SEED

Because many seeds require particular treatment-- stratification (cold treatment) and/or scarification (chemical or mechanical treatment to soften the seed coat), once they are treated they are immediately ready to germinate. However, because of the 'production line" character of our project; there likely are not sods ready to accept seeds that come out of stratification. Therefore most of these seeds are planted individually into pots so they can be transplanted later.

FORB ORCHARD AND SHRUB NURSERY

Seed collection is a time consuming, back breaking cost-inefficient process. In order to improve this process we established an orchard of forbs and shrubs. We maintain these plants and give them maximal growing conditions so that they will produce seeds which are fully developed and we can much more easily collect. The orchard has been in production for two years and has proven to accomplish what we planned. Currently there are 56 species of forbs and 10 species of shrubs present. **We intend to continue to increase the size of the forb orchard and shrub nursery in the future.**

INCREASED FACILITY

Our overwintering sheds have proven to be very successful. The tubelings and cubelings that are not outplanted during the growing season are kept through the winter in temporary greenhouses funded by Mt Tech, built by Rick Douglass and Krystal Weilage. Keeping these plants through the winter provides material to plant immediately in the spring to accompany fall or spring seeding efforts. This winter, 2011-2012, we overwintered 1250 forbs and 1200 shrubs.

FUTURE PLAN

FORB SODS

We intend to continue producing forb sods inside the greenhouse. We produce 30 one meter square forb sods twice a year. The first batch we start in April and is ready to plant in June; the next set is planted in July and is ready to plant in September.

We also plant outside forb sods in early spring. After this growing season (2012) we will know whether or not to continue outside forb sod production. This project requires much more intense labor to keep them watered properly and weeded. We have had very good success with direct seeding. By the end of growing season 2012 we can determine the success of the sites with outside forb sods and compare those to sites that were direct seeded. If the direct seeding is successful we will discontinue making outside forb sods.

SEED COLLECTION

We will continue field seed collection because it is productive and it gives as the opportunity to look for new populations. Seeds collected from the forb orchard will greatly increase the amount of seed from local native plants adapted to our climate and possibly adapted to soil contamination that will be planted as restoration of diverse native plant communities.

FORB ORCHARD, SHRUB NURSERY

Butte-Silver Bow is cooperating with us to expand the orchard from which we will collect seeds; and start a nursery so that we can eventually provide shrubs and trees that are several years old rather than seedlings or one-year plants.

MATCH

I will continue directing the project and my time will continue as matching value. Mt Tech will continue providing the Greenhouse, the Tissue Culture Lab building, the space for the forb sods and orchard. They will continue providing O and M for the Greenhouse and Mt Tech provides a truck.

BUDGET REQUIREMENTS

SALARIES

The project will require a full-time Coordinator. The project requires the full-time technician position who maintains the greenhouse, does the primary seed collecting, seed cleaning and treating, builds forb sods and maintains the forb orchard and nursery. We will need paid part-time student technicians all year.

SOIL Delivered soil, packets of potting soil, clean sand, pea gravel)

COMMERCIAL SEED because we are not yet collecting enough local native seed we are enhancing our supply with commercial seed

WATERING DEVICES (tanks, valves, hoses, timers, etc.)

MISC HAND TOOLS (shovels, rakes, trowels, weed-eaters, buckets, wheel barrow, gloves,

notebooks, pens, markers, pots, flats, tubes, trays)

SUMMARY OF SITES, DISPERSAL ISLANDS AND OTHERS

1) Eggers Hill
2) The Syndicate
3) Mt Con
    a. Robin Bullock Garden
    b. Dispersal islands on west side of kiosk

4) Granite Mtn. borrow Pit
5) N-S ridge, 4th of July fire
6) Visitor's Center
7) Clark Street Ball park interseeding
8) Buffalo/Montana Streets interseeding
9) 13th and Missoula Gulch
10) **Mt. Tech sites:**

a) Calypso Garden - north of Biology Bldg
b) Forb orchard
c) Temporary greenhouses
d) Rick's watering demonstration
e) 4 individual sites we seeded 2 years ago; small dumps that were 'cleaned' and we raked a native seed mix into. Two look good; two do not look good.

Montana Department of Justice
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Your Name and Contact Information: (you may remain anonymous)

Dave Palmer 490-3964 2217 N. Main Walkerville

Your Idea: Fully describe your concept.

Recontour the Alice Pit - partially backfill it, install a liner, fill it with moulton res. water, plant native fish, landscape it and you have turned a real eyesore / safety

Project Location: Describe the project location here and mark it on the map on back. (over)

The Alice Pit - right off Main St. in Walkerville.

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☒ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☒ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. All residents could enjoy a nice picnic/fishing area. This would replace the lost opportunity to fish Silver Bow Creek. It would also turn an unsightly pit into a useable venue.

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☒ $1M to $5M ☐ more than $5M

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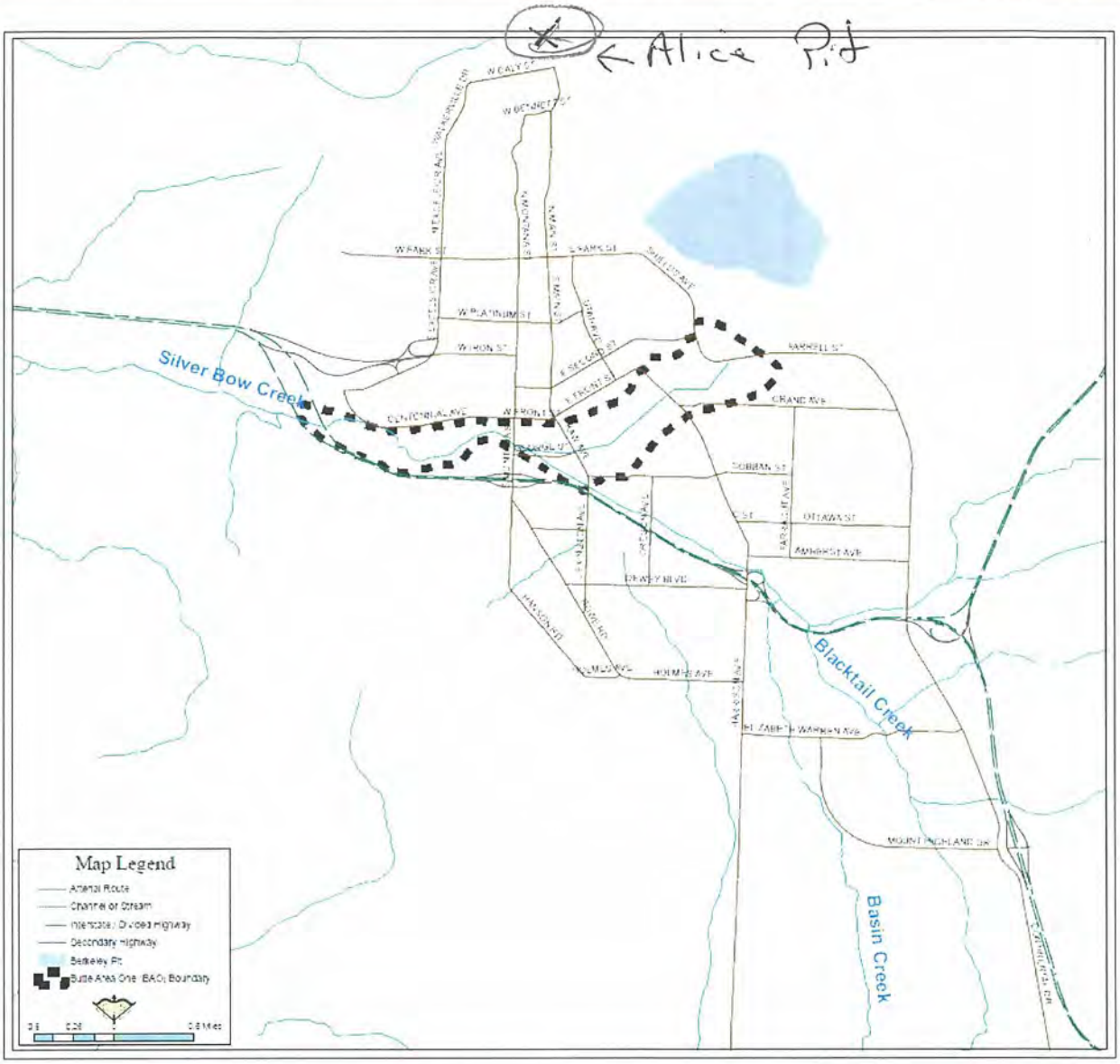
hazard which was caused by past mining activity into a good looking family friendly recreation / fishing area! Presently we have an area with a fence that says danger Keep Out!; why not have a fenced area that says WELCOME - ENJOY YOUR DAY!!

Excess pretreated water could come from the Moulton Treatment Plant into the Alice Pit and then if needed it could be piped back into the treatment plant to be reused by the city. A win-win situation for the water division + the city.

A walking trail should be installed on the outer rim of the pit which would connect the scenic trail already on the knob to the walking trail which now ends at the Granite Mt. memorial site.

Butte Area One Map



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Your Name and Contact Information: (you may remain anonymous)

Mary Kay Craig, 518 W. Granite St., Butte, 723-3851, marykaycraig@bresnan.net

Your Idea: Fully describe your concept.

Restore Silver Bow Creek through town to a natural (not put & take) fishery, including benthic organisms & aquatic insects. Bring fishery quality water from top reach of SB Creek above Moulton Res. to Texas Ave, or if unable to capture adequate that water, bring Silver Lake water to SB Creek at Texas Ave.

Project Location: Describe the project location here and mark it on the map on back.

LAO, Texas Ave to Blacktail Creek

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☒ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☒ water system improvement ☒ storm water controls ☒ other Parrot tailings removal & remediation

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. All future Butte youngsters, families, fishery and aquatic resources, and Butte image all benefit. Economic development is more viable in a more livable city. Homes & businesses nearby become more valuable.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☒ more than $5M

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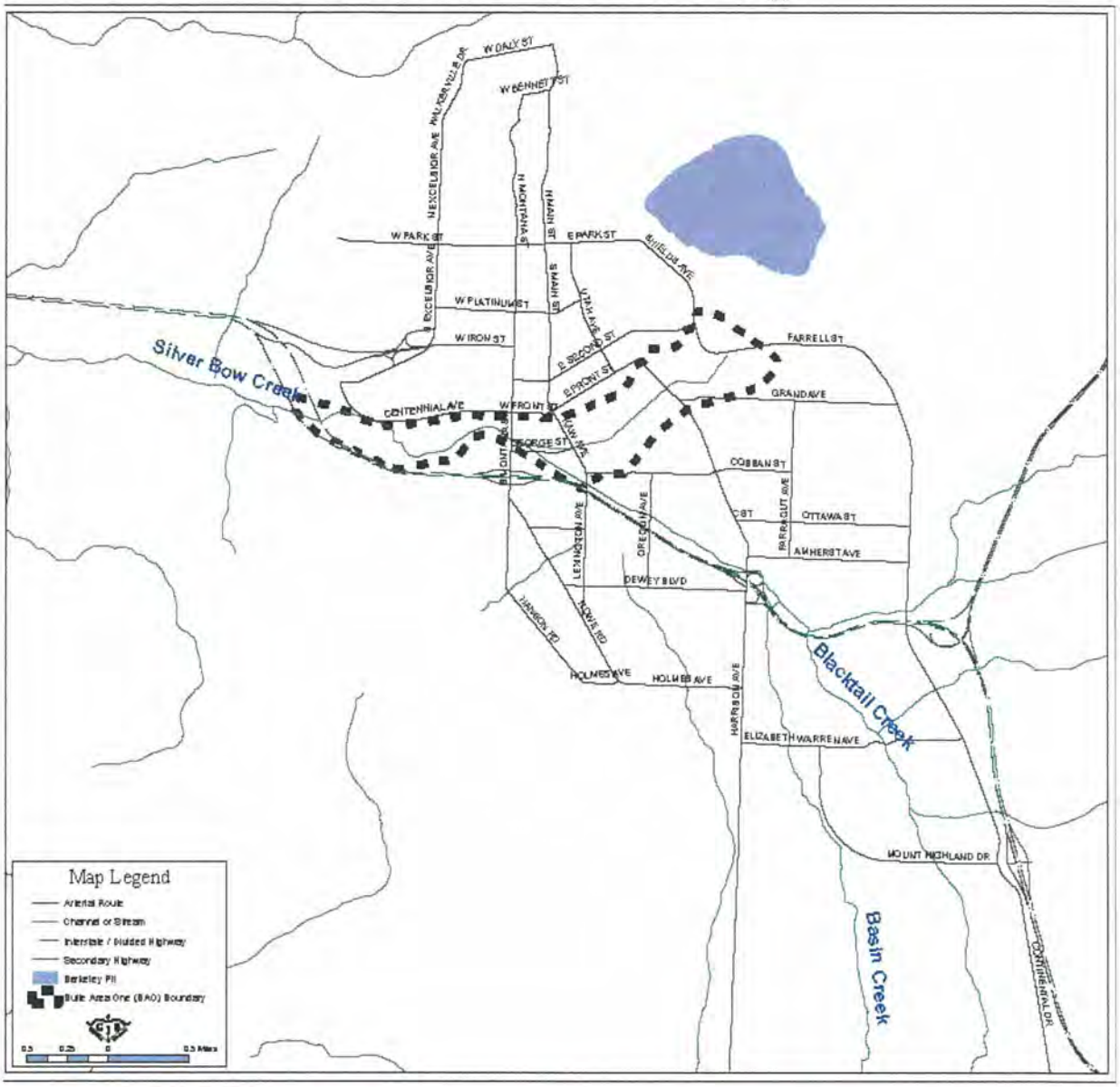

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Your Name and Contact Information: (you may remain anonymous)

Mary Kay Craig, 518 W. Granite St., Butte, 723-3851, marykaycraig@bresnan.net

Your Idea: Fully describe your concept.

Restore a clean and healthful environment (non-toxic ambient AQ) on the Butte Hill by preventing mobilization of "contaminants of concern" and crystalline silica glass from Historic Mining Landscape east of Granite Mtn. Memorial & Minimize damage to lungs in windy events by soil caps where contours allow. Also cap waste dumps West in Missoula Gulch that appear to be overlooked by EPA's remedy.

Project Location: Describe the project location here and mark it on the map on back.

East of Granite Mtn Memorial. Portions of Missoula Gulch. EPA/ARCO do caps. NRD plant to minimize erosion

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☒ waste cap improvement ☒ stream restoration ☒ revegetation

☐ recreation/fishing ☒ water system improvement ☒ storm water controls ☒ other Air Quality Restoration

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Contaminants of Concern reside with crystalline silica glass in Butte. All potentially cause excess mortality from Butte through Deer Lodge in river ecosystem (CDC data). Human health of present and future generations benefit from this project, esp. that of lower income people on the Hill.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M Unknown

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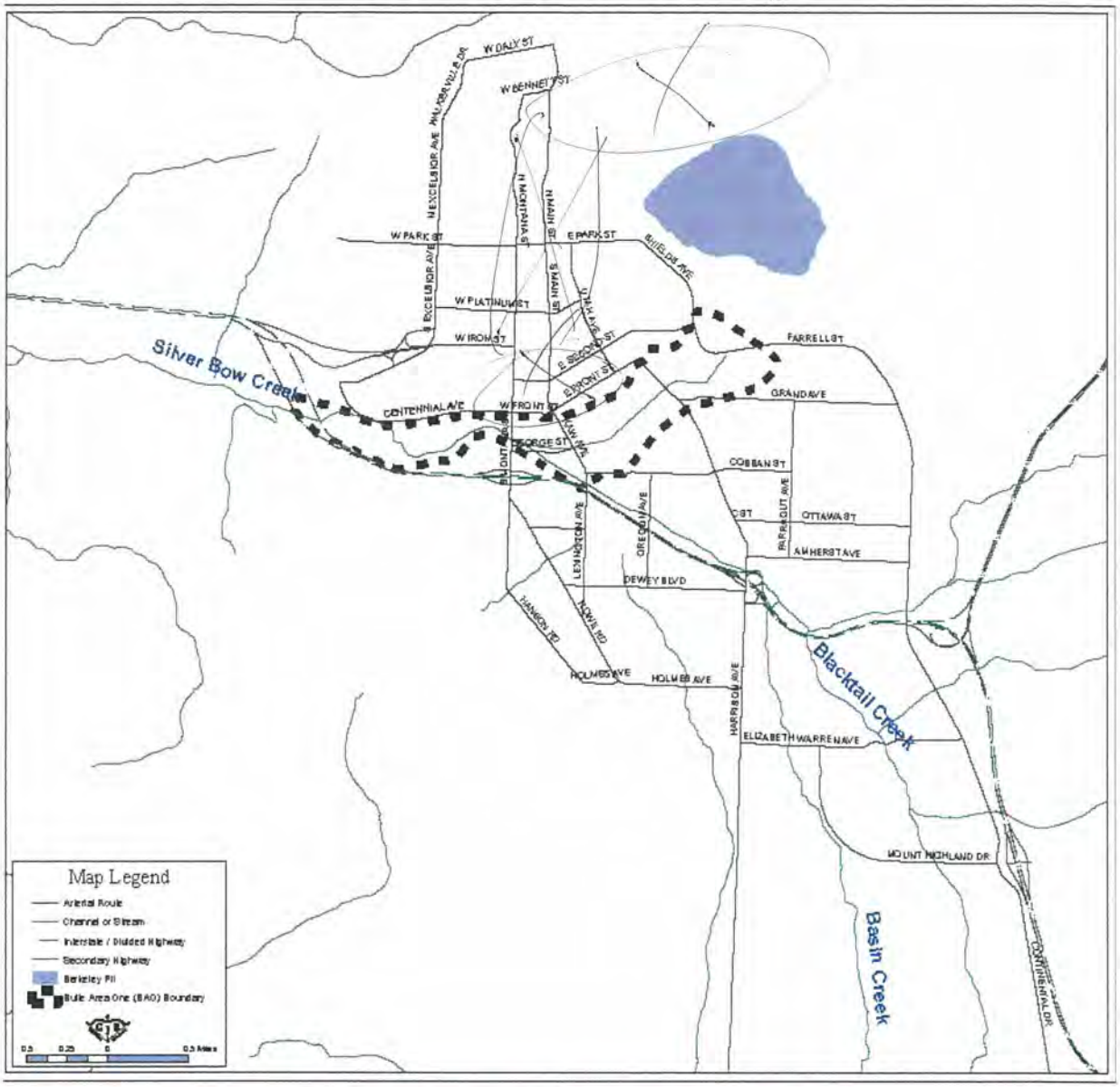

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Your Name and Contact Information: (you may remain anonymous)
Mary Kay Craig, 518 W. Granite St. Butte, 723.3851, marykaycraig@bresnan.net

Your Idea: Fully describe your concept.
Stop organic contaminants from entering S.B. Creek near Montana + Front Streets by excavating and removing the buried petroleum type contaminants dumped south of the Holland Rink by the ACM in about 1930's according to old-timer employees of ACM. Such have been recently identified through hydro centrifuge device.

Project Location: Describe the project location here and mark it on the map on back.
Area below the old Holland Rink (south of current Safeway store)

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Downstream humans and fishery benefit when toxic chemicals are stopped from entering the waterway/groundwater. Potentially less disease. ~~The Butte~~

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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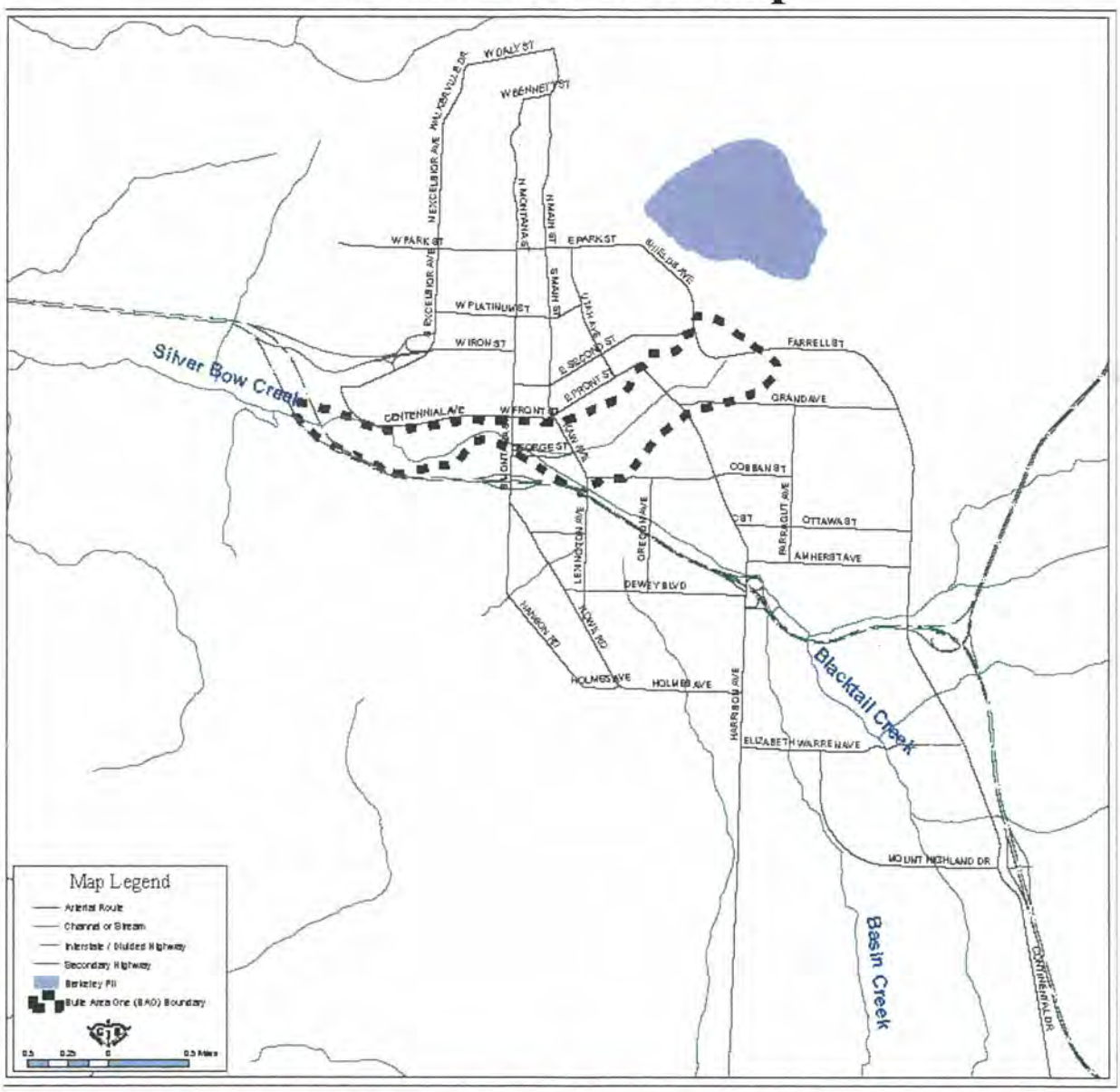

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– taken over phone by P. Cunneen

Your Name and Contact Information: (you may remain anonymous)

Pat Shea, Bert Mooney Airport, Butte, MT patshea@butteairport.com
phone: 494-3771, Cell: 490-9910

Your Idea: Fully describe your concept.

Restore Basin Creek through Airport Authority property at Bert Mooney airport. Would remove areas where water ponds on airport property.

Project Location: Describe the project location here and mark it on the map on back.

Basin Creek from South of Shoe String Army to K-Mart.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☑ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Benefits native westslope cutthroat stream. Restore trout habitat for spawning area, and provide improved conduit of instream flow to reach Silver Bow Creek.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

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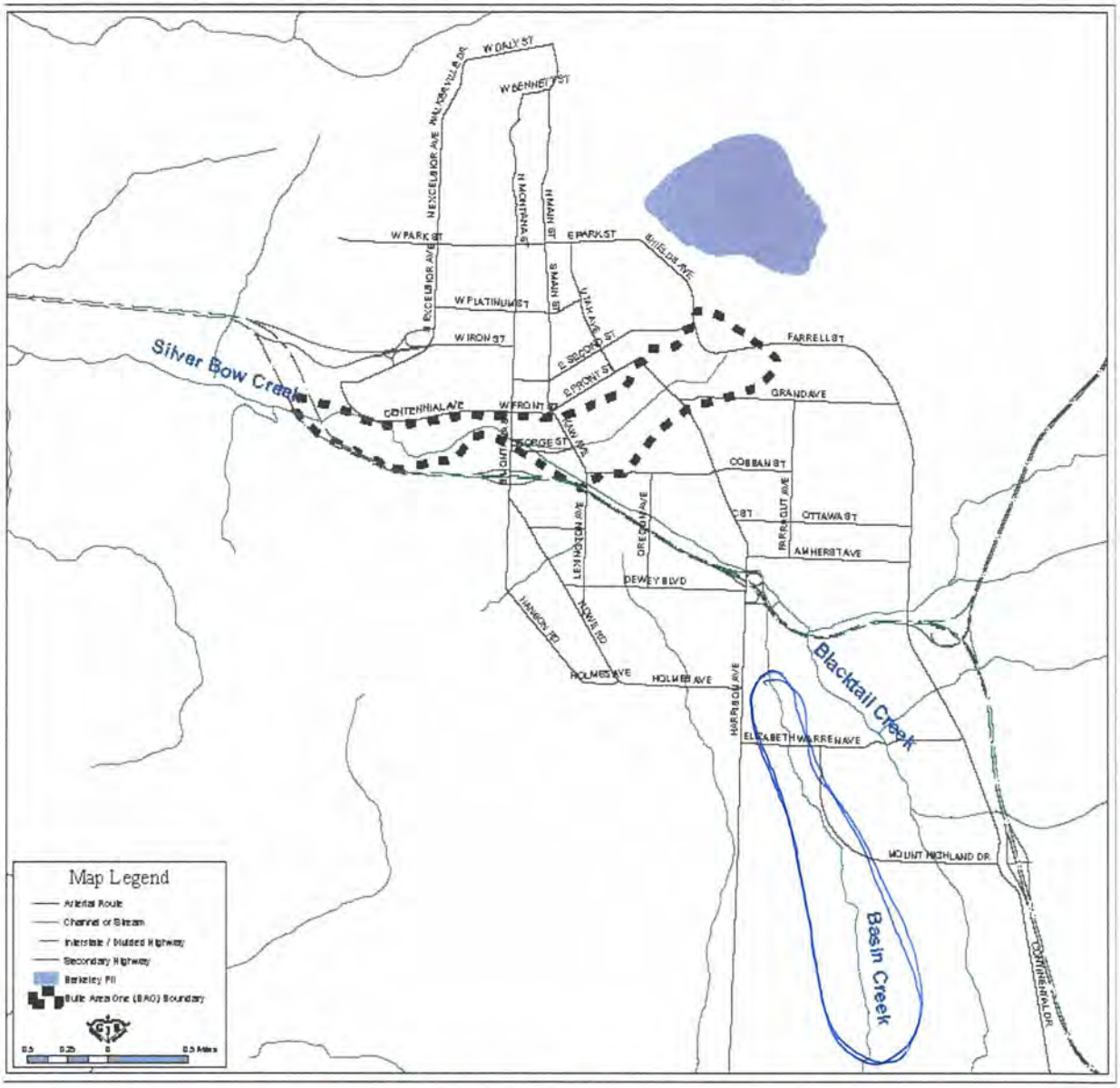

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Your Name and Contact Information: (you may remain anonymous)

Keith Ingram 723-5262 1115 N. Sso W. Butte, MT. 59701

Your Idea: Fully describe your concept.

See Attachments

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

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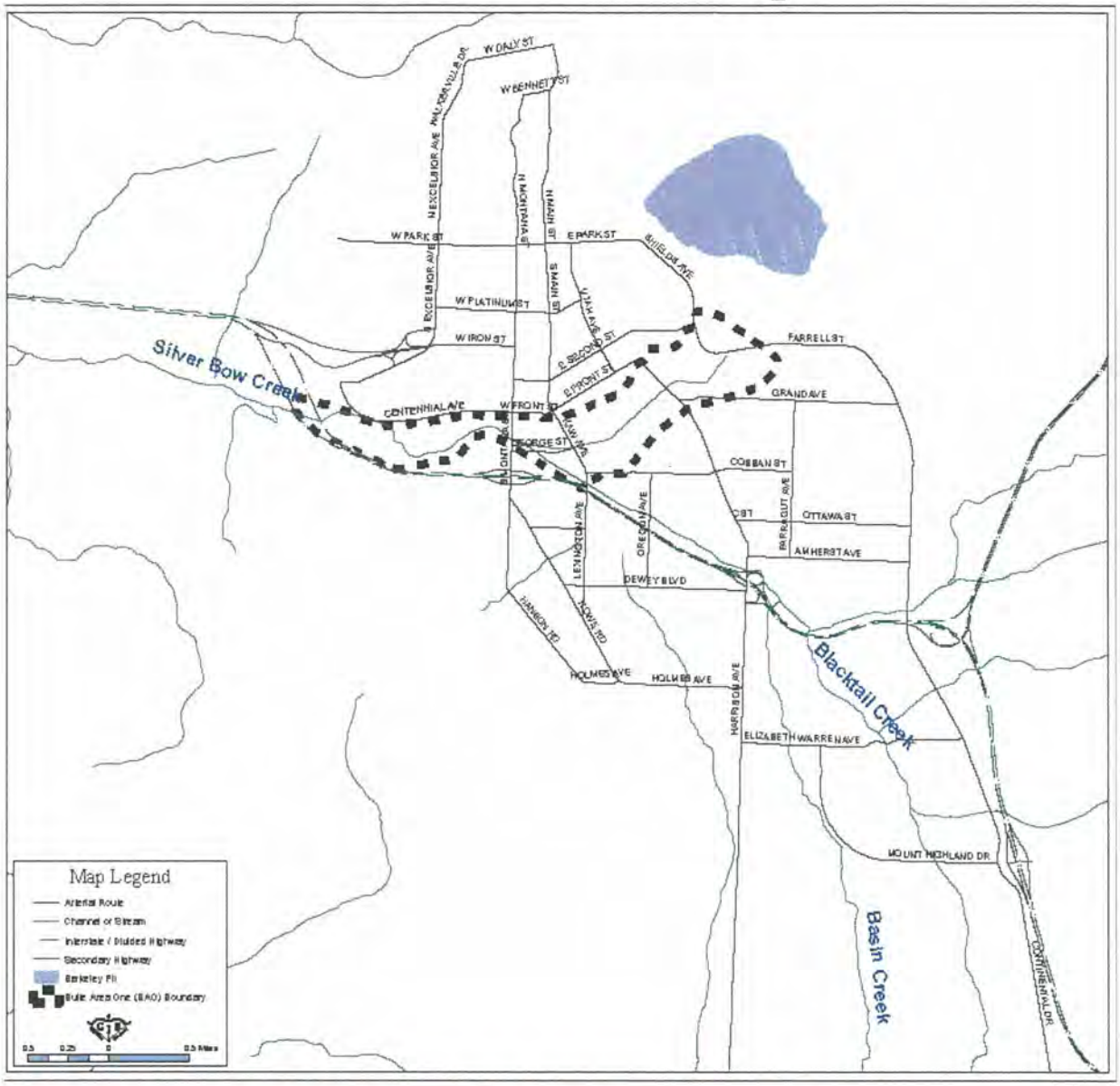

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Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Skip Ingram

From: "Skip Ingram" <SkipIngram@bresnan.net>
Date: Monday, April 23, 2012 11:34 AM
To: "Padraig Cunneen" <PCunneen@mt.gov>
Subject: bnrc idea submittal

NAME:

KEITH INGRAM
1115 MISSOURI
BUTTE,MT. 59701 406-723-5262

YOUR IDEA:

TO PROPERLY TEST AND EVALUATE PROBLEMS SUCH AS MINE WASTE ON SIGHT. ROCKS ,CEMENT, DETERIORATING WRIP-WRAP SYSTEM AND REMOVAL OF SUCH NOW THAT THE STORM WATER DRAINAGE HAS BEEN REROUTED OUT OF THIS AREA.CONTOUR THE EAST PORTION OF THE LOT TO PROPERLY DEAL WITH STORM AND MELTING WATER IN THIS AREA AND ALSO WATER DRAINING OF THE CAPPED IN PLACE CONTAMINANTS IN THE ADJACENT LOT. AS THIS WATER RUNOFF IS GOING INTO AN 18" PLUGGED CULVERT THAT RUNS UNDER THE CAPPED AND ACTIVE RAILROAD PROPERTY AND THE WATER IS LEFT TO SOAK INTO THE SOIL IT IS NOT MAKING IT'S WAY TO THE PONDS FOR PROPER TESTING. RAPID SURVEY GROUP WAS HIRED BY MY INSURANCE COMPANY TO DO AN EXTERIOR-OBSERVATION REPORT ON MY HOME(SEE DOCUMENT 12,PICTURES 13 &14).THEY DECLINED TO CONTINUE INSURANCE COVERAGE. I INFORMED THEM THE VEGETATION AND DRIED GRASS WAS NOT ON MY PROPERTY SHE SAID I SHOULD GET IT TAKEN CARE OF AND SEND THE BILL TO THE OWNERS.SINCE 2007 I HAVE HAD NUMEROUS CONVERSATIONS WITH THE COMMISSIONER FOR THAT DISTRICT(DAN FOLEY) MR. MOODRY (WEED BOARD) MARK WILCOX (CODE OFFICER). THE LATEST BEING MR. WILCOX WHO LAST YEAR IN THE MIDDLE OF MAY SAID IT WOULD BE DEALT WITH WITH NOTHING DONE.I TALKED WITH HIM A WEEK AGO AND HE STATED THEY WERE ABLE TO TAKE CARE OF THE WEST PORTION BUT WITH ALL THE ABOVE PROBLEMS NEED ASSISTANCE TO PREP THE PROPERTY FOR EASIER CUTTING.

PROJECT LOCATION:

THIS IS REGARDING PROPERTY LOCATED TO ADJACENT TO MY PROPERTY LOCATED AT 800 S. ALABAMA BUTTE,MT.(SEE ATTACHED DOCUMENTS 6-11)

THE PROPERTY (SEE DOCUMENTS 3-5) HAS BEEN TRANSFERRED TO BSB ALONG WITH THE MAINTENANCE ISSUES INCLUDED IN OWNERSHIP.

TO MY KNOWLEDGE THIS PROPERTY HAS NEVER BEEN PROPERLY TESTED FOR CONTAMINANTS

PROJECT TYPE:

X MINE WASTE REMOVAL X WASTE CAP IMPROVEMENT X REVALIDATION (SOME WHAT) X STORM WATER CONTROLS X FIRE HAZARD PREVENTION

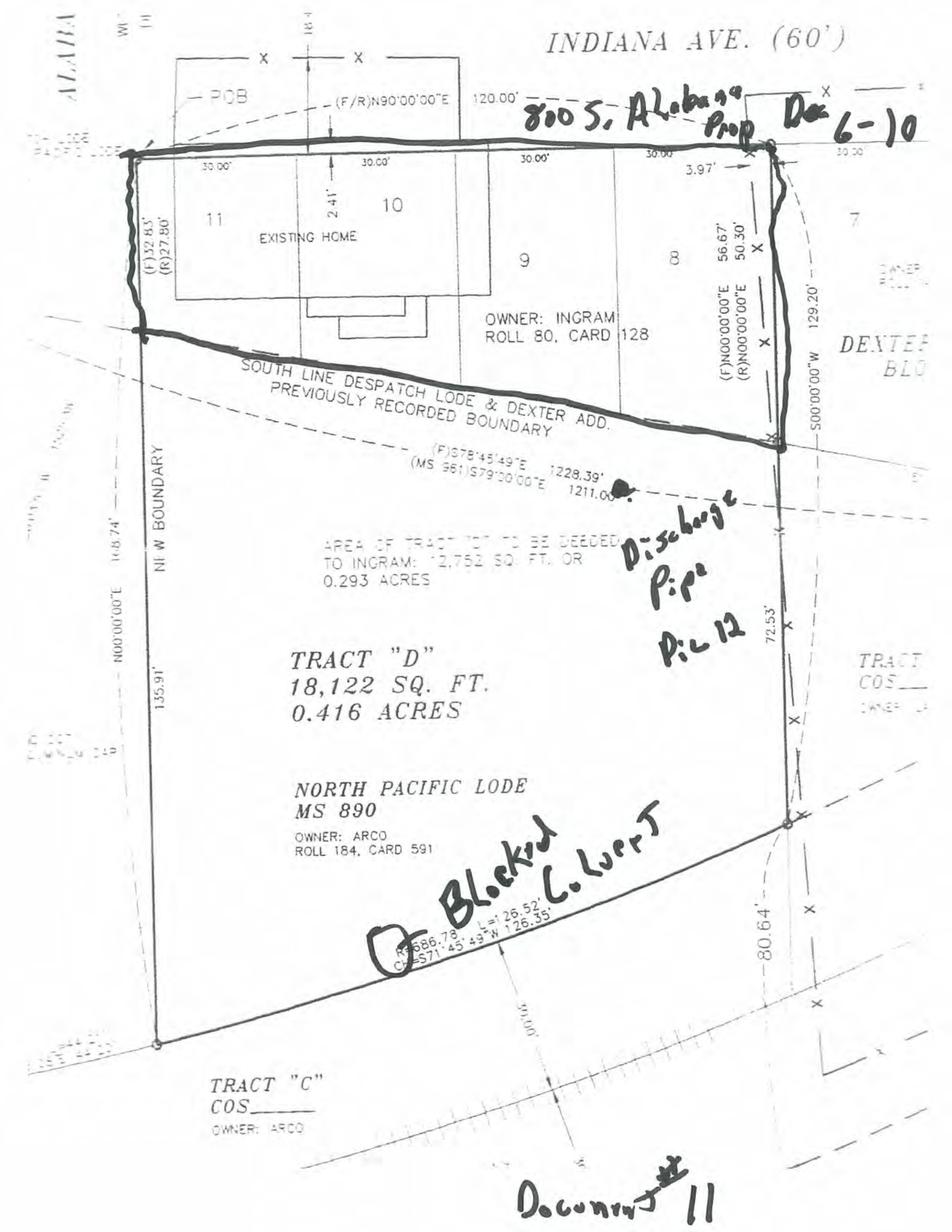
ESTIMATED COST:

LESS THAN $100K

P.S. ALSO I WOULD LIKE FOR YOUR REVIEW AND SUBMITTED IS A COPY OF COMMUNITY INTERVIEW PLAN THAT MY SELF AND OTHERS IN THE COMMUNITY PARTICIPATED IN WITH A REQUEST BY THE EPA FOR THEIR 5 YEAR REVIEW AND WOULD BE INCLUDED IN THAT REPORT.AFTER NUMEROUS CONTACTS WITH ROGER HOOGERHEIDE,EPA BEING TOLD THERE WAS A DELAY IN THE REPORT THAT AFTER IT WAS PUBLISHED AND MY CONCERNS WERE OMITTED ;LITERALLY THROWN IN THE GARBAGE!!!!. THE LAST PAGE IS THE EMAIL HE SENT .

AS YOU APPEAR TO ME TO NOT ONLY BEING MEMBERS OF THIS COMMUNITY BUT VERY CARING PEOPLE AS TO THE OUT COME OF THIS VERY LONG AND DIFFICULT CLEAN UP CAMPAIGN PLEASE DO NOT IGNORE THESE IDEA SUBMITTAL FORMS AND THE CITIZENS THAT PREPARED THEM.IF YOU DECIDE THAT THERE IDEAS ARE NOT A FIT TO THIS FUNDING SET UP MEETINGS WITH ARCO,BSB, AND EPA REGARDING THEIR CONCERNS AND MAKE THESE ENTITIES RESPONSIBLE FOR THE PROBLEMS.

THANK YOU VERY MUCH FOR YOUR TIME. KEITH INGRAM


INDIANA AVE. (60')
POB
(F/R)N90°00'00"E
120.00'
800 S. Alabama Prop Dec 6-10
30.00'
30.00'
30.00'
30.00'
3.97'
2.41'
11
10
9
8
7
EXISTING HOME
(F)32.83'
(R)27.80'
OWNER: INGRAM
ROLL 80, CARD 128
(F)N00°00'00"E 56.67'
(R)N00°00'00"E 50.30'
S00°00'00"W 129.20'
SOUTH LINE DESPATCH LODE & DEXTER ADD.
PREVIOUSLY RECORDED BOUNDARY
(F)S78°45'49"E 1228.39'
(MS 961)S79°00'00"E 1211.00'
NI W BOUNDARY
N00°00'00"E 148.74'
AREA OF TRACT TO BE DEEDED TO INGRAM: 12,752 SQ. FT. OR 0.293 ACRES
Discharge Pipe Pic 12
TRACT "D"
18,122 SQ. FT.
0.416 ACRES
135.91'
72.53'
NORTH PACIFIC LODE
MS 890
OWNER: ARCO
ROLL 184, CARD 591
Blocked Culvert
R=586.78'
CH S71°45'49"W 126.35'
L=126.52'
80.64'
TRACT "C"
COS____
OWNER: ARCO
Document 11

South Discharge Pipe Pic 12

Notice! Sediment Toxic?!

Prepared For: Allied Insurance Co.
Insured's Name: Ingram,keith
Address: 800 S Alabama St
City: Butte State: MT Zip: 59701
Inspection Date: 10/14/2010

Underwriting Concern
Overgrown vegetation.

13

The Rapid Survey Group
(866) 402-6998 www.rapidsurveygroup.com
e No. 1495188 ReportType: Exterior - Observation Only; Policy Number: DPC 0020630

Prepared For: Allied Insurance Co.
Insured's Name: Ingram,keith
Address: 800 S Alabama St
City: Butte State: MT Zip: 59701
Inspection Date: 10/14/2010

Underwriting Concern
Dry grass.

P.c 13*
14

14

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)

SKYLINE SPORTSMEN.

Your Idea: Fully describe your concept.

WOULD LIKE TO SEE POND AREA BEHIND CHAMBER of COMMERCE BUILDING, ON BOTH SIDES of HIGHWAY CLEANED of HEAVY METAL DEPOSITS

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

BENEFITS - PUBLIC - MAY STOP THESE HEAVY METALS FROM POSSIBLY ENTERING NEARBY CREEKS.

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

- **Wednesday March 14**, 6 – 8 PM, Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
- **Tuesday March 20**, 6 – 8 PM, Butte-Silver Bow Public Archives, 17 W. Quartz St.

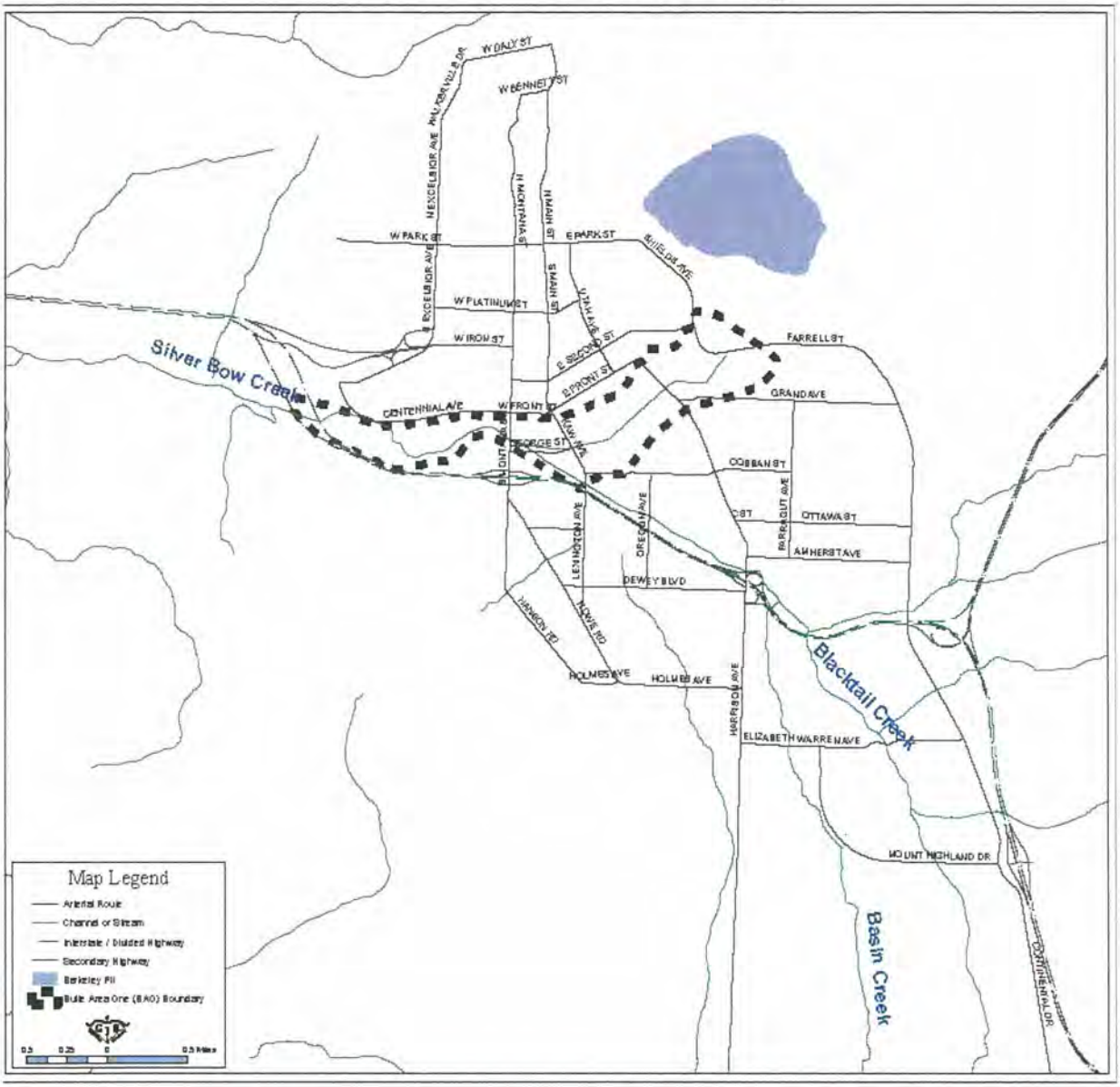
Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



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65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

SKYLINE SPORTSMEN ASSOC.

Your Idea: Fully describe your concept.

PLANT NATIVE GRASSES, PLANTS AND TREES IN THE PARK AREA AND AROUND THE PROPOSED PUBLIC FISH POND TO BE BUILT BEHIND THE HILLCREST SCHOOL.

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

BENEFITS PUBLIC, WILL ENHANCE PROPOSED PUBLIC FISH POND AND PARK AREA.

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Your Name and Contact Information: (you may remain anonymous)

Skyline Sportsmens. Assoc.

Your Idea: Fully describe your concept.

Develop-Fishing Pond / Swimming Hole in the pond area behind Butte Plaza Mall —

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Department of Justice

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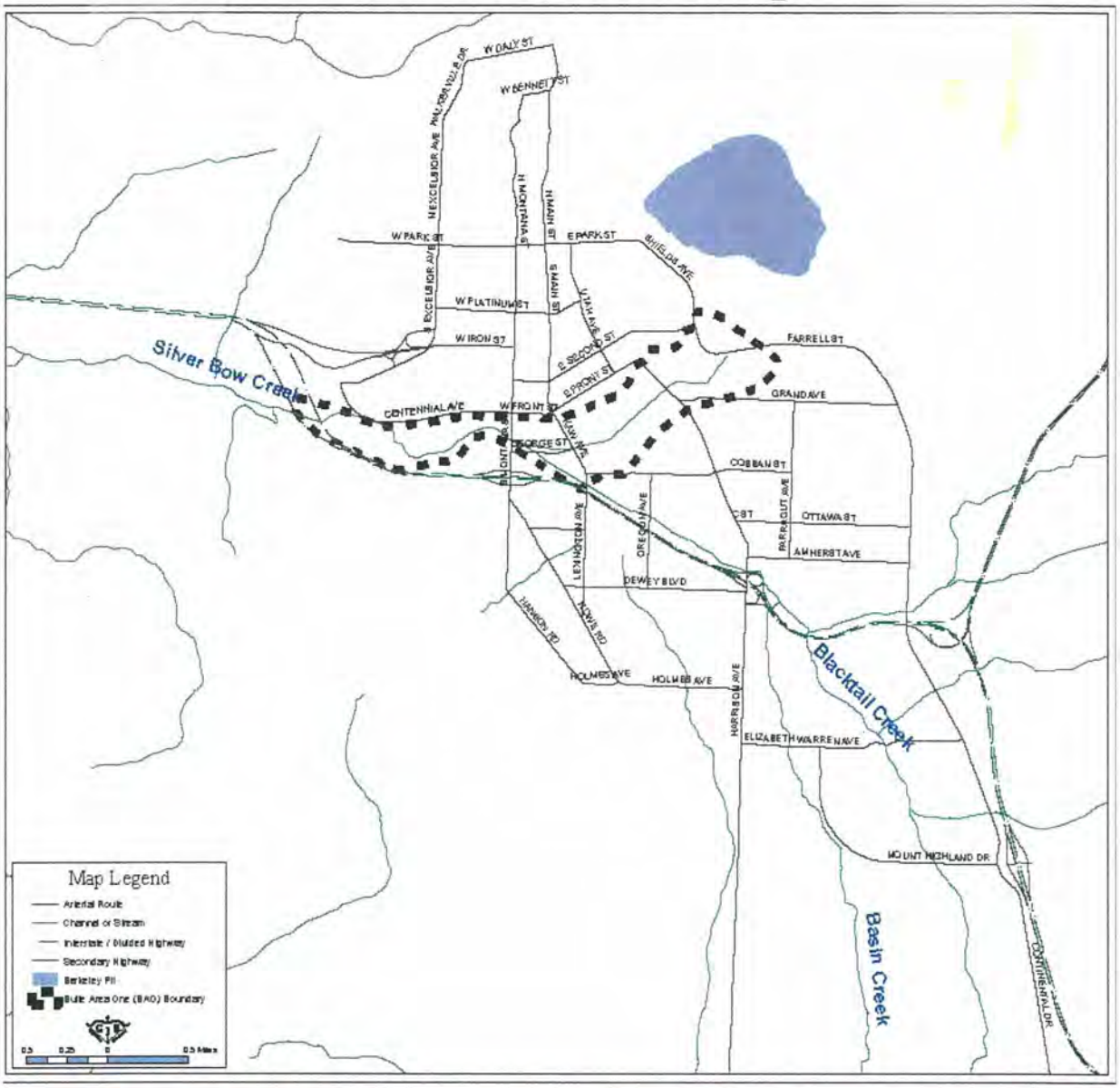
Butte Area One Map



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Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

LES CASTREEN

Your Idea: Fully describe your concept.

CLEAN UP AND PLANT NATIVE GRASSES, PLANTS + TREES AROUND the STORM WATE DITCH AND POND AT the END of UTAH ST. - NEAR WALKING TRAIL - ALSO ANY AND ALL SUCH STORM WATER DITCHES DUMPING WATER INTO THE CREEK -

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☐ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

BENEFITS PUBLIC —

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Your Name and Contact Information: (you may remain anonymous)

Les Costain, President, Skyline Sportsmen

Your Idea: Fully describe your concept.

Restore and develop area pond South of Butte Chamber of Commerce, make pond into kids fishing pond

Project Location: Describe the project location here and mark it on the map on back.

South Butte Chamber of Commerce

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Benefits citizens of Butte as it replace lost fishing resources and provide park

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☒ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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pcunneen *a* mt.gov

Cunneen, Padraig

From: John Trudnowski [jtrudnowski@wet-llc.com]
Sent: Friday, April 20, 2012 3:45 PM
To: Cunneen, Padraig
Subject: Skyline NRD project idea
Attachments: Skyline NRD request.pdf

Pat, I wanted to submit this for the Skyline Sportsmen.

John Trudnowski, PE
Water & Environmental Technologies
480 East Park
Suite 200
Butte, MT 59701

Office - (406) 782-5220
Direct - (406) 723-1526
Cell - (406) 490-2918
Fax - (406) 723-1537

1321 8th Ave North
Suite 103
Great Falls, MT 59401
(406) 791-2290

www.wet-llc.com

Montana Department of Justice
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Your Name and Contact Information: (you may remain anonymous)
STEVE STOSICH & ROB BAKER (BAKER AUTO)

Your Idea: Fully describe your concept.
WE ARE ATTEMPTING TO GET 2 SOFTBALL FIELDS BUILT FOR BUTTE HIGH SCHOOL. ROB BAKER OF BAKER AUTO HAS OFFERED LAND TO SCHOOL DIST. #1 FOR THE CONSTRUCTION OF THESE FIELDS. 2 TO 4 ACRES!

Project Location: Describe the project location here and mark it on the map on back.
IT IS EAST OF KAW, NORTH OF COBBAN & SOUTH OF MARCIA. IT LIES BEHIND BAKER AUTO.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☒ water system improvement ☒ storm water controls ☐ other EXCAVATION OF PLANNED SITE

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
STUDENTS OF BUTTE HIGH SCHOOL & THE SOFTBALL PROGRAM. WILL REPLACE A LARGE VACANT AREA WITH A USEFULL SPORTS FACILITY, THAT IS MUCH NEEDED BY BUTTE

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K
SITE PREP - EXCAVATION?
☒ $100K to $500K ☐ $500K to $1M ☒ $1M to $5M ☐ more than $5M (APP 1.5-2 MILL TOTAL CONSTRUCTION)

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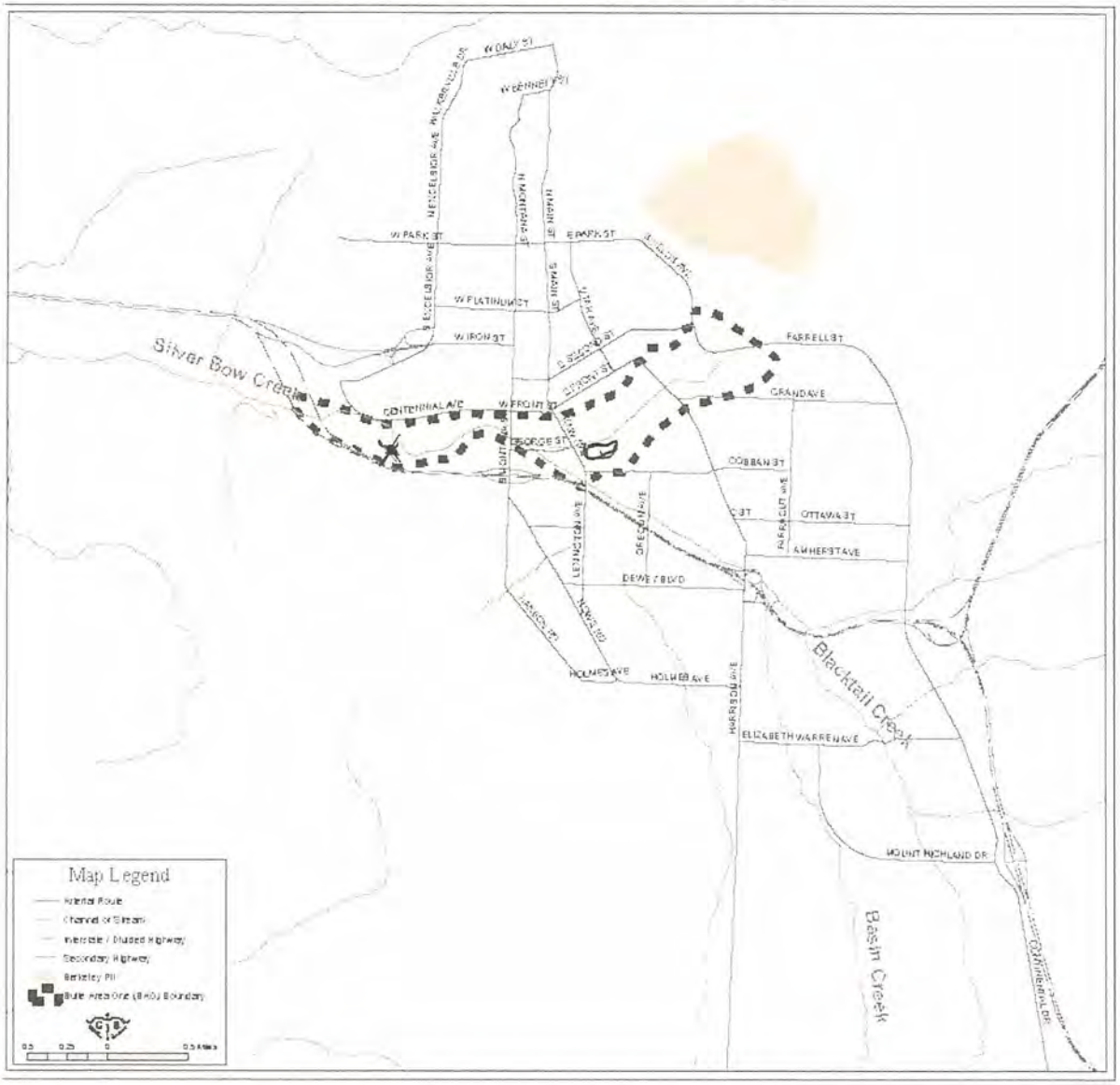

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Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)
Don Davis, Northwest Little League
555 Edison - Butte 406-723-5350

Your Idea: Fully describe your concept.
Culvert / trees / vegetation to prevent potentially contaminated run-off from getting onto our children's play area. Storm water run off erodes the north side of the field. This then washes onto the field.

Project Location: Describe the project location here and mark it on the map on back.
Jim Scown Field on Caledonia St.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☒ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☒ less than $100K

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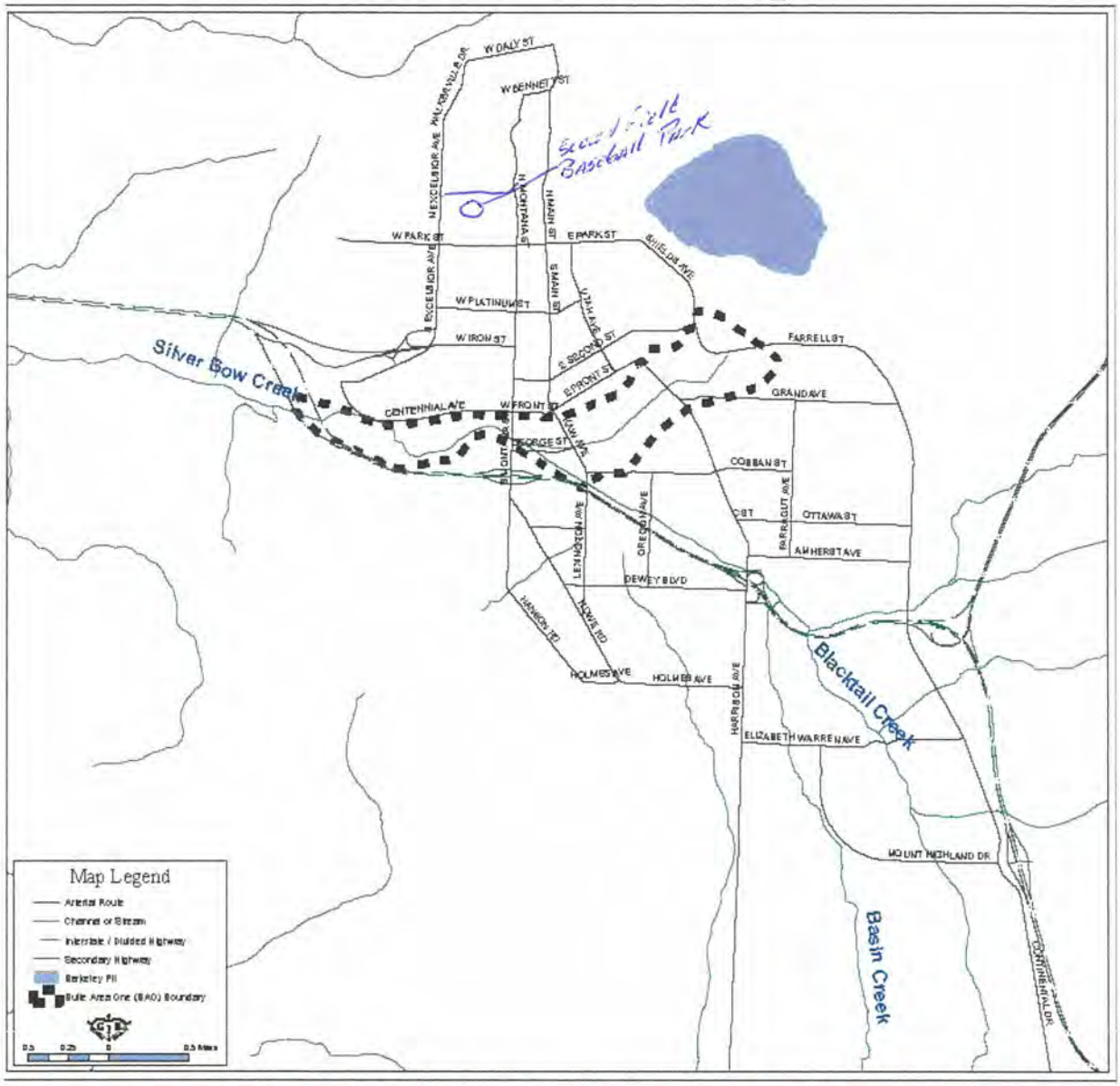

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Your Name and Contact Information: (you may remain anonymous)
Don Davis, Northwest Little League
555 Edison St Butte 406-723-5350

Your Idea: Fully describe your concept.
Culvert/trees/vegetation to prevent potentially contaminated run-off from getting into our children's play area. The South Field floods outs every year because of the Missoula Gulch Run off.

Project Location: Describe the project location here and mark it on the map on back.
Missoula Ave. Baseball Fields

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☒ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☒ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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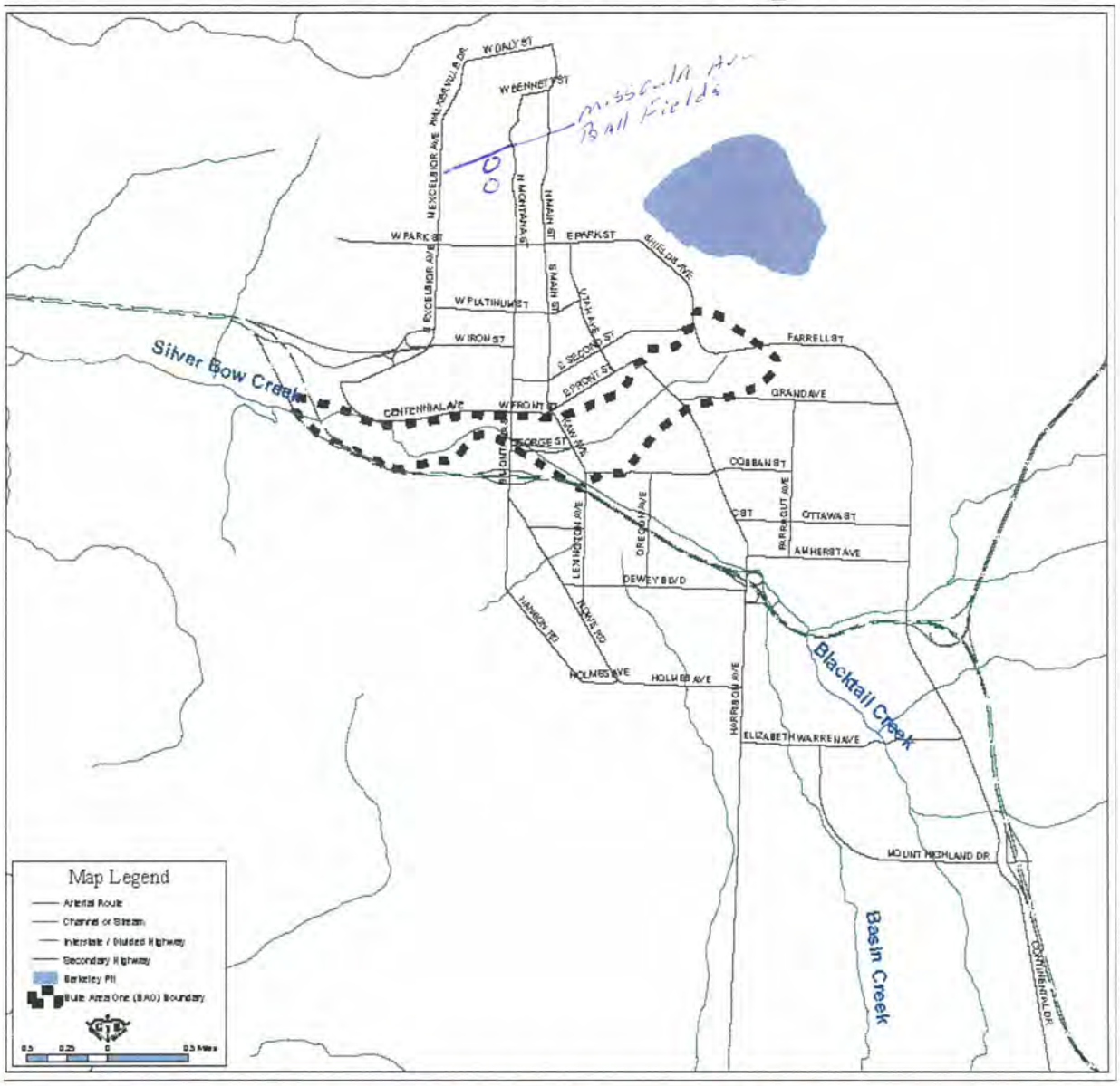
pcunneen@mt.gov

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)
MARTIN DAILY @ NORTHWESTERN.COM
MARTY DAILY - ~~406-565-3611~~ 498-5617

Your Idea: Fully describe your concept.
REMOVE SLAG & MINE DUMPS ALONG MONTANA ROAD NORTH OF BUTTE WATER FACILITY

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
MINE WASTE ARE LOCATED AT THE HEAD of A DRAINAGE THAT EVENTUALLY GETS TO BROWNS GULCH CREEK

Estimated Cost: How much would your project cost? ☐ unknown ☒ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

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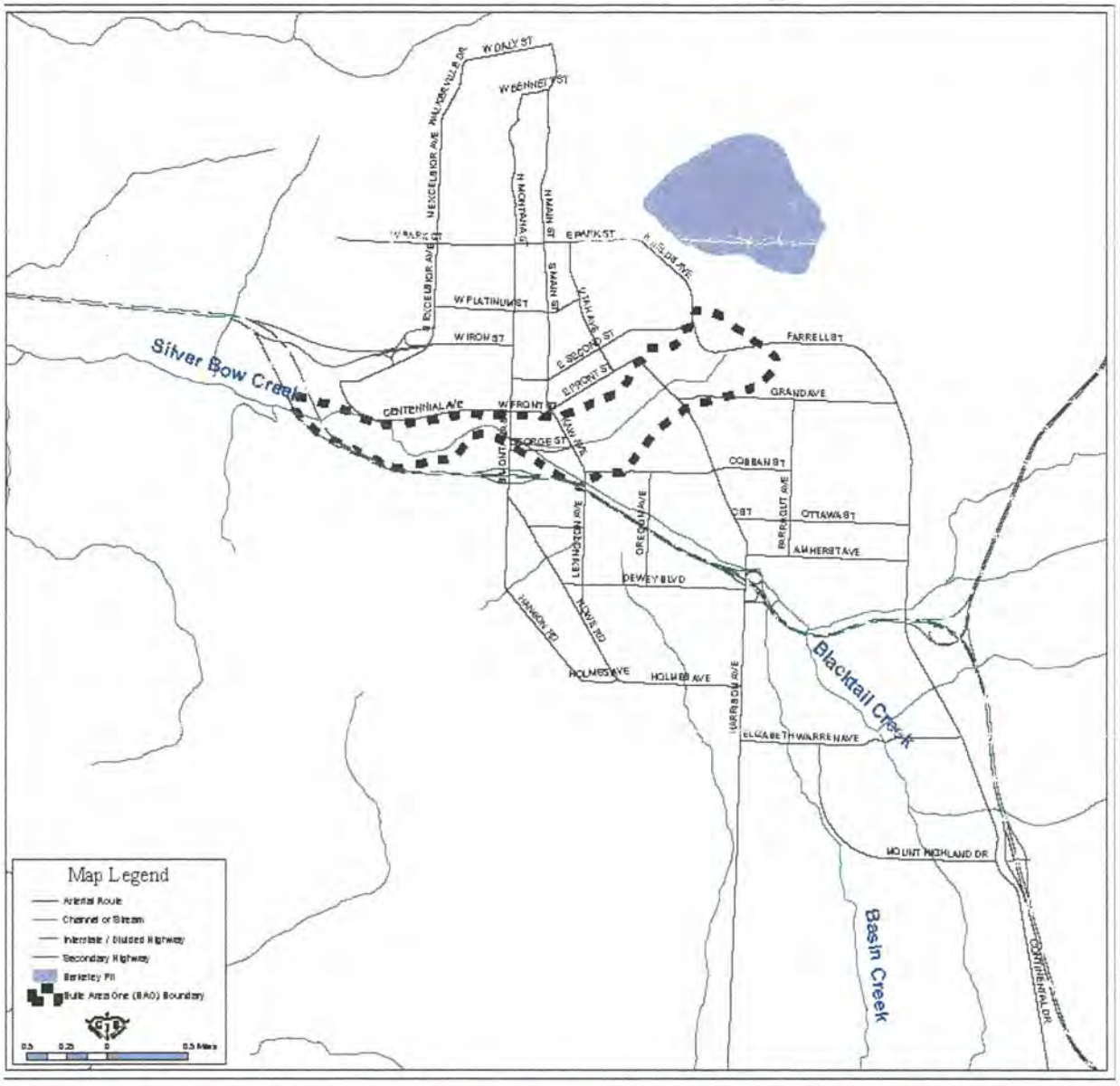
Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



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Your Name and Contact Information: (you may remain anonymous)

Dr. Ragan Callaway	ray.callaway@mso.umt.edu	243-5077
Giles Thelen	giles@mso.umt.edu	243-5935

Your Idea: Fully describe your concept.

See explanation below

Project Location: Describe the project location here and mark it on the map on back.

See explanation below

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ■ waste cap improvement ☐ stream restoration ■ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See explanation below

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K

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Promoting Native Plant Diversity in the BPSOU

Dr. Ragan Callaway and Giles Cassidy Thelen
The University of Montana
giles@mso.umt.edu, 406-243-5935

Project Description:

Our group has been working to promote native plant diversity in the Butte Priority Soils Operating Unit (BPSOU) through a combination of strategic seeding, use of weed-resistant native species, and diverse mixes of appropriate native species. We are proposing to substantially expand the area to which we apply our successful revegetation approaches and coordinate the expansion of revegetated acreage with new techniques we have developed at the University of Montana. During the next period we will optimize our revegetation with Biochar that tips competitive balance in favor of most natives and against many exotic weeds and with solarization which kills weeds seeds and reduces the soil pathogens that slow natives but not exotics. Our work at the University of Montana has demonstrated substantially higher proportions of persistent native communities with these low cost amendments.

Native plant diversity is critical to the long-term health of natural systems. Our project goals are to: 1) restore areas to pre-mining conditions (i.e. historic native plant diversity); 2) protect water and wildlife resources; 3) resist invasion of unwanted invasive plants by promoting native plant diversity and utilizing naturally weed-resistant native species, and 4) use Biochar and solarization for maximum results. Working in concert with Butte-Silver Bow and Montana Tech, we have been using hand collected seed, forb orchard produced seed, and purchased seeds and containerized plants produced from these sources to increase the number of native species in established and new reclamation sites. We have demonstrated over the last three field seasons (2009-2011) that our project goals are realistic and beneficial.

Restoration is defined as "returning the injured resources to their uncontaminated or 'baseline' condition – the condition of the resource had the hazardous substance not been released." Restoration refers to actions taken, in addition to remediation, to return the damaged resources and services to their baseline condition. For example, planting additional grasses, wildflowers, shrubs and trees in the Silver Bow Creek floodplain that would not be planted under remediation and would help restore the area to its pre-mining state. Promoting native plant diversity reflects this definition.

In addition to restoring the area to pre-disturbance conditions, high native plant diversity resists new invasion of weeds better than low-diversity native communities. As has been demonstrated repeatedly by scientists, when native forb (herbaceous broad leafed plants) diversity is reduced the remaining plant community is more susceptible to invasion by unwanted alien plants. For example, Maron and Marler (2007) showed that very low diversities of Montana native plants posed very little resistance to invasion by spotted knapweed and two other alien invaders. Equally important, they found that by resisting invasion, the negative

impact of exotics on native abundance was reduced in more diverse versus less diverse assemblages. Together, these results suggest that revegetating sites from which exotics have been eliminated (or have not yet discovered) with highly diverse mixtures of native plants has great potential to increase resistance to subsequent weed invasions. Thus, using native diversity as a weapon against exotic invasion is potentially powerful, yet underutilized, in restoration contexts.

We found that adding activated carbon and Biochar were important tools for promoting native plant diversity during restoration projects. Simply placing this material on the surface of the soil increased germination and growth for natives. Currently the State of Montana has invested in several different energy projects that supply carbon as a by-product. Biochar is different than AC, but it can be turned into AC or may be important in the forms we can access it in. Clean Coal technology is one avenue where Biochar (a carbon-rich powder) is a byproduct that currently has no use. Also, the new BioMax machine is another. The University of Montana now owns the BioMax, a mobile biomass gasifier and electricity generator. In February 2011 it conducted an on-site demonstration at Paws Up Ranch in the Blackfoot Valley. Beetle-killed trees and waste biomass will be processed by a Vermeer chipper to provide feedstock to the BioMax, which will then produce electricity. Wood residues are usually left at site of production to be burned because such material is uneconomic to gather and transport. This demonstration changes that dynamic by bringing the generator to the source of supply. This is the first time such a project has been attempted. The by-product of this process is called BioChar, and is made up primarily of Carbon (54%) and ash (34%). This unused product will be donated to the Callaway Plant Ecology Lab for our BNRC project. This product has been included in greenhouse trials as a surrogate for activated carbon and has shown promise as an important and publicly attractive addition to the restoration efforts in the Upper Clark Fork Watershed.

Solarization, using heavy, clear plastic on freshly capped sites to 'cook' the non-native seed bank and effectively sterilize the area so that pathogens that suppress natives are reduced (Katan 1981). After solarization sites will be treated with the highly successful native seed mix developed and demonstrated in the previous funding period. Solarization is a very effective method of pathogen suppression and weed control that is very much under-utilized in restoration of native vegetation (which is much more suppressed by coevolved pathogens than exotics which are not coevoled with local pathogens). Twelve years again in the Diettart Gardens of The University of Montana we solarized a demonstration plot and subsequently planted native seed. Even after seeding in exotics the demonstration area is overwhelmingly native species. We think that the solarization approaches we have developed at UM will provide a cheap but highly effective tool for promoting natives and controlling unwanted plants.

Our lab has over a decade of experience discovering which native plants confer resistance and/or superior competitive abilities against unwanted, invasive plants. We will continue our greenhouse trials for Butte origin plants and the common weeds in the area to determine which species should be included in the long-term restoration of these impacted areas.

Project Location:

We will concentrate our efforts in the Butte Priority Soils Operating Unit (BPSOU), which is featured in Figure 1. Figure 1 demonstrates sites we have established recently. It is worth noting that our work promoting native plant diversity in the BPSOU can be applied to all areas in the Upper Clark Fork Watershed project location

How Diverse Native Plant Communities Enhance Water, Wildlife, Fisheries, and Recreation:

1. Better overall productivity
2. More wildlife, bird and insect diversity
3. Higher retention and better cycling of nutrients
4. Aesthetics
5. Low maintenance needed (i.e. weed control and irrigation)
6. Little to no herbicide required
7. Resistant to invasion of unwanted exotic plants

Our project will improve the overall health condition of the system. More diverse native plants will be beneficial for animals. The roots of this diverse assemblage will increase the productivity of the soil and over time make the soil more healthy and this could also improve the water that percolates from the surface to the bedrock.

CONCLUSION: Getting the minute details right is crucial for a successful project. Controlling cap soil weeds, seeding/planting diverse native plants, and then controlling weeds is an essential order of events that must be done successfully and in sequence. Once native communities are established they can be s highly self sustaining. Our approaches do not require watering at any stage of the process as this simply makes native species less prepared for eventual drought periods. Minimal invasive weed control is needed, primarily at the beginning, for the reasons described above.

Our efforts during the last three years have been to establish native plant communities from seed and outplanting, and to dramatically increase seed orchard production. We are learning the details of working in this unique ecosystem, its complications, and initiating the best approach for long-term success with the money available. We understand the long-term goals and are focused on future generations of Butte-Silver Bow residents and the citizens of the upper Clark Fork Watershed.

Project Schedule:

Our requested funding would be from 2013-2022. Beginning in April and then in October we would apply seeds to sites in the BPSOU, using our Biochar and solarization techniques. We

would also establish our forb orchard at the Historic Fort Missoula. Starting in the spring of 2013 we will also initiate our greenhouse projects, which include determining weed resistant and competitively strong native species, and growing trees and shrubs for outplanting in 2014 and beyond. In June through October we will collect, clean, and determine viability of native seeds in the study area, maintain and optimize current field sites in the study area (including planting, hand weeding, overseeding, and data collection) maintain and expand the forb orchard and greenhouse trials in Missoula, and promote education and visibility to our project to the Butte community.

Project Budget:

We are requesting $190,000 per year for the duration of the ten year cycle, for a total of 1.9 million.

Detailed budgets are available upon request. Funds would go towards salary and benefits (70%), supplies such as seed, Biochar, and solarization fabric (20%); travel (15%), and communication. We will contribute over 5% per year of cost-match (PI salary, land costs).

References

Katan, J. 1981. Solar heating (solarization) of soil for control of soilborne pests. Annual Review of Phytopathology 19: 211-236.

Maron, J.L. and M. Marler. 2007. Native plant diversity resists invasion at both low and high resource levels. Ecology 88:2651–2661.

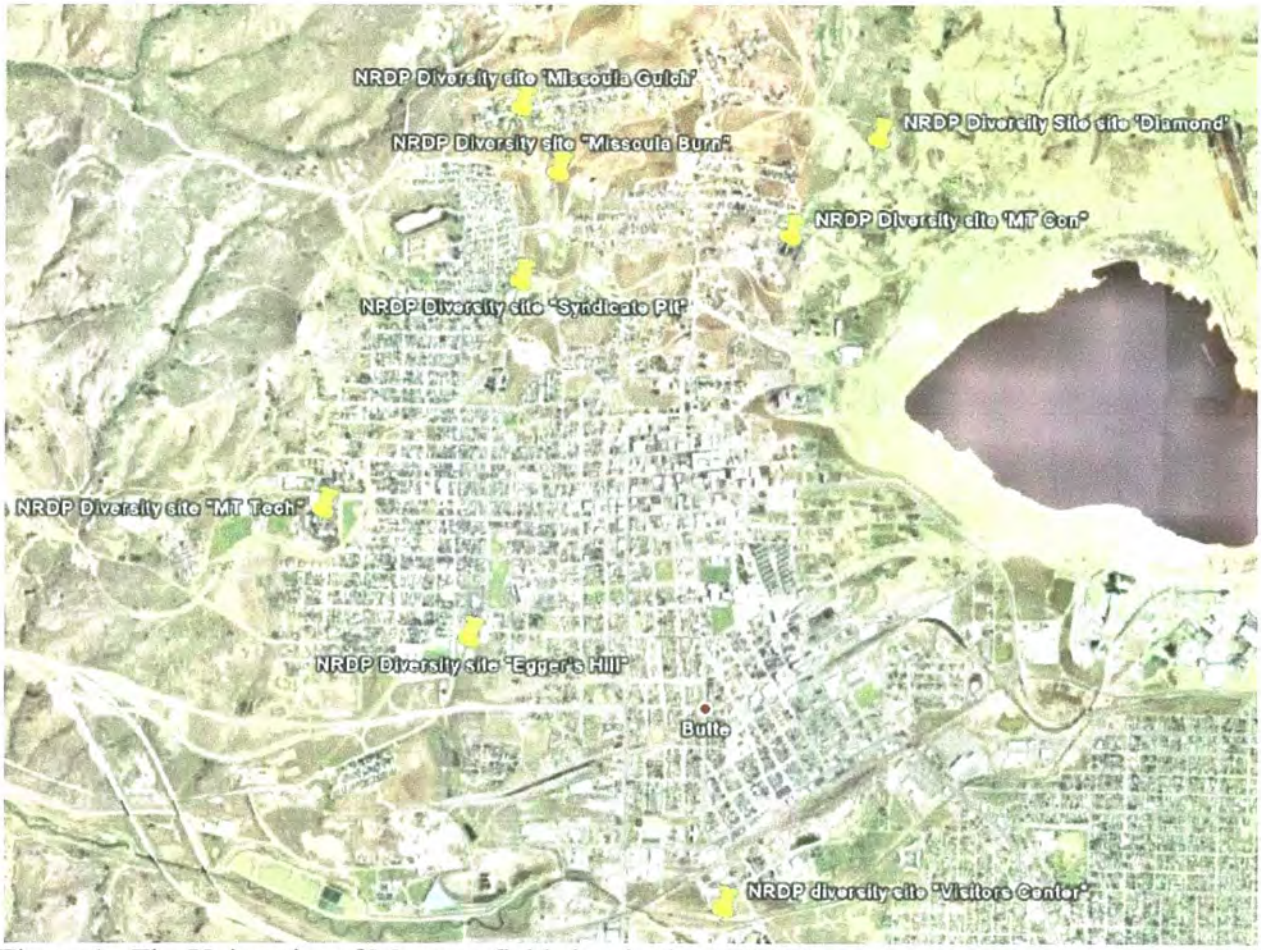

Figure 1. The University of Montana field sites in the BPSOU.

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

Tom Malloy B-SB County - (on file)

Your Idea: Fully describe your concept.

See attached.

Project Location: Describe the project location here and mark it on the map on back.

Butte - Silver Bow County

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☒ stream restoration ☐ revegetation

☒ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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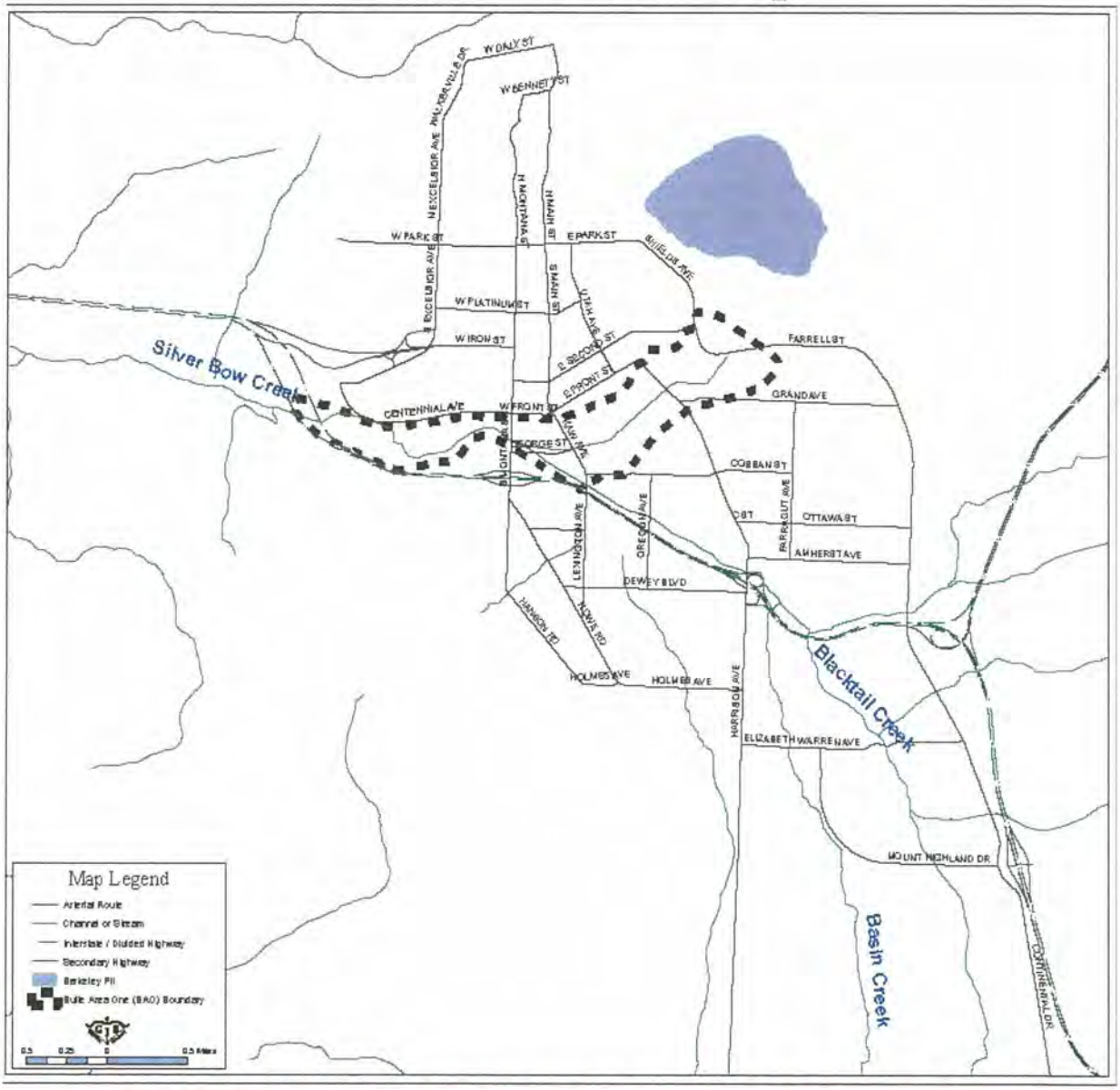
pcunneen@mt.gov

Butte Area One Map



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Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

BNRC Suggestion | Tom Malloy | 04-20-12 | (1)

Immediate Objective: Determine Maximum Feasible Beneficial (Public) Use for surface and near-surface water bodies in and around Butte.

Long Term Objective: Develop all or several of these water bodies to meet their maximum feasible beneficial (Public) use.

Project Location: Butte-Silver Bow County

Specific Water Bodies To Be Evaluated:
- Green Lake west of Mining Museum
- Pond at Kaw Ave & south of I-15
- Ponds along Blacktail Creek (multiple)
- MSD (Silver Bow Creek)
- Blacktail Creek
- Confluence of Blacktail Creek and Silver Bow Creek
- Wetlands east of Butte Plaza Mall
- Others

Beneficial Uses to Include:
- Stream Restoration
- Revegetation
- Mine Waste Removal (Potential)
- Recreation / Fishing
- Water System Improvement (Potential)
- Storm Water Controls

Evaluation Targets:
- Soil Toxicity
- Ground Water Toxicity
- Surface Water Toxicity
- Property Ownership
- Zoning and Growth Policy Status
- Potential Site Improvements such as
  - soil / contaminent removals
  - soil importation
  - Public Use Considerations (e.g., Parking lots, bathrooms, land purchase, walking trails, etc.)

Project Benefits: Because all of the surface water bodies and most of the near-surface water bodies in and around Butte have been impacted by mining and/or contaminants generated by mining, these water bodies have been

Project Benefits (contd.) – largely ~~or~~ restricted from any or most public uses. The general citizenry of Butte has been denied fishing ponds, boating opportunities, swimming opportunities, drinking water, recreation opportunities and other uses directly due to the impacts of mining and/or the contaminants generated by mining. This project will identify the maximum feasible beneficial use of these water bodies to the general Butte community.

Project Scenario : The BNRC (or its designee) will contract with an Environmental Engineering contractor to perform the following;

Phase 1

① Collect & analyze – Soil samples and/or Data
– surface water samples and/or Data
– ground water saples and/or Data
Geo-Probes (or similar) will be used to collect subsurface soil samples

② Evaluate Potential Public Uses of each Water Body

③ Evaluate Potential Engineered Improvements to include;
– mine waste excavations & removals
– contaminated soils removals
– clean soil replacements
– engineered site enhancements

④ Re-Evaluate Potential Public Uses following potential Implementation of Engineered Improvements and Enhancements

⑤ Phase 2 – Media Sampling to Re-Confirm media conditions material volumes and lateral extents of waste and/or contaminants

⑥ Report to BNRC options for maximizing feasible Beneficial Public Use to the Butte Community.

Estimated Costs – ~~Phase 1 Soil Sampling~~

– Assume 10 Sites to be Evaluated

Phase 1 Soil Sampling & Analyses – $10K/site		$ 100 K
Surface Water Sampling & Analyses – $ 2K/site		20 K
Ground Water Sampling (if any) – $5K/site		50 K
		$ 170 K

Estimated Costs (contd.) Phase 2 Confirmation Sampling
- Assume 5 Sites to be Re-Evaluated

Soil Sampling (geo-probes)	$5K/site	$ 25K
Surface Water	$2K/site	$ 10K
Ground Water (if any)	$2K/site	$ 10K
		$ 45K
Engineering Costs		$ 50K
Contingencies		$ 20K

Phase 1	$ 170K
Phase 2	$ 45K
Engineering	$ 50K
Contingencies	$ 20K
TOTAL	$ 285K

Butte Natural Resource Damage Program
BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL

SUMMARY
April 20, 2012

Proposal: Watershed Stewardship Program

Elizabeth Wasson, M.S.
723 N Henry Ave
Butte, MT 59701
406-565-6735
onthedivide@rocketmail.com

Concept: Establish Watershed Stewardship program to educate and engage landowners in restoration of the Silver Bow Creek Watershed through providing information, training and incentives for installing native landscapes, rain gardens, reducing turf areas, controlling runoff, marking storm drains, providing proper disposal of household hazardous waste and other activities that mitigate urban and industrial impact on water quality.

Project Location: Project locations would include residential, commercial, public and reclamation spaces in and around Silver Bow Creek. Specific locations will be selected according to criteria that emphasizes overall impact in water conservation, visibility and community benefit.

Project Type: This project is applicable to the following goals:

- waste cap improvement
- stream restoration
- revegetation
- water system improvement
- storm water controls
- community involvement

Project Benefits: This project will benefit the public through improving water and air quality, restoring native landscape elements, enhancing habitat fro native fauna, improving esthetics and enhancing community understanding and ownership of watershed integrity. In addition, this proposal is consistent with existing plans and priorities including 2005 Silver Bow Creek Watershed Restoration Plan 2.

Estimated Cost: $224,284.50 for three year project.

Proposal: Watershed Stewardship Program (cont.)

Public: Work with Butte - Silver Bow government to include water-wise, native based landscaping policies for public properties and as part of municipal code for new development. Develop goals for reducing turf areas and establishing diverse, native plantings for all municipal installations. Critically evaluate pesticide and fertilizer use by municipalities.

Partnerships: Mark storm drains to increase awareness of the impacts of runoff. Organize hazardous waste collections for pesticides and other household chemicals. Enhance native plant demonstration garden near the visitor's center and provide training and resources for teachers and students.

PROPOSED BUDGET:

To help ensure the success of landscape installations and program, the projects should be monitored and maintained for three years following installation. The costs of materials will vary with location and can be potentially augmented by working with the potential donors and volunteers.

Private landscape grants for materials and installation (not including recipient matching contribution)

Clean soil and compost	$50,000
$3,000 for each of eight (8) installations	$24,000
$5,000 for each of two (2) commercial installations	$10,000
$25,000 for one (1) municipal installation	$25,000
Maintenance year 2 (10%)	$5,900
Maintenance year 3 (7%)	$4,130
Contracted Services (design, landscape architect, testing)	$50,000
Public outreach and education	$15,000
Storm Drain Marking	$5,000
Hazardous waste collection (1x for 3 year pilot)	$6,000
Subtotal	$195,030
Contingency (15%)	$29,254.50
Total	$224,284.50

Proposal: Watershed Stewardship Program

REFERENCES:

EPA - A Watershed Stewardship Toolkit for Volunteers
http://water.epa.gov/action/adopt/index.cfm#toolkit

Idaho Rivers United's Water Wise Gardens
http://www.idahorivers.org/protectrivers/conservation.aspx?page=waterwisegarden

Examples of water-thrifty landscaping, illustrating a variety of styles(Idaho)
http://waterthriftyplants.com/Landscapes/tabid/648/Default.aspx

Montana Native Plant Society - Landcaping With Native Plants
http://www.mtnativeplants.org/Native_Plant_Landscaping

Silver Bow Creek Watershed Restoration Plan - Montana Natural Resource Damage Program

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

Dr. Kelly Dixon 243.2450

Your Idea: Fully describe your concept.

See explanation below

Project Location: Describe the project location here and mark it on the map on back.

See explanation below

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ■ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See explanation below

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K

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pcunneen@mt.gov

Promoting Butte's Future Through its Past: Archaeology, History, Preservation, and Education

Dr. Kelly Dixon
The University of Montana

We are submitting our ideas to promote the future of Butte, including Uptown Butte and other sites in and near Butte Area One and the Butte Priority Soils Operating Unit, by developing local partnerships and educational opportunities to update existing architectural surveys; document and restore elements of mineyards; develop a comprehensive interpretive signage and apps program within a Geographic Information System (GIS); explore the potential for compatible public use(s) of historic buildings, structures, and sites; and develop long-term archaeological research related to topics such as human-environment interactions and human ecology (e.g., studying the history and significance of water, industrial engineering to get fresh water to Butte, dewatering the mines, etc. in Butte's mining history). We plan to partner with Jim Jarvis, the historic preservation officer of Butte-Silver Bow, to ensure that the results of this undertaking dovetail with Butte's local preservation needs, plans, and long-term goals. We envision developing community-based volunteer and educational programs and also would like to partner with Montana Tech's Preservation program to ensure that as many local interests and perspectives are built into this project.

~~Dr. Ragan Callaway and Giles Cassidy Thelen~~
~~The University of Montana~~
~~giles@mso.umt.edu, 406-243-5935~~

Cunneen, Padraig

From: Dixon, Kelly [Kelly.Dixon@mso.umt.edu]
Sent: Friday, April 20, 2012 10:23 AM
To: Cunneen, Padraig
Subject: BNRC proposal submission
Attachments: Butte_BNRC_Dixon_UM_cultural_Historical.docx

Hello Pat,

My name is Kelly Dixon and I am an Archaeology Professor over at UM, Missoula. I recently met with Jim Jarvis to see if we could develop partnerships with his historic preservation program, with the intent that we could supply him with education-based research projects to assist with his long-term goals as the Butte Historic Preservation Officer. We also hope to establish long-term partnerships with Montana Tech to develop archaeology and preservation field schools in Butte. During our meeting, I brought up the BNRC request for proposals and Jim suggested I contact you to discuss our plans and the potential for funding for such projects.
Since there is a BNRC proposal deadline today, I am including the attached proposal for exploring the historical and cultural history of Butte, which includes a summary of ideas that came out of our meeting with Jim. I realize that the cultural emphasis of this proposal may be beyond the scope of your purview to fund natural resources. If so, I completely understand. Nevertheless, I hope that you and the Council will consider the significance of the history of human impacts on Butte's environment as you make plans for restoration, etc. If any of this interests you at all, I will be more than happy to schedule a meeting (in person or via telephone) with you sometime this spring to discuss these topics in more detail.

With sincere regards and appreciation for your time,

Kelly Dixon

Kelly J. Dixon

Associate Professor

The University of Montana

Department of Anthropology

Social Science Building

32 Campus Drive

Missoula, MT 59812 USA

kelly.dixon@mso.umt.edu<mailto:kelly.dixon@mso.umt.edu>

Cunneen, Padraig

From: Susan Mackey [completestreets4butte@gmail.com]
Sent: Friday, April 20, 2012 7:54 AM
To: Cunneen, Padraig
Subject: Idea for Butte area One Restoration

Greetings Pat,
Below follows my idea for the Butte Area One Restoration Project:

Name and contact informtion:
Susan Mackey
Complete Streets Coordinator
SRTS Team Butte
completestreets4butte@gmail.com
www.completestreets.org
406-490-7944

My idea:
I support the concept of connecting and adding on to the trails from those around the Chamber of Commerce/Visitor Center to those that lead to Ramsey, with potential to extend further. There are many obstacles to connection of the trails, but I believe a simple concept could help this problem, and join future trails and greenways-essentially connecting neighborhoods,and connecting the Butte community.

Through newly built trails, bridges, and multi-modal safe roadways referred to as "complete streets", we can make the necessary connections. Complete streets are designed for everyone-motorists, public transit users, bicyclists, and pedestrians of all ages and abiities. Wherever it is not possible to connect the trails by the use of other trails, we should use the concept of complete streets for safe, multi-modal connections. i support the complete streeet concept for all built recreational or greenway projects. Wherever roadways, trails are reconstructed or created, I propose they are designed for all users.

Project Location: Anywhere roadways/trails are built, or reconstructed, looking at existings trails in particular.

Project Type: Recreational/fishing

Project benefits: The concept of complete streets/trailways benefits the local Butte community and the local/state tourism industry by restoring the recreational opportunities of Butte Area One. Connected trails/roadways improve convenience, foster community, promote health and wellness, and enhance the infrastructure of travel combined with natural environment. The Butte community/tourists will experience an environmentally enhanced,walkable,bike friendly community-a more livable Butte.

Estimated cost: unknown, depends..

Thank-you for your time and effort, I would appreciate further consideration of the complete street concept,

Susan Mackey
Complete Streets Coordinator
SRTS Team Butte
completestreets4butte@gmail.com

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)
Mike Flanick 533-9530
Po Box 37 RAMSAY

Your Idea: Fully describe your concept. Public Education Signs: Erect "Silver Bow Creek" signs at every trail, street, road, or interstate crossing so all are aware of the drainage & its location. Erect informational signs at old Smelter ~~Signs~~ sites and at any potential water treatment sites with Spec's, Data and descriptions.

Project Location: Describe the project location here and mark it on the map on back.
Through out BAO.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☑ other Education

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. All. Also benefits BAO ~~and~~ in the long term by creating Public Awareness.

Estimated Cost: How much would your project cost? ☐ unknown ☑ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

Need more info? The BNRC will conduct public workshops for developing/gathering ideas:

- **Wednesday March 14.** 6 – 8 PM. Quality Inn (former War Bonnet Inn) 2100 Cornell Ave.
- **Tuesday March 20.** 6 – 8 PM. Butte-Silver Bow Public Archives. 17 W. Quartz St.

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

Kumar Ganesan, kganesan@mtech.edu, 406-490-1949

Your Idea: Fully describe your concept.

See attached two pages.
Performance evaluation of hydrodynamic system and its impact on the restoration efforts of Silver Bow Creek

Project Location: Describe the project location here and mark it on the map on back.

Civil Center area
Missoula Gulch area

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☒ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Benefits the restoration efforts of Silver Bow Creek, the general public to have a healthier creek running through the town

Estimated Cost: How much would your project cost? ☐ unknown ☒ less than $100K Phase I

☒ $100K to $500K Phase II & III ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Natural Resource Damage Program
State of Montana
Department of Justice

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Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Silver Bow Creek Restoration Project:

Treating and Characterizing Outflow from Hydrodynamic Devices Using a Simple Custom Engineered Treatment System

Storm water carries coarse and fine sediment particles that contains residue from mining operations into Silver Bow Creek (SBC). This adversely affects the restoration efforts of Silver Bow Creek. Under the superfund program, there is a plan to install six hydrodynamic devices essentially to trap coarse materials from the storm water before it gets into the SBC. The fine particles and the dissolved portion of toxic metals may likely escape the hydrodynamic system and end up in the water body. Therefore, evaluating the performance of the hydrodynamic system in terms of its ability to remove sediments and contaminants is paramount to assess its effectiveness in our restoration efforts. **The overarching objective of this project is to enhance the restoration of SBC on its own natural way by minimizing contaminant inflow.**

This proposed project has three phases. **Phase I** will involve characterizing the coarse particles collected by one of the hydrodynamic systems (size and metal contents), and characterizing the outflow (fine particles leaving, the size, metal content and flow rate). Similarly the incoming flow will be characterized for its flow and content.

Phase II will extend this study to characterize the other five hydrodynamic devices to gather a better handle on the performance of the system. In addition, samples will be taken from the existing storm water collection ponds to understand the toxic metal loads going into the ponds.

Phase III will focus on "custom engineering a treatment system" to reduce the contaminant levels in the off water from the hydrodynamic system. Montana Tech has developed filters that are based on treated natural fibers that are effective in removing several toxic metals from water especially copper. The custom engineered treatment system includes designing a treatment system that is specific for the type of contaminant present in the water stream (storm water) based on the laboratory test and Phase I and Phase II results. This custom design is based on home grown technology which is simple, easy to operate, and cost effective. The filters that collect the toxic metals will be disposed accordingly based on the concentration levels. One of the possible approaches includes reducing the natural fiber to ashes or chemically treating to recover the captured contaminant. The engineered system will involve a simple design such as a 55 gallon drum, filled with layers of tailored filter materials that are designed to remove the specific contaminant as the water flows upwards through the filters.

The success of this project will lead us to apply this simple technology for treating contaminated water before it finds its way into the creek. If it is successful, it will minimize the adverse impact on the creek and enhance its natural ability to restore itself.

The essence of this project has been discussed with Rick Larson of Butte Silver Bow County, Joe Griffin of DEQ, and Nick Tucci of Montana Bureau of Mining and Geology. Butte Silver Bow

endorses this project mainly to understand the effectiveness of hydrodynamic system on the restoration efforts in Butte. In a bigger picture, it is very critical for us to understand the potential impact of storm water on the natural restoration ability of SBC. An effort in terms of sampling, modeling and identifying the degree of impact on SBC is essential. Developing strategies to decrease such impacts by appropriate technology and cost effective measures are valuable. The proposed work is a small step in the right direction. Natural systems are very resilient and SBC is already showing signs of this, but further reduction of toxics inflow in to the creek will expedite its own restoration cycle significantly. I believe one of the golden goals of BNRC is just that.

Company Involved:

A small company, Energy and Environmental Research and Technology LLC, located in Butte has the licensing agreement with Montana Tech to use the filters developed at Montana Tech. Under this proposed project, most of the laboratory work will be conducted at Montana Tech's Environmental Engineering laboratory and graduate students will be involved. In addition expert consultants from Chemistry, MBMG, Metallurgical Engineering, Geological and Environmental Engineering will be used to successfully complete this project.

Funding Requested:

1) Expedited Funding of $50,000 to complete Phase I work.

2) Phase II and III will be for two years after the completion of Phase I at $90,000 per year (total of $180,000).

Benefits:

a) Add on benefit to evaluate the performance of the hydrodynamic system invested by superfund activity
b) It will improve understanding of storm water impact on SB Creek restoration efforts.

c) The treatment technology will be an asset to improve the restoration efforts of SBC in a very cost effective manner using home grown technology.

d) It will minimize the toxic metal impact on Silver Bow Creek and will significantly improve its ability for natural restoration process or expedite the restoration.

e) Provide better understanding of the storm water to develop future strategies for restoration projects.

f) Benefits the Butte community at large with a cleaner and fishable creek that we owe it to our younger generations.

Contact: Kumar Ganesan, kganesan@mtech.edu; 490-1949

Cunneen, Padraig

From: Ganesan, Kumar [KGanesan@mtech.edu]
Sent: Thursday, April 19, 2012 3:59 PM
To: Cunneen, Padraig
Subject: FW: Butte Area One Restoration Project idea from Kumar Ganesan
Attachments: doc20120419115423.pdf

Pat here is the Restoration project that I discussed with you on Wednesday. Please review and contact me if you have any further questions. I appreciate very much the BNRC providing this opportunity to get involved in this restoration efforts

Thanks
Kumar

-----Original Message-----
From: kcopier se@mtech.edu [mailto:kcopier se@mtech.edu]
Sent: Thursday, April 19, 2012 11:54 AM
To: Ganesan, Kumar
Subject:

KM-5050

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)
Neal Egan & Fran Doran, 900 W Silver, Butte, Ph.782-0793, fdoran@bresnan.net
Barb Kenison, 901 W Silver, Butte, Ph. 782-6841, bkenison@bresnan.net
Kathy Kenison, 845 W Broadway, Butte, Ph. 490-6983, kkenison@pioneer-technical.com
Your Idea: Fully describe your concept.

See Attached Description

Project Location: Describe the project location here and mark it on the map on back.

See Attached Map

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation
☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

See Attached Project Benefits Section

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K
☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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  Tuesday March 20, 6 – 8 PM, Butte-Silver Bow Public Archives, 17 W. Quartz St.

Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Project Idea:

To build an urban forest and recreational area in the old East Side Butte neighborhood previously destroyed by years of railroad and mine waste. Most of the buildings in the East Side neighborhood were torn down or moved to make way for the expansion of the Berkley pit and mining, leaving the area in question barren and desolate. The treated Berkley Pit water could babble through the park and through the Parrot Flats finally making its way into Silver Bow Creek. The Historic Railroad Roundhouse, which is presently for sale could be transformed into a railroad museum and mining interpretive center. There is a little over 50 acres owned by Burlington Northern, MSE and Butte Silver Bow that can be used for the project and a small amount of land privately owned that could possibly be purchased to enhance our urban forest area. The Lady of the Rockies Tram could be situated here along with the Carousel, MHSA compliant softball fields, lighted walking trails, a fishing pond and a much needed water park for the community. The area is close to the Berkley pit viewing stand and will attract those visitors as well as the visitors making their way to tournaments at the MAC Center.

Project Benefits:

The area in question was devastated by years of mining and railroad waste. Homes and buildings in the neighborhood were destroyed in preparation for mining expansion which was later abandoned when the mine closed leaving behind urban decay and devastation. Some of the mine waste has been capped with little or no vegetation or physical restoration creating a barren eye sore next to a key visitor attraction, our Berkley Pit viewing. This project could create a major regional forested recreational area with multiple uses, including cross country skiing, sledding, fishing, softball, walking trails, a railroad museum an mining interpretative center, a water park and many other tourist attractions. The area is also adjacent to low income and special needs housing offering a recreational opportunity close to their neighborhood.

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OKLAHOMA ST
ATLANTIC ST
E MERCURY ST
CURTIS ST
NEW ST
MADISON ST
SHIELDS AVE
WARREN AVE
GARDEN AVE
E PLATINUM ST
E ALUMINUM ST
E IRON ST
CHICAGO ST
S ARIZONA ST
UTAH AVE
EMMA ST
SHORT ST
ER CO ST

Cunneen, Padraig

From: Kathryn Kenison [kkenison@pioneer-technical.com]
Sent: Wednesday, April 18, 2012 3:40 PM
To: Cunneen, Padraig
Cc: helen.joyce@mse-ta.com
Subject: Butte Area One Idea Submittal
Attachments: Property Boundry.pdf; BAO Project Idea and Project Benefits.docx; BAO-Idea-Submittal-Form-final.pdf

Hi Pat,

Fran Doran asked me to forward this BOA Idea Submittal to you. Let me know if you are not the proper contact.

Thanks,
Kathy Kenison

Butte Area One Restoration Project: Providing a Dog Park or Parks for Butte Submitted April 2012

Dogs and people have gone together in the Summit Valley like bread and butter since early miners panned for gold.

Name & Contact Information:
Phyllis Hargrave – 782-8034
Judy Kruzich – 782-5110

Butte Spay/Neuter Task Force
P.O. Box 544
Butte, MT 59703

Our idea: We are submitting this proposal for a dog park or parks to be incorporated into the Butte Area One Restoration Project. Dog parks provide opportunities for people to socialize, bringing people together to create a greater sense of community. Dog parks make communities safer by offering a secure area for dogs to play and socialize, without getting in the way of others. Fenced off from other public areas, dog parks ensure off-leash dogs cannot go after or annoy patrons outside of the park. Also, socialization between pets typically makes for calmer, less aggressive animals. And parks give dog's access to more exercise lessening the amount of behavioral issues.

To continue the growth of our community as a historical destination, providing a safe space for visiting pets, is a draw for tourists traveling with their four-legged friends. Folks may plan their lunch, dinner breaks and overnight stays around the presence of a dog friendly community.

Dog parks are the perfect fit to restored lands in the Butte area. Dog parks don't have to be flat – actually some hills and drainages would be a fun place for dogs to run and play. In doing some research on dog parks, we have found that decomposed granite is the most durable dog park surface and natural vegetation would be a perfect fit. Decomposed granite is easily brushed from a dog's fur. Decomposed granite is more sterile than soil as it is devoid of organic material and microbial life present in soil that will support the growth of grass. Decomposed granite is comfortable for dogs to walk and lie on. The looseness of the mixture provides support and a little "give" to alleviate pressure on the dog's joints.

By restoring or replacing injured ground water or surface water resources, we could potentially have a fountain with a basin under it so the dogs can soak and get a drink, and would only turn on when someone (dog or human)

pressed a foot pedal (as in the dog park in Lake Havasu AZ). This water would be recycled and not be wasted if no one was in the dog park. Ideally, there would be a surface water source (like Bark Park on Jacob's Island, Missoula MT), but the potential sites do not have available surface water. If a water source was available, a small pond could be constructed.

Our plan would be to have a narrow, grassy area around the outer edge of the dog park with trees for shade for dog napping and family time. This would be the only area that would need to be irrigated and/or have a drip system.

The dog park entrance should involve a double gate design to minimize escapes from the park and also to prevent fights at the entrance. The gate's location should be near the parking lot. The area should be contained by a 6-foot fence at a minimum. Most potential sites are near traffic areas and care must be taken to avoid loose dogs.

Drinking water for people as well as dogs and restroom accommodations close by are essential. A covered gazebo with picnic tables and benches would be an excellent place for owners to rest and also provide shade on hot days, and some relief from snow and rain on bad weather days. Additionally, benches located throughout the park would add to the enjoyment of the outdoors.

A well designed water source for play and drinking would be provided such as a concrete area surrounded by a border of small gravel with a fountain that would only turn on when someone pressed the bar.

Park clean up would consist of plastic bags for picking up dog waste and garbage cans by the entrance/exit.

Project Location: A minimum of a 2-acre parcel, possibly

--the Bonanza mine area west of Excelsior Street which is 10.5 acres (S13, T03 N, R08 W, BLIND 5441, BONANZA 485, PAYSTREAK 2331, 1/3 INT), YELLOW JACK 837), or

--the Travona mine area east of Excelsior Street which is 16.74 acres (S13, T03 N, R08 W, POR CROWN POINT LODE #3708, POR BLACK CHIEF FR #2368, POR ANDY JOHNSON LODE #484, POR BONANZA LODE #485,

POR STAR WEST LODE #621, IRON CLAD LODE #864, ANCIENT LODE #589, TRAVONIA LODE #573).

--An alternate location, or location for a second park, would be "Cinder Park" north of Chester Field Park /St. James Healthcare which is 2.43 acres (BARNARD PLACER, S13, T03 N, R08 W, POR (CINDERS PARK).

Project Type: This project would restore recreational opportunities lost because of mining.

Project Benefits: Central Butte lacks recreational amenities for citizens and tourists who own dogs. Butte Area One has been developed by mining, housing, and businesses supporting the mining since the first placer miners of Silver Bow Creek brought their dogs to the valley. Dogs have subsequently been relegated to small yards and short leashes (Butte DOES have a leash law). Presently dogs are not allowed in open areas; the present city parks ban dogs on- or off-leash punishable by a large fine.

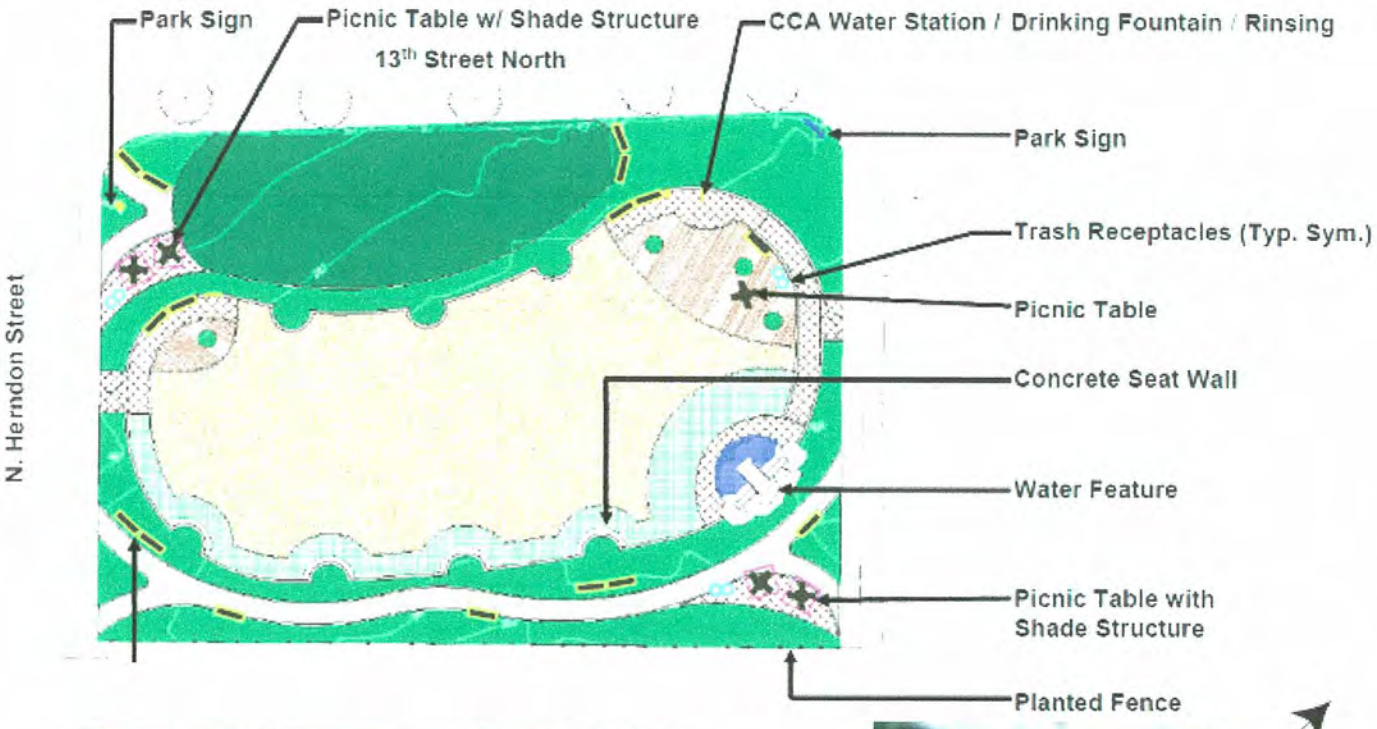
A dog park would provide opportunities for people to socialize, bringing people together to create a greater sense of community. Parks not only benefit those who own dogs, but also those elderly or renters who no longer are able to own dogs. Some folks gather just to watch and interact with dogs, without the responsibility of dog ownership. Parks serve as a social center; additionally dogs make meeting people easier. Travelers , campers, and even those people visiting patients in the local hospital can relax with their pooches in a dog park without fearing their pets getting lost while enjoying the safety of a developed area. Dog parks in the Butte Area One area would be within walking distance from central Butte neighborhoods and will have a good connection with the walking trail.

Also, socialization between pets typically makes for calmer, less aggressive animals, which means they are less likely to attack. And parks give dog's access to more exercise lessening the amount of behavioral issues.

A dog park would strengthen Butte-Silver Bow's identity as a major recreational, environmental, and historical attraction by preserving and enhancing unique historical, natural and cultural elements of the area.

Estimated Cost: $100 to $500K

An example of a possible dog park design.



After a day at the dog park!

Cunneen, Padraig

From: JUDY KRUZICH [judykruzich@wildblue.net]
Sent: Wednesday, April 18, 2012 2:49 PM
To: Cunneen, Padraig; Phyllis Hargrave
Subject: dog park application
Attachments: PAH_dog_park_v2.doc

Pat, attached is our application for a dog park (or dog parks) in conjunction with the Butte Area One Restoration Project. Please let me know if you need anything else. I can be reached at 782-5110 or Phyllis at 782-8034. Thank you so much for considering our project.

Judy

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

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Your Name and Contact Information: (you may remain anonymous)

Jay Cornish, MSE, jay.cornish@mse-ta.com
Kriss Douglass, Montana Tech, samjd@montana.com

Your Idea: Fully describe your concept.

MSE Technology Applications, Inc. (MSE) and the Restoration Native Plant Diversity Project (Montana Tech) will collaborate in the development – and potential commercialization – of soil-free grass/forb/shrub mats for establishing metals/acid-tolerant native plant communities on upland (and possibly riparian) sites within the Upper Clark Fork River Basin (UCFRB). The project will involve the following three phases:

- Proof-of-principle, wherein the details of mat assembly and plant community establishment would be worked out at sites within the Butte Valley, and progress documented (under relevant BRES criteria) during the 2012 growing season.
- Demonstration, wherein the sustainability of the 2012 plots plus performance at additional sites would be evaluated during the 2013 growing season – using relevant BRES criteria.
- Commercialization, wherein sufficiently promising field results would be used to make a go-no go decision regarding establishment of a small business to manufacture the mats.

The proof-of-principle phase will include side-by-side evaluations of a commercially available upland seed mix (from BSB), locally harvested seed (Montana Tech) and Foundation seed of metals/acid-tolerant cultivars (from NRCS/Bridger Plant Materials Center). Test sites would range from "easy" (e.g., on topsoil) through "harsh" (e.g., on eroding waste rock dumps). The mat types will include seed-containing (i.e., established on-site) and seedling-containing (i.e., previously established in a greenhouse) at time of planting.

The demonstration phase will probably involve improved mat design and installation techniques (i.e., as learned from the 2012 growing season); tubling-grown acid/metals-tolerant shrub species will be added to those sites having a reasonably continuous vegetative groundcover.

Montana Department of Justice
Natural Resource Damage Program

The results from the two growing seasons will be used to assess economic and ecological viability of the mat concept(s), and lead to a go-no go decision regarding creation of the manufacturing business. Such decision may occur as early as the fall of 2013, with the immediate market area focused on both private and public sector clients involved in reclamation-restoration activities within the UCFRB.

Project Location: Describe the project location here and mark it on the map on back.

See above discussion; general project location marked by "X" on map (Butte Priority Soils Operable Unit/Area 1).

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☒ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Successful deployment of one or both of the mat concepts would result in the following benefits:

- Enhanced reduction of exposure pathways, by human and ecological receptors, to uncovered mine waste on the Butte Hill.
- The metals/acid-tolerant cultivars would perform better (than non-tolerant cultivars) in stabilizing hard-to-reclaim sites on the Hill or in upland areas around Anaconda, thus contributing to self-sustaining, native plant communities on these "harsh" sites. With further testing, the concept may be applicable also to degraded riparian areas.
- The established vegetative cover should enhance erosion control and subsequently reduce metals-laden stormwater runoff to receiving surface waters (e.g., Silver Bow Creek).
- The concept also builds upon decades of identifying/cultivating acid/metals-tolerant ecotypes, with potential for creating new small-business opportunities in Butte.

Estimated Cost: How much would your project cost? ☐ don't know ☒ less than $100K *

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

* Although no detailed budget has been prepared to date, labor and material costs for the first two phases of the project are estimated to be ≤ $100K.

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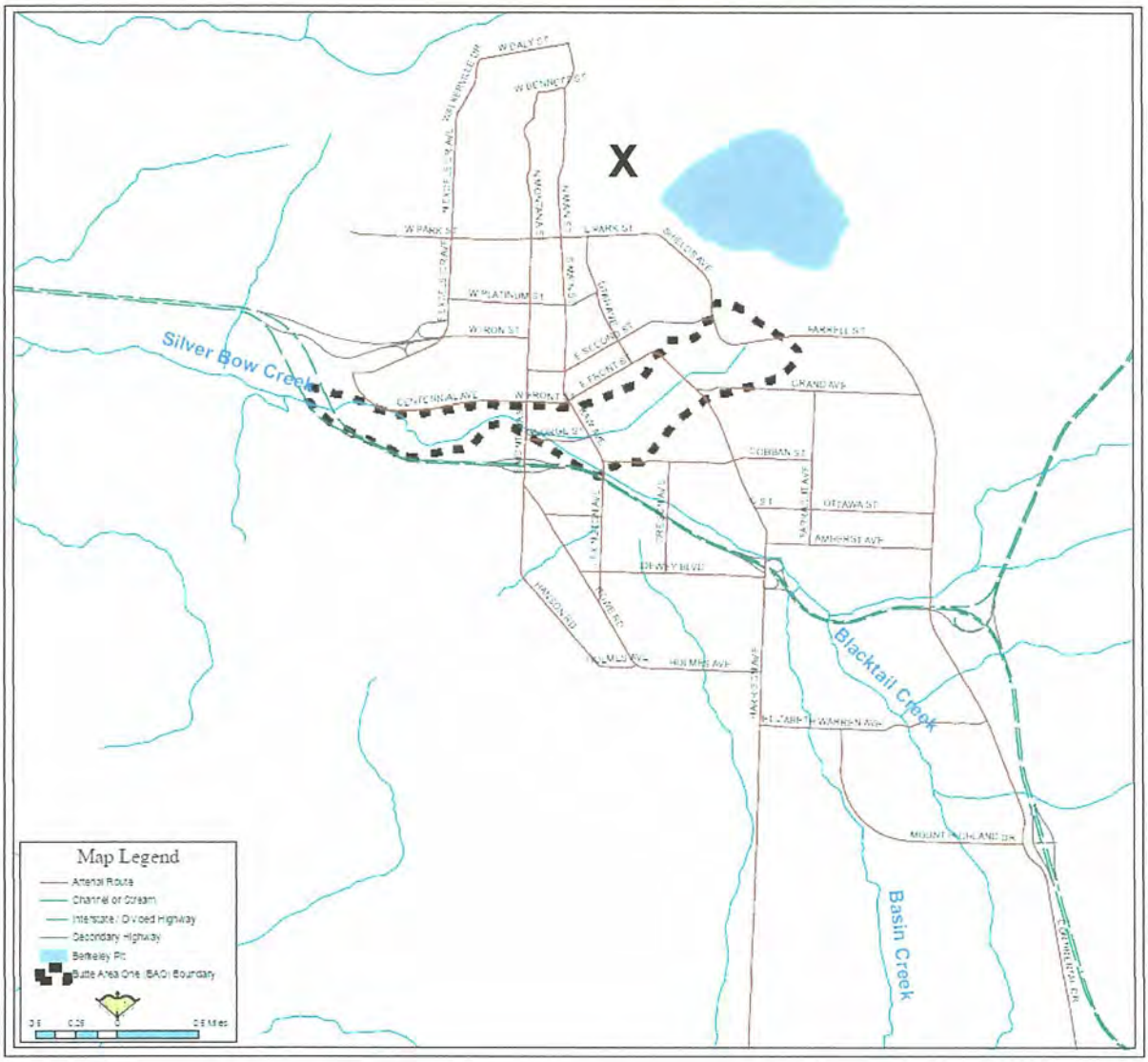
Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Cunneen, Padraig

From: James Cornish [jay.cornish@mse-ta.com]
Sent: Wednesday, April 18, 2012 12:07 PM
To: Cunneen, Padraig
Cc: samjd@montana.com
Subject: " Tough Plant" Soil-Less Mat Manufacturing Concept
Attachments: BAO Idea Submittal from MSE and Montana Tech .pdf

Hello,Pat,

Here's an idea that you may find interesting.

Best Regards,

Jay Cornish
Sr.Environmental Biologist
MSE

---------- Forwarded message ----------
From: Miriam King <miriam.king@mse-ta.com>
Date: Wed, 18 Apr 2012 11:54:43 -0600
Subject: BNRC Submittal
To: James Cornish <jay.cornish@mse-ta.com>

Jay,

The proposal/submittal is attached as a PDF document.

Thanks,
Miriam

--
Miriam King

MSE Technology Applications, Inc.

406-494-7364

This message may contain confidential and/or proprietary information, and is intended for the person/entity to which it was originally addressed.
Any use by others is strictly prohibited.

Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)

Whittier Garden Club - Marcee Cameron Ruark (533-9196)
info@whittierwildcatgarden.com/ marceec@bresnan.net

Your Idea: Fully describe your concept.

Placement of a heated structure within the Whittier Garden to serve as a year-round greenhouse and meeting area. Native plants would be grown and made available to the community along with planting/ growing information as well as assistance from Garden Club members (students). I envision our student club members being community ambassadors of gardening knowledge specific to the Butte area.

Project Location: Describe the project location here and mark it on the map on back.

The Whittier Garden is located adjacent to Whittier Elementary School on the George Parrot Field. Prior to being selected as a garden location, the area was utilized as an ice skating rink. Student club members are in the process of reclaiming the soil in the garden, which was damaged over years of compaction as an ice rink and is currently barren.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☒ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☒ other (Community Education)

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Both community members and the student garden club members will benefit from understanding the special gardening requirements specific to our native soil and climate. Over time the effort will become self-sustaining as plants re-seed and each generation of students pass their knowledge to both the next generation as well as their family members.

Estimated Cost: How much would your project cost? ☐ unknown ☒ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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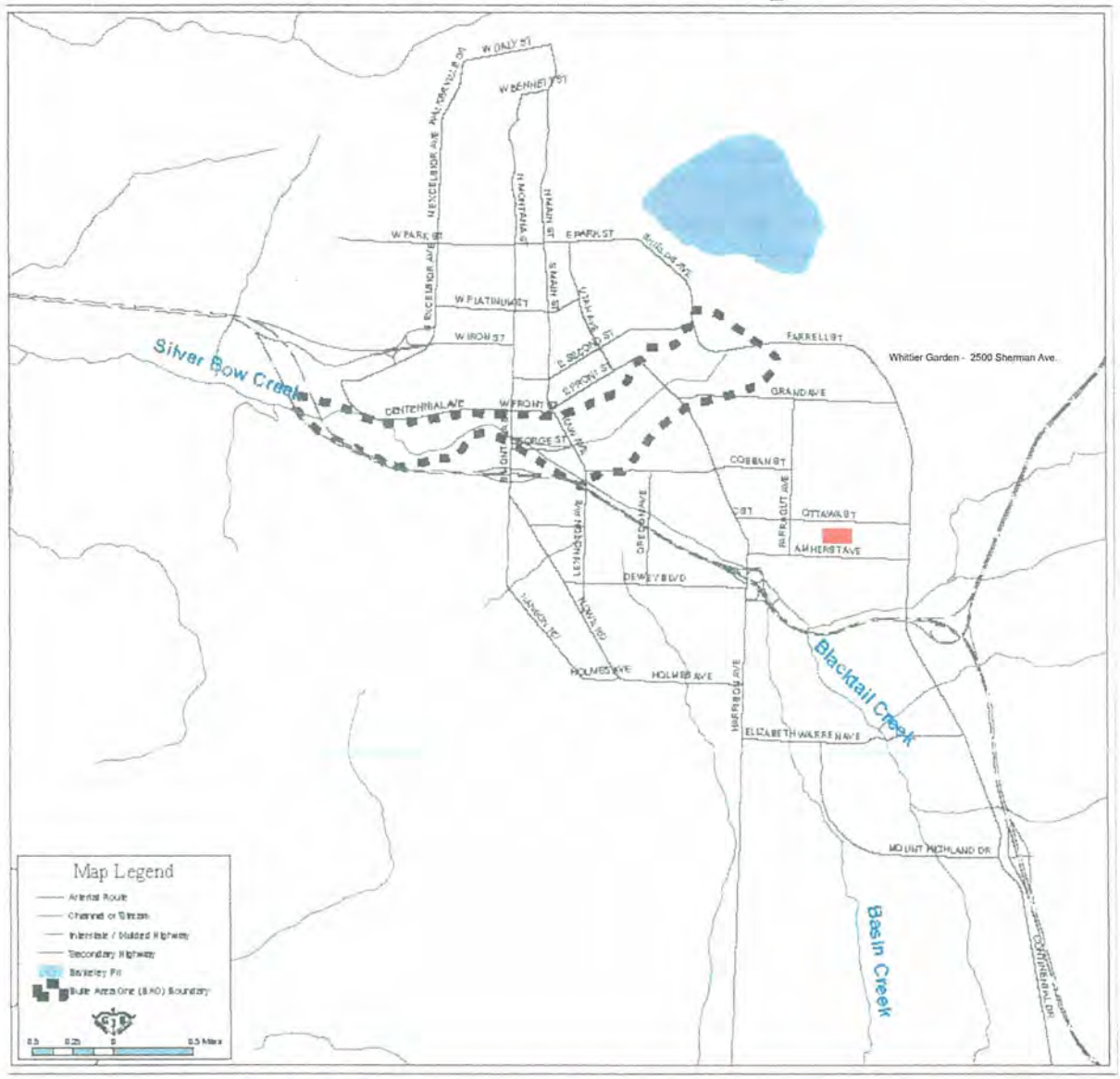
Contact Pat Cunneen at 533-6882 or pcunneen@mt.gov for more information.

Natural Resource Damage Program
State of Montana
Department of Justice

Butte Office
65 East Broadway
Butte, MT 59701

Phone: 406-533-6882
Cell: 406-498-7584
pcunneen@mt.gov

Butte Area One Map



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Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Cunneen, Padraig

From: Marcee Cameron [marcee.cameron@mse-ta.com]
Sent: Wednesday, April 18, 2012 11:14 AM
To: Cunneen, Padraig
Subject: BNRC Project Idea Submittal Form - Whittier Garden Club
Attachments: BNRC_SUBMITTAL FORM-WHITTIER GARDEN.pdf

Dear Mr. Cunneen,
Please consider my attached Project Idea Form for BNRC funding. If you need further information, please don't hesitate to contact me. Please send me a reply email to verify your receipt of this document and to also let me know if I need to submit a hard copy as well.
Sincerely,
Marcee Cameron Ruark

--
Marcee Cameron
Project Engineer/Scientist
MSE-TA
406-533-9196 (cell)
406-494-7371 (office)

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Your Name and Contact Information: (you may remain anonymous)
Kathy Jangula 406-490-7396 or 406-494-2233 wk
Tkjangie01@gmail.com

Your Idea: Fully describe your concept.

Complete the Alice Knob trail system to replace lost recreation opportunities for the Walkerville community. The idea is to construct a parking area at southeast corner at North St and West Clark St. of the reclaimed Alice Knob area. It would provide a gravel trail with interpretive signage up to an area (formally the old ballfield) to be planted with a native garden and exhibit area to reestablish native vegetation, trees and shrubs for bird habitat, bird watching and wildlife viewing (deer, fox) opportunities. It is thought there are areas of the Alice Knob that would support native tree plantings that would provide additional natural resources that were historically present in Walkerville. The trail would then continue with new construction to the top where picnic benches were constructed on the hillside, but are not accessible. The trails will provide educational opportunities for primary school children and daycares with additional interpretive signage further explaining reclamation activities and the views of the Continental Divide and other mountain ranges from the East, South and West. The gravel trail will blend well with the natural habitat.

The trail would then be connected to the Granite Mine Memorial and Mtn Con via the old rail line that circled Walkerville and the Alice Knob. The rail line is now a gravel road that could be graded and marked with signage to provide a Rail to Trails connection to other Rail to Trails routes and Copper Way trails located in the Butte area.

Constructing the trail connections at the Alice Knob would provide additional stabilization to the reclaimed areas of the Alice Knob as the trails would be constructed with bench cuts that would reduce acceleration of runoff on the slopes. This would reduce erosion and sedimentation that could reach storm water controls and add an additional burden to the system. Grading the gravel roads with a pedestrian/bikeway and providing proper ditching would reduce erosion and sedimentation as well as provide for safe pedestrian and bicycle traffic.

Butte Area One Map

Project Location: Describe the project location here and mark it on the map on back.

The project is located on the lower section of the reclaimed Alice Knob east of the Sherman School. The project would then extend east to the Granite Mine Memorial.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☒ waste cap improvement ☐ stream restoration ☒ revegetation

☒ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

This project would benefit the Walkerville community and Butte Silver Bow by creating an urban interface with forest lands, wildlife habitat and restoring currently unused land with native plants, trees and grasses. If the native garden and exhibit area are successfully planted to replace non-native species it would then be extended to other areas of the Alice Knob reclamation area. The restoration will help stabilize the existing cap, prevent erosion and sediment from entering the storm water system and Silver Bow Creek.

The project would be a continuation of lost recreation replacement with trail systems to connect historic mine yards, rail lines, and other historic mining features that have been reclaimed for public use and interpretation.

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K

☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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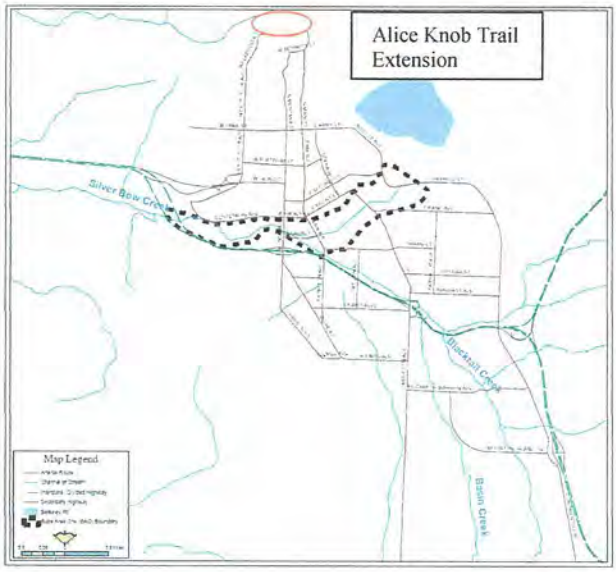
Butte Area One Map



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Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Cunneen, Padraig

From: Kathy Jangula [tkjangie01@gmail.com]
Sent: Monday, April 16, 2012 7:38 PM
To: Cunneen, Padraig
Subject: NRDP idea fund request
Attachments: Alice Knob BNRC project1(1).doc

Pat,

Attached is an idea submittal form to request funding for a project for the Town of Walkerville. If you need a hard copy please let me know and I can drop one off at the office.

Thank you for your time.

Kathy Jangula
Ward I Councilperson
Town of Walkerville
Cell #406-490-7396
Wk #406-494-2233

Cunneen, Padraig

From: Young, Courtney [CYoung@mtech.edu]
Sent: Wednesday, April 18, 2012 10:42 PM
To: Cunneen, Padraig
Cc: Young, Courtney
Subject: BNRC Response

Pat,
Over the years, I have participated on a number of research efforts at MT Tech either independent of or with the MWTP to characterize the Berkeley Pitlake. In particular, this work involved a series of 5 studies: (1) selective metal recovery, (2) surface waters, (3) deep waters and sediment, (4) sidewalls and (5) remediate with slag. I would be happy to give a talk to BNRC to review these efforts. The BNRC will see how this work progressed and ultimately ended up with that last effort and it is this effort that I think offers a huge opportunity for Butte and that is to get rid of pit once and for all. Fill it in with slag as well as new and old tailings from MR Operations. Once covered, the place can be a golf course, sports complex, park, etc. (i.e., Destination Montana revisited). It will attract instead of detract businesses and finally get Butte growing. It will take some intense planning as well as some more research to be done correctly. It will also take agreement with BNRC, DEQ, MR, ARCO and EPA. To be honest, I gave a presentation to EPA in Denver on this matter and it was received well. In this regard, I would like to propose to BNRC to further the research with slags but additionally examine mixing in new and old MR tailings. Off hand, I estimate that it would involve 3 MS students and would cost $450,000. I would be the PI on the work but would incorporate the help of other faculty as needed, namely Dr. Huang and Dr. Downey. Thank you for your consideration. CHEERS!
Courtney

Courtney Young, PhD, QP
Dept Head and Lewis S. Prater Distinguished Professor Metallurgical & Materials Engineering
Montana Tech Butte MT 59701

(406)496-4158
cyoung@mtech.edu<mailto:cyoung@mtech.edu>

Hi Pat
I know this is too late but...

Montana Department of Justice
Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

Carol Link, 134 South Main St, Butte, MT [illegible] nealthinkpt@gmail.com

Your Idea: Fully describe your concept.

Education education, PR spots on TV, pictures (not just on health dept) to let people know about having soil tested before they garden, keeping pets out of mine waste, →

Project Location: Describe the project location here and mark it on the map on back.

Garden Shops, Murdochs, Wagners, Triple S etc

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☒ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Public health + well being for all citizens of Butte esp re: children.

Estimated Cost: How much would your project cost? ☒ unknown ☒ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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How to make sure that waste doesn't come into your home inadvertantly; more Public announcements on TV, radio, newspaper that tell you how to get your home tested before you do construction. The only way newcomers find out this info is through neighbors who know, not the city, county, health dept or any EPA CTECH or gov. source.

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Your Name and Contact Information: (you may remain anonymous)
Six names attached.

Your Idea: Fully describe your concept. See the Noor Parwana idea whereby NRD funds would supply clean soil for growing food gardens in, especially, uptown Butte where yards are compromised by mine or smelter toxins that can uptake into plants.

Project Location: Describe the project location here and mark it on the map on back.
Uptown Butte Hill, LAO, Greeley neighborhoods and wherever contaminants of concern do not meet national standards for food - local standards are not adequate.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☒ other Replacement of food garden quality soil.

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Potentially all Butte citizens

Estimated Cost: How much would your project cost? ☒ unknown ☒ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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pcunneen@mt.gov

NRD idea for soil for gardens

NAME	ADDRESS	PHONE/EMAIL
Mary Kay Craig	518 W. Granite	723-3851/marykaycraig@bresnan.net
Carol Link community garden steering committee	1101 W Gold	782 4804 healthlinkept@gmail.com
George H. Waring	518 W Granite	723-3851/georgewaring@bresnan.net
James Dolan (Hummingbirds Cafe)	603 W. PARK	209-4802 /hummingbird_butte@gmail.com
Scott Musgrove	614 1/2 W Park	(406) 224 6161 musgrove101@gmail.com
Essie Effinghan	603 W. PARK	

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Natural Resource Damage Program

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Your Name and Contact Information: (you may remain anonymous)

Donna Bowman, 406-498-5662
1024 #B Maryland

Your Idea: Fully describe your concept.

I really like Trinity Berry idea. Please clean up Silver-Bow Creek in town. Make it a fishery.

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

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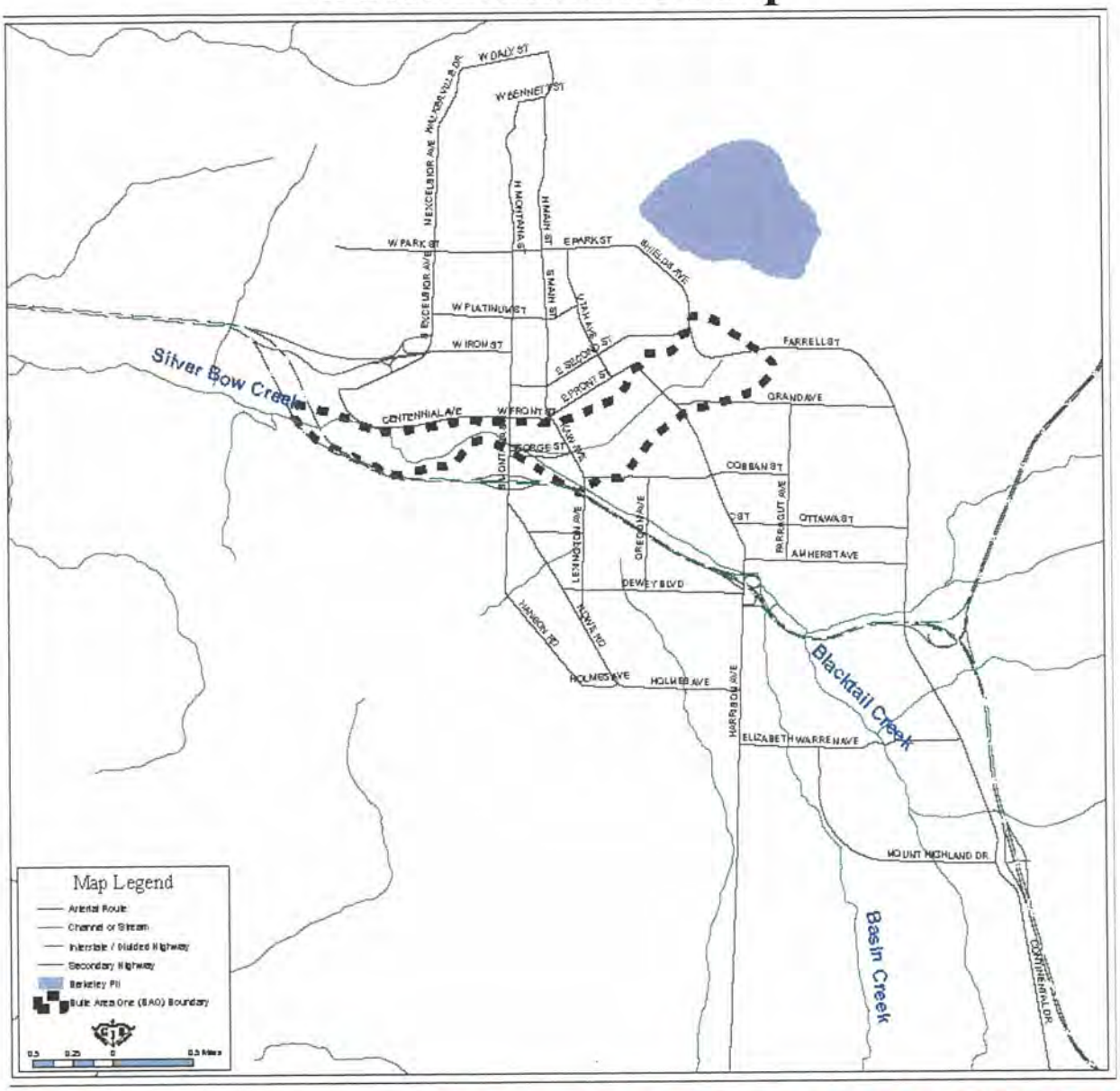
Butte Area One Map



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Butte, Montana 59701

Montana Department of Justice
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Your Name and Contact Information: (you may remain anonymous)
Bernadette Lewis Bernadette R Lewis
675 S. Oaksta
Butte, MT. 59701 723-8574

Your Idea: Fully describe your concept.
See Trinity Berry's idea. Native People would like to see this.

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

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☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

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Your Name and Contact Information: (you may remain anonymous)

Nick Lewis
675 S. Dakota St.
Butte, MT. 59701 723-8574

Nick Lewis

Your Idea: Fully describe your concept.

See Trinity Berry's idea.

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

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Your Name and Contact Information: (you may remain anonymous)
Michaelynn Hawk - Project Dir. Indian Peoples Action
PO Box 113. Butte, MT 59701

Your Idea: Fully describe your concept.
See Trinity Berry's idea. Native People want a fishery in
S B creek in Town.

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

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Your Name and Contact Information: (you may remain anonymous) Angela Leyton 2010 Arizona Butte MT 59703 1/9/2013

Your Idea: Fully describe your concept.
Support the idea Submitted by Native American Ignace Trinity Berry

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
Would benefit the Native American Butte Urban Community & all Butte citizens

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Montana Department of Justice
Natural Resource Damage Program

BUTTE AREA ONE RESTORATION PROJECT IDEA SUBMITTAL FORM

The Butte Natural Resource Damage Restoration Council (BNRC) is soliciting ideas for projects that would improve Butte-area natural resources, namely groundwater and surface water resources of Silver Bow Creek that were injured by mining and were the subject of the $28.1 million claim recovered from ARCO. Appropriate ideas would focus on restoring or replacing injured groundwater and surface water resources or replacing the services that these resources provided, such as drinking water and fishing, etc. Do you have ideas about the restoration of the Butte Hill's natural resources or those of the surrounding areas? Then please share them with us by completing and submitting the form below by **Friday, April 20, 2012**. The BNRC will consider your ideas while preparing their draft Butte Area One Restoration Plan. The goal is to have this plan out for public review in fall 2012 and to the Governor by December 2012 for his consideration.

Your Name and Contact Information: (you may remain anonymous)

Patty Boggs 782-0461

Your Idea: Fully describe your concept.

Support Trinity Berry Idea of cleaning up Butte Silver Bow Creek

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☑ mining waste removal ☐ waste cap improvement ☑ stream restoration ☐ revegetation

☑ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Will ~~support~~ Benefit Butte Native American Community

Estimated Cost: How much would your project cost? ☒ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Department of Justice

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Your Name and Contact Information: (you may remain anonymous)
Scott Musgrove / musgrove101@Gmail.com

Your Idea: Fully describe your concept.
I support Trinity Barry's Plan for creek reclamation.

Project Location: Describe the project location here and mark it on the map on back.
Silver Bow Creek in town

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☐ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Your Name and Contact Information: (you may remain anonymous)

James Duncan

Your Idea: Fully describe your concept.

Support Trinity Berry's Idea to clean up Silver Bow Creek

Project Location: Describe the project location here and mark it on the map on back.

Silver Bow Creek

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Your Name and Contact Information: (you may remain anonymous)

Danelle Stein 4067820461

Your Idea: Fully describe your concept. Clean Silverbow creek so people can use it and fish Can live in the creek

Project Location: Describe the project location here and mark it on the map on back.

Silver Bow Creek

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☑ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. The Silverbow community as well as our Native American Community

Estimated Cost: How much would your project cost? ☑ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Your Name and Contact Information: (you may remain anonymous)
Debra Dick
1007 S. Wyoming St. Butte, MT 59701

Your Idea: Fully describe your concept.
See Trinity Berry idea. I support her concept. I would like to see the creek restored. As I am a Native Indian & believe in keeping nature the way it is meant to be, natural

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☒ mining waste removal ☐ waste cap improvement ☒ stream restoration ☒ revegetation

☒ recreation/fishing ☐ water system improvement ☒ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. It benefits Butte Children from here on out & also turns the creek back to its natural state.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Your Name and Contact Information: (you may remain anonymous)
Alta Beggs Longfox 152 Fawn DR. Butte MT 406-491-3256

Your Idea: Fully describe your concept.
Support Trinity Berry's Idea of how to clean up the Silver Bow creek behind her house

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☑ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public. Would support the Native American people of Butte

Estimated Cost: How much would your project cost? ☑ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☒ more than $5M

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Your Name and Contact Information: (you may remain anonymous)

Leigh Craig 100 E Broadway 782-5211

Your Idea: Fully describe your concept.

Support for Priority Ranking on Silver Bow Creek

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Your Name and Contact Information: (you may remain anonymous)

Jan Hemingway 100 E Broadway Finlen Hotel

Your Idea: Fully describe your concept.

Support for County Bonny re ideas for Silver Bow Creek

Project Location: Describe the project location here and mark it on the map on back.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☐ stream restoration ☐ revegetation

☐ recreation/fishing ☐ water system improvement ☐ storm water controls ☐ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.

Estimated Cost: How much would your project cost? ☐ unknown ☐ less than $100K

☐ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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Your Name and Contact Information: (you may remain anonymous)
Butte Country Club
3400 Elizabeth Warren
Butte, MT 59701

Dan Hickman, president
406-490-6180 (cell)

Your Idea: Fully describe your concept.
Please see attached for a more detailed explanation. In summary, upstream flows from Basin Creek have a direct impact with high ground water and flooding on the Butte Country Club. The BCC wishes to mutually work with its neighbors and the appropriate governmental authorities to mitigate any impacts to the community, the fishery, the water quality, and the BCC.

Project Location: Describe the project location here and mark it on the map on back.
Basin Creek, north of Elizabeth Warren and south of I-15/90.

Project Type: Check the box(es) that is/are most applicable to your idea:

☐ mining waste removal ☐ waste cap improvement ☒ stream restoration ☐ revegetation

☒ recreation/fishing ☐ water system improvement ☐ storm water controls ☒ other

Project Benefits: Who/What does your idea benefit? Describe how it will restore or replace natural resources and benefit the public.
Please see attached for a more detailed description of the benefits and impact on the natural resources.

Estimated Cost: How much would your project cost? ☐ don't know ☐ less than $100K

☒ $100K to $500K ☐ $500K to $1M ☐ $1M to $5M ☐ more than $5M

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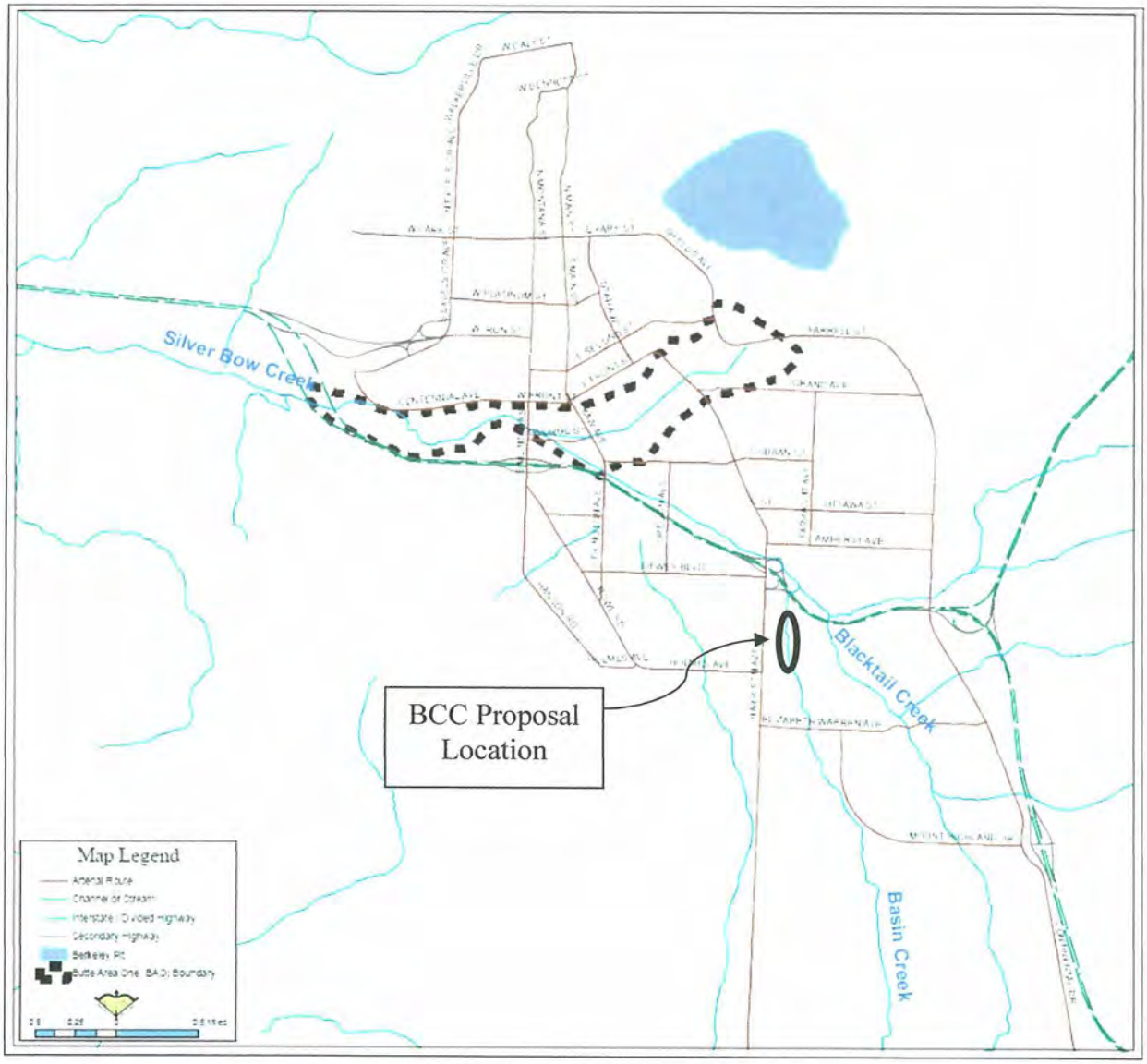
Butte Area One Map



Place Stamp Here

Butte Natural Resource Damage Restoration Council
65 East Broadway
Butte, Montana 59701

Butte Area One Restoration Project Idea

Entity: Butte Country Club
3400 Elizabeth Warren
Butte, MT 59701
(406) 494-2394 (office)

By: Dan Hickman, President
(406) 490-6180 (cell)

Project Location: Section 29-T3N-R7W, Basin Creek

Project Background: Basin Creek flows under portions of the airport, north through land abutting the Butte Country Club (BCC). The stream meanders through an old hayfield owned and controlled by the Bert Mooney Airport Authority, where it saturates the ground and pools at an old road bed (formerly White Bvd). At that point water from the pool seeps under the road bed and flows onto the BCC. Recent changes to the upstream flows have caused considerable damage to the BCC, where stagnant standing water deprives Basin Creek of its full flow potential, negatively impacting the fishery, and creating a hazardous breeding ground for mosquitoes. This year alone the BCC has spent over $25,000 in drainage projects just to make the course playable. Without this project, essentially one third of the course was unplayable. The BCC does not look at the recent project as a final solution; more construction is needed to insure water flowing through the Basin Creek drainage area is handled in the most prudent manner possible.

Project Description: The BCC proposes to take a proactive approach to protect the water quality of Basin Creek (and the downstream waterways), the fishery, and the property of the club.

During periods of high water (whether through mountain snowpack melt or operations of Basin Creek Reservoir), local snow melt, and extended precipitation events, Basin Creek tends to flood Hole #8. Also, rising groundwater tends to pool in the low areas of the course. The BCC proposes to install a drainage system on this hole and extend the other drain systems recently installed.

Knowing significantly increased flows will be expected in Basin Creek, we believe that the creek channel and its banks will need to be altered or protected to avoid what will likely be considerable erosion. Some of the specific actions required would be:

1. Replace existing culvert – existing culvert would be too small to adequately handle increased flows.
2. Remove a sand trap – to avoid increased erosion causing sand, silt, and top soil to be washed down the creek.
3. Add fill, elevating the land surface in the immediate vicinity of Hole #8 green.
4. Add rip rap to certain sections of the creek bank to avoid continual erosion.
5. Install drains.*
6. Enhance existing drains.

   Note * - drains would consist of a ditch with a perforated pipe, covered in gravel and wrapped with a silt screen. The ditch would then be grassed over.

I believe this project to be in the $450,000 range. I acknowledge that more cost refinement is necessary. The BCC would provide 33% cost support for this project. BCC's support would come in the form of manpower, machinery, materials, and cash to reach the 1/3-2/3 split.

Project Benefits: This project has considerable benefits for this 1,300' stretch of Basin Creek and the waterways downstream, including Silver Bow Creek and the upper stretches of the Clark Fork River. With the modifications proposed, significant volumes of silt and organic material (top soil, bank debris, etc.) will not flow into the waterways – preserving water quality, spawning habitat, and stream banks. The resident trout population will continue to thrive. Avoiding surface water as a result of high ground water tables or flooding will keep water temperatures lower enhancing the biodiversity of the streams. Avoiding the stagnant pooling will minimize the active breeding zones of the mosquitoes. These insects not only are nuisances, they create a health hazard for the residents of nearby subdivisions, the workers and customers frequenting the nearby business district, and the users of the course. And finally, the BCC uses nitrogen rich fertilizer and proper drainage and creek control will control surface water which may prevent unwanted nitrate loading of Basin Creek, Blacktail Creek, and Silver Bow Creek.

Summary: While the BCC believes that some of the issues we are currently facing are caused by upstream interests, we are confident we can work together for the benefit of all. The BCC understands that upstream projects and/or water management are continuing to evolve and we are confident those changes will further impact the BCC. The BCC also understands some ideas presented to the Butte Natural Resources Damage Restoration Council (BNRC) will directly impact the BCC if approved. We are confident that the BNRC will consider all projects in a regional perspective and know that if certain projects are approved, impacting the BCC, our proposal would be given adequate consideration.

Cunneen, Padraig

From: Dan Hickman [dan@goldenstoneresources.com]
Sent: Thursday, May 17, 2012 10:48 AM
To: Cunneen, Padraig
Subject: BNRC Proposal
Attachments: BAO Idea Submittal Form (final).docx; Butte Area One Restoration Project BCC.docx

Mr. Pat Cunneen:

Attached please find our Butte Area One Restoration Project Idea Submittal Form and a letter providing more detail for the Butte Country Club's proposal for stream restoration and surface water drainage along Basin Creek. Please call if you have any questions.

Sincerely,
Dan Hickman, President of the Butte Country Club

Dan Hickman
Golden Stone Resources, LLC
3659 Albany Ave.
Butte, MT 59701
406-490-6180