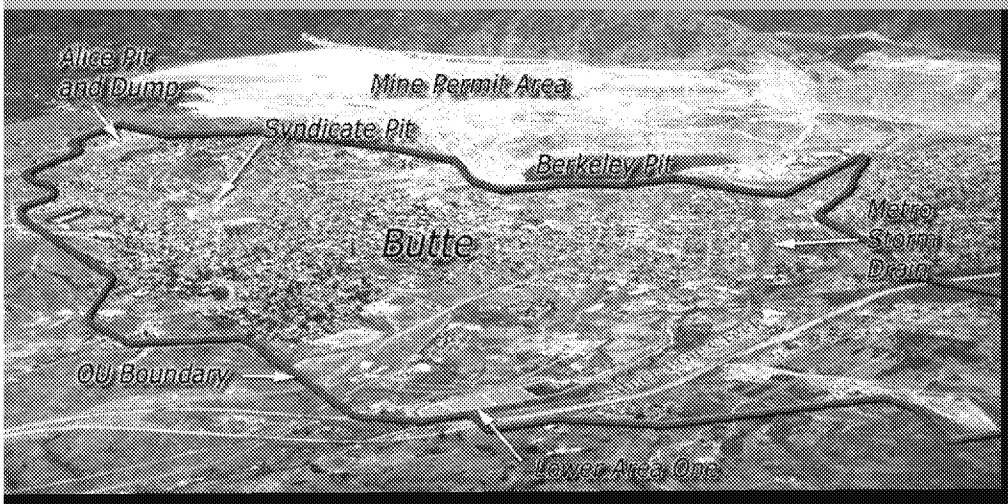
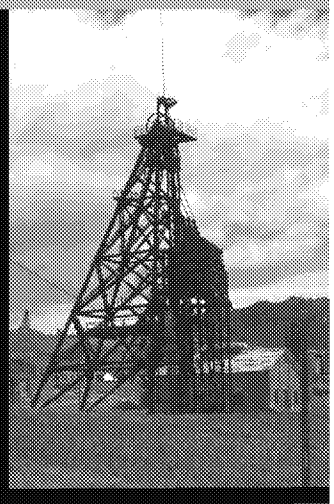
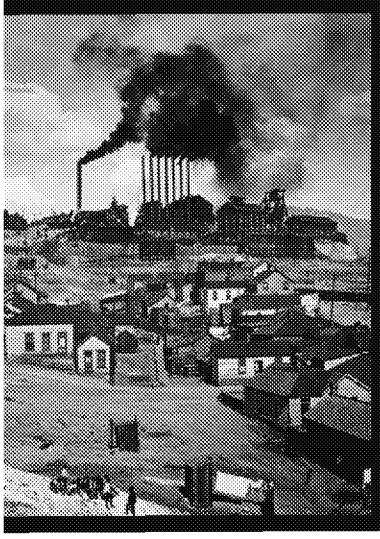


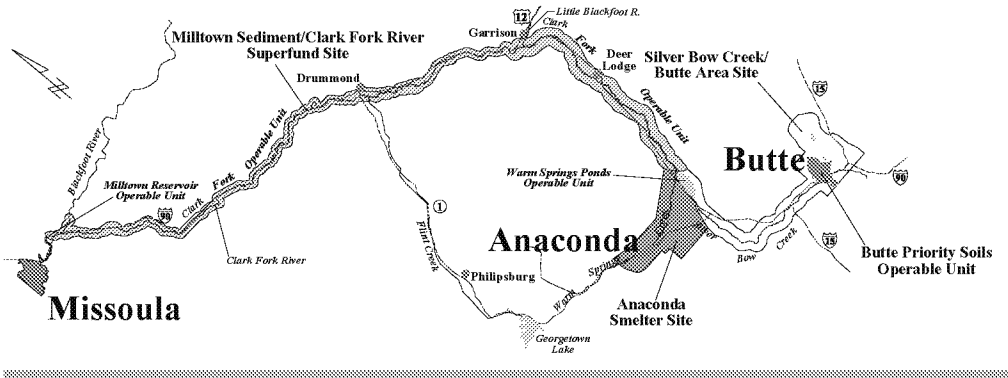




Community Involvement Plan

Butte Priority Soils Operable Unit,
Silver Bow Creek/Butte Area Superfund Site,
Butte, Montana

February 2013



U.S. Environmental Protection Agency, Montana Office, Region 8, Butte and Helena, Montana

Community Involvement Plan

Butte Priority Soils Operable Unit, Silver Bow Creek/Butte Area Superfund Site, Butte, Montana

February 2013

Prepared for:

U.S. Environmental Protection Agency
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Appendix A Community Profile
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Acronyms and Abbreviations

ACMC	Anaconda Copper Mining Company
BMPs	best management practices
BNSF	Burlington Northern Santé Fe Railroad
BPSOU	Butte Priority Soils Operable Unit
BRES	Butte Reclamation Evaluation System
BRW	Butte Reduction Works
BSB	Butte Silver Bow
BTL	Butte Treatment Lagoons
CD	consent decree
CIP	community involvement plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	Clark Fork Coalition
CFRTAC	Clark Fork River Technical Assistance Committee
CFWEP	Clark Fork Water Education Program
CIC	community involvement coordinator
CTEC	Citizens Technical Environmental Committee
cy	cubic yards
D	democrat
DEQ	Montana Department of Environmental Quality
DOE	U.S. Department of Energy
EJ	environmental justice
EPA	U.S. Environmental Protection Agency
ERA	emergency response action
ESD	explanation of significant differences
LAO	Lower Area One
LIEAP	Low Income Energy Assistance Program
mg/kg	milligrams per kilogram
MSD	Metro Storm Drain
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NPL	National Priorities List
NRDP	Natural Resource Damage Program
O&M	operations and maintenance
OU	operable unit
PRI	Partial Remedy Implementation

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PRP	potentially responsible party
R	republican
RMAP	Residential Metals Abatement Program
RI/FS	remedial investigation/ feasibility study
ROD	record of decision
RPM	remedial project manger
SARA	Superfund Amendments and Reauthorization Act
SBC	Silver Bow Creek
SHPO	State Historical Preservation Office
TAG	technical assistance group
TCRA	time critical removal action
the site	Silver Bow Creek/ Butte Area Superfund Site
UAO	unilateral administrative order
UCFRB	Upper Clark Fork River Basin Remediation & Restoration Advisory Council
WCP	West Camp pump station
WLIP	waste left in place
%BPOV	percentage of persons below poverty level

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Section 1

Community Issues and Concerns

This Community Involvement Plan (CIP) is the plan that the U.S. Environmental Protection Agency (EPA) will use to communicate with stakeholders and the general public regarding the remediation activities of the Butte Priority Soils Operable Unit (BPSOU) of the Silver Bow Creek/Butte Area Superfund Site (the site). The CIP identifies issues of concern to community members throughout the BPSOU and outlines outreach activities that EPA intends to implement to address those concerns, as well as a timeline for implementation. The CIP also addresses environmental justice concerns.

EPA's general mission is to protect human health and the environment through implementation of environmental laws enacted by Congress and assigned to EPA for implementation. To achieve that mission, EPA needs to continue to integrate, in a meaningful way, the knowledge and opinions of others into its decision-making processes. Effective public involvement can both improve the content of the agency's decisions and enhance the deliberative process. Public involvement also promotes democracy and civic engagement, and builds public trust in government.

EPA has long been committed to public involvement. The fundamental premise of EPA's Public Involvement Policy is that EPA should continue to provide for meaningful public involvement in all its programs, and consistently look for new ways to enhance public input. EPA staff and managers should seek input reflecting all points of view and should carefully consider this input when making decisions. They also should work to ensure that decision-making processes are open and accessible to all interested groups, including those with limited financial and technical resources, English proficiency, and/or past experience participating in environmental decision making. Such openness to the public increases EPA's credibility and improves the decision-making processes. At the same time, EPA should not accept recommendations or proposals without careful review.

The Public Involvement Policy supplements, but does not amend, existing EPA regulations that prescribe specific public participation requirements applicable to EPA's activities under specific statutes, such as regulations found at 40 CFR Part 300 (the National Oil and Hazardous Substance Pollution Contingency Plan or NCP). The NCP regulations specify the required level of public participation for Superfund projects. When feasible, agency officials should strive to provide increased opportunities for public involvement above and beyond the minimum regulatory requirements.

Superfund is the nation's program to cleanup uncontrolled or abandoned hazardous waste sites. The Superfund law, officially known as the Comprehensive Environmental Response, Compensation, and Liability Act as amended (CERCLA), was passed by Congress in 1980 and amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA). Other amendments have been enacted through the years. Superfund has three primary functions:

- It gives EPA the authority to perform studies and make cleanup decisions which minimize or control releases or potential releases of hazardous substances.
- It enables EPA to compel those responsible for site contamination to pay for or conduct studies or cleanupactions (enforcement lead sites).

- It provides EPA the ability to fund and perform studies or cleanup actions when money from responsible parties is not available (fund lead sites).

At fund-lead sites, cleanup is paid for with Superfund money. At enforcement-lead sites, a potentially responsible party (PRP) pays for or performs cleanup. CERCLA requires EPA, or the state at state-lead sites, to develop and manage community involvement programs at both fund-lead and enforcement-lead sites. At either type of site, community involvement remains the responsibility of the EPA or the State.

The CIP has been prepared following guidance from EPA's *Community Relations in Superfund: A Handbook and Superfund Community Involvement Handbook.* It also incorporates 2011 updates to that guidance posted on EPA's website. It is a flexible document that will continue to evolve, and EPA invites public comment and discussion on this plan at any time. Readers are encouraged to participate in the communication process and may contact the designated EPA staff with any questions, comments, or suggestions for improvement. Contact information is provided in Section 2.

The community involvement effort promotes two-way communication between members of the public and the lead government agency responsible for remedial actions. EPA is the lead government agency for BPSOU. EPA's objectives for community engagement in the neighborhoods throughout the BPSOU are to:

- Provide the public the opportunity to express comments on and provide input to technical decisions.
- Identify the best way to communicate information to the public.
- Inform the public of planned or ongoing cleanup activities.
- Identify and resolve misperception.
- Where applicable, address environmental justice issues.

The BPSOU is located in southwest Montana, in the communities of Butte and Walkerville. The cleanup is being performed by potentially responsible parties, including the Atlantic Richfield Company under EPA oversight. EPA is the lead agency and oversees remedial designs, implementation of remedial action, and performance of operations and maintenance at the site. As noted above, EPA also has the lead role for implementing community involvement activities. The Montana Department of Environmental Quality (DEQ) is a supporting agency.

This CIP relies heavily on personal interviews with stakeholders and the general public that were conducted as part of the CIP preparation process. It provides opinions and concerns of the interviewees and not those of the agencies. The information developed through the interviews and summarized herein reflects interviewees' responses and perceptions, ***regardless of whether those responses are factually accurate***. The CIP will serve as a basis for addressing community concerns and for clarifying misinformation identified in community responses.

The CIP is structured in the following format:

- **Section 1 - Community Issues and Concerns.** Provides a summary of the information that is important to the community as determined from the community interviews.

- **Section 2 - Input from the 2011 Five-Year Review.** Provides a brief summary of input from the recently conducted Five-Year Review of the entire site.
- **Section 3 - Community Involvement Action Plan**. Provides EPA's plan of action for implementing community involvement activities to address community issues and concerns.
- **Section 4 – Overview of the Superfund Site and OUs.** Presents a broad overview of how the BPSOU is related to the Silver Bow Creek/Butte Area Superfund site , other OUs within that site, and to other sites.
- **Section 5 –Timeline of Regulatory Activities**. Presents a broad overview of the regulatory activities conducted to date as well as work planned for the near future.

Supporting information for these sections is provided in Appendices A through C.

1.1 Community Interview

Community interviews were conducted between October 3, 2011 and February 17, 2012. The objective of the interviews was to find out how to best keep the public informed and involved as the project progresses. A total of 20 people were interviewed in 17 interviews. The interviewees were selected to provide a broad range of input. They included: retirees, teachers, medical personnel, landowners, city and county officials, nonprofit environmental representatives, and business people in the Butte area. All were residents of Butte-Silver Bow. Based on input from the initial interviewees, two additional interviews were conducted by phone to capture input from community recommendations.

Interviews typically lasted about an hour. Each interviewee was asked a list of 10 questions to determine their knowledge of the site, interests, concerns, and preferred methods of receiving information about the site. Those questions are provided below. EPA also reviewed available demographic and economic data to construct a community profile of the areas surrounding the site. That information is provided in Appendix A.

1.2 Results

The following presents the questions asked and the summarized responses to those questions.

1.2.1. What are you main issues or concerns with the cleanup of BPSOU?

Interviewees offered a wide variety of issues or concerns, and most had more than one. The most common responses are illustrated in the pie chart (Exhibit 1-1).

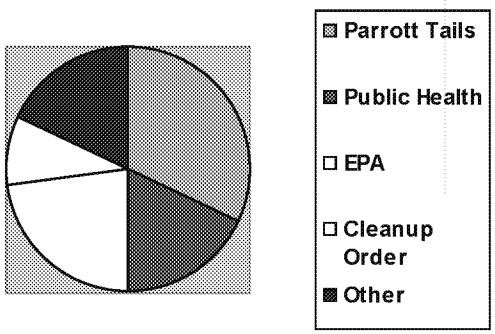

Exhibit 1-1. Main Issues or Concerns

The single most common concern heard during the interviews was the Parrott Tailings. It was raised by 7 interviewees, 6 of whom thought that the tailings should either be removed or studied further to ensure that they were not impacting groundwater and surface water. There were

concerns that caps placed on the tailings would erode and that the capture area at Lower Area One would not adequately capture contamination in groundwater coming from the tailings. One person believed that the removal of the tailings was overkill and should not occur.

Public health was the second most common concern heard. People were not sure that contamination was significantly impacting the community, but they wanted EPA to hear that the community was concerned about making sure homes are safe (especially for low-income people), about disproportionate health impacts to people on the hill, and about the need for neighborhood kids to have safe places to play and go to school. There was also a concern that perception (rather than reality) would impact community development.

Two people were concerned about the order of the cleanup, specifically why the cleanup of areas downstream was proceeding prior to finalization of the cleanup in Butte. They were concerned that contamination in Butte could recontaminate areas downstream.

Five people mentioned EPA in their answer to this question. Four stated that they believed EPA was doing a good job and was working hard to cleanup Butte. One person thought that there is a perception problem, and that the public doesn't realize all the work that is being done because the consent decree has resulted in a "gap toothed" appearance of cleanup in some areas for the short term. Two interviewees reported that most people in Butte are satisfied with the way the work is going and that EPA has done a very good job. They believed that the average person in Butte doesn't get heard and that the same people complain, no matter what. One person thought that EPA wasn't listening and had turned off people who would have been interested in the project.

Several interviewees had specific comments that could not be grouped. They were:

- There is a need to tell people what the plan was for cleanup in Butte in a way that will open the lines of communication and take care of more than the immediate needs of Butte.
- There seems to be a lack of a systematic organized method for the public to participate in the decision making process.
- The name of Silver Bow Creek is *not* the Metro Storm Drain and that the pink coating that has been applied is ugly and adds to the degradation of the creek.
- The 2011 five-year review needed an external review and had been treated like a pro-forma box to be checked, which turned off a lot of people in the community.
- There is a perception that the project is moving very slowly and that there is internal fighting on how to get the money needed to do cleanup.
- Good stuff is being done, but it is a difficult task explaining technical issues at such a complex site. Even the difference between reclamation and restoration confuses people.

1.2.2. Do you have any concerns about public health?

About two thirds of the interviewees responded that they had concerns regarding public health. Of those that had no concern, two said that they knew people who have lived in Butte all their lives and suffered no ill effects and the others believed that the health issues were being addressed by EPA and

so they were not concerned. One person who had no public health concerns said that it would be nice to meet the stream water quality standards, but that was impracticable.

Of the people who did have concerns, four mentioned a lack of available data on public health (Exhibit 1-2). The level of detail for this concern ranged from a general wish for more information on the effects of mining to one question about whether the pig study used to validate action levels was sufficient. One person asked if the contamination contributed to chronic obstructive pulmonary disease effects.

Eight of the interviewees mentioned cancer or mortality rates in Butte. Three of those people believed that cancer rates were actually higher in Butte than elsewhere and that the cancers were unusual in their type or target. The remaining four people who mentioned cancer rates felt that the *perception* in the community was that cancer rates were higher than elsewhere, but they themselves either did not believe this to be true or were unsure. The disconnect between perception and reality regarding health effects was also said to be negatively impacting community development. Rashes from contact with soil and respiratory issues were also mentioned by someone who cited cancer as a primary concern.

"There is a perception in Butte that cancer rates are higher. Everyone seems to "know someone" with cancer. Maybe it is because we are such a close-knit community that we all know someone."

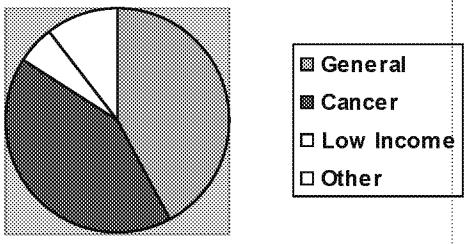

Exhibit 1-2. Public Health Concerns

It was stated that many low income people, especially those on the hill, have multiple environmental issues in their homes (e.g. mining-related lead, lead paint, or asbestos) and that environmental contamination affected their health disproportionately. One person said that they believed it was EPA's *responsibility* to provide the "best public health" regardless of cost. One of the interviewees referred EPA to the community needs health assessment that was in the process of being completed.

Two people mentioned attic dust in older homes as a public health concern, and one of those people said that the line for sampling of attic dust is arbitrary and should not be used to determine eligibility for sampling or cleanup. They felt that statistics should be used to show if there is no problem in certain areas. One person was worried that Butte-Silver Bow would not be able to ensure that institutional controls would be implemented in a manner that would protect public health. This person did not believe that Butte-Silver Bow would perform the needed maintenance. One person wanted to know why the water in the Berkeley Pit was being allowed to get to a critical level prior to the onset of treatment, given that they believed that the contamination from the pit had the potential to go all the way to the Pacific Ocean if it entered the hydrogeologic system.

1.2.3 What kinds of information do you want about EPA's activities?

Most of the people interviewed said that they liked receiving site information as written materials, such as the EPA bulletins that are now distributed as newspaper inserts. Several of people had specific suggestions on how to improve those materials:

- You should simplify the information. Raw data are available if people want it, but most don't need it. The technical assistance group (TAG) should help boil down the data into what the public needs.

- EPA needs to use fewer words and more pictures. Use lots of graphics to show progress and issues, status, principal parties, goals, objectives, etc. Show time-specific accomplishments.
- Keep doing the inserts, but put them in on Mondays instead of Wednesdays.
- Make sure that the information is timely.

Other community members had suggestions about the type of content they wanted included in the written materials. These suggestions were:

- Make sure the updates tell what work is being done, how the community can help, and where the current work is being done.
- We need information on how people can get their soils tested. Maybe in a link to the hospital website.
- Give us a review of the whole site history. Show a timeline of how we got to where we are at (why were the pumps allowed to turn off). What went wrong and why? I'd like a publicized remediation plan – where we are, and where we are going.
- Tell us what is EPA doing in Butte as a whole? What is done to make it a safe, habitable, and clean environment?
- EPA needs to educate the public on what can and can't be done to protect the caps. Maybe pool up funding from various sources and start *Cap Watch* which would be like *Pitwatch* and could be a place that people could turn to for the latest information on the caps and provide a community system for cap awareness and protection.
- Ongoing test result trends by month, by year, by neighborhood, for air and soil quality, with identified sources for previous and ongoing contaminators. Particularly, air particulate matter at the Greeley monitoring site, as related to MRI's blast times and at hourly intervals thereafter.

Three community members interviewed were also members of CTEC, and they thought that CTEC should have a greater opportunity to comment on documents and changes. CTEC should be used as a platform to gather information from the public. The Montana Pole and Treating Plant site was cited as "an example of how agencies dismiss public input." Someone suggested that CTEC should do a quarterly update.

Finally, one person said that there is enough information available, if people are willing to get it. It is not EPA's role to educate the public.

1.2.4 Do you want to be involved in any site-related activities that EPA and other agencies conduct?

Most of the people interviewed wanted to be involved in at least some of the activities being conducted at the BPSOU (Exhibit 1-3). Of those who had a response, more than half were happy with their current level of involvement and the

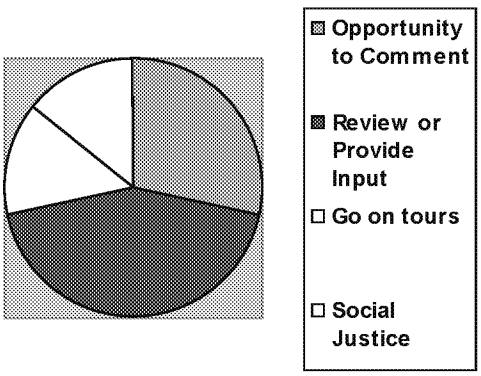

Exhibit 1-3. Opportunities to Be Involved

remainder wanted to be more involved.

As a follow up, EPA asked how these people would like to be involved, what the best way was to involve them, and if there was anything they had read about or heard recently that stood out in their minds. The results to these follow-up questions are presented below and in Exhibit 1-4.

1.2.4.1 How do you want to be involved?

Some of the people interviewed wanted their involvement to consist of being informed of changes and perhaps going on site tours, so they could be better informed and could serve as a resource for their friends and neighbors. Others asked to have direct involvement with the process, such as providing review of flyers to ensure that they were easy for the community to understand. The comments are:

- I'd like to be informed beforehand of changes and not after they have already been finalized. We need an opportunity to comment.
- I'd like an opportunity to voice an opinion.
- I'd like to go on site tours. I think this is a very good way to learn about the site. It is so complicated, that being able to look at the site is very useful in understanding the issues.
- I'd like to help review flyers so that they are accessible to the public. EPA needs to draft them at a high school level so that people can understand them. Also, people don't understand the relationships between the different agencies and the funding sources, so that would be good to explain, maybe with a chart.
- I'd like to be used as a resource for getting information to schools in the county. Call or email me and I will forward the documents to the right places. This could be flyers that go home with kids, or other information tools.
- I'd be happy to review things or provide advice on how materials are written, so that you have the point of view of someone who works with teenagers.
- I'd like to be involved in social justice issues.
- I would be willing to be involved in facilitating the establishment of a procedure in neighborhood communities for common citizens to become involved in the participation in the decision making and restoration/revitalization process.
- I'd like to be involved in the area from the Parrott Tailings to Lower Area One.

- Newsletters/flyers (4 mentions)
- Email (3)
- Website updates (2)
- Meetings (2)
- Tours (1)
- Postcards (1)
- Public service announcements (1)
- Newspaper ad or story (1)
- Citizen neighborhood community information/action alliances (1)
- Online surveys (2)
- Project Green (3)

Exhibit 1-4. Best Involvement Tools

1.2.4.2 Is there anything you received, read or heard about that particularly stands out?

People were asked if there was anything that they received, read, or heard about that particularly stood out for them about the BPSOU. Their responses are excerpted below and listed in Exhibit 1-5. Several of these items are not related directly to the BPSOU, but to the site itself.

- I heard there is a higher incidence of asthma in Butte than elsewhere, is that right? Is it related to mine waste? I also heard there is a Department of Energy (DOE) initiative for working with older homes, and I wonder if that could be tied to the lead abatement program at the site?
- The Parrott Tailings seems to be in the news a lot (4 mentions).
- I've been hearing about NRD funding. The spending of the money seems to be politically driven, and Butte is probably not getting our fair share.

- Increased rate of asthma in Butte.
- DOE initiative for older homes.
- Five-year review.
- Parrott Tailings.
- NRD funding for Butte
- Funding for BSB water system.
- Stacie Barry's doctorial dissertation.

Exhibit 1-5. Recent Topical Issues in the Community

- There have been meetings and discussions on NRD funding for the BSB drinking water system.
- I've heard about the walking trail, cleanup along Silver Bow Creek, and the fighting for Superfund reclamation money at downstream sites. That money needs to stay in Butte.

1.2.5 What do you think is the best way to get information to the community?

Most people interviewed had at least one suggestion for getting information to the community. Several people said that they thought EPA should use as many ways to communicate as possible. Suggestions for getting information to the community were divided into five main groups: schools, fact sheets, news media, face-to-face interactions, and the internet (Exhibit 1-6).

Four people thought that involving the schools would be very useful, and their suggestions included: history club, science fair, and the Ann Cody Smith Essay contest. It was suggested that involving high-school age students would be best for more complicated subjects.

Seven people thought that written materials, such as the EPA fact sheets or *Pitwatch* were good ways to involve people. They thought that delivering the newsletters as inserts was a good idea, but cautioned against delivering on Wednesday when all the store inserts were in the papers.

Ten people cited the news media as the best way to reach people. Their suggestions included *Party Line* with Ron Davis and CFWEG – *EcoJazz* radio programs, the *Montana Standard* and *Butte Weekly*, a bi-weekly EPA science Q&A in a newspaper, or perhaps a regular column spearheaded by CTEC.

Exhibit 1-6. Best Ways to Get Information to the Community

Schools (4)
▪ History club ▪ Science fair ▪ Ann Cody Smith Essay contest
Written Materials (10)
▪ Newsletters, fact sheets, bulletins, *Pitwatch*
News Media (10)
▪ *Party Line* radio interview ▪ CFWEG – *EcoJazz* radio interview ▪ Montana Standard and Butte Weekly (bi-weekly EPA science Q&A or a regular column – maybe spearheaded by CTEC).
Face-to-Face (10)
▪ Public meetings ("with venues and times that make sense"), ▪ Talks to local groups (e.g., the Exchange Club, Rotary, or Pachyderms and Burros ▪ CTEC meetings ▪ Neighborhood community gatherings
Internet (6)
▪ Central location for reports with cross-link ▪ Improved EPA website ▪ Fact sheet inserts sent via email list ▪ Short environmental topic films on line ▪ Environmental blog ▪ Facebook page

(#) = Number of times mentioned.

Ten people suggested face-to-face interactions. These included: public meetings ("with venues and times that make sense"), talks to local groups (e.g., the Exchange Club, Rotary, or Pachyderms and Burros, and CTEC meetings. It was also suggested that EPA disseminate information to people using citizens who were trusted by others in the community. One person suggested EPA participate in quarterly ("fifth Wednesdays") neighborhood community gatherings, in each BSB Council of Commissioner's District, focusing on dissemination of information and on how citizens can become involved in the decision-making process and in the actual remediation, restoration, and revitalization process.

Six people said that the internet was the best way to get information to people. Their suggestions included: have a central location for reports with a cross-link, beef up EPA's website, send the fact sheet inserts to an email list for those who have a computer but don't read newspapers, put short environmental topic films on line, create a blog, and create a Facebook page.

1.2.6 Who do you trust for advice and information?

Many people who answered this question said that they generally turned to friends or neighbors for advice, and that they didn't have any specific individuals to name. However, several people named local citizens or other individuals who worked in local government or who had been involved in the project over the years in one way or another. They believed that these individuals were knowledgeable or had expert qualifications. One person said that it was important to have face-to-face interactions that allowed questions to be asked and answered.

Other people named the agencies that they believed were trustworthy. EPA and DEQ were mentioned most frequently (Exhibit 1-7). People often said that the choice of who they turned to for advice depended upon what the subject was. One person said that they only trusted themselves through careful critical investigation.

Exhibit 1-7. Organizations or Individuals Cited as Trustworthy for Advice or Information

Government Representatives	Local Citizens	Other
EPA (7) Montana DEQ (4) Montana Natural Resources Damage Program Bureau of Mines and Geology (2) Butte Silver Bow, Director of Public Health, Butte Silver Bow, Chief Executive	Pat Cooney Dan Powers Ian Magruder Fritz Daily	Marci at ARCO ARCO and Pioneer Articles in the newspaper

(#) Number of times mentioned, if mentioned more than once.

1.2.7 Are there other people we should talk to?

During the interview, people were asked if there was anyone else that they thought EPA should talk to in order to get a complete picture of how best to communicate with the community. The names and/or organizations suggested are presented in Exhibit 1-8.

Some of these people were already on the list of individuals to be interviewed and others were contacted by EPA and asked if they would participate in the interview process. Names of individuals who could not be interviewed but who were otherwise interested were placed on a future contact list.

Exhibit 1-8. List of Additional People to Contact for an Interview

Potential Interviewee	Area of Interest	Potential Interviewee	Area of Interest
Butte Silver Bow (BSB) Homes	Low income housing issues	Fritz Daily and John Ray	Community and social justice issues
Karen Burns , BSB Community Development Director		Terri Hocking, BSB Health Dept.	Health issues (Env. Factors working group)
Barbara Brophy, Butte Head Start		Connie Kenny, Butte Chamber of Commerce	Business perspective
Barb Miller			
ARCO Retirees Group and Belmont Senior Citizen's Center (Nancy)	Senior's issues	BSB Council of Commissioners	Community and infrastructure issues and local government perspective
Justin Ringsak	Communication issues	Dave Palmer, BSB Commissioner	
Chad Okrush		Jon Sesso, BSB Planning Dept.	
Matt Vincent and Pat Munday	Env. issues	Paul Babb, BSB Chief Executive	
Ted Duaime, MBMG			

1.2.8 Is there anything else you like or have seen work best about the cleanup or past community involvement activities?

Many of the interviewees cited specific items that they believed worked best. These are divided into four groups: general cleanup, specific projects, groups, and information (Exhibit 1-9). Specific projects and groups that were mentioned favorably by interviewees are listed in Exhibit 1-10. The general comments are excerpted below.

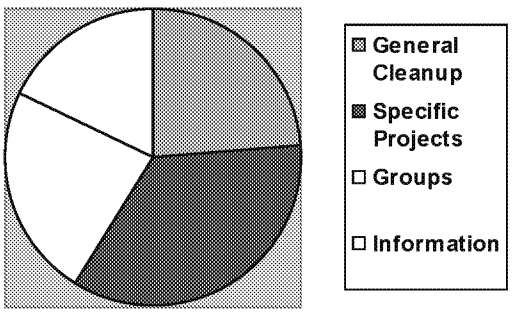

Exhibit 1-9. Things Interviewees Have Liked Best

- The cleanup has been great overall. People forget where we have come from. EPA is not visible enough about these achievements. The area has really been beautified. When you clean something up, you should toot your horn.
- I like it all – especially the walking trail and the ongoing community enrichment. Don't babysit us. Just leave us with a place to start or maybe a vision of what it could be. We have been in it too long to see beyond it.
- The sampling and cleanup at people's houses have been very good. But there are people who are not taking advantage of it and the Residential Metals Abatement Program (RMAP) needs to find a way to reach them.
- I am impressed by the cleanup of the soils and attic dust.
- The cleanups are great, and a lot of the work around town has been very beneficial. ARCO and EPA have done a great

- Granite Mountain Memorial
- Copper Mountain
- Trail system
- Project Green (2)
- Rally Around the Creek
- CFWEP (2)
- CFRTAC
- CTEC (4)
- Pitwatch (2)
- Newspaper articles are effective.
- Field trips with the WET program.
- Need to expand to produce "Capwatch."
- Greenway service district.

Exhibit 1-10. Projects or Groups Mentioned Favorably

job. Their managers have been strong women who have been able to get the job done.

- The Greenway Trail System is a good example of how informed citizens took an active role in producing something good for Butte.

1.2.9 If there was one thing you would ask EPA to do better as it relates to community involvement in Butte, what would it be?

Fifteen of the interviewees had a response to this question, and for most people, the response related either to a need to increase EPA's visibility in the community or to increase the EPA's educational outreach (Exhibit 1-11).

Seven people had comments related specifically to EPA's visibility:

- EPA should have a visible, welcoming, public presence in Butte. The new office is too hard to get to because of security and there is no one there who is supposed to be doing public outreach – not technical work.
- Be more visible.
- Tell us about accomplishments. Help people to understand the relationship between EPA and ARCO, so they see that it is about stakeholders working together and not some sinister thing.
- Be more visible. Reach out to clubs and get them to spread the word. Get on *Party Line*.
- Show your face. Go to meetings. Take control when someone starts monopolizing the meeting.
- Come into the neighborhoods, and clean them up. There is a lot of degradation in the housing. Maybe get involved with the Emma Park Neighborhood task force.

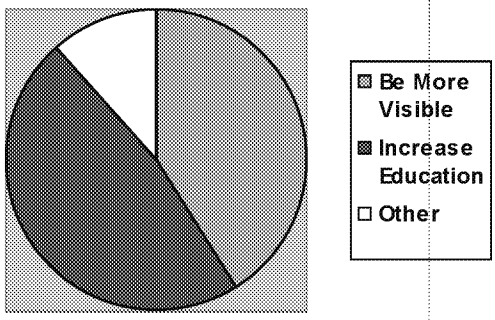

Exhibit 1-11. One Thing EPA Could Do Better

- EPA has had an image problem – since the Reagan administration. Give us a status report. Be more visible on remediation and solution. Advertise your successes. EPA shouldn't take the brunt of 100 years of mining.

Eight people asked that EPA make an effort to produce more information, target specific audiences, and educate the public:

- Talk to the public in a way they can understand. Incorporate GIS layers, so people can use the internet to look up what interests them about the site.
- Butte is a reclamation economy. Maybe EPA could involve Brownfield-type activity in some way. It's about more than cleaning up soil. It's about cleanup, job retraining, and public infrastructure. The issues need to be addressed holistically. Make this a flagship site that is a model for the community. Give us more information on time-specific goals, objectives, and strategy.
- Make a concerted effort to engage the citizenry. Too often it has been "*we will talk in the future....*"

- Involve schools and do more outreach. CFWEP needs resources to produce materials. Find a voice for getting out EPA's message and receiving the community's message.
- Get the community groups working together, and teach us how to sustain after EPA leaves. Educate about health risks, and address why other communities are growing, while Butte is not. Is that because of water contamination, earthquake damage, and tunnels under town? Why are we waiting until 2020 to treat pit water?
- Make sure that the people understand that the EPA stands for the people. EPA should be a guardian of health and welfare for the community.
- Develop, initiate, empower, and promote a systematic organized procedure whereby neighborhood community listening sessions would be held each quarter, in every BSB Commissioner District. Be instrumental in the formation, empowerment, encouragement, and ongoing functioning of neighborhood community remediation, restoration, and revitalization alliances and action task forces.
- Participate in authentic, two-way communication for the community.
- Improve your website and coordinate with the community. Let people know what EPA can and can't do. There is no use taking the heat for something that you are not even allowed to do.

Two people had comments that fell outside of the two categories described above:

- Make more of an effort to help the public and not do just what ARCO wants. Be more visible and open to the citizens of Butte. Address the concerns raised at the public meetings about the Parrott Tailings.
- The expansion of the area where attic dust will be addressed to include all of BSB and Rocker means that this issue is now very well covered by EPA.

1.2.10 Is there anything else you would like to add?

This question was a final opportunity for people to mention something that they might have forgotten earlier in the interview. The answers spanned a wide range of topics and are presented below.

- Lose the acronyms in EPA newsletters and help CTEC improve and address their mission.
- Sara is easy to deal with.
- Expand EPA's presence on the internet. Try making some short videos on environmental topics.
- EPA doesn't need a PR person. They need a good communication specialist – a good Irish priest.
- It's a complicated site and numerous groups seek to represent "the community."
- CTEC is getting better, but they don't have a good reputation.
- The progress is wonderful. People forget what it used to look like.
- Check out the community needs assessment on the BSB website. Environmental health is a section in the document and there is a community health improvement plan.

- Do something about traffic when Harrison Avenue is shut down.
- There is a lot at stake here. Be visible. Step up and show us that you are part of the solution. Be straight with us. Tell us "*this is financially where we are at….*" "*This is the best we can do.*" People think that money for cleanup is unlimited and ask for things that EPA can't deliver.
- Give presentations to the County Commissioners. That will get the news of progress in the newspapers (because they cover those meetings).
- Butte needs reclamation, not caps that will erode. I am not sure that the county has the expertise to do the Butte Reclamation Evaluation System (BRES) evaluations. People need to know that the people checking the caps are qualified.
- The open spaces sold by ARCO are stressing the limits of the public health lead program. The Lower Area One changes are good and user friendly.
- Overall, the silent majority thinks the cleanup is pretty good. Only a select few are very involved and unhappy. CTEC is not fulfilling their mission statement.
- EPA is always measured by the EPA itself. There should be a 3rd party check and balance to ensure that reasonably and informed people are doing right things.
- EPA should look at what it can do in collaboration with other government entities to form a coordinated program to develop, encourage, and contribute to development of community spirit, willingness, preparedness, and transformation.
- Add some "web facts" on how Superfund affects you, what happens if contaminants increase in the future, and what is EPA planning for next steps. Use public service announcements to direct people to the web site.

1.3 Input from CTEC

CTEC provided input as a group to the CIP and also on the draft. That intput was used, along with information from the individual interviews, to develop the outreach methods in Section 3 and is provided below.

1.3.1 Input to the CIP

CTEC held a public meeting on September 20, 2011 regarding the upcoming revision to the CIP. People at the meeting volunteered concerns and suggestions for proposed actions. The concerns are listed below, as provided by CTEC. The number in parentheses indicated how many people shared the concern.

1. Five Year Review was biased (due to EPA/contractors evaluating themselves) and citizens are skeptical regarding its content. (2)
2. Number of involved citizens is dwindling, same people at meetings. (2)
3. Involve kids, schools, MT Tech in community involvement.
4. CI programs must target low income and disadvantaged groups. (2)

5. Transparency of EPA decision making, planning, and data available should be improved. (2)
6. Community needs to be involved in decision making, not just receiving information from EPA.
7. Many things are happening and changing with Superfund, but not being explained (examples given: LAO construction, OU actions being more integrated, EPA approach evolving).
8. Community involvement coordinator (CIC) should be trained in communication and EPA CI training.
9. Frustrating to see EPA and DEQ argue; this confounds communication between the public and EPA (one example given was argument about whether ARARs called for dissolved or total metal analysis in water quality).
10. Yard caps may not last (one example given was rising water prices may lead to people not watering vegetation on caps).
11. EPA is waiting for public to come to them for involvement and outreach.
12. There is a lack of response to citizen concerns, comments, including those technical comments made by experts in community.
13. BSB is a PRP and may have conflict of interest when determining or advocating what is best for the public.

The proposed actions suggested by attendees at the CTEC meeting are listed below, as received from CTEC. Many of these suggestions have been incorporated into the CIP.

14. There should be more neighborhood meetings, addressing topics localized to that neighborhood, and within walking distance of those affected. (5)
15. Piggy-back Superfund outreach with existing programs that reach a wide audience (examples given: LIEAP, Weatherization, CFWEP, water utility bill, Hunan Resources Council, District XII neighborhood initiative, Facebook (example given is popular "you know you're from Butte Montana if" page. (3)
16. Address the community's specific health risk concerns and prove that current conditions are protective of human health based on actual human health measures. (2)
17. Keep EPA website up-to-date. (2)
18. Technical answers need to be given to the technical questions and comments provided by community members. (2)
19. Involve public before decisions are made and before plans are drafted.
20. Follow EPA guidance documents regarding outreach to low income communities.
21. Update public more regularly. Currently is is common for remedial actions and planning to occur first followed by outreach, if outreach occurs at all.

22. CTEC should have a seat at the table with on-going technical committees to address CTEC need for involvement in technical remedy issues and EPA transparency issues.
23. Publish non-technical articles on Superfund and environmental issues in local newspapers to stimulate discussion and generate interest in coming to public meetings.
24. Send post cards targeted to affected groups: break down simple to complex issues, targeted RMAP outreach.
25. EPA should change how it evaluates the merit of community input and ideas with respect to decision-making and learn how to communicate with low-income people on these ideas.
26. Conduct analysis of the view that EPA Montana personnel have of the role of public involvement. Develop EPA community outreach plan at state level for Montana. Train EPA personnel to effectively follow state outreach plan.
27. Establish citizen advisory committee to analyze and evaluate community involvement in Superfund decision-making.
28. EPA should state at the start of every public meeting what the role of public input will be, so as to set realistic expectations for the public.
29. TAG group should become an advocate of public interest.
30. Use innovative venues of public participation (examples given: neighborhood meetings, citizen working groups).
31. EPA should make better use of media, TV, radio for public outreach.
32. Be clear what EPA means when agency personnel state "will look into it" and hold EPA accountable to respond.
33. Begin every public meeting with summary of how current meeting topic relates to big picture of Superfund cleanup in Butte.
34. Involve BSB commissioners better.
35. Public involvement training and better resources for EPA CI personnel should be provided.
36. Start a facilitated CI program.
37. EPA should define local government role in speaking for citizen needs versus citizen working groups or individuals speaking for community.

1.3.2 Feedback on Draft CIP

In order to encourage community input to the CIP, EPA provided a draft copy to the interviewees and CTEC. Written feedback was received from 3 individuals and from CTEC as a whole and verbal feedback was provided to EPA at a CTEC meeting on September 5, 2012. All comments received were reviewed carefully by EPA. When commenters were able to provide suggestions that EPA was able to use to improve the CIP, those suggestions were incorporated (primarily in Section 3.2).

CTEC commented that the activities proposed in CIP were the same as those from the 2003 CIP. They provided several suggestions for improving the planned activities:

a) Directly address public involvement with a description of how public input will be used in decision making.

b) Respond quickly to citizen concerns, perhaps by addressing them in a bulletin called "Responding to Butte's Concerns."

c) Involve more people by holding neighborhood meetings on a regular basis instead of one public meeting per year. The neighborhoods could be based on commission districts and the commissioner could be involved in the process in order to tailor the information to meet the neighborhoods needs. EPA should also coordinate outreach with non-Superfund programs (such as the Low Income Energy Assistance Program [LIEAP]) to reach a wider audience.

d) Provide technical responses to technical questions and comments provided by community members by acknowledging that the question was received and by stating what will be done to review and respond. CTEC should also have a seat at the table in ongoing technical meetings.

e) Include specific activities that wil reach out to lower income folks and get them involved in understanding Superfund and participating in decision making, as well as get low income rentals tested for metals. Neighborhood meetings can be used to make an informal community needs assessment of environmental justice issues.

CTEC believes tht the CIP should also include a schedule or timeline for implementing activities and a mechanism for evaluating progress. CTEC would also like EPA to prioritize and describe in writing those activities which EPA believes CTEC should provide support in implementing so that CTEC can consider how to address those needs.

1.4 Current Community Concerns

This section is reserved for an update of community concerns, hopefully on an annual basis. This CIP is intended to be a living document, and the three-ring binder format allows topical issues and concerns to be inserted in this section as needed.

Recently there have been concerns and questions regarding current and future design of health studies in Butte, along with the misunderstandings of incidence rates vs. mortality rates.

A Health Study Remedial Design Work Plan is required under the 2011 Unilateral Administrative Order and is currently being designed through a collective effort of stakeholders, including a community advisory board. The process will include the best epidemiologists and technical advisors in the State of Montana and across the region. EPA enphasises that a comprehensive health study is critical to the success of the cleanup efforts protecting human health in Butte and has extended the timeline for when the work plan and final design is due.

Dr. Carol Ballew who is a Senior Public Health Epidemiologist for the State of Montana explains incidence and mortality rates:

- Incidence rates – the newly diagnosed cases of disease in a population each year – are the best way to compare the risk of getting a disease like cancer or heart disease or lung disease from

one community to the next. Getting a disease depends in part on being exposed to risk factors, including environmental risk factors.

- Mortality rates – the deaths from disease in a population each year – depend on both incidence rates and being able to get effective medical treatment and care. Two communities can have similar incidence rates but very different mortality rates. In fact, a community can have a relatively low incidence rate but a relatively high mortality rate because medical its care options are limited.

Incidence rates are the best way to compare the risk of getting a disease. Mortality rates are a way to compare access to care and treatment after people get a disease.

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Section 2

Input from Recent Five-Year Review Interviews

In 2011, EPA conducted a five-year review of the entire site. Five-year reviews provide an opportunity to evaluate the implementation and performance of a remedy to determine whether it remains protective of human health and the environment. As the name suggests, reviews begin five years following the initiation of a CERCLA response action, and are repeated every five years. Part of that process involves meeting with the community to solicit feedback and provide comments with regard to any concerns related to the final remedy. Over 100 community interviews were conducted during the 2011 five-year review, and information was distilled and evaluated in the 2011 five-year review report.

This section presents information from the interviews that is believed to be the most relevant to the BPSOU CIP. Again, these are perceptions voiced by interviewees in order to understand the concerns and frame of mind in the community. No effort has been made to verify the veracity of the input received or to provide rebuttal. However, EPA's response to moving forward with some of the concerns expressed by the interviewees is included below in italics.

2.1 Parrott Tailings and Metro Storm Drain

The Parrott Tailings were not included in the interview questions, but they were brought up by at least half the interviewees. Many comments concerned waste left in place (WLIP), including: the tailings should have been removed, tailings present recontamination issues, and copper has not been addressed as a toxin. There were comments that not enough data had been collected, that new data obtained since the ROD has not been considered, and that the aquifers are not well-characterized. A few people were concerned about the need to treat groundwater into perpetuity, and many people are concerned with redevelopment. Many people said cleanup work should have been paid for by the PRP and not the NRD fund.

Almost one third of the respondents mentioned concerns with the Metro Storm Drain (MSD). Several interviewees said that when the French drain system is jetted, iron plugs up the holes and the fittings are damaged. Many people are concerned about recontamination of the aquifer and everything downhill. One interviewee said, *"The Metro Storm Drain is like a superhighway for contaminants to get to Silver Bow Creek and ruin all the work that was just completed."* Several people said that the MSD was once a creek, and should be restored to look like a creek and meet aquatic standards. People were also concerned with the long-term O&M. One person wanted more monitoring to prove that the MSD can deal with contaminants.

EPA acknowledges the concerns that the community has raised regarding the Parrott Tailings and groundwater in the MSD. Currently, the MSD capture and pumping system is working as expected, and baseline conditions in Silver Bow Creek have been substantially improving for the past several years while the MSD system has functioned and other cleanup measures have been implemented. The PRPs, with Agency oversight and involvement, have been studying ways to improve the entire groundwater capture system that was installed in the MSD and improve the design to be more robust. Additionally, ongoing Consent Decree negotiations may address these issues. The five-year review for BPSOU did not

include a review of the MSD and Parrott Tailings portion of the remedy because the remedy implementation is ongoing. This system will be evaluated in the next five-year review.

2.2 Westside Soils

Westside Soils is the name of another OU of the site. It will look at mining related contamination in rural Butte and other areas outside of the BPSOU. EPA has not yet worked on Westside Soils OU, so the original intention was not to include it in the five-year review. However, many interviewees brought up the topic themselves, often stating that work should be done in the Westside Soils area because it can affect other projects downstream. People were primarily concerned that the area was being used for recreation and that houses were being built in the area. One person noted that signs intended to keep people out of the area were ineffective, and children riding bikes kick up a lot of dust. Three interviewees mentioned that Bell Smelter was a potential source of copper which was a contributing source of contaminants to BPSOU. One resident was concerned about cancer in his dogs.

In the five-year review report, EPA stated that it plans to initiate formal Superfund RI/FS activities for this OU soon, as resources permit.

2.3 Stormwater

About a third of the interviewees listed storm water as a concern. One issue was movement of contaminants in storm water, including recontamination of areas downstream. The aging infrastructure of the stormwater system was the primary concern brought up by interviewees. It was said that, because the cement pipes used to transport storm water were installed in waste, the current system cannot deal with large storm events, and an interdisciplinary team should be used for storm water management. It was also said that storm water is an environmental justice issue and there should be more funding to help fix the infrastructure in poor neighborhoods where there is a lack of consistent curbs, sidewalks, and gutters. A few people mentioned a need for a conventional water treatment plant at LAO to address contaminated storm water.

EPA, in conjunction with the BPSOU PRPs, has developed several work plans that address stormwater run-on/runoff in source areas and stormwater conveyance systems. Additional areas that are the source of stormwater contamination have been remediation and revegated. A curb and gutter plan, done in several phases, was developed and approved by the EPA and is being implemented. The program includes the installation of curb and gutters at or near source areas. The program began in 2009 and will continue in 2013 . Additional settling ponds and other storm water best management practices have been implemented. The county's stormwater system is now the subject of several improvement projects, including the cleanout of sediments and the installation hydrodynamic devices. More work may be implemented over the next several years as data is evaluated and futher engineering options are explored. EPA and DEQ are committed to controlling stormwater such that aquatic receptors in Silver Bow Creek are protected.

2.4 Waste Left In Place

More than half of the people interviewed mentioned WLIP, specifically the capped areas and source areas in Butte. Most people understood the need for WLIP and felt that total removal wasn't practical. One interviewee said, "It's a risk management based law. There's not a total clean up law."

Concerns about WLIP included fire hazards from grass, permanence, long-term operations and maintenance, improper access by vehicles, vegetative diversity, the current use of herbicide,

recontamination from erosion, the protection of shallow ground water, redevelopment, and that areas capped under emergency order might not be as thick as they should be. Most people disliked fences. Several people mentioned the need for more testing and one person said, "The BRES should be available to the public just as USGS information is available to the public. Someone said in a meeting the other night that half the caps were failing, and I know this not to be true, but I want the data to prove it." This person said that the original soil work was based on arsenic, but they are now seeing more cadmium and copper. One person said that trees at Copper Mountain have been lost and should be replaced. A handful of people wanted total removal, and one said that plowing lime was not a long-term solution.

The BPSOU five-year review report identifies the evaluation and maintenance of caps as an issue which must be addressed by EPA. Results from the BRES evaluations, including soils data, are publically available at the Butte-Silver Bow County's Planning Department.

2.5 Lower Area One (LAO)

Almost half of interviewees were concerned about LAO. The interview team did not ask about it, and yet dozens of people commented on it. Almost all of the interviewees who mentioned LAO were concerned about the work being done there, and most were concerned with the effectiveness.

Under the Unilateral Administrative Order (UAO), PRP's are required to upgrade the Butte Treatment Lagoons system within Lower Area One. Currently Phase II upgrades are scheduled to be complete in 2013. Atlantic Richfield and Butte-Silver Bow County provide Monthly Progress Reports for the Silver Bow Creek/Butte Area Superfund Site, as required by the Butte Priority Soils Unilateral Administrative Order. The reports, are posted on EPA's website at www.epa.gov/region8/superfund/mt/sbcbutte/index.html and are a great resource for keeping up to date with:

- *Operations and maintenance activities*
- *Construction activities*
- *Design*
- *Technical studies and reports*
- *RMAP activities*
- *Butte Reclamation Evaluation System activities*
- *Upcoming activities*
- *BNSF Railway Company (BNSF) and Union Pacific Railroad Company activities*

2.6 Environmental Justice Issues

Environmental Justice (EJ) is focused attention on communities which are disproportionately impacted by environmental problems, with the goal of ensuring a quality environment for all citizens regardless of race, ethnicity or other socioeconomic factors, and promoting equal access to public information and participation in matters relating to human health and the environment. The EJ

Program consists of technical and administrative support personnel tasked with facilitating the Regions implementation of this goal.

During the 2011 five-year review, EPA received communications from the community indicating that EJ concerns in the Butte-Silver Bow area were not being adequately addressed. Specifically, some people expressed the belief that:

- Outreach efforts in the Butte-Silver area were not effective in reaching low income residents.
- EPA was not involving the community in a meaningful way in the decision-making process for BPSOU- and RMAP-related activities.
- EPA is not adequately responding to community EJ concerns.

Most of the comments in regard to EJ concerns were aimed at low income areas potentially affected by BPSOU and RMAP activities. EPA responded to these concerns, in part, by writing letters (Appendix I) and conducting an EJ screening (Section 2.2.5).

Since work at the site began, EPA has tried to incorporate EJ goals in the day-to-day outreach activities at the BPSOU, often as a result of comments from the community that indicated they would prefer a change in where a meeting was held or how information was distributed. EPA and Butte Silver Bow County have worked to find ways to specifically reach low income people with infomraiton and cleanup options for their residences. It has been EPA's belief that incorporating these changes is good for the community and for the project. In addition to these ongoing activities, formal EJ evaluations have recently been conducted by the EJ program as a result of community comment. The ongoing and recent activities are briefly described below. EPA intends to continue incorporating EJ into public involvement at the BPSOU and welcomes public input on the community involvement action plan in Section 3.

In the text that follows, additional EPA activities for environmental justice outreach, and community outreach in general, are described.

2.6.1 EPA Assigned a local Remedial Project Manager (RPM)

Early in the Superfund process at the BPSOU, EPA decided that having a local RPM was a necessity in Butte in order to provide the highest level of communication and local engagement. RPM Sara Sparks is a Butte native and has been based in Butte at a local EPA project office since 1990. She has been available on short notice to talk to concerned citizens and to attend meetings and conduct site tours. Feedback from the community on her presence has been favorable. Of the over 18 active Superfund sites in Montana, there is only one other site (Libby Asbestos) where a local RPM has beenlocated at the site. An additional RPM Nikia Greene has been assigned to BPSOU providing continued community involvement and cleanup activity management.

2.6.2 EPA Makes public meetings accessible

EPA has made a point to hold public meetings in uptown locations that are easily accessible to those most impacted by the project. These meetings were originally held in the Carpenters Union Hall on 25 West Granite. This location was changed due to concerns about it not being handicap accessible. Since then, meetings have been held at the Elks Club or at Montana Tech, sometimes in both locations. Current meetings have been held at the Butte Public Archives. The meetings have also been advertised in both the *Montana Standard* and the free newspaper – the *Butte Weekly*. For some meetings, radio announcements have been made.

2.6.3 EPA Provided information on a regular basis in an accessible format

EPA has provided information to the community in a number of ways, including: website, fact sheets as newspaper inserts, newspaper columns, radio ads, radio talk shows, and public meetings. Every effort has been made to make this information accessible to the low income communities. This includes meetings in the low income areas and distribution of fact sheets and ads in free newspapers.

EPA continues to work on fact sheets and regular distribution of those fact sheets.

2.6.4 EPA Helped set up a TAG

EPA provided the original TAG grant that allowed the Citizens Technical Environmental Committee (CTEC) to be formed in Butte in 1991, and EPA has provided annual TAG grants since that time to keep CTEC functioning. CTEC's mission, as stated on their website (www.buttectec.org) is "*To provide technical comments and public outreach on the Superfund process for Silver Bow Creek and Montana Pole and Treating NPL sites. CTEC also provides education services to help young people gain a better understanding of the environmental issues associated with Butte-area Superfund sites.*" Like EPA, CTEC has an office in uptown Butte (27 W. Park St.). CTEC has currently developed a strategic plan that will include efforts to engage low income communities with the cleanup activities.

2.6.5 EPA Conducted EJ Screening of Butte Silver Bow Area

In March 2012, the EJ Program conducted a block group level EJ screening of the Butte Silver Bow area. The primary objective of the screening was to identify communities in Butte Silver Bow with potential EJ concerns. Several statistics were examined and compared to state averages including population, percent minority, percent below poverty, and income levels.

Butte Silver Bow has an estimated population of 34,200 residents, almost evenly split between male (50.5 percent) and female (49.5 percent). As with most of Montana, Butte residents are primarily Caucasian (94.4 percent). Minority populations account for less than 4 percent of the residents of Butte Silver Bow (Hispanics, 3.7 percent; Native Americans, 2.0 percent; Asian Americans, 0.5 percent; and African Americans, 0.3 percent). The median household income is $37,986, with a per capita income of $21,357. Nearly 25 percent of local families with children under the age of five years old have incomes below the poverty level. That percentage increases to 58 percent in single family homes. The percentage of persons below poverty (%BPOV) level in Silver Bow County is 17.8 percent. The %BPOV level for the State of Montana is 14.5 percent (2010 Census). Screening and analysis data show that %BPOV in Butte Silver Bow exceeds the State of Montana average for this statistic. Based on this indicator Butte Silver Bow is indentified as an area of potential EJ concern. A demographic map depicting block group level analysis is provided in Appendix A. Appendix A also includes a point location map that contains the estimated locations of residential cleanups done by the RMAP up to 2012 overlain by the areas identified as an EJ concern.

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Section 3

Community Involvement Action Plan

This section describes specific activities that EPA plans to undertake to actively engage the public at the site and to ensure that decision-making processes are open to all interested groups, including those with limited financial and technical resources, when those meetings are not legally limited to participants in negotiations. These activities will generally be implemented by EPA's local RPMs, with support from contractors. These individuals are the primary contacts for the public regarding questions or concerns about the site.

The activities that EPA plans to implement have been divided into activities that EPA currently conducts at the site and optional activities that EPA can consider implementing. This list is intended to be flexible, and activities may be added or deleted as the project progresses and as feedback is obtained from the public. Activities that do not receive a favorable response from the public may be dropped in order to focus on more popular activities.

EPA intends to work closely with community groups, specifically CTEC, and will look for support from those groups to encourage community involvement. EPA has identified a number of new activities, many of which were suggested by interviewees. These new activities will be implemented individually and are their implementation is dependent on funding and availability of personnel.

BPSOU - Principal Site Contacts

Sara Sparks
EPA Remedial Project Manager
(406) 782-7415
Sparks.sara@ epa.gov

Nikia Greene
EPA Remedial Project Manager
(406) 457-5019
(406) 457-2690 (toll free)
Greene.nikia@ epa.gov

155 W. Granite Street, Suite B2
Butte, MT 59701

and

Federal Building
10 West 15th Street, Suite 3200
Helena, Montana 59626

EPA will continue to seek public input on its activities, both in day to day interactions with the community and through specific outreach activities, such as public meetings. EPA will consider this input as part of our decision making process at the site. As at any Superfund site, descisions regarding remediation or how resources are deployed are made based on a variety of factors. These factors may include (but are not limited to) protectiveness, technical practicability, adherence to guidance, available funding, cost-effectiveness, efficacy, precedence at other sites, and public opinion. Input from the public is weighed in any decision making process, but its ability to significantly alter the decision depends on the other factors involved.

3.1 Existing Outreach Activities to Continue

EPA has an ongoing outreach program at the site. Activities that EPA currently performs and intends to continue are:

1. Provide a point of contact
2. Develop and distribute fact sheets
3. Hold public meetings/open houses

4. Provide updates to local government officials and agency partners
5. Update and expand the web site
6. Maintain the information repository and administrative record
7. Maintain the site mailing list
8. Develop the email list service
9. Present on local radio programs
10. Implement EJ activities
11. Continue to expand and develope data bases that present historic and current cleanup data.

These activities are described in more detail below and supporting information is provided in the cited appendices. EPA intends to continue to provide these outreach activities to the community as a base. These activities are typical of large Superfund sites. They were listed in the 2003 CIP. Although several of the reviewers may believe otherwise, the activities conducted to date meet or exceed all EPA requirements for community involvement at Superfund sites.

3.1.1 Provide a Point of Contact

The EPA RPMs, Sara Sparks and Nikia Greene, will continue to serve as the public's points of contact for the site. EPA will continue its commitment to providing answers in a timely fashion.

In addition to answering questions, EPA will make a point of *asking* people if they have questions. This can be done during sampling events, at meetings, and in all interactions with the public. People often have questions but are hesitant to speak up. As a result, they may assume the worst. It is much better to proactively ask questions and to address them with the appropriate information. During the course of these interviews, people commented that they appreciated that EPA was taking an interest in what the community thought. Asking questions is an excellent way to find out what types of information the community wants and how they would like to receive it. The goal is to make sure that perception is accurate with cleanup data and what has actually occurred and occurring at the site.

3.1.2 Develop and Distribute Fact Sheets

EPA has prepared and distributed many fact sheets and bulletins over the course of the project. Since 2010, EPA has been preparing and distributing a monthly bulletin. The bulletin (as well as previous fact sheets) is distributed to the entire community as an insert in the *Montana Standard* (daily newspaper) and the *Butte Weekly* (weekly free newspaper). Fact sheets prepared to date are provided in Appendix B and can also be found at: www.epa.gov/region8/superfund/mt/sbcbutte/index.html.

3.1.3 Hold Public Meetings

EPA has had numerous public meetings over the course of the project. However, it has been difficult to expand beyond a core audience of people who are already actively involved in the project. However, many people interviewed said they liked meetings, so EPA will set a goal of having at least an annual public meeting. If possible, EPA will hold an open house immediately prior to at least one meeting. The combined open house/public meeting format is good for both people who prefer to have a presentation and people who like to mingle and ask questions. EPA will have a presentation at the start of the meeting followed by time to circulate among the various tables. This can give people

something to talk about when they visit the tables. Asking people who visit each table what their concerns are and writing them on a flip chart is a good way to stimulate conversation and to capture concerns.

To increase attendance, EPA will place an ad in the local papers and send out an email reminder prior to each meeting. EPA will issue a press release in advance of meetings, and may even give a brief interview to the local paper about the subject of the meeting (an annual update of the site's activities). Local media include two local newspapers (the *Montana Standard* and the *Butte Weekly*) and five radio stations (KAAR, KXTL, KBOW, KMBR, and KOPR). A list of media contacts for distribution of press releases or placement of advertisements is provided in Appendix C.

Public meetings and open houses will continue to be held at locations that are easily accessible to the site and that meet accessibility requirements of the Americans with Disabilities Act. The list of meeting locations is provided in Appendix C.

3.1.4 Provide Updates to Local Government Officials and Agency Partners

EPA currently meets informally with BSB commissioners, the county planning director, and the chief executive to keep them up to date with project progress. EPA will continue those meetings. The list of elected officials relevant to BSB is provided in Appendix C.

EPA also meets on a regular basis with its agency partners at DEQ. These meetings will continue to ensure that everyone is up to date with plans and progress at the site. Contacts for agency partners are also provided in Appendix C.

3.1.5 Update and Advertise BPSOU Web Site

EPA has a BPSOU website as part of the overall EPA website. It includes an overview of site history, developments, upcoming activities and links to supporting documents. It can be a useful tool for providing information to the public. However, parts of it (such as introductory descriptions) are out of date, the format has been described as not being user friendly, and much of the general public does not know it exists.

Because it is a government website with certain security concerns, it follows a format used for all EPA sites. There is very little flexibility allowed for changing the format. However, it may be possible to add suggested items such as "'web facts' on how Superfund affects you, what happens if contaminants increase in the future, and what EPA is planning for next steps."

Also, EPA can commit to making sure that the website is updated and that it stays current. Also, we can try to make more people aware of the website, by including the link for the website in all email announcements and in publications (e.g., the annual facts sheet), letters, press releases, and advertisements. EPA will also work to link the website to other established websites and will broaden its exposure through social media links.

Those websites will include BSB Health Department (not established yet) and the following other websites:

- **CTEC.** CTEC's mission is to provide technical comments and public outreach on the Superfund process for Silver Bow Creek and Montana Pole and Treating sites. CTEC also provides education services to help young people gain a better understanding of the environmental issues associated with Butte-area Superfund sites. www.CTECbutte.org

- **Clark Fork Water Education Program (CFWEP).** "CFWEP has been a leading provider of environmental and restoration education programs and services in western Montana since 2005. Based at the Montana Tech Department of Technical Outreach in Butte, the CFWEP offers multi-disciplinary science and history programs for schools, teachers, and students in and around the Upper Clark Fork Basin. The CFWEP also offers public education and outreach services such as tours, events, and publications that connect the public with the science and history of the amazing landscape of western Montana." **www.cfwep.org**.

- **Clark Fork River Technical Assistance Committee (CFRTAC).** "CFRTAC is a volunteer citizens' organization whose mission is to help residents make informed choices and participate in the Superfund remediation, restoration and redevelopment of the Clark Fork River and its affected communities from Butte to Missoula. As the EPA-designated technical advisory group, CFRTAC has been involved in the Clark Fork River watershed for more than 15 years." **www.cfrtac.org**.

- **Clark Fork Coalition (CFC).** The CFC is "dedicated to protecting and restoring the Clark Fork River basin, a 22,000-square-mile area draining western Montana and northern Idaho. We have a 25-year-long record of substantial achievements improving the health of the watershed." **www.clarkfork.org.**

- **Montana Natural Resources Damage Program (NRDP)**. The NRDP was created in 1990 to prepare the state's lawsuit against the Atlantic Richfield Co. for injuries to the natural resources in the Upper Clark Fork River Basin. Decades of mining and mineral processing operations in and around Butte and Anaconda released substantial quantities of hazardous substances into the Upper Clark Fork River Basin between Butte and Milltown. These hazardous substances extensively degraded the area's natural resources." **https://doj.mt.gov/lands/**

- **Butte Silver Bow Health Department** (not established yet…coming soon)

- **Atlantic Richfield's Butte Cleanup Data site.** This site provides information on the remediation of the BPSOU, including chemistry and flow data from Blacktail and Silver Bow Creek, ground water chemistry and water level data, links to study specific reports and more detailed databases. Data is characterized into two major media — ground water and surface water. In addition to regular monitoring data, the website provides information gathered from special studies used to evaluate specific questions from the complex water system within the BPSOU. It also includes updates of current and future projects within the BPSOU www.bpsou.com/site/index.php.

- **St. James Hospital.** St James Hospital has a website that provides information on the hospital, local doctors, news and events, and quick links. www.stjameshealthcare.org

3.1.6 Maintain Information Repository and Administrative Record

EPA will continue to maintain the on-site information repository and the administrative record. EPA's administrative record is housed at EPA's Butte office in Butte, Montana (Appendix C) and at the EPA Records Center in Helena, Montana. The site information repository is a subset of documents from the administrative record. It is located at the site, in order to be accessible to the general public.

The repository contains basic site information for public review, documents on site activities, technical site documents, this CIP, and general information about the Superfund program. EPA has

placed notices in the local newspapers that notify the public of the availability of the administrative record file and site information repository, and identifies the information repository location and the hours of availability. That information has also been provided in fact sheets other site documents.

Because so many people prefer to get information via the internet, rather than drive to a document repository, most of the documents included in the information repository are also listed on websites maintained by either EPA or DEQ. In general, documents previous to and including the ROD can be found on EPA's website (www.epa.gov/region8/superfund/mt/sbcbutte/index.html). Many of the documents prepared since the ROD was issued in 2006 can also be found on that website

3.1.7 Maintain a Site Mailing List

EPA will continue to maintain the existing site mailing list. This mailing list will be used to distribute materials such as fact sheets or reminder postcards.

3.1.8 Develop the Email List Service

Email is fast and inexpensive and can be an excellent way to communicate with people about the site. Feedback from the interviews indicated that many people interviewed now rely on email as a reliable communication tool. EPA has a very small email list service that it intends to build upon over the next year.

EPA will work to expand that email list, with the goal of making it the primary means to providing written materials (e.g., fact sheets) meeting reminders, and other notices to the public. It will be used in conjunction with the site mailing list to provide fact sheets, meeting reminders, and other project information to the general public.

3.1.9 Present Information on Local Radio Programs

In the past, EPA's RPMs, Sara Sparks and Nikia Greene, have made appearances on the local radio program – *Party Line* - to provide information on site activities. This has been well received, and EPA intends to continue the practice, with a target of one appearance per year. Contacts for the radio station are provided in Appendix C.

3.1.10 Incorporate EJ in Outreach Activities

As discussed in Section 2.6, EPA has incorporated EJ goals in the day-to-day outreach activities at the BPSOU, and will continue to do so. Ongoing activities that support EJ goals are: working with the county personnel who implement the RMAP program on specific ways to reach low income people, having a local office in the affected area of town, holding public meetings at locations accessible to the low income community, providing information in an easy to read format in the free newspaper and other locations, supporting the TAG recipient, CTEC, and supporting the RMAP through distribution efforts involving community members. EPA will evaluate any suggestions from the community for merit in meeting the EJ goals, and will implement them, as needed.

3.2 More Outreach Activities

In addition to the substantial list of continuing activities listed above, activities that EPA believes would add value to engagement at the site have also been identified. Many of these activities were suggested in the interviews or in the response to the draft CIP. EPA plans to implement these activities individually, as time and manpower become available. They are:

- Have a presence at local events
- Give presentations to local groups
- Hold neighborhood meetings
- Involve the schools
- Explore the use of social media
- Coordinate outreach with non-Superfund programs (such as LIEAP)
- Respond in writing to technical questions and comments
- Consider including CTEC in ongoing technical meetings
- Help increase the success of metals testing program in low income rentals
- Publicized remediation plan for the site
- Sponsor site tours by a third party
- Be available to the public at the CTEC office

3.2.1 Have a Presence at Local Events

EPA will consider having a presence (e.g., a booth with handouts) at local events, such as fairs or rodeos. These events are a great place to hand out brochures, shake hands, and talk about the site with people who would not normally attend a public meeting. Attending these events presents an opportunity for the EPA to develop relationships and become a recognizable, friendly face to more people in the community. This makes it more likely that people will come to EPA with questions or concerns in the future. Most of the materials that would be needed for this event would be those that have already been prepared for meetings or sampling visits. An annual appearance at one event is a manageable goal.

Some suggested events for consideration in 2013 or beyond are:

- Folk festivals
- Granite Mountain Memorial annual event
- Mining Museum
- Chamber of Commerce

3.2.2 Provide Presentations to Local Groups

Giving presentations was mentioned by several interviewees. EPA will explore giving presentations to community groups in the area (e.g., Rotary, Elks, garden clubs, or homeowner groups). These presentations are a good way of identifying middle-ground people who may not already be involved in the process. These folks can help explain the facts to their neighbors. The materials that would be needed for these events would be those that have already been prepared for meetings or other visits. In addition, speaking to a friendly group can be a welcome break for the project team. Setting a goal of

doing one or two such talks a year is achievable. A list of local groups that would potentially welcome presentations is provided in Appendix C.

3.2.3 Hold Neighborhood Meetings

The suggestion was made to hold small meetings within impacted neighborhoods. Involve more people by holding neighborhood meetings on a regular basis instead of one public meeting per year. The neighborhoods could be based on commission districts and the commissioner could be involved in the process in order to tailor the information to meet the neighborhoods needs. Neighborhood meetings can also be used to make an informal community needs assessment of environmental justice issues.

3.2.4 Involve the Schools

Because this site will be active for a long time, EPA will consider involving younger people in the process. Raising the awareness of the site with kids educates both the children and their families. Local citizens have a strong, generational connection to their property. Raising awareness in kids should improve communication and be beneficial to the kids. DEQ will explore making an annual presentation at a school or group (e.g., 4-H or Future Farmers of America). EPA could also take a science class on a field trip to collect a water sample. The kids could take turns wearing gloves and writing down the notes, and they could look at a printout of lab results. EPA could have a contest to design an informational poster about the site. This type of annual event could build goodwill and would also be an enjoyable experience for the project team. It could also ignite a child's interest in science and government. Names and locations of local schools and contacts for those schools are provided in Appendix C.

3.2.5 Explore the Use of Social Media

Social media tools (e.g., Twitter, Facebook, YouTube, internet forums, podcasts, blogs, etc.) are quickly becoming the preferred method of communication in many geographic and demographic groups. Their use is not yet as prevalent in rural Montana, due to the age of the population and preference for traditional communication methods. However, they should not be discounted and EPA will consider use of one or more of these social media in expanding outreach to younger audiences at the site. The greatest potential for success with these media will likely be communication efforts made in conjunction with the local schools.

3.2.6 Coordinate Outreach with Non-Superfund Programs

EPA will explore ways to team with local, non-Superfund programs where it appears likely that this would help engage a wider audience than is already reached via the other methods of communication. We agree with CTEC that this technique may be useful in reaching some low income audiences that might otherwise not be reachable. As suggested by CTEC, these non-Superfund programs could include the LIEAP or the Emma Park Neighborhood task force.

3.2.7 Respond in Writing to Requests for Information

Provide technical responses to technical questions and comments provided by community members by acknowledging that the question was received and by stating what will be done to review and respond.

3.2.8 Consider including CTEC in Ongoing Technical Meetings

EPA does not believe it is useful for CTEC to attend all ongoing technical meetings, and CTEC does not have the budget or the mission to attend all technical meetings. Also, many technical meetings are related to consent decree negotiations and, by court order, are not open to the public. However, there may be meetings that a representative of CTEC could attend to develop a greater understanding of the issues facing the site and to provide input to the process. EPA will evaluate this potential on a meeting by meeting basis and will make CTEC aware of meetings where attendance could be useful.

3.2.9 Help Increase Success of Testing of Low Income Rentals

EPA wil work with BSB to ensure that their residential lead testing program is more successful in testing low income rentals for metals. We understand that there are several property owners that own large numbers of low income properties and who are refusing to participate in the testing program. We will work with BSB to explore legal options for increasing participation.

3.2.10 Publicized Remediation Plan For The Site

It was suggested that EPA could publicize an easy to read and very brief remediation plan for the site. This would be something easier for the public to understand than the proposed plan and the record of decision (ROD). EPA prepared a proposed plan and ROD fact sheet in 2006, that presented the remedial plan in very basic languagealong with costs and action levels. We will revisit that fact sheet to see how it can be updated to reflect current remedial plans at the BPSOU.

3.2.11 Sponsor Site Tours

Several of the interviewees mentioned that they thought site tours were useful, as did one of the reviewers. It was suggested that the tours be sponsored by EPA but led by a knowledgeable third-party. This third-party could include CTEC, a regional TAG group, local government staff, or knowledgeable volunteers. EPA will explore the possibility of funding an annual tour in the future as part of the CIP.

3.2.12 Be Available to the Public at The CTEC Office

The interviewees and reviewers have provided EPA with a very comprehensive list of suggestions for activities that would better engage the local population regarding Superfund activities at the BPSOU. While these activities would clearly add value, they are well beyond the typical activities conducted at a Superfund site and EPA does not have the ability to implement given current staffing and budget constraints.

Former CIC, Nikia Greene, has transitioned into the role of co-RPM for the site, and EPA has yet to fill the CIC position, due to a hiring freeze and budget constraints. However, EPA is looking for ways to find a creative solution that would put in place a person dedicated to community engagement locally, at least part time.

In the interim, EPA will commit to having an EPA representative at the CTEC office on a limited basis specifically to answer questions from the public or help with the outreach activities listed in this section. EPA currently envisions that this role will be shared by the two co-RPMs (Nikia Greene and Sara Sparks). Currently the schedule is on Tuesday afternoons from 1:00 pm to 3:00 pm. When a CIC position becomes available, that new hire could expand the community outreach hours at the CTEC office as needed.

3.3 How Did We Do?

In keeping with the desire for this to be a living document that will evolve over time as a useful communications tool, this section is reserved for a brief, annual summary of the outreach activities conducted, including a honest assessment of what worked and what didn't work, and what might be done to improve outreach. Although these assessments will be informal, EPA currently plans to solicit input from various community members. The summary pages will be inserted in this section of the CIP for easy access.

CTEC has requested that the CIP provide specific metrics for measuring success, other than the informal methods described above. EPA is willing to work with CTEC to develop a metric that can be used to measure the success of one or more of the engagement techniques described in Sections 3.1 and 3.2. Together, EPA and CTEC can elvaluate the success of the metric and determine if it should be expanded to measure the success of additional activities.

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Section 4

Overview of the Superfund Site and OUs

One of the issues commonly raised by the interviewees, both in the BPSOU CIP interviews and the five-year review interviews, was that it is difficult for people not involved with the project to grasp the overall scope of the project and where the BPSOU fits in with other high-profile parts of the site (such as the Berkeley Pit). EPA intends to develop a number of informational tools (e.g., slides, posters, handouts) in the future that will help citizens with this problem. They will be geared to a variety of different levels of detail.

This section of the CIP is a starting point for providing that information. It presents a brief overview of the relationship of the BPSOU to the Silver Bow Creek/ Butte Area Site and to other OUs. It also provides an overview of the mining history of the area. A timeline of regulatory activities (past and future) is provided in Section 5.

4.1 Silver Bow Creek/Butte Area Superfund Site

The Silver Bow Creek/Butte Area Site is one of four contiguous Superfund sites in the upper Clark Fork River Basin, extending 140 miles from the headwaters of Silver Bow Creek north of Butte to the Milltown Reservoir near Missoula, Montana (Exhibit 4-1).

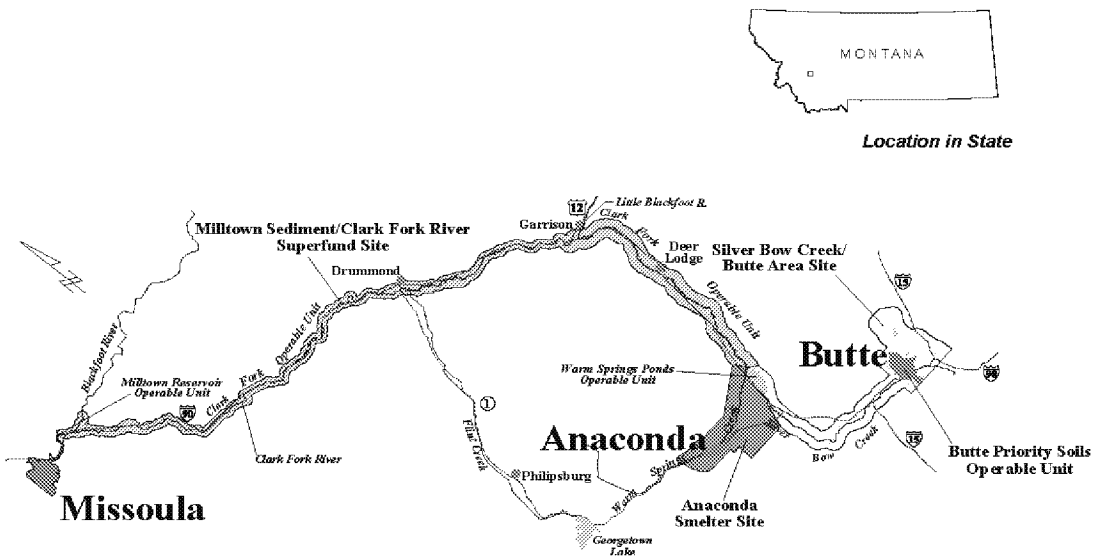

Exhibit 4-1. Location and Layout of Silver Bow Creek/Butte Area Superfund Site

The original Silver Bow Creek Superfund Site was added to EPA's National Priorities List (NPL) in September 1983, under the authority of the CERCLA. Work began on a remedial investigation/feasibility study (RI/FS) in 1984. During the course of the RI/FS, the importance of Butte as a source of contamination to Silver Bow Creek was formally recognized. Preliminary results indicated that upstream sources were partly responsible for the contamination observed in the creek. After a thorough analysis of the relationship between the two sites (Butte and Silver Bow Creek), EPA concluded that they should be treated as one site under CERCLA.

EPA subsequently modified the existing Silver Bow Creek Site to include the Butte area and the formal name was changed to the "Silver Bow Creek/Butte Area NPL Site" in 1987 (Exhibit 4-2). The site lies immediately west of the continental divide, at the easternmost extent and headwaters of the upper Clark Fork River drainage. It encompasses approximately 85 square miles, including the entire length of Silver Bow Creek and associated land contamination, from Butte westward (26 miles) to the Warm Springs Ponds near Anaconda.

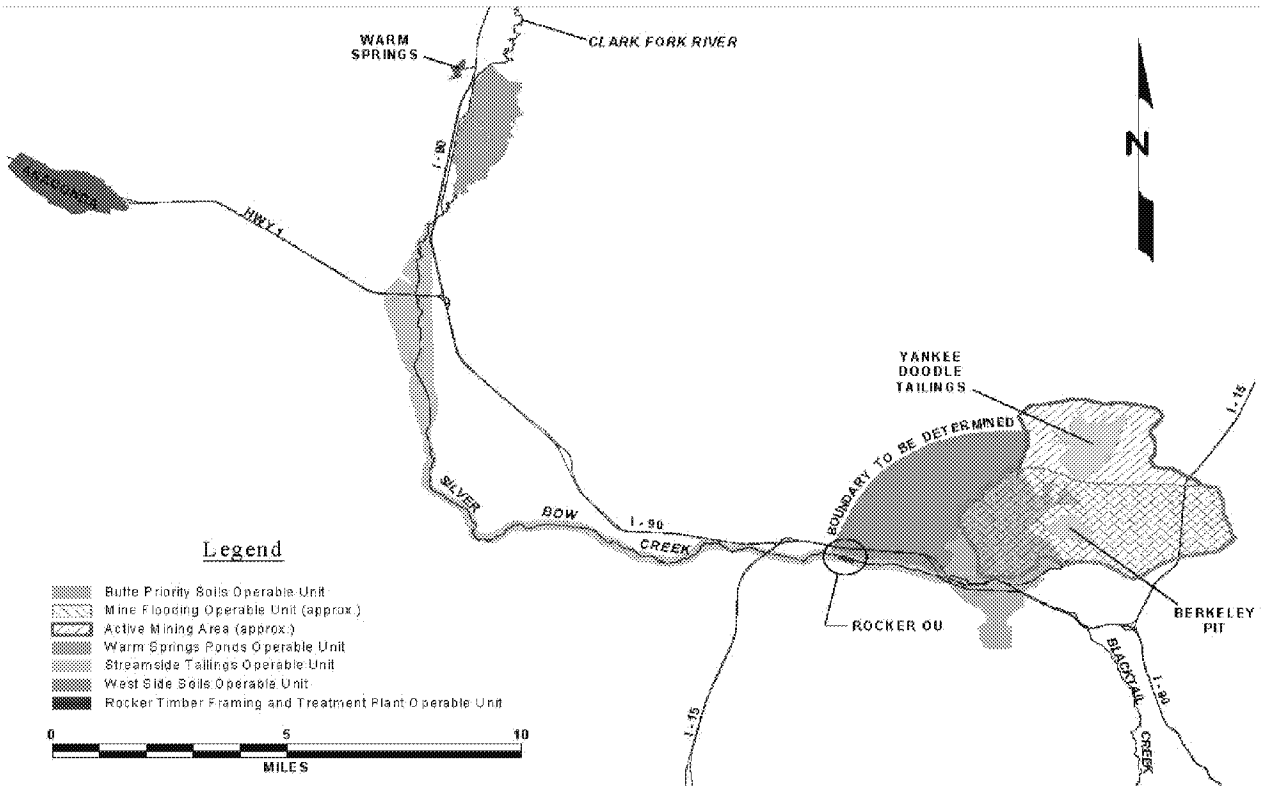

Exhibit 4-2. Layout of Silver Bow Creek/Butte Area Superfund Site.

The site is divided into two portions for administrative purposes - the original portion and the Butte portion.

4.1.1 Original Portion of the Site

The original portion of the Silver Bow Creek/Butte Area NPL Site includes three OUs:

1. **Streamside Tailings OU**. This area covers contamination along and within the Silver Bow Creek floodplain, downstream of the historic Butte Mining District and between the western end of the BPSOU and the point at which Silver Bow Creek enters the Warm Springs Ponds. The OU extends for approximately 26 creek miles between Butte and Warm Springs. It includes the extent of fluvially deposited tailings along Silver Bow Creek and the adjacent railroad beds that are contaminated with mine waste. DEQ and EPA completed a RI/FS for this OU and a ROD was released in 1995. The ROD requires removal or in-place treatment of contaminated tailings and impacted soils from within the 100-year floodplain. Remediation

was initiated in 1999 and is ongoing currently. Restoration activities are concurrently being implemented within this OU as well. Work is expected to be completed in the next two to three years. The state and public have a strong interest in assuring that the upstream BPSOU remedy protects, and is consistent with, the Streamside Tailings OU remedy.

2. **Warm Springs Ponds OUs**. These OUs are located at the western border of the site and consists of three man-made ponds covering 2,400 acres at the confluence of Silver Bow, Mill, Willow, and Warm Springs creeks. The ponds were constructed by the Anaconda Copper Mining Company (ACMC) between 1911 and 1959 to control the amount of mine and mill tailings and contaminated sediment carried into the Clark Fork River from Silver Bow Creek and the Anconda area. All mining-related contamination in these ponds is the result of migration from upstream sources (e.g., from Butte and Anaconda). Two interim RODs for this OU have been signed, one in 1990 and one in 1992. Remedial action has included removal of tailings, modification of channels to route flood flow, modification of berms, establishment of monitoring systems, upgrading of treatment systems, construction of wet-closure berms, chemical fixation of contaminated tailings and soils, long-term monitoring, and institutional controls. Cleanup was completed in 1995, and EPA's five-year review of the remedy found that it continues to protect human health and the environment.

3. **Rocker Timber Framing and Treating Plant OU**. This OU is located 3 miles west of Butte and was the location of a wood treatment plant that operated for 48 years, closing in 1957. The plant produced treated wood for use in the underground mines in the Butte area. Spilled process materials (arsenic trioxide powder), treated wood chip residues, and dripped or leaked process solutions (creosote and caustic heated arsenic brines) resulted in contamination of soils and groundwater. In 1989, an initial response action removed approximately 1,000 cubic yards (cy) of contaminated material for disposal. A ROD was signed in 1995 to address the remaining contamination in soils and groundwater. The selected remedy involved an innovative treatment technology to immobilize arsenic in soils and precipitate arsenic from groundwater. An interim monitoring phase started in 1998. In 2001, supplemental groundwater treatment activities were initiated in support of remedial work being conducted at the adjacent Streamside Tailings OU. EPA's most recent five-year review of the remedy found that it continues to protect human health and the environment, although further actions at the site may be implemented.

4.1.2 Butte Portion of the Site

The BPSOU is one of four remedial OUs within Butte portion of the site:

1. **BPSOU**. This OU generally consists of historic mining areas within Butte and the adjacent town of Walkerville. For many years, CERCLA removal authority was used to conduct extensive cleanup of the OU – notably, the Lower Area One removal action which removed large volumes of mining waste from Silver Bow Creek's floodplain, sotrmwater control actions that constructed catch basins in Missoula Gulch, and several human health based actions that addressed yards and mercury contamination. The RI/FS for BPSOU focused on contaminants in soil and mine waste, surface water, and alluvial groundwater in the urban area encompassing the historic Butte Mining District (Exhibit 4-3). The BPSOU ROD was signed in 2006 and its implementation is ongoing (see above). More specific information about the BPSOU cleanup activities is presented below in section 4.2.

2. **Butte Mine Flooding OU**. This area consists of flooding of the Berkeley Pit and hydraulically connected underground mine workings and associated bedrock aquifers in response to the cessation of dewatering practices. It also addresses the bedrock groundwater system which exist beneath a large portion of the BPSOU. EPA has completed a RI/FS for this OU, and a ROD was released in 1994. A state-of-the-art treatment plant was completed to treat inflow from the active mine area before discharging this water into Silver Bow Creek, or for use in the nearby mining operation. Berkeley Pit water will be treated when rising water levels in the pit reach a critical level. Treated water will be discharged to Silver Bow Creek or reused within the active mining operation. There is extensive monitoring of the bedrock aquifer and the pit water level. The recent five year review found that the remedy is working well and is protective of human health and the environment.

3. **West Side Soils OU**. This OU encompasses areas of Silver Bow County that have experienced mining activity but lie outside of other OUs (generally north and west of Butte Hill). EPA is currently planning an RI/FS for this OU, but the site has not been funded over the past several years due to resource constraints for EPA.

4. **Active Mining and Milling OU**. This area is located west and northwest of the BPSOU and consists of the permitted mine area currently operated by Montana Resources. In 2002, EPA deferred Superfund action at the site to state authority under the operating permit.

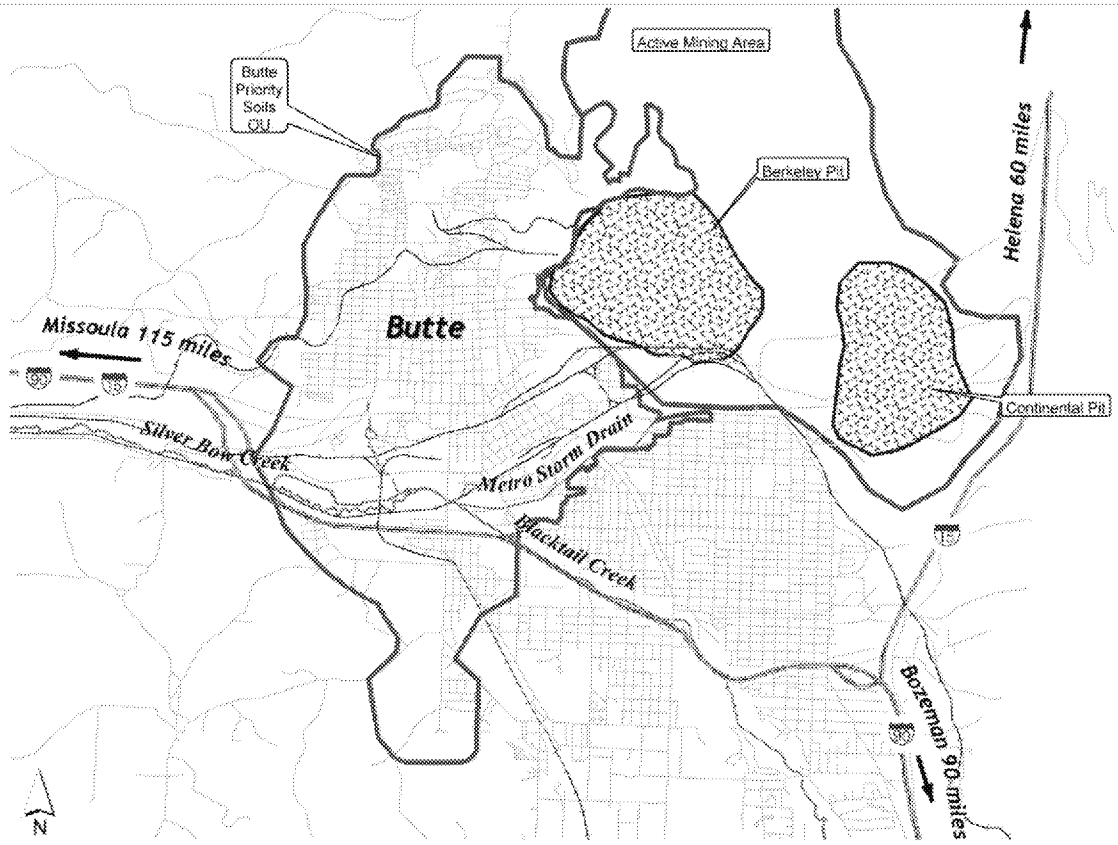

Exhibit 4-3. Outline of BPSOU and Other Features within Butte, Montana.

CDM Smith

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4.2 Overview of Mining at the BPSOU and Beyond

Historically, Butte has served as a globally important mining, milling, and smelting district. Gold was first discovered near Butte in 1864 (Exhibit 4-4). The low-grade ores proved difficult to recover, and Butte remained a small mining camp compared to others in the region. Early activities focused on placer mining; however, silver and copper ore also attracted the attention of early miners.

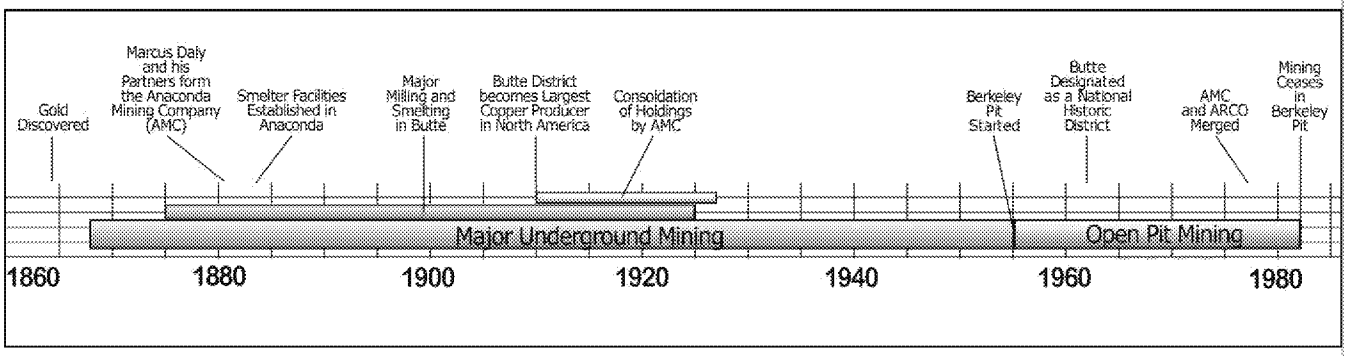

Exhibit 4-4. History of Mining in Butte

By the 1870s, dozens of silver and copper claims had been located and successful treatment processes developed, prompting the construction of mills and smelters capable of refining arsenic-laden copper ores. A world-class copper industry began to develop. In 1881, the purchase of mining claims by future copper baron, Marcus Daly, marked a significant turning point for Butte. Daly and his financial partners organized ACMC and rapidly accumulated surrounding mining properties on the Butte Hill. In 1883, Daly developed his own smelting facility 25 miles away and established the town of Anaconda. In the early 1890s, Daly and the ACMC built their own railroad, the Butte, Anaconda & Pacific, thus monopolizing the mining, transportation, and smelting of the copper ore. Spurs of the mainline tied all of the ACMC mines on the Butte Hill to the smelter works in Anaconda. By 1884, there were some 300 operating copper mines, at least 10 silver mines, 8 smelters, and over 4,000 posted claims.

By 1910, the Butte district had produced over 284 million pounds of copper, making it the largest producer of copper in North America. All of the mines produced waste piles of various compositions, and the mills and smelters produced large quantities of tailings which were disposed of in ponds or dumped in Silver Bow Creek. Between 1910 and 1927, ACMC completed consolidation, with few exceptions, of all of the major mines, smelters, and mills in Butte. Milling and smelting continued in Butte until the 1920s but, as the copper smelting capacity at Anaconda grew, Butte became primarily a mining center. However, Butte's smelters and mills produced air emissions which contaminated yards and attics throughout the BPSOU.

Mining in Butte has resulted in the development of over 500 underground mines with roughly 3,000 miles of underground workings and numerous waste rock dumps. The operation of mills, concentrators, and smelters generated tailings and a variety of other waste materials containing elevated concentrations of arsenic, lead, and other metals. Butte and Walkerville were established with the advent of mining in the area and grew as the mining and milling industries flourished. Neighborhoods were established close to or surrounding the mining and milling centers as a matter of convenience.

Mining in Butte was entirely underground until 1955, when ACMC began surface mining at the Berkeley Pit. The pit has a total depth of 1,780 feet and encompasses approximately 1 square mile. Immense quantities of low-grade ore were moved from the Berkeley Pit to Anaconda. In the 1960s and early 1970s, changes in mining and processing procedures significantly reduced rail traffic. The completion of the Weed Concentrator in Butte in 1964 reduced the amount of ore sent to Anaconda from twelve to just one trainload per day. The Weed Concentrator (now known as the Montana Resources Concentrator) was an ore concentrating facility which produced large quantities of waste in the active mine area and discharged large volumes of contaminated water to the Metro Storm Drain.

In 1977, ACMC merged with ARCO. Open pit mining operations continued in the Berkeley Pit until 1982 and in the adjacent Continental Pit until 1983, when ARCO suspended all mining operations. ARCO closed the Anaconda Smelter in 1984. Mining in the Continental Pit restarted in 1985 and continues today. ARCO is currently a subsidiary of BP LLC.

The simultaneous development of mining and ore processing industries and the associated growth in population that occurred a century ago in Butte now present complex risk-reduction challenges. Mining in Butte left an urban landscape littered with unvegetated or sparsely vegetated acid metaliferous mine wastes, often containing elevated concentrations of arsenic and metals

Section 5

Timeline of Regulatory Activities

This section presents an overview of the activities conducted by EPA and others at the BPSOU since the BPSOU was created in 1987. EPA is considering creating a fact sheet of this material to have available as a public handout when people have general questions about work done to date. It also provides a summary of activities planned for the near future. The future activities will be updated on a regular basis.

5.1 Enforcement History - 1987 to Present

In 1989, EPA separated the BPSOU into Phase I and Phase II activities – to be implemented concurrently. Phase I activities focused on high-priority human health risks and resulted in the implementation of numerous TCRAs and ERAs. These activities have included physical removal and/or capping of the majority of potential arsenic and lead source areas within, or close to, residential neighborhoods (e.g., waste rock dumps, railroad beds, residential yards, and play areas).

Phase II activities included conducting the RI/FS for the entire BPSOU. The emphasis of Phase II was an evaluation of arsenic and metal impacts on Silver Bow Creek and alluvial groundwater and both present and future human health impacts from source materials located outside of residential areas.

5.1.1 Superfund Removal Program Actions

EPA knew the studies needed prior to issuance of a ROD would take a long time to complete. A significant concern was the fact that people were living among the mine waste dumps, and children were playing on mine waste source areas in their back yards. To reduce risk immediately, EPA conducted numerous time-critical response actions (TCRAs) and expedited response actions (ERAs) at the BPSOU (Exhibit5-1).

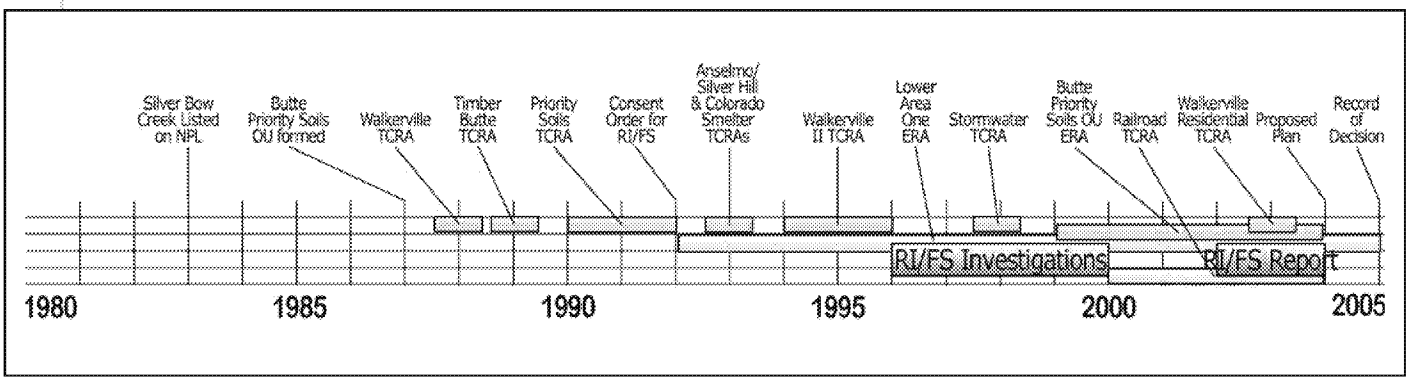

Exhibit 5-1. Timeline of Superfund Removal and Remedial Work from NPL Listing to Issuance of ROD

Response actions are conducted by EPA's Removal Branch when serious, immediate threats to the environment or to the people who live or work around these sites need to be taken care of before the long-term remedial action is complete, or even underway. EPA can respond quickly to perform a removal; and, in some cases, removal actions eliminate the need for a long-term cleanup at certain

portions of a site. Thus, removal actions may speed the cleanup of portions of the site and may lead to early clean-up.

The RI report identified 182 mining-related sites that have been impacted by, or are potential sources of, arsenic and metals in the BPSOU. Nearly all of those source areas, with the exception of waste areas in the Metro Storm Drain, were addressed under removal authority. Significant source materials were removed, but most were capped in place. Over 400 acres of land at the BPSOU have had extensive response actions. Most of this work was completed in the late 1980s through late 1990s. The response actions addressed the more pressing problems at BPSOU. Although an accelerated process was used, Superfund law requires that these actions are implemented in ways that contribute to the efficient performance of a final long-term remedial action, to the extent practicable. Thus, EPA required that the response actions be constructed in a manner intended to be permanent. Where capping of wastes was selected as part of the early response actions, sound engineering designs were implemented to ensure the stability and performance of the caps. Intensive monitoring and inspections of the caps has been, and will continue to be, performed.

Implementation of the response actions has resulted in reclamation, removal, or stabilization of almost all contaminant source areas and mine waste accumulations initially identified by EPA as needing a response action. Often, but not always, this identification was due to the exceedence of arsenic or lead soil action levels at discrete locations within the OU. Storm water contributions and acute environmental risk also formed the basis of some of these actions. The response actions included TCRAs, ERAs, and other actions as listed below.

5.1.1.1 TCRAs

- **Walkerville TCRA (1988).** Addressed mine waste dumps (e.g., Lexington Mine Yard) and residential soil areas contaminated with lead above 2,000 milligrams per kilogram (mg/kg) or mercury above 10 mg/kg in Walkerville. Nearly 300,000 cy of material were removed from 10 sites. One mile of rock-lined ditch was also constructed to control surface water runoff from the recontoured waste piles. EPA also removed contaminated soil from six earthen basements and 33 residential yards.

- **Timber Butte TCRA (1989**). Approximately 40,000 cy of contaminated soil were removed and consolidated in an on-site repository that was recontoured, covered with fill soil, and revegetated. Drainage was improved with recontouring and the installation of drainage ditches. Contaminated soil was removed from two residential yards and the yards were recontoured, covered with soil, and revegetated.

- **BPSOU TCRA (1990 and 1991).** Mitigated risks from a number of mine waste dumps, a concentrate spill, and seven residential yards located in Butte and Walkerville (Exhibit 2-3). Response actions were taken at 30 waste dumps (100,000 cy) that were either capped or removed. In addition, a railroad bed and seven residential yards were reclaimed. These actions included removing waste, adding lime rock, capping with soil, application of fertilizer, and seeding each site.

- **Colorado Smelter TCRA (1992).** Addressed wastes associated with the Colorado Smelter. Approximately 40,000 cy of mine waste were removed and consolidated in an on-site repository. The site was reclaimed and drainage channels were installed.

- **Anselmo Mine Yard and Late Acquisition/Silver Hill TCRA (1992).** Addressed a mine yard and several mine dumps in Butte. The work involved excavation of mine waste, recontouring, capping, and revegetation. Terracing, rock-lined ditches, and other drainage control measures were used for storm water management purposes.

- **Walkerville II TCRA (1994).** EPA conducted further removal activities in Walkerville to address four additional dump areas with elevated soil lead levels. In 1994 and 1995, 12 more waste dumps were either removed or capped in place.

- **Railroad Beds TCRA.** Addresses railroad beds and adjacent residential yards at the OU that contain elevated concentrations of metals and arsenic. The railroad beds were constructed using mining-related waste or contaminated by spillage during transport of ore or ore concentrates. The TCRA includes significant storm water drainage improvements.

- **Storm Water TCRA.** Begun in 1997, to control storm water flow and minimize soil erosion and transport of contaminated sediment to Silver Bow Creek. Storm water conveyance structures were built and large areas of barren land and contaminated soil were reclaimed with cover soil and revegetation. Storm water channels and detention ponds were placed in critical areas to minimize erosion and reduce the release and transport of contaminants from historic mining areas. This response action also included reclamation of the Alice Dump and the removal of about 50 cy of soils contaminated with elemental mercury in the Dexter Street area. The Alice Dump is a large waste rock dump located in upper Missoula Gulch that contained about 2 mcy of contaminated soil and waste rock. At Dexter Street, a limited quantity of the mercury-contaminated soils required disposal at an EPA-approved hazardous waste disposal facility. The remaining soils were disposed at an on-site waste repository.

5.1.1.2 ERAs

- **LAO ERA.** This ERA entailed removal of accessible mine tailings impounded in the Silver Bow Creek floodplain from the historic Colorado Smelter and Butte Reduction Works facilities. In 1997, the PRP excavated and removed approximately 1.2 million cy of tailings from the floodplain. The area was then backfilled with imported material, and the stream channel was reconstructed. Waste removal was completed to a predetermined depth-of-excavation contour. Tailings remain beneath the limits of the excavation and beneath the Metro Sewage Treatment Plant facility, historic slag walls, and other immovable structures. As a result, a groundwater collection system was constructed in 1998 and the LAO revegetation plan was completed, including stream bank reclamation. Phase II of the LAO ERA was an interim hydrologic equilibration and monitoring period that included ground and surface water sampling, water level monitoring, and water treatability studies.

- **BPSOU ERA (residential soils/source areas).** Addresses residential areas with soil-lead concentrations above the residential lead action level (1,200 mg/kg) via the work plan for Residential Areas and the Butte-Silver Bow County Lead Prevention and Abatement Program. This action also reclaimed, or repaired to EPA standards, more than 50 sites above the lead action level for non-residential source areas (2,300 mg/kg).

5.1.1.3 Other Actions

- **LAO Manganese Removal (1992).** This removal action was used to remove manganese ore stockpiles in LAO within the floodplain of Silver Bow Creek. The piles were located east of the Metro Sewage Plant and west of Montana Street in LAO. The action was done by the U.S. Bureau

of Reclamation in cooperation with the Defense Logistics Agency and EPA. The stockpiles included ore and process tailings remaining after efforts by the Department of Defense to process manganese ore at the Butte Reductions Works Plant in World War II. A total of 261,000 cy were moved to a private repository in Whiskey Gulch, west of the BPSOU. The action was a critical ancillary action to the LAO ERA

- **Old Butte Landfill/ Clark Mill Tailings (1998).** A RCRA corrective action was completed at this site southwest of Butte. The site consisted of a 60-acre impoundment with approximately 1 million cy of mill tailings immediately adjacent to, and partially mixed with, the old Butte Municipal Landfill. The mixed nature of the wastes necessitated a combined remedy be performed under RCRA jurisdiction. At the Clark Mill Tailings, approximately 800,000 cy of the Colorado Tailings removed from LAO were placed were in the repository. The final repository cover was constructed in 1997 and 1998. The overall design included construction of a recreational complex on top of the repository that included several irrigated ball fields, play areas, and park buildings. The recreational complex was opened in 2001.

- **Walkerville (2000).** All unsampled residential properties in Walkerville were tested by EPA and cleanups implemented at those residences with elevated arsenic, lead, and/or mercury above action levels. In all, approximately 40 properties were addressed.

Through these removal actions, mine-impacted lands have been addressed using a variety of engineering applications including storm water controls, soil caps over mine waste, and mine waste removals. Land reclamation using vegetated soil caps has been a vital component of most response actions taken at the BPSOU, and will play a key role in the site remedy.

5.1.2 Superfund Remedial Program Actions

5.1.2.1 RI/FS

The RI/FS phase of the Superfund process determines the nature and extent of contamination at the site, tests whether certain technologies are capable of treating the contamination, and evaluates the cost and performance of technologies that could be used to clean up the site. EPA began this work at the BPSOU in 1988. The human health risk assessment for arsenic was completed in 1997, and amended with a technical memorandum in 2000. An ecological risk assessment was completed in 2001, followed by the Phase II RI report in 2002 The Phase II FS was completed in 2004.

5.1.2.2 Proposed Plan and ROD

On December 20, 2004, EPA issued a proposed plan that described the preferred alternative for cleanup at the BPSOU. A public comment period ran for 90 days and included several public hearings to explain the plan and take comment. EPA received many comments during that comment period. Based on the input received, a responsiveness summary was prepared and was included as part of the ROD.

The ROD summarizes the science behind the cleanup decision. It includes cleanup goals, compliance with other laws, risks posed by site contaminants, evaluation of cleanup alternatives, and the rationale for the cleanup decision. It demonstrates how the remedy selection process was carried out in accordance with legal requirements. Finally, it provides a thorough site history and includes concerns and comments on the proposed plan submitted by the public and EPA's response to those comments. The BPSOU ROD was issued in September 2006.

Modifications to the proposed plan based on public comment include:

- A shortened time frame for residential metals sampling and abatement.
- Enhancement of the existing medical monitoring program to include the general population (not just sensitive populations). In addition to blood lead, the program now includes blood mercury and urinary arsenic.
- Continuation of groundwater treatment using the "treatment lagoons" on a probationary basis, instead of construction of a new conventional lime treatment plant.
- A shortened time frame for the storm water management program.

After the ROD was completed, EPA revised the CIP for the BPSOU to ensure that it was consistent with the final ROD.

5.1.2.3 Explanation of Significant Differences

In 2011, EPA issued an Explanation of Significant Differences (ESD) for the ROD, which made changes to the ROD as follows:

Selected Remedy for Solid Media: RMAP

1. The modification of the residential assessment and sampling time period from 8 to 10 years, and the modification of the remediation time frame for residential areas found to exceed action levels from 15 to 20 years (Pages 12-2, 12-15, and 12-16 of the ROD). Yearly goals and yearly reporting for achieving yearly goals are also identified.
2. The modification of the soil sampling depth for residential areas from the original 0 to 2 inches to depths of 0 to 2 inches, 2 to 6 inches, and 6 to 12 inches (Page 12-20 of the ROD).
3. The modification of the contaminated soil removal and replacement depth from yard areas from 18 inches to a minimum of 12 inches (Page 12-20 of the ROD).

Selected Remedy for Solid Media: Non-Residential Contamination

4. The elimination of the need for reclamation of the small waste area at the Wake-Up Jim site 1615 because the site is now protected under the Granite Mountain Memorial historic site and its fencing and institutional control requirements (Page 12-24 of the ROD).

Selected Remedy for Groundwater: Groundwater Monitoring

5. Elimination of the need for tracer dye monitoring of the MSD Sub-Drain system and replacement with augmented flow monitoring (Page 12-39 of the ROD).

5.1.2.3 Remedial Design/Remedial Action

Remedial design activities at the BPSOU have included the following:

- RMAP. BSB has been addressing contaminated residential properties throughout the BPSOU. BSB also addresses contaminated attics throughout the Butte area.

- BRES. The BRES is an on-going program that evaluates the remediated Source Areas throughout the BPSOU. Each Source Area is evaluated every four years to ensure that the caps meet all revegetation standards.

- Granite Mountain. The BPSOU 2006 ROD included provision for addressing the Granite Mountain Memorial Area. Reclamation activities were divided into two phases and were completed between 2008 and 2011. These actions made the areas safe and usable for public visitation. This project included reclaiming over thirty acres of waste dumps, installation of parking lots, park benches, public restrooms, interpretive signs, and walking trails in close proximity of the Granite Mountain Memorial Area. For details on the construction activities associated with the Granite Mountain Memorial Area, please consult the Final Granite Mountain Memorial Area Phase I and Phase II Remedial Action Work Plan/Final Design Reports.

- Railroad Beds. The purpose of railroad bed cleanups was to address elevated concentration of metals associated with approximately 10 miles of railroad beds at the site. Standard construction techniques were employed, focusing on providing barriers to waste materials for environmental separation and to reduce erosion along rail embankments, and implementing improvements to the storm water drainage system. Waste rock and other contaminated materials located within the 100 year flood plain were removed and a waste repository, which may be part of a future dedicated development, was constructed. In addition, a new historic preservation trail was constructed on approximately 4.5 miles of former rail line from the community of Rocker, passing by Montana Tech, and ending at the Kelley Mine Yard in upper Butte.

- MSD Subdrain. The MSD subdrain has been operating for approximately 10 years. The PRPs continue to operate and maintain the system to collect contaminated groundwater.

- Groundwater Studies. The PRPs have installed 43 additional groundwater monitoring wells to aid in the study of groundwater in the BPSOU. Furthermore, there are 11 additional studies that have been or are being conducted to ensure that the selected BPSOU remedies are functioning properly. A comprehensive groundwater study will be completed for the BPSOU in early 2013.

- Butte Reduction Works (BRW). Remedial action has been completed in the BRW area to address contamination in the area and on-going maintenance is occurring to ensure that remediation standards are being met at the site.

- Storm Water Best Management Practices (BMPs) for the BPSOU. The PRPs have been installing jBMPs to address storm water contamination from the BPSOU. These BMPs include the installation of 1000s of feet of curb and gutter through out the BPSOU. Hydrodynamic devices are being installed on 5 major drainage areas on the Butte hill. Barren areas that are contributing heavy metals to the storm water system are being capped. The major underground storm water pipes have been investigated to determine if remedial action is needed to upgrade or replace the pipes to improve storm water quality. BSB has implemented a comprehensive street maintenance and snow removal program to ensure contamination from the Butte hill is not reaching Silver Bow Creek.

- Butte Treatment Lagoons (BTL) and West Camp Pump Station (WCP). The BTL and WCP have been completely redesigned and are being reconstructed to ensure these components of the

groundwater collection and treatment system are of the highest engineering standards and will continue to function well into the future.

- Butte Mine Waste Repository. The PRPs continue to operate and maintain the Butte Mine Waste Repository. A new design will be generated to expand the repository .
- Monitoring. Groundwater, surface water and storm water monitoring is ongoing through out the BPSOU.

5.1.2.4 Unilateral Administrative Order

A UAO is an enforcement tool that compels PRPs to design and carry out cleanup actions. An objective of Superfund enforcement is to place ultimate responsibility for the costs of cleaning up Superfund sites on those who are considered responsible. If PRPs do not comply with a UAO, EPA has the flexibility to determine whether to perform a fund-financed cleanup and seek to recover those costs from the PRPs. PRPs have a strong incentive to comply with UAOs, since the Superfund law authorizes a court to award penalties for non-compliance.

On July 21, 2011 a UAO was issued to six PRPs for partial remedial design, remedial action, and certain operation and maintenance activities (effective date of September 6, 2011). The 2011 UAO requires the PRPs to implement parts of the 2006 BPSOU ROD, so cleanup work can move forward. The 2011 UAO does not address the final cleanup plan for surface water and groundwater at the BPSOU. The 2011 UAO does address work for residential cleanup, cap protection, and storm water controls that are needed at this time.

The Partial Remedy Implementation work plan (PRI work plan) attached to the UAO is not a comprehensive or final work plan for implementation of the 2006 BPSOU ROD. The work plan describes:

- Status of remedial design and remedial implementation efforts for the 2006 BPSOU ROD
- Remedial design, remedial action, and operations and maintenance activities required for the 2011 and 2012 time period and other final remedial design plans.

The major components of work to be conducted under the PRI work plan are listed in Section 5.2.1.

5.1.2.5 Consent Decree

A consent decree (CD) is a legal document, approved by a judge, which formalizes an agreement reached between EPA and PRPs for cleanup actions. CD negotiations have been ongoing for several years in Butte because of many factors including the complexities of surface water and ground water cleanup at the BPSOU, and interactions with natural resource damage planning. EPA will continue negotiations with DEQ and other State agencies, and the PRPs through further study, design, review, and discussion. EPA issued the 2011 UAO to ensure that necessary and appropriate cleanup work in Butte continues, even though a final CD has not been completed.

5.1.3 Butte Residential Lead Program

Another risk-reduction strategy has been the ongoing RMAP operated by the BSB Health Department. This program has removed sources of lead contamination starting in 1995 from yards and homes.

5.2 Upcoming Activities at the BPSOU - 2013 to 2014

The following is a brief overview of upcoming activities at the BPSOU. The scope of work included in the PRI work plan that will be conducted by the PRPs under the UAO over the next few years includes:

- Residential cleanup. Implementation of the RMAP (April 2010) is required. The RMAP requires all yards within the BPSOU to be sampled and assessed within 10 years. If action levels are exceeded, those yards must be remediated within 20 years (2011 ESD). Additional requirements include addressing: non-mining lead sources, attic dust, community outreach, and medical monitoring.
- Storm water controls. Installation of devices within the Butte storm water system that will reduce contamination levels before storm water enters Silver Bow Creek (SBC). Additional requirements include installation of new catch basins, hydrodynamic devices (sediment catch), curb and gutter, and the implementation of storm water system clean-out plans.
- Capping improvements. All capped waste sites in Butte will be evaluated. All capped waste sites not in compliance will be corrected to meet current capping and vegetation standards.
- MSD and LAO. Improvements to the LAO Treatment Lagoons and the MSD interception and pumping system, are required based on detailed engineering studies.
- Surface water protection. Removal of contaminated areas around SBC near Montana Street, and the continuation of the bank and sediment removal plans for cleanup of contaminated mine-waste in and near the creek.

Exhibit 5-2 presents a list of specific activites that will be conducted. Updates will be provided to the community in the bulletins and at public meetings. For more information on a particular UAO requirenment please contact Nikia Greene at 406-457-5019 or greene.nikia@epa.gov.

5.3 Updates

EPA will update this section of the CIP annually so that interested community members can keep abreast of planned work at the BPSOU. This information will also be provided to the community through other methods (e.g., monthly bulletins in the newspaper and monthly progress reports on the Silver Bow Creek/Butte Area website at: www.epa.gov/region8/superfund/mt/sbcbutte/index.html.

Exhibit 5-2. Upcoming BPSOU Activities

Category	Activity		
Ongoing Operation and Maintenance (O&M)	▪ MSD O&M ▪ BTL/WC/HCC Operation ▪ GW Monitoring	▪ Surface Water Monitoring ▪ Catch Basin O&M	▪ Cleanout of Sediments from STW system ▪ Butte Mine Waste Repository Operation ▪ BRES Routine O&M
Operations and Maintenance Plans	▪ Interim BTL/WC/MSD O&M Plan	▪ Interim Storm Water Ponds and STW Engineered Structures O&M Plan	▪ Street Maintenance and Snow Management Plan
UAO Required Construction & Construction Completion Reports	▪ BTL Upgrades ▪ Granite Mountain ▪ MSD/BRW Upgrades and BRW East End Grading ▪ Curb and Gutter (Third Cycle Phase I) ▪ Curb and Gutter (Third Cycle Phase II)	▪ Hydrodynamic Devices ▪ Stormwater and Source Control Sites ▪ SBC Culvert Removal ▪ Buffalo Gulch Catch Basin Construction ▪ Silver Bow/Blacktail Creek Near Stream	▪ Romoval/Reclamation ▪ Mine Waste Repository Expansion ▪ Monitoring Well installation and Construction Completion Report ▪ BRES Corrective Actions ▪ Illicit Connection Actions ▪ RMAP
UAO Required Studies	▪ MSD Loading Studies ▪ MSD to BRW Localized GW Study ▪ Abandoned Aqueduct Report	▪ MSD Subdrain Draft Groundwater Management Report ▪ Geochemistry Study	▪ Evaluation of Sediment Removal ▪ Health Study
Wetland Demonstration Area Work Plan	▪ Preparation of plan		
Institutional Controls Plan	▪ Preparation of plan		

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Appendix A

Community Profile

Silver Bow County, Montana

People QuickFacts

	Silver Bow County	Montana
Population, 2011 estimate	NA	998,199
Population, 2010	34,200	989,415
Population, percent change, 2000 to 2010	-1.2%	9.7%
Population, 2000	34,606	902,195
Persons under 5 years, percent, 2010	5.8%	6.3%
Persons under 18 years, percent, 2010	21.0%	22.6%
Persons 65 years and over, percent, 2010	16.4%	14.8%
Female persons, percent, 2010	49.5%	49.8%
White persons, percent, 2010 (a)	94.4%	89.4%
Black persons, percent, 2010 (a)	0.3%	0.4%
American Indian and Alaska Native persons, percent, 2010 (a)	1.9%	6.3%
Asian persons, percent, 2010 (a)	0.5%	0.6%
Native Hawaiian and Other Pacific Islander, percent, 2010 (a)	0.1%	0.1%
Persons reporting two or more races, percent, 2010	2.1%	2.5%
Persons of Hispanic or Latino origin, percent, 2010 (b)	3.7%	2.9%
White persons not Hispanic, percent, 2010	92.1%	87.8%
Living in same house 1 year & over, 2006-2010	81.7%	83.2%
Foreign born persons, percent, 2006-2010	2.1%	2.0%
Language other than English spoken at home, pct age 5+, 2006-2010	5.3%	4.6%
High school graduates, percent of persons age 25+, 2006-2010	91.2%	91.0%
Bachelor's degree or higher, pct of persons age 25+, 2006-2010	22.9%	27.9%
Veterans, 2006-2010	3,423	100,874
Mean travel time to work (minutes), workers age 16+, 2006-2010	16.1	17.7
Housing units, 2010	16,717	482,825
Homeownership rate, 2006-2010	65.8%	69.0%
Housing units in multi-unit structures, percent, 2006-2010	21.9%	16.3%
Median value of owner-occupied housing units, 2006-2010	$117,200	$173,300
Households, 2006-2010	14,847	401,328
Persons per household, 2006-2010	2.19	2.36
Per capita money income in past 12 months (2010 dollars) 2006-2010	$21,357	$23,836
Median household income 2006-2010	$37,986	$43,872
Persons below poverty level, percent, 2006-2010	17.8%	14.5%

Business QuickFacts

	Silver Bow County	Montana
Private nonfarm establishments, 2009	1,156	36,326[2]
Private nonfarm employment, 2009	13,046	341,357[2]
Private nonfarm employment, percent change 2000-2009	5.1%	15.2%[2]
Nonemployer establishments, 2009	1,849	78,775
Total number of firms, 2007	3,754	114,398
Black-owned firms, percent, 2007	F	0.2%
American Indian- and Alaska Native-owned firms, percent, 2007	F	2.0%
Asian-owned firms, percent, 2007	S	0.6%
Native Hawaiian and Other Pacific Islander-owned firms, percent, 2007	F	S
Hispanic-owned firms, percent, 2007	S	1.0%
Women-owned firms, percent, 2007	24.5%	24.6%
Manufacturers shipments, 2007 ($1000)	0[1]	10,638,145
Merchant wholesaler sales, 2007 ($1000)	D 8[1]	202,782
Retail sales, 2007 ($1000)	504,698	14,686,854
Retail sales per capita, 2007	$15,486	$15,343
Accommodation and food services sales, 2007 ($1000)	78,285	2,079,426
Building permits, 2010	122	2,022
Federal spending, 2009	320,381	10,353,034[2]

Geography QuickFacts

	Silver Bow County	Montana
Land area in square miles, 2010	718.48	145,545.80
Persons per square mile, 2010	47.6	6.8

Silver Bow County QuickFacts from US Census Bureau www.quickfacts.census.gov/qfd/states/30/30093.html
3/26/2012
[1]: Counties with 500 employees or less are excluded.
[2]: Includes data not distributed by county.
Population estimates for counties will be available in April, 2012 and for cities in June, 2012.
(a) Includes persons reporting only one race.
(b) Hispanics may be of any race, so also are included in applicable race categories.
D: Suppressed to avoid disclosure of confidential information
F: Fewer than 100 firms
FN: Footnote on this item for this area in place of data
NA: Not available
S: Suppressed; does not meet publication standards
X: Not applicable
Z: Value greater than zero but less than half unit of measure shown

Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits, Consolidated Federal Funds Report

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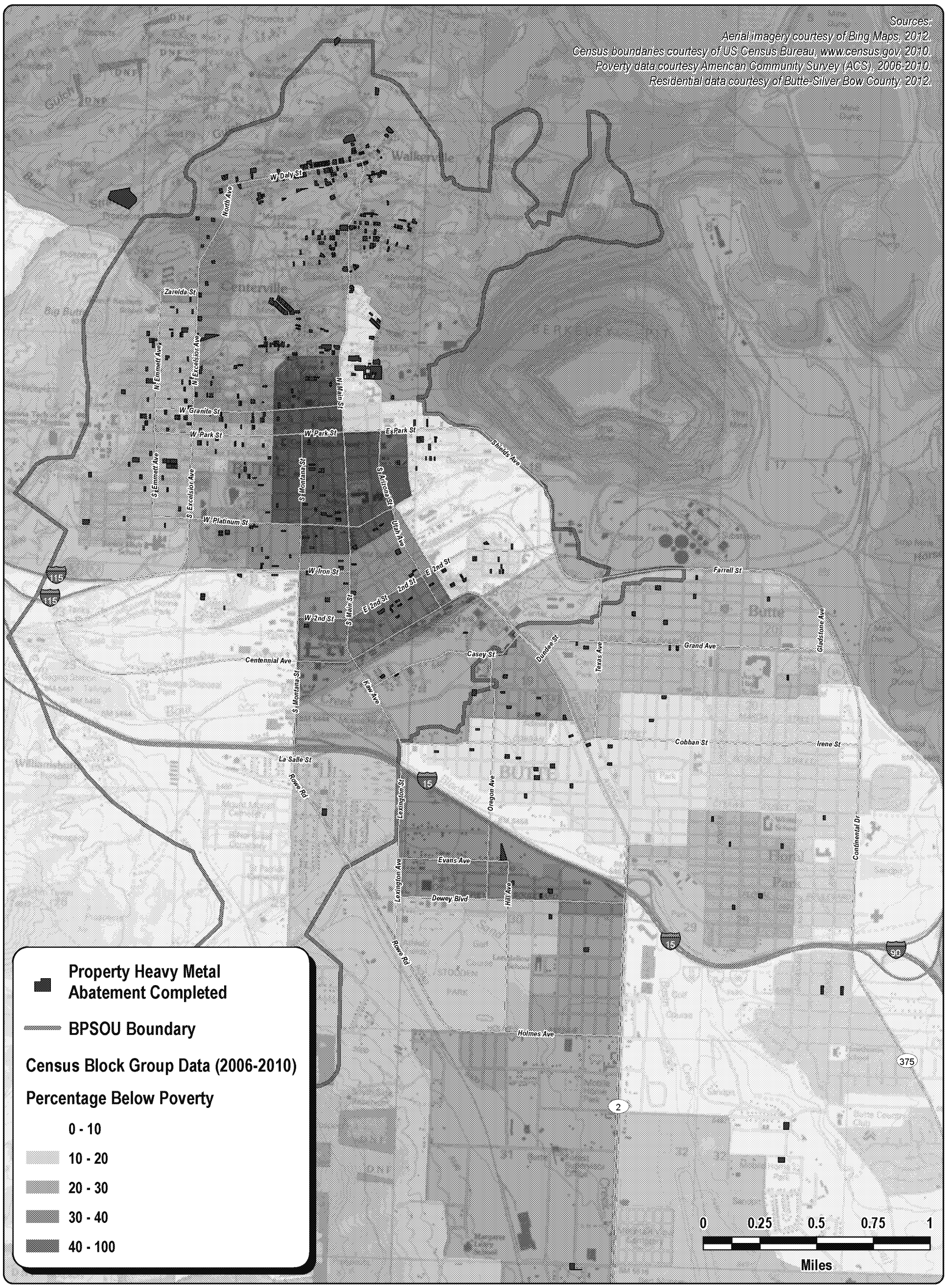

Figure A-1
Clean-ups To Date in Areas of Environmental Concern

Silver Bow County, Montana

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W
E
S

CDM Smith

Appendix B

Copies of Recent Fact Sheets and Bulletins

Silver Bow Creek / Butte Area

Residential Metals Abatement Program (RMAP)

Bulletin #1 **March 31, 2010**

Residential Investigation and Cleanup Work Completed as of December 2009

Sampling and Inspections

- **1,464** yards sampled
- Lead-based paint inspections completed in **816** homes
- Interior dust samples collected from **396** homes
- **444** attics sampled

Abatements (cleanups)

- **377** residential yards cleaned up
- Lead-based paint abatements at **149** homes
- Interior cleanings have been done at **174** homes
- **92** attics abated

Blood lead testing

- **8,568** blood lead tests completed
- **Of 995** children tested in 2008, 2009, **not one** above the permissible blood lead level.

EPA's 2006 Record Of Decision (ROD) for cleanup of Butte Soils included the **Residential Metals Abatement Program.** The Program is designed to address exposure to lead, arsenic, and mercury contamination and is a key part of the overall environmental clean up in Butte. EPA is confident that the program protects the health of Butte citizens.

The residential metals abatement program addresses both mining and non-mining contamination. Mining contamination includes waste rock, tailings, and aerial emissions. Non-mining contamination includes lead-based paint, lead solder, and lead pipes.

Butte-Silver Bow County Health Department administers the program. The County is funded by the Atlantic Richfield Company under EPA and DEQ's direction. The metals abatement program also includes:

- Long-term tracking and data management
- Education and outreach
- Medical monitoring

mg/kg = parts per million

The program requires that all residential properties within the Butte Priority Soils area be sampled within 10 years. Residences with lead of more than 1200 mg/kg or arsenic greater than 250 mg/kg in the soils will be cleaned up. A home's interior, including attic living spaces, will be cleaned if lead or arsenic is found in dust within a living space at those same levels or if mercury is found at a level greater than 147 mg/kg. Affected populations—people having elevated levels of metals in blood or urine and sensitive populations—young children and pregnant or nursing women will get priority for sampling and cleanup.

The Health Department will sample dust, soil and paint from homes and yards. People with elevated levels of contaminants on their properties may provide blood and urine samples to check for metals in the body. Currently, that monitoring includes blood lead testing, but will soon include a blood test for mercury and urine test for arsenic.

Over the next 10 years, the Health Department will reach out to Butte residents with the details of the program and how they can get their residence or yard tested. If you are interested in having your home or yard sampled, please call the Health Department at 406-497-5042.

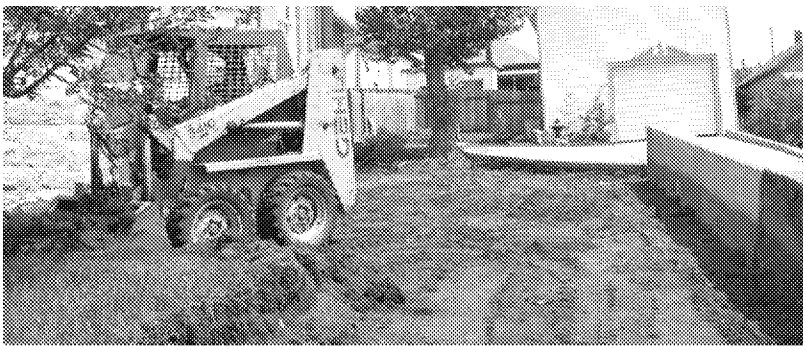
Blood Lead Testing

The primary means of exposure to lead in the environment in Butte is by ingestion—most commonly from contaminated dust on fingers, toys, and other items. This means children are the most exposed group. Exposure to lead can cause problems with learning development. Again, the risks are highest in children.

When blood lead testing began in the early 1990s, the percentage of people (mostly children) having blood lead concentrations above the permissible level (9.9 µg/dl or micrograms per deci-liter) was 8 percent. Since that time, it has ***dropped steadily***, especially as the abatement and education programs were conducted at high-risk homes. Since 2004, the percentage of people having elevated blood lead levels has been below 1 percent. In 2008 and 2009, none of the 995 children tested were above the permissible level. Urinary testing for arsenic is a component of the program and more information will be available from the Health Department when this testing becomes available.

Do you Need More Information?

- **U.S. Environmental Protection Agency:** Sara Sparks, Remedial Project Manger, 782-7415 or Wendy Thomi, Community Involvement Coordinator, 406-457-5037
- **Montana Department of Environmental Quality:** Joe Griffin, Project Officer, 560-6060
- **Butte Silver Bow County Planning Department:** Tom Malloy, 497-6257
- **Butte Silver Bow County Health Department:** Eric Hassler, 497-5042
- **Citizens Technical Environmental Committee:** Suzanne Nordwick, 494-7433
- **Atlantic Richfield Company:** Marci Sheehan, 723-1831



Yard cleanup

Montana Department of Environmental Quality

Attic cleanup

Documents Can Be Found At These Butte Locations

Citizens Technical Environmental Committee
27 West Park Street
Monday - Thursday from 10 am to 3 pm

www.buttectec.org

U.S. EPA Butte Office
155 W. Granite (Under the Courthouse)
Monday - Friday 9 am to 4 pm

www.epa.gov/region8/superfund/mt/sbcbutte

Silver Bow Creek / Butte Area

Contacts

Bulletin #2 April 28, 2010

TOLL FREE NUMBERS

U.S. EPA Helena
1-866-457-2690

U.S. EPA Denver
1-800-227-8917

MT DEQ Helena
1-800-246-8198

REMEDIAL PROJECT MANAGERS

Butte Priority Soils OU
Sara Sparks—782-7415
Mine Flooding OU
Sara Sparks—782-7415
Rocker OU
Mike Bishop—457-5041
Warm Springs Ponds OU
Scott Brown—457-5035
Streamside Tailings OU
Joel Chavez—444-1420

The Silver Bow Creek / Butte Area Superfund Site investigation and cleanup is complicated. With many agencies and individuals involved in the investigation, analysis, outreach, construction and cleanup, legal affairs, monitoring, and management it may be hard to know who to call. The Remedial Project Manager is the best source for technical and other information. Other staff working on the site Cleanup may have additional information that you seek and you may call them to get information.

Butte Priority Soils Operable Unit (OU)

Name	Program/Role	Phone-area code 406
Environmental Protection Agency and Dept. of Environmental Quality in Butte		
Sara Sparks	EPA Project Manager	782-7415
Joe Griffin	DEQ Project Manager	560-6060
Jean Cannada	Environmental Assistant	782-3264
U.S. Environmental Protection Agency in Helena		
Wendy Thomi	Community Involvement Coordinator	457-5037
Joe Vranka	Superfund Branch Chief	457-5039
Henry Elsen	Site Attorney	457-5030
Julie Dalsoglio	Office Director	457-5025
Montana Department of Environmental Quality in Helena		
Larry Scusa	Federal Superfund Section Supervisor	841-5035
Sandi Olsen	Remediation Division Administrator	841-5001
Brad Smith	Site Attorney	841-5023
Richard Opper	Department Director	444-6815
U.S. Agency for Toxic Substances and Disease Registry		
Dan Strausbaugh	Montana Representative	457-5007
Butte—Silver Bow County		
Tom Malloy	Planning Department, Superfund	497-6257
Eric Hassler	Health Department, Lead Program	497-5042
Rick Larson	Public Works	497-6518
Paul Babb	Chief Executive	563-4000
Citizens' Technical Environmental Committee		
Janice Hogan	TAG Grant Administrator	723-6247
Suzzann Nordwick	CTEC President	
Atlantic Richfield Company		
Trey Harbert		723-1816
Marci Sheehan		723-1831

Montana Pole and Treating Plant Superfund Site

The Montana Pole and Treating Plant, also in Butte, has been a Superfund site since 1987. The Plant operated as a wood treating facility from 1946 to 1984. Hazardous substances from the pole-treating operations were discharged into a ditch next to the plant. The substances then ran towards Silver Bow Creek. EPA and DEQ have taken measures to prevent further contamination of Silver Bow Creek. Additional actions were taken to remove the immediate sources of soil contamination, treat ground water and restrict access to the site. Samples are collected regularly to ensure compliance with the cleanup levels in the ROD. The Interstate 15/90 bridge that bisects the Site is being replaced in 2010 and 2011. The third Five Year Review is due in 2011. The Citizens' Technical Environmental Committee (CTEC) manages a grant for technical review and outreach related to this site as well as the Silver Bow Creek / Butte Area site.

Montana Pole Contacts

Lisa DeWitt, DEQ Project Manager

Roger Hoogerheide, EPA Project Manager
406-457-5031

Mary Ann Dunwell, DEQ Public Information Coordinator
406-841-5016

Janice Hogan, CTEC Grant Administrator
723-6247

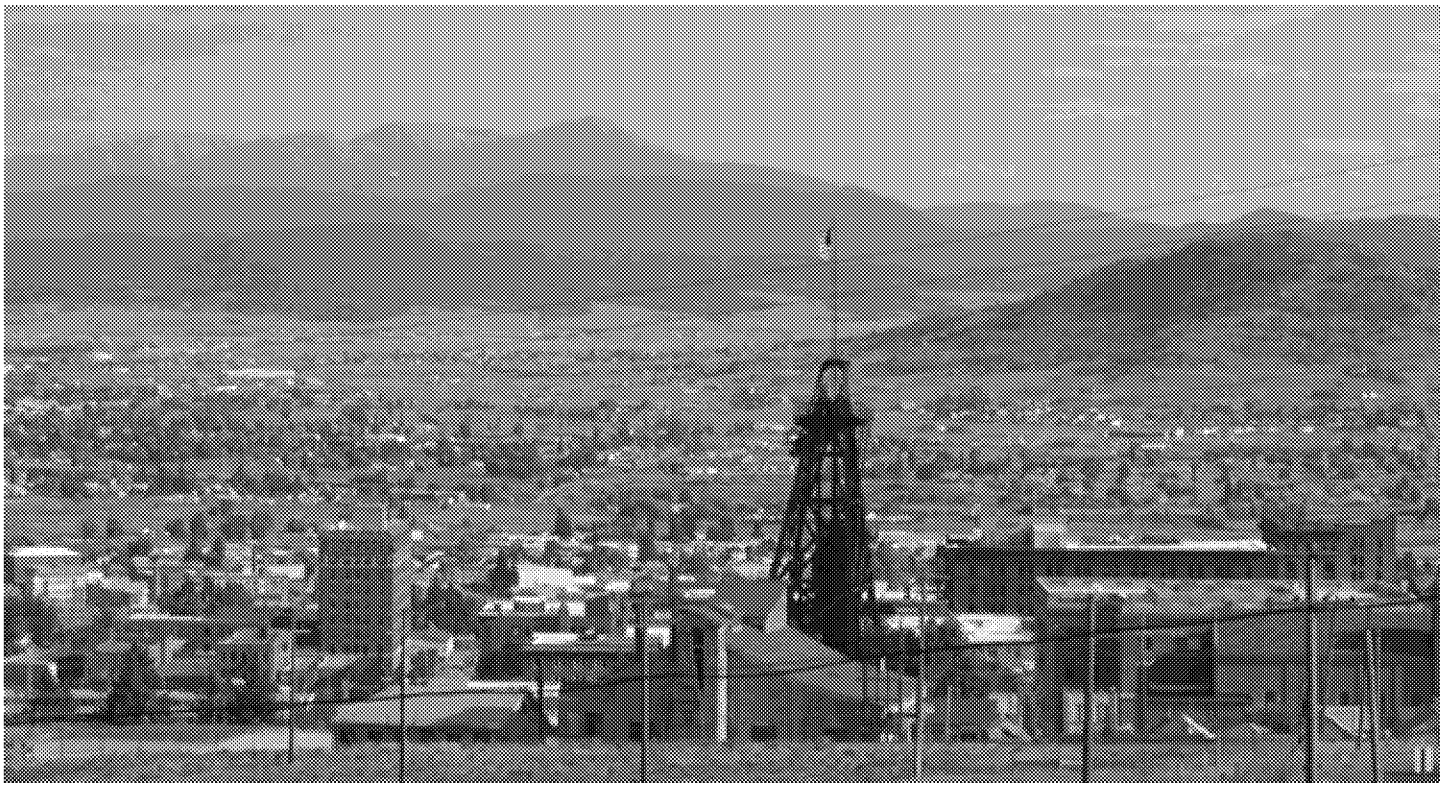
Documents Can Be Found At These Butte Locations

Citizens Technical Environmental Committee
27 West Park Street
Monday - Thursday from 10 am to 3 pm

www.buttectec.org

U.S. EPA Butte Office
155 W. Granite (Courthouse basement)
Monday - Friday 9 am to 4 pm

www.epa.gov/region8/superfund/mt/sbcbutte



Silver Bow Creek / Butte Area

Granite Mountain Memorial Area (GMMA)

Bulletin #3 **May 26, 2010**

Memorial Facts

- EPA funds for work at Granite Mountain were obtained by the community in September, 1994.
- Memorial construction started in fall, 1995.
- The base Monument was completed in 1996.
- The basis for the grant was a state historical preservation requirement.
- The Memorial serves as a cap, preventing exposure to underlying metals.
- EPA personnel have been involved with the Granite Mountain Memorial Board since its inception.

The Butte Priority Soils Operable Unit 2006 Record of Decision included provision for addressing the Granite Mountain Memorial Area. Reclamation activities were divided into two phases. Phase I activities began in June 2008 and were completed in August 2009. Implementation of Phase II began in August 2009 and will be completed in spring 2011. The following summarizes Phase I and II remedial activities at the Memorial Area. These actions make the area safe and usable for public visitation.

Phase I

- Thirty acres of waste rock dumps and other adjacent areas were graded, capped and re-vegetated.
- A half–mile multi–use trail links the Memorial to Center Street.
- A multi–use trail leads to Top of the World Area.
- One mile of channels run from the Moose, Corra, and Green Mountain Shafts to act as storm water controls for the Memorial Area.
- A sediment basin at the North Kelley Mine Yard and a drop structure at the Kelley Mine Shaft serve as storm water controls.
- Fencing and barricades provide access control in the area.
- An over flow parking lot acts as a cap and serves the Memorial area.

Phase II

- The Memorial now includes completed south and west quadrants, a granite sign, benches, trash receptacles, a flag pole, ethnic flags and core installation, new signage, audio system, and parking lot. (Complete June 6, 2010)
- Twenty acres at the Mountain Con Yard and adjacent areas will be graded, capped, and re-vegetated.
- One mile of multi–use trails system will run from the Mineyard & Butte Hill.
- The former Foreman's House area will be converted to a park, including a gazebo, public restroom, picnic tables, benches, and barbeque grills.
- Water, sewer, and electrical lines now support park amenities.
- Historical features will be preserved and interpretive signs installed.
- Four additional parking lots will be constructed at Wyoming Street, Buffalo Street, Center Street, and the Mountain Con.
- East Pacific Street extends into the Mountain Con parking lot.
- Walking trails for guided tours will be constructed.
- A trail to the Center Street parking lot runs north from the Mountain Con.

For details on the construction activities associated with the Granite Mountain Memorial Area, please consult the Final Granite Mountain Memorial Area Phase I and Phase II Remedial Action Work Plan/Final Design Reports.

The Granite Mountain Mine Disaster

On the night of June 8, 1917, a group of men descended into the Granite Mountain mine to inspect an electrical cable that had fallen loose while being strung by a crew from an earlier shift. When the assistant foreman accidentally touched his carbide lamp to the frayed paraffin paper that wrapped the cable, it caught fire. The fire and deadly smoke quickly fanned through the stopes and shafts of the well ventilated mine to connecting mines including the Speculator. Despite heroic measures to rescue those trapped below ground, 168 miners died.

On June 8, 1996 the Granite Mountain Memorial was dedicated to those 168 men who lost their lives in the most deadly metal mining disaster in U. S. history.

Butte and Walkerville have a very strong mining heritage. The Granite Mountain Memorial Interpretive Area helps preserve the mining history. The community commemorates the 168 men who died in the fire by purchasing engraved bricks that are placed in the Memorial Floor and each year around the 8th of June there is a public service at the Memorial to remember all those that were impacted by the terrible fire.

This year's Memorial Service will be at 1:30 pm on Sunday, June 6, 2010 at the Monument. President of the Board, Gerry Walter will host the gathering.

- Speakers from EPA, ARCO, BSB and the GMM Board are expected along with color guard presentation of the Flag, opening prayer and closing prayer.
- Service at the Memorial is scheduled for 30-45 minutes.
- No more than 5 minutes of presentation per speaker.
- Reception will be held immediately thereafter at the Mother Lode Theatre.
- A movie produced by ARCO (The Original) about Butte will follow the reception.

Do you Need More Information?

- **U.S. Environmental Protection Agency:** Sara Sparks, Remedial Project Manger, 782-7415 or Wendy Thomi, Community Involvement Coordinator, 406-457-5037
- **Montana Department of Environmental Quality:** Joe Griffin, Project Officer, 560-6060
- **Butte Silver Bow County Planning Department:** Tom Malloy, 497-6257
- **Butte Silver Bow County Health Department:** Eric Hassler, 497-5042
- **Citizens Technical Environmental Committee:** Janice Hogan, TAG Administrator, 723-6247
- **Atlantic Richfield Company:** Marci Sheehan, 723-1831, Trey Harbert, 723-1816

Documents Can Be Found At These Butte Locations

Citizens Technical Environmental Committee
27 West Park Street
Monday - Thursday from 10 am to 3 pm

www.buttectec.org

U.S. EPA Butte Office
155 W. Granite (basement of the Courthouse)
Monday - Friday 9 am to 4 pm

www.epa.gov/region8/superfund/mt/sbcbutte

Silver Bow Creek / Butte Area

Upcoming Cleanup Work

2010 And Beyond

Bulletin #4 **June 30, 2010**

Ongoing in 2010

- Consent Decree negotiations
- Implementation of the Butte Reclamation Evaluation System
- Implementation of the Residential Metals Abatement Program
- Reclamation work on the Mountain Con Mine Yard

Completed in 2010

- Granite Mountain Memorial
- Trees, vegetation and irrigation system at the Syndicate Pit

Upcoming activities include...

The Mountain Con Mine Yard

The Responsible Parties (RPs) will continue reclamation work through 2010. The area will be open for public use in the summer of 2011.

Butte Treatment Lagoons

In late 2010, the RPs will begin upgrades to the ground water treatment lagoons located south of Centennial St. The upgrades include the west camp pump station, site utilities, and lagoon cell improvements. Additional remediation of the treatment lagoons will take place in 2011.

Catch Basin #8 (at the bottom of Excelsior St.)

The RPs will upgrade the inlet structure to help with access to the catch basin. This will also improve low flow capture.

Curb and Gutter Program

The RPs will install curbs and gutters on the Butte hill to address sediment loading to the underground stormwater system and Silver Bow Creek.

Butte Silver Bow (BSB) Stormwater System

BSB maintenance crews have begun a regular program of removing sediment from the stormwater system. This will help with stormwater collection and flow. The material removed from the system is being taken to the BSB mine waste repository.

Confluence of Blacktail and Silver Bow Creeks

This area east of Montana Street at the confluence of MSD and Blacktail Creek will be cleaned up. The RPs are removing contaminated material from the embankments and land surrounding the confluence and replacing it with clean fill. They will then re-seed the area. The Northwest Energy property requires re-sloping and a road base cap.

Metro Storm Drain (MSD) Upgrades

Vault Pumps - The RPs have installed the vault pumps. The pump vault will operate once the isolation test is complete in the summer of 2010.

Isolation Test-Phase III - EPA will determine if a Phase III will be conducted as part of the isolation test on the MSD groundwater collection system. This is aimed at determining if part of the MSD ground water collection system can be removed. The decision will be based on whether or not the groundwater is contaminated. If conditions are favorable, groundwater collection in the lower portion of MSD will be discontinued.

Install Manhole - The RPs will install an additional manhole in the MSD channel to help with the cleanout and jetting of the ground water collection system.

Jetting of MSD Groundwater Collection System - The MSD groundwater collection system will be jetted at least 2 more times in 2010.

Riprap - The RPs will grout the riprap in the MSD Channel to ensure it will stay in place.

MSD Bank Channel - The RPs will rebuild the bank of MSD near the corner of Texas Ave. and Civic Center Road.

Do you Need More Information?

- **U.S. Environmental Protection Agency:** Sara Sparks, Remedial Project Manger, 782-7415 or Wendy Thomi, Community Involvement Coordinator, 406-457-5037
- **Montana Department of Environmental Quality:** Joe Griffin, Project Officer, 560-6060
- **Butte Silver Bow County Planning Department:** Tom Malloy, 497-6257
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Silver Bow Creek / Butte Area

Redevelopment and Institutional Controls

Bulletin #5 **July 28 2010**

What are Institutional Controls?

ICs are legal and administrative tools used to maintain protection of human health and the environment at Superfund sites, sometimes by protecting a remedy that is already in place.

ICs are often an important part of the overall cleanup and redevelopment at a site. Every Montana Superfund Site has Institutional Controls to protect and complement the remedy.

ICs can be used for many reasons and there are different types. Some restrict site use, others ensure that redevelopment happens in a protective manner. Some aim to modify behavior or provide information to people.

Superfund and Redevelopment in Butte

At the Butte Priority Soils Operable Unit (BPSOU), more than two million cubic yards of mine waste within the community have been removed and taken to secure repositories. Some areas of mine waste have been capped in place. It is common at large mining sites such as Butte to see some combination of waste removal and capping of waste in-place. It is simply not feasible to remove such a large volume of contaminated mining waste and replace it with clean soil.

Since the remedy leaves wastes in place, these caps must be permanent and remain effective and, to the extent possible, must not restrict future community development projects.

EPA highly encourages redevelopment at Superfund sites. BPSOU workplans have included redevelopment since 1990. There are many examples of Superfund cleanup efforts in Butte improving public health and the environment while allowing for significant redevelopment projects including:

- The Original Mine Yard—the primary stage for the National Folk Festival for the last 3 years.
- The Mountain Con Mine Yard— set to open to the public in spring 2011 with walking trails, public restrooms, a covered gazebo for picnics and a beautiful garden area.
- East Park/Mercury Street Redevelopment Area— site of a number of new buildings including the Belmont Senior Citizens Center and the Butte Central Gymnasium. Both are used daily and serve people from all over the Butte area.
- Granite Mountain Memorial
- Copper Mountain Complex
- Missoula Street Baseball Complex
- Knob Hill Park
- Chamber of Commerce
- Tullamore Subdivision

Institutional Controls in Butte

The Butte remedy includes the following minimum ICs:

1. A controlled groundwater area
- which covers both bedrock and alluvial aquifers
- prevents domestic use of contaminated water, spreading or worsening existing contamination, or release of highly contaminated groundwater to surface water through irrigation
- prevents new well development, except for Superfund monitoring wells, well systems that treat contaminated water prior to use, and the use of existing commercial wells.

An education and well abandonment program will be implemented to persuade owners not to use contaminated water and to voluntarily take existing wells out of service in exchange for being hooked up to public water.

2. County zoning and permit requirements will be implemented to ensure that
- capped waste left in place, and other control measures such as storm water controls are not disturbed, mismanaged, or inappropriately developed
- waste taken from these areas is disposed of at the Butte Mine Waste Repository or, if identified as a hazardous waste, disposed of appropriately.

These controls and permits allow reuse and redevelopment with adequate funding.

3. Deed notices and deed restrictions are required and are in place for most of the capped areas
- for all areas where wastes were capped and left in place or where engineered controls were constructed or other discrete wastes were left in place.
- to notify current and subsequent landowners of the presence of wastes or engineered controls and ensure that these wastes are not disturbed. Fencing and signs may be required to ensure the integrity of caps and engineered controls.

4. Where private landowners require fencing or signage to protect the remedy, the remedy requires installation of these fences or signs.

Do you Need More Information?

- **U.S. Environmental Protection Agency:** Sara Sparks, Remedial Project Manger, 782-7415 or Wendy Thomi, Community Involvement Coordinator, 406-457-5037
- **Montana Department of Environmental Quality:** Joe Griffin, Project Officer, 560-6060
- **Butte Silver Bow County Planning Department:** Tom Malloy, 497-6257
- **Butte Silver Bow County Health Department:** Eric Hassler, 497-5042
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- **Atlantic Richfield Company:** Marci Sheehan, 723-1831, Trey Harbert, 723-1816

Check out these web sites!

www.buttectec.org **www.epa.gov/region8/superfund/mt/sbcbutte**

Silver Bow Creek / Butte Area

Butte Treatment Lagoons
(Lower Area One)

Bulletin #7 **October 6, 2010**

Design Report was released in September.

Details on the Upgrades, planned by EPA, DEQ, Butte-Silver Bow & Atlantic Richfield, will be at two locations:

EPA's Butte Office
155 W. Granite
(Courthouse basement)
Mon. - Fri., 9 am - 4 pm

CTEC - Citizens' Technical Environmental Committee
27 West Park Street
Mon. - Thu., 10 am - 3 pm

Design plans were available Sept. 27, 2010.

Butte Treatment Lagoons (BTL) and West Camp Pump Station Upgrades

As part of the overall cleanup in and around Butte, EPA and Atlantic Richfield cleaned up the Butte Reduction Works and Colorado Smelter (known as Lower Area One). A two phase clean-up plan was designed for the area (see map on back).

Phase I (1993 to 1998) involved removing the Colorado Tailings that contained heavy metals and then reconstructing the Silver Bow Creek channel. About 1.2 million cubic yards of tailings (1.2 million pick up loads) were moved and placed on the Clark Tailings, capped with clean material. The Copper Mountain Park was built on the site. Large volumes of clean soil were brought back to replace the Colorado Tailings before the new Silver Bow Creek channel was constructed. The area was re-vegetated with native grasses, shrubs and trees.

Phase II (2001—present) involved the construction of the BTL and a ground water collection system. The groundwater collection system includes the Metro Storm Drain which runs from the corner of Continental Avenue and Texas Avenue to just east of Montana Street. Groundwater is collected from the West Camp Underground System and Lower Area One. BTL treats approximately 1200 gallons/minute of water.

The treatment system is a two part process. Lime is added to the groundwater, causing the heavy metals to drop out of the water. Then the water travels through a series of wetlands to meet State water quality standards.

Starting this fall, EPA and Atlantic Richfield will begin the upgrading of the existing BTL. Please refer to the map for locations of facilities discussed in this bulletin.

The Lime Addition System is located in a building where lime is added to the contaminated groundwater. The existing building will be expanded to house equipment needed to operate an upgraded lime system. A parking lot and security lights will be installed. Once lime is added to the groundwater, it will flow to the lagoon cells, which will be upgraded to ensure the cells continue to function properly for the future.

The Site Operation Building will be constructed and used for office space, sample preparation, maintenance and storage as well as site wide monitoring and system instrumentation. New water and sanitary lines will be installed at the site.

The Automatic Sampling Building, Influent Pump Station, and Effluent station will be constructed at the end of the Butte Treatment Lagoons System. This building will be used for sampling treated water before it enters Silver Bow Creek.

Finally, the West Camp Pump station is located on the north side of Centennial Avenue (see map on back). The pump station will be upgraded with a new building, a paved road to the site, and on-site security.

www.buttectec.org

www.epa.gov/region8/superfund/mt/sbcbutte

Do you Need More Information?

- **U.S. Environmental Protection Agency:** Sara Sparks, Remedial Project Manager, 782-7415 or Nikia Greene, Community Involvement Coordinator, 406-457-5019
- **Montana Department of Environmental Quality:** Joe Griffin, Project Officer, 560-6060
- **Butte Silver Bow County Planning Department:** Tom Malloy, 497-6257
- **Butte Silver Bow County Health Department:** Eric Hassler, 497-5042
- **Citizens Technical Environmental Committee:** Janice Hogan, TAG Administrator, 723-6247
- **Atlantic Richfield Company:** Marci Sheehan, 723-1831, Trey Harbert, 723-1816

Silver Bow Creek / Butte Area

Butte USA Café

Bulletin #8 November 10, 2010

Are You Interested?

Attend the Next Meeting

Tuesday November 23, 2010
7:00 pm —9:00 pm
Conference room below
Denny's (near Holiday Inn.)

Possible topics include:

Discussing the outcome of the prioritization workshop described on the other side;

Incorporating as a 501 (c) (3) non-profit organization in order to receive funding for a staff position and projects;

Reconsidering the group's by-laws;

Agreeing on comments regarding NRD Long-Range Guidance Plan and funding;

Setting a schedule for recruiting new members.

Butte Restoration Alliance

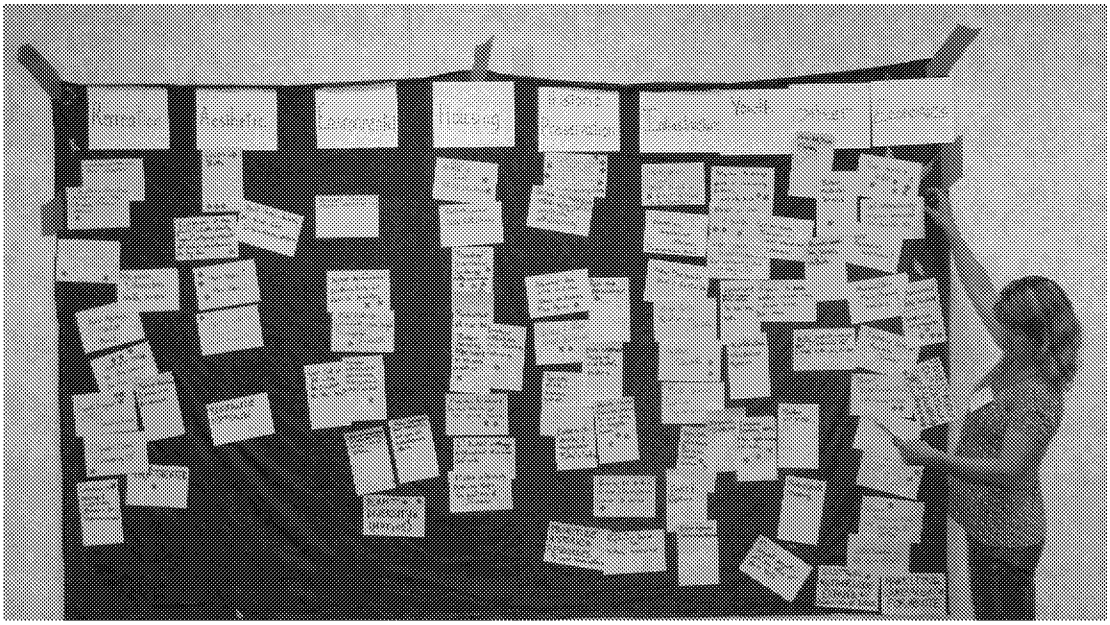
The Butte Restoration Alliance (Alliance) formed in the fall of 2006 as a diverse, independent and active group representing a cross-section of the community. The group started with seed money from EPA and now relies almost entirely on volunteer support from its dedicated community members. Most of these members represent at least one other Butte community organization; some are involved in several. Through these members and constituent groups, the Alliance can maximize community input into restoration issues and activities.

Acknowledging the vision, principles and objectives of other community planning processes, the Alliance may:

- Review current and future restoration and redevelopment projects;
- Facilitate events to reach out and provide information to the public;
- Solicit ideas on projects from the broader public;
- Evaluate projects and priorities relative to funding and public input and support;
- Recommend action to Butte's Council of Commissioners.

Butte Restoration Alliance Guiding Principles

- **Historic & Cultural Preservation:** We believe that Butte has a unique history and culture that should be valued and preserved.
- **Environmental Responsibility:** We believe that environmental responsibility must be a part of remediation, restoration and redevelopment projects.
- **Sustainability:** We believe that all projects must be sustainable with resources identified to maintain them into the future.
- **Accessibility:** We believe that projects should be accessible and available to the wide spectrum and diversity of Butte citizens.
- **Community:** We believe community consensus builds connectedness and "community". We believe in Butte's community spirit and sense of independence. Involvement in remediation, restoration and redevelopment projects can further encourage that spirit.



Identified Areas of Interest at the Sept. 28 workshop:

- Recreation
- Aesthetics
- Environment
- Housing
- Historic Preservation
- Infrastructure
- Youth
- Economics
- Other

Twenty four members of the Butte Restoration Alliance gathered recently for a workshop—Butte USA Café—to prioritize among their many interests and issues and focus on several of them during the evening. The goal of the BRA has always been to provide recommendations and facilitate action for a safe and desirable community. During the September workshop the group focused on "What actions, projects or improvements—if accomplished—would make Butte a better place to live or visit?" The technique helped the group to generate ideas on getting started by looking at barriers and challenges and actions to address them. Many common goals were identified within the Alliance. Focus areas during the evening were:

Coordinating Historical Attractions
Parks and Recreation
Superfund, including Parrot Tailings

Do you Need More Information?

U.S. Environmental Protection Agency **www.epa.gov/region8/superfund/mt/sbcbutte**

- Sara Sparks, Remedial Project Manager, 782-7415
- Wendy Thomi, Community Involvement Coordinator, 406-457-5037
- Nikia Greene, Community Involvement Coordinator, 406-457-5019

Montana Department of Environmental Quality

- Joe Griffin, Project Officer, 560-6060

Butte Restoration Alliance

- Suzzann Nordwick, Executive Committee Chair, 565-1537

New member applications are available on the Alliance website

www.butterestorationalliance.org

Silver Bow Creek / Butte Area

2010 Fall Superfund Work

Bulletin #9 **December 1, 2010**

Atlantic Richfield Co. will be submitting Construction Completion Reports (CCRs) in January, 2011 for:

Syndicate Pit
&
Jennie Dell Waste Dump

CCRs are reports that document all construction activities that occur in Butte Priority Soils Operable Unit.

Fall activities include...

Butte Reduction Works (BRW)
The existing seep along Silver Bow Creek (SBC) is caused by the drainage from the east pond at BRW. To ensure the ground water does not move toward SBC, the water level in the pond will be lowered. Contaminated water will be drained to the hydraulic control channel (HCC) and directed into the Butte Treatment Lagoons for treatment in Lower Area One (LAO). A head gate will be installed to maintain the water level and the existing culvert in SBC will be removed. The BRW work started on October 25 and will be completed in December.

Lower Area One — Hydraulic Control Channel (HCC)
The HCC is designed to collect contaminated groundwater and send it to the LAO ponds for treatment prior to discharge into SBC. Cleaning the HCC started in November using a vacuum truck to remove sediment, iron slimes, and sludge in the bottom of the channel. The vacuumed sludge, sediments, and water will be hauled to the Butte Mine Waste Repository located on Butte Hill.

Lower Area One — Butte Treatment Lagoons Sludge Removal
Sludge was removed from the Butte Treatment Lagoons in October and November. Removal happens several times a year. The sludge is produced from a chemical reaction between hydrated lime and contaminated groundwater. The lime helps remove contaminants from the groundwater. This sludge is dredged from the lagoons and moved to the Lower Area One Sludge Drying Beds.

Lower Area One — Sludge Drying Beds Clean Out
Dried sludge from the Butte Treatment Lagoons is removed from the drying beds and hauled to the Butte Mine Waste Repository. Precautions are taken to prevent sludge from leaving the trucks. Dried sludge is currently being hauled.

Lower Area One — Butte Treatment Lagoons (BTL) Upgrades (see also, Bulletin #7-October 6, 2010)
The final engineering design documents are available for review. The designs include upgrades to the Lime Addition System, Site Operation Building, Automatic Sampling Building, Influent Pump Station, Effluent Station, and the West Camp Pump Station. After approval, EPA and Atlantic Richfield will start upgrades to the existing BTL.

Silver Bow Creek Stream Bank Work
The removal of the contaminated stream banks and replacement with clean fill started on October 12 and will be completed in December. The adjacent uplands will be capped with topsoil during the same time period. Vegetation restoration along the stream banks and uplands will be conducted in spring, 2011.

Granite Mountain Memorial Phase II
Construction activities will be completed this fall on the Granite Mountain Memorial Phase II project. This work includes the Foreman's Park area and walking trails associated with the site. The final seeding activities will be completed in spring, 2011 and the area will be opened to the public in summer, 2011.

More Fall Work...

Metro Storm Drain (MSD) Isolation Study
The Phase III Isolation Study started on August 7 and was completed in November, 2010. The study is designed to determine if the lower section of the MSD sub-drain can be isolated to limit the volume of clean groundwater it collects.

Metro Storm Water Sub-Drain Clean Out
The Metro Storm sub-drain, which collects contaminated groundwater, must be cleaned several times per year. The sub-drain cleaning is completed by power washing the slotted pipe with water to remove mineral build up in the pipe. This work will be completed in December, 2010.

Metro Storm Water Drain Flow Meter Installation
The flow meter will be installed in January, 2011 and will measure the flow of water in the Metro Storm Drain.

Winterization of MSD
Winterization of the MSD sub-drain system is completed.

Catch Basin 8
The road to Catch Basin 8, at the end of Excelsior Street, will be enhanced to support all traffic that enters the site for inspections, cleaning operations, and maintenance activities. Work will be completed in December, 2010.

Curb and Gutter Programs
On October 15, Atlantic Richfield Company started installing curb and gutter at defined, high sediment, erosion areas on Butte Hill. Curb and gutter installation helps control and minimize contaminated storm water run-off to Silver Bow Creek. The installation will continue this fall until freezing conditions prevent further work. The project will start up again next summer and be completed by October, 2011.

Pacific Street
Pacific Street is the entrance to the Mountain Con area within the Granite Mountain remediation project. Curb and gutter installation and paving was completed in November, 2010.

Do you Need More Information?

- **U.S. Environmental Protection Agency:** Sara Sparks, Remedial Project Manager, 782-7415 or Nikia Greene, Community Involvement Coordinator, 406-457-5019
- **Montana Department of Environmental Quality:** Joe Griffin, Project Officer, 560-6060
- **Butte Silver Bow County Planning Department:** Tom Malloy, 497-6257
- **Butte Silver Bow County Health Department:** Eric Hassler, 497-5042
- **Citizens Technical Environmental Committee:** Suzzann Nordwick, President, 565-1537
- **Atlantic Richfield Company:** Marci Sheehan, 723-1831, Trey Harbert, 723-1816

www.epa.gov/region8/superfund/mt/sbcbutte **www.buttectec.org**

Silver Bow Creek / Butte Area

Five-Year Review

Bulletin #10 **December 22, 2010**

The Draft Five-Year Review Report is available to the public at:

EPA Montana Office
10 West 15th Street,
Suite 3200
Helena, MT 59626

And:

EPA Butte Office
155 W. Granite
Butte, MT 59701

And:

http://www.epa.gov/region8/superfund/mt/sbcbutte

What is a Five Year Review?
The five-year review is a regular EPA checkup on a Superfund site.

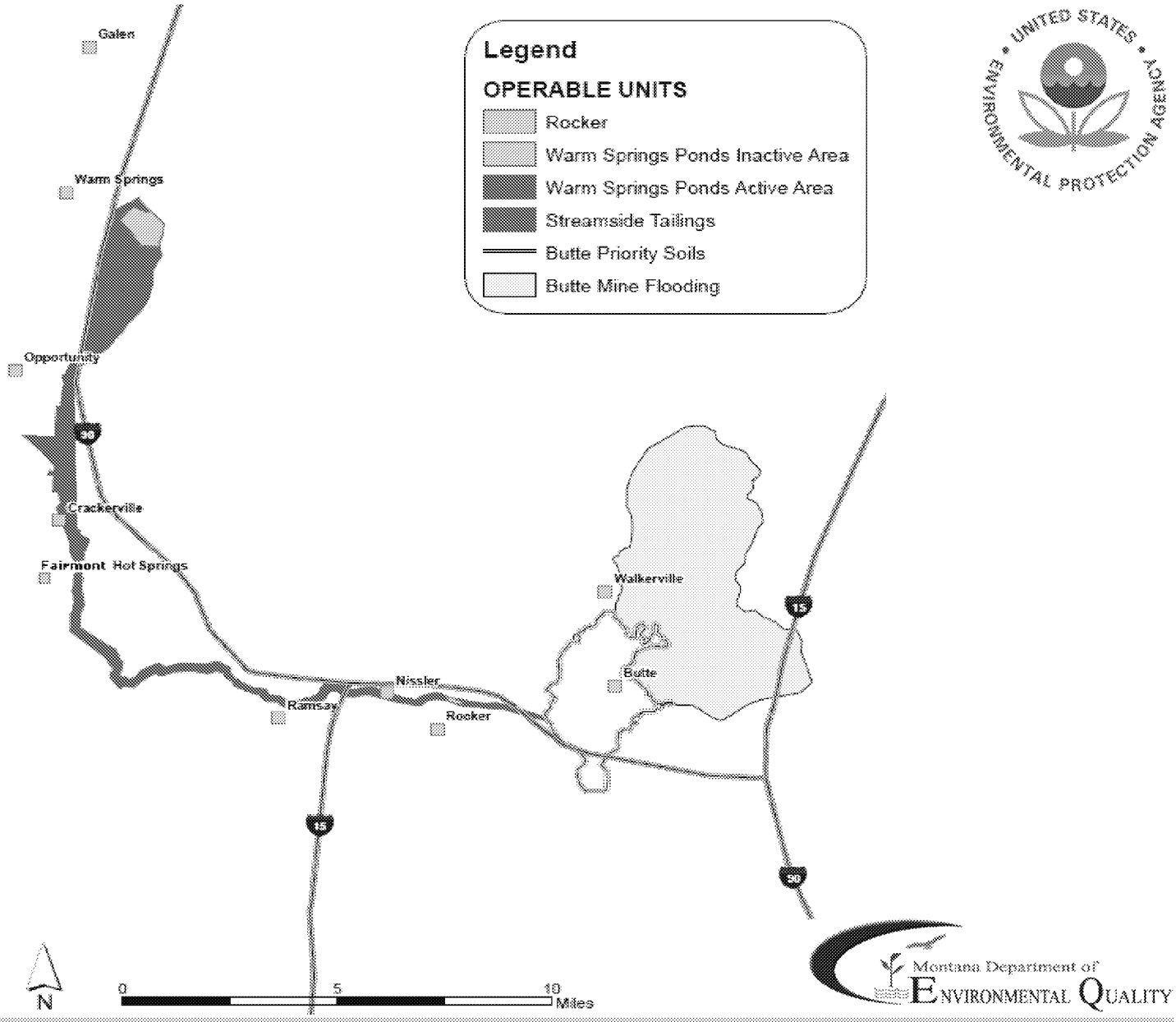
What is the purpose of the five-year review?
The five-year review is conducted to determine whether cleanup actions are functioning as designed and whether cleanup levels remain protective.

What is the process of the five-year review?
The five-year review process involves notifying interested parties that a review of the protectiveness of the remedy is occurring. A review team is established to obtain and examine relevant data and documents concerning the site. The team conducts site inspections and interviews and later makes a protectiveness determination. A report is prepared including recommendations and findings.

Third five-year review for the Silver Bow Creek/Butte Area site
This review covered activities conducted from January 2005 through December 2009. Environmental Protection Agency (EPA) Region 8 conducted the review with input from the Montana Department of Environmental Quality (DEQ). The Draft Five-Year Review Report is now available for comment.

The review took over a year to complete and included over one hundred interviews. The team reviewed hundreds of technical plans, reports, and other documents that had been prepared for the site over the last five years. Several public meetings were conducted to keep the public engaged in the process.

The purpose of the five-year review is to determine whether the implemented remedies at the Silver Bow Creek/Butte Area Superfund Site are protective of human health and the environment. The methods, findings, and conclusions of such reviews are documented in five-year review reports. Six of the operable units were included in this five-year review (see location map on back).



Do you Need More Information?

U.S. Environmental Protection Agency:

Roger Hoogerheide, Review Coordinator, 406-457-5031

Joe Vranka, Superfund Branch Chief MO, 406-457-5039

Sara Sparks, Remedial Project Manager, 406-782-7415

Nikia Greene, Community Involvement Coordinator, 406-457-5019

www.epa.gov/region8/superfund/mt/sbcbutte

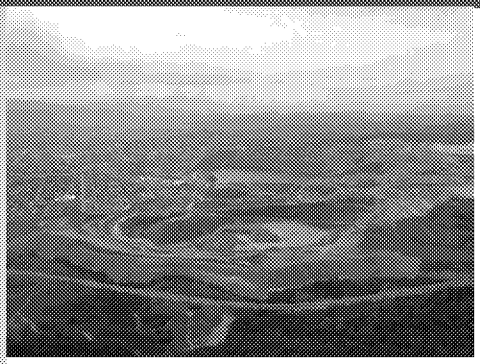
Montana Department of Environmental Quality:

Daryl Reed, Superfund Project Manager, 406-841-5041

Silver Bow Creek / Butte Area

Citizens' Technical Environmental Committee (CTEC) & Technical Assistance Grant (TAG)

Bulletin #11 **January 26, 2011**



How can I get involved?

- **Attend the CTEC monthly public meeting found at:**
  www.buttectec.org
  Events and Public Meetings
- **Contact Janice Hogan (CTEC TAG Coordinator) at: (406-723-6247)**
- **Visit the CTEC office at: 27 West Park Street**
- **Write to CTEC at:**
  P.O. Box 593
  Butte, Montana 59703
- **Email CTEC at:**
  buttectec@hotmail.com
- **Fill out an online membership at:**
  www.buttectec.org/form

The Citizens' Technical Environmental Committee (CTEC) has a core group of 15 volunteer citizens, who facilitate public involvement in the remediation, restoration and redevelopment of the Butte area. Issues are extensive and more public participation is greatly needed. CTEC works with the Environmental Protection Agency (EPA), the state of Montana, responsible parties, and others to help make the Superfund process understandable for the community.

CTEC is a non-profit organization that started in 1989. CTEC's mission Is to provide technical comments and public outreach on the Superfund process for Silver Bow Creek/Butte Area and Montana Pole and Treating Plant National Priority List sites. CTEC aims to improve education services to help young people gain a better understanding of environmental issues associated with Butte-area Superfund sites.

For more than a decade CTEC has been funded by the EPA through a Technical Assistance Grant (TAG). CTEC members represent diverse areas of expertise and provide the Superfund process with an informed local voice and alternative perspectives to help formulate Superfund decisions that reflect community needs.

Technical Assistance Grants (TAG's) are awarded to help community groups understand site-related information and participate in decision-making throughout the cleanup of a Superfund site. Grants are used by a community group to contract with a technical advisor(s) to assist the community in understanding technical information related to cleaning up a Superfund site and how clean-up decisions may affect the community.

With a better understanding of what is going on at a site and what decisions need to be made, community members are more able to comment on the technical aspects of site cleanup. Technical comments provided by community members assist EPA in:

- Identifying and controlling unacceptable human exposures from site contamination
- Monitoring and controlling migration of contaminated ground water
- Improving construction design, and implementing the remedy

Community members also play a key role in determining site reuse. EPA believes that community participation is an important part of cleaning up and bringing land back into a beneficial community use.

Initial awards of $50,000 may be available to nonprofit community groups. Most of the funding must be used to contract the services of a technical advisor(s). By statute, only one TAG at a time can be awarded per site. Additional funding may be available at the end of the project period. Since 1988, over 270 TAGs have been awarded and over $22,000,000 in funding has been provided by EPA.

Do you Need More Information?

U.S. Environmental Protection Agency:

Sara Sparks, Remedial Project Manager, 406-782-7415
Nikia Greene, Community Involvement Coordinator, 406-457-5019
Wendy Thomi, Grant Project Officer, 406-457-5037

www.epa.gov/superfund/community/tag/

Citizens' Technical Environmental Committee:

Janice Hogan, TAG Grant Administrator, 406-723-6247
Suzzann Nordwick, President, 406-565-1537

www.buttectec.org

Silver Bow Creek / Butte Area

Community Engagement & EPA's New Office

Bulletin #12 February 23, 2011

Community Engagement Goals

- **Provide early and frequent opportunities for stakeholders to participate**
- **Define the roles and responsibilities of EPA and other agencies and communicate what EPA can and cannot do**
- **Produce outcomes that are responsive to stakeholder concerns**
- **Evaluate and measure the effectiveness of community engagement activities**

The Environmental Protection Agency (EPA), in consultation with the Montana Department of Environmental Quality (DEQ), makes critical decisions to protect human health and the environment throughout the Superfund process. These decisions, related to cleanup of contamination and management of waste left in place, directly affect communities. The people who are most affected by the decision have a voice in the decision-making process. EPA remains committed to engaging and working with affected communities throughout the entire Superfund process and especially during decision-making phases.

Community engagement is about interactions that build relationships and about recognizing and emphasizing the community's role in identifying concerns and providing input. Good relationships and dialogue lead to identifying common interests and exploring solutions together. The agency recognizes that EPA's culture of seeking stakeholder input must be at the forefront of the way we make decisions. EPA understands and appreciates that the success of a cleanup is dependent on effective partnerships with the public and between government agencies.

EPA's internal goal is a "One Cleanup," "One Team" project management approach. This approach enables all team members to understand project facts and community dynamics, to effectively communicate an accurate message to the public. EPA wants to ensure that decisions consider the results of community consultation. EPA is committed to promoting continual improvements to community engagement through:

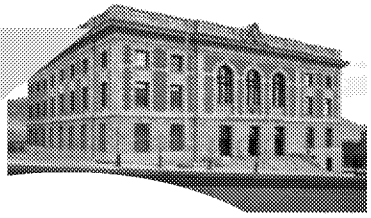
- Training key EPA personnel, to strengthen communication and community engagement skills;
- Enhancing outreach through a variety of tools and techniques;
- Presentation of complex scientific and technical data so that all diverse stakeholders can participate in an informed and meaningful way, including disadvantaged and at-risk populations.

Tour of remediated areas and discussion of Butte Reclamation Evaluation System (BRES) with Butte Restoration Alliance Members – July 2007

EPA HAS A NEW OFFICE!

The new EPA office is located on the corner of Copper and Main in the Mike Mansfield Federal Building. The building is Americans with Disabilities Act (ADA) compliant. Anyone coming in to visit must have a photo I.D. After a brief security check visitors can find Sara Sparks and Jean Cannada on the third floor in room 339. EPA looks forward to meeting with you in the new office.

Mike Mansfield Federal Building



New Office Address:

U.S. EPA Butte Office
400 North Main Street
Butte, Montana 59701

Room 339
Phone #'s are the same!

Do you Need More Information?

U.S. Environmental Protection Agency:

Joe Vranka, Superfund Branch Chief, 406-457-5039
Sara Sparks, Remedial Project Manager, 406-782-7415
Jean Cannada, Senior Environmental Employee, 406-782-3264
Nikia Greene, Community Involvement Coordinator, 406-457-5019
www.epa.gov/region8/superfund/mt/sbcbutte

Montana Department of Environmental Quality:

Joe Griffin, Project Officer, 406-560-6060

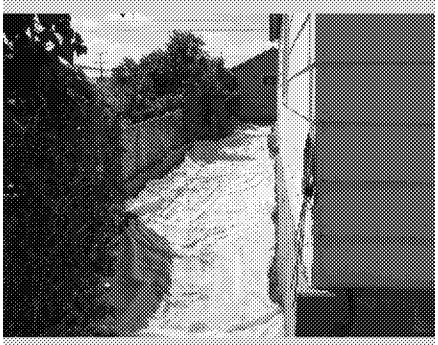
Silver Bow Creek / Butte Area

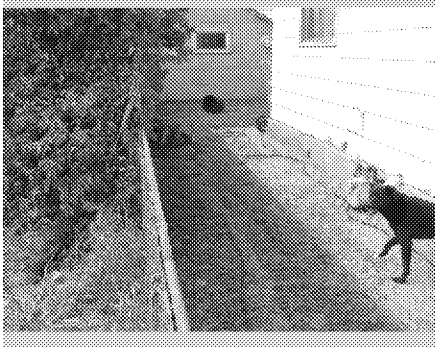
2010 Residential Metals Abatement Program Activities

Bulletin #13 **April 6, 2011**

Butte-Silver Bow (BSB) Health Department Completed 65 Abatement Projects in 2010

- 3 interior living spaces
- 38 residential attics
- 24 residential yards





The Residential Metals Abatement Program (RMAP) aims to reduce risk from exposure to high metals levels. RMAP is designed to sample and remediate (if necessary) all residential properties in the Butte Priority Soils Operable Unit. The Butte-Silver Bow Health Department performs continuous metals abatement activities in the Butte area through the RMAP. Children living at or frequently visiting properties that exceed action levels, help determine the order of the abatement projects.

Abatement projects are performed when lead levels in soils and dust are greater than 1200 mg/kg (parts per million)) and/or arsenic is greater than 250 mg/kg and/or mercury is greater than 147 mg/kg.

Testing

Blood lead screening is available to all residents of Butte-Silver Bow. The Butte Women's, Infant's and Children's program (WIC) gives special attention to screening children. WIC staff routinely performs finger stick capillary collections. If a collection result is more than 9 micrograms of lead per deciliter of blood, it is confirmed with a venous collection before the child is documented as having an elevated blood lead. Of the 693 blood lead screenings performed between January and December 2010, one venous collection was confirmed having a blood lead level more than 9.9 micrograms of lead per deciliter of blood; the elevated blood level came from a non-environmental source of lead. RMAP staff contact each family of a child with an elevated blood level and arranges for an environmental assessment. The RMAP includes Case Management for children with elevated blood levels, to work with the family and/or landlord to assure that the child's environment is not a source of lead contamination. Case management includes home visits, education for the family, and timely follow-up lab testing.

To ensure that the BSB Health Department provides accurate and appropriate environmental screening and testing for the residents of Butte, the Health Department staff has attained EPA lead supervisor/contractor and risk assessor certification.

Environmental assessments

Environmental assessments are offered to all WIC clients and expedited if potential exposures are identified during the interview process. Environmental assessments are performed to identify potential sources of lead, arsenic and mercury exposures. Environmental assessments consist of soil testing, attic dust testing, interior dust testing and X-ray fluorescence testing for lead-based paint. The residences where exposures are identified during the environmental assessment process are prioritized for abatement. The Health Department conducted 251 environmental assessments in 2010. In addition to environmental assessments, the Health department informs families about potential exposure to contamination.

Montana Department of Environmental Quality

Education and Outreach

The Residential Metals Abatement Program (RMAP) works in conjunction with the medical community - particularly pediatricians and the WIC program- to inform the public about risk, health monitoring, nutritional information, and the Program's activities. Education and outreach specifically address portions of homes that pose a risk for potential exposure. The RMAP relies on educational materials and face -to- face consultations to ensure homeowners, remodeling contractors, home inspectors, potential buyers, and weatherization workers are aware of the following:

- The potential presence of lead, arsenic, and/or mercury in attics or basements.
- The importance of restricting access to those areas by sensitive populations (young children and pregnant or nursing mothers), and taking the appropriate measures to ensure that dust is not tracked into the interior living space.
- The proper communication protocol prior to implementing any remodeling project and/or landscaping project to ensure that dust and soil are appropriately handled and taken to an approved disposal facility.

The RMAP engages in a range of education activities

- **Distribution of Educational Materials to**
  - Local Contractors
  - Hardware/Lumber Suppliers
  - Childcare Facilities/Programs (e.g. Head Start)
  - Housing Authorities (e.g. Human Resource Council –Section 8 and LIEAP)
  - Local Realty Agencies
- **Informative Presentations**
- **Periodic Mailings**
- **Events (e.g. Community Health, Fitness, and Safety Fair)**
- **Public Service Announcements**

Do you Need More Information?

U.S. Environmental Protection Agency:

Sara Sparks, Remedial Project Manager, 406-782-7415

Jean Cannada, Senior Environmental Employee, 406-782-3264

Nikia Greene, Community Involvement Coordinator, 406-457-5019

Butte Silver Bow County Health Department:

Eric Hassler, Residential Metals Abatement Program Manager, 406-497-5042

Michele Bay, Community Outreach Coordinator, 406-497-5045

Montana Department of Environmental Quality:

Joe Griffin, Project Officer, 406-560-6060

Silver Bow Creek / Butte Area

2011 Unilateral Administrative Order (UAO) & Work Plan

Bulletin #14 **August 10, 2011**

Hard copies of the UAO, including the Work Plan can be viewed at:

EPA- Butte Office
400 North Main Street
Mon. - Fri., 9 am - 4 pm

CTEC - Citizens' Technical Environmental Committee
27 West Park Street
Mon. - Thu., 10 am - 3 pm

Montana Tech Library
1300 West Park Street
Mon.-Fri., 7:30 am- 4 pm

UAO issuance to six PRPs:

1. Atlantic Richfield Co.
2. Butte Silver Bow County
3. RARUS Railroad Co.
4. Inland Properties Inc.
5. BNSF Railway Co.
6. Union Pacific Railroad Co.

What is a UAO and what is its role?

A Unilateral Administrative Order (UAO) is an enforcement tool that compels Potentially Responsible Parties (PRPs) to design and carry out cleanup actions. An objective of Superfund enforcement is to place ultimate responsibility for the costs of cleaning up Superfund sites on those who are considered responsible. If PRPs do not comply with a UAO, the Environmental Protection Agency (EPA) has the flexibility to determine whether to perform a fund-financed cleanup and seek to recover those costs from the PRPs. PRPs have a strong incentive to comply with UAOs, since the Superfund law authorizes a court to award penalties for non-compliance.

Issuance of the 2011 UAO for the Butte Priority Soils Operable Unit (BPSOU) / Butte Site

On July 21, 2011 a UAO was issued for Partial Remedial Design, Remedial Action, and certain Operation and Maintenance activities. The 2011 UAO has been issued to six PRPs. The Effective Date of the 2011 UAO is September 6, 2011. The 2011 UAO requires the PRPs for BPSOU to implement parts of the 2006 BPSOU Record of Decision (ROD), so cleanup work can move forward.

Linking the UAO to Consent Degree (CD) negotiations

A Consent Decree is a legal document, approved by a judge, that formalizes an agreement reached between EPA and PRPs for cleanup actions. Consent Degree negotiations have been ongoing for several years in Butte because of many factors including the complexities of surface water and ground water cleanup at the BPSOU. EPA will continue CD negotiations with the Department of Environmental Quality (DEQ) and PRPs through further study, design, review, and discussion. EPA issued the 2011 UAO to ensure that necessary and appropriate cleanup work in Butte continues in a timely manner, even though a final Consent Degree has not been completed. The 2011 UAO does not address the final cleanup plan for surface water and groundwater at the BPSOU. The 2011 UAO does address work for residential cleanup, cap protection, and storm water controls that are needed at this time. The Partial Remedy Implementation Work Plan (PRI Work Plan) attached to the UAO is summarized on the back of this bulletin.

Partial Remedy Implementation Work Plan (PRI Work Plan)

The PRI Work Plan is not a comprehensive or final work plan for implementation of the 2006 BPSOU ROD. The PRI Work Plan describes:

1. The status of remedial design and remedial implementation efforts for the 2006 BPSOU ROD
2. Remedial design, remedial action, and operations and maintenance activities that are required for the 2011 and 2012 time period and other final remedial design plans.

Summary of requirements in the PRI Work Plan

- For residential cleanup; Implementation of the Residential Metals Abatement Plan (RMAP-April 2010) is required. The RMAP requires all yards within the BPSOU to be sampled and assessed within 10 years. If action levels are exceeded, those yards must be remediated within 20 years (2011 ESD). Additional requirements include addressing: non-mining lead sources, attic dust, community outreach, and medical monitoring.

- For storm water controls; Installation of devices within the Butte storm water system that will reduce contamination levels before storm water enters Silver Bow Creek (SBC). Additional requirements include installation of new catch basins, hydrodynamic devices (sediment catch), curb and gutter, and the implementation of storm water system clean-out plans.

- For capping improvements; All capped waste sites in Butte will be evaluated. All capped waste sites not in compliance will be corrected to meet current capping and vegetation standards.

- For the Metro Storm Drain System (MSD) and Lower Area One Treatment Lagoon System (LAO); Improvements to the LAO Treatment Lagoons and the MSD interception and pumping system, are required based on detailed engineering studies.

- For surface water protection; Removal of contaminated areas around SBC near Montana Street, and the continuation of the bank and sediment removal plans for cleanup of contaminated mine-waste in and near the creek.

See a more detailed description of the UAO and PRI Work Plan at the locations on the front of this bulletin.

Do you Need More Information?

- **U.S. Environmental Protection Agency:** Sara Sparks, Remedial Project Manager, 782-7415 or Nikia Greene, Community Involvement Coordinator, 406-457-5019
- **Montana Department of Environmental Quality:** Joe Griffin, Project Officer, 560-6060
- **Citizens Technical Environmental Committee:** Janice Hogan, TAG Administrator, 723-6247

Silver Bow Creek / Butte Area

Summer Summary 2011

Bulletin #15 **September 21, 2011**

KEY DEVELOPMENTS SUMMER 2011

Issuance of a Five-Year Review Report

Issuance of a Unilateral Administrative Order

Issuance of a Explanation of Significant Difference

Documents can be viewed in Butte at:

EPA- Butte Office
400 North Main Street
Mon. - Fri., 9 am - 4 pm

CTEC - Citizens' Technical Environmental Committee
27 West Park Street
Mon. - Thu., 10 am - 3 pm

Montana Tech Library
1300 West Park Street
Mon.-Fri., 7:30 am- 4 pm

Or online at:

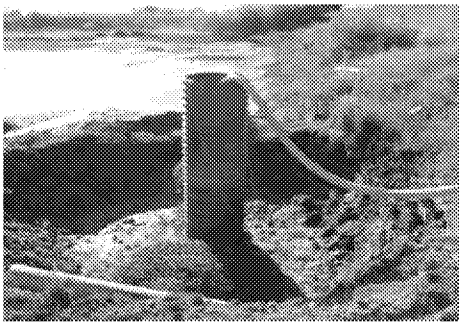
http://www.epa.gov/region8/superfund/mt/sbcbutte/index.html

RMAP (Residential Metals Abatement Program)

The RMAP is a tool designed to sample and cleanup residential properties in the Butte Priority Soils Operable Unit (BPSOU). RMAP is unique to the Superfund process because it not only addresses mining contamination but also addresses non-mining contamination such as lead based paint. Modifications related to the RMAP can be viewed in Section 3 of the Explanation of Significant Differences located online. The significant differences have to be documented but do not fundamentally alter the overall approach of the remedy. The RMAP, including the expanded lead cleanup, will continue to be implemented as described in the Final Multi-Pathway Residential Metals Abatement Program Plan (April 2010).

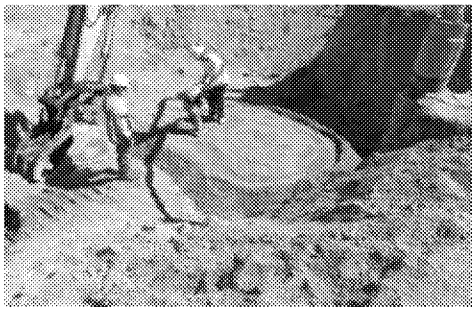
BTL (Butte Treatment Lagoons)

The BTL is a two part treatment process that involves, 1). adding lime to contaminated water so metals drop out, and 2). filtering the water through a series of wetlands to meet State water quality standards. Upgrades to the BTL are currently taking place. A concentrated effort has been placed on the dewatering of the lowest lagoon (**Cell D-4**).

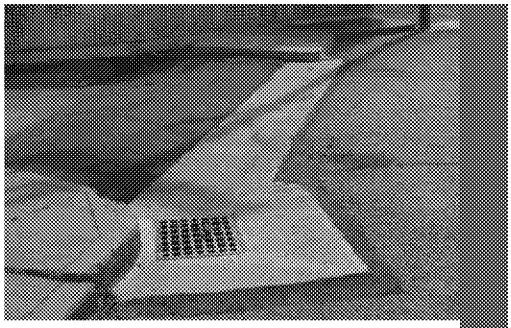


West Camp Pump Station

West Camp Pump Station collects contaminated groundwater and pumps the water to the BTL. Upgrades are being conducted to enhance the pumping system and are scheduled to be completed by the end of November 2011.



Curb and Gutter Construction



Curb and gutter construction is a plan to reduce sediment loading by directing storm water flows. Curb and gutter construction targets the areas that have the highest direct benefit to Silver Bow Creek. Currently, curb and gutter is being installed throughout the Butte Hill and will continue to be an open plan to control storm water, contingent upon existing and new data.

BRES (Butte Reclamation Evaluation System)

The BRES is a tool that provides a practical way to evaluate the stability, integrity, and continued protectiveness of completed cleanup projects such as caps. The BRES is implemented by Butte Silver Bow County. Corrective measures on BRES sites started on August 15, 2011. Approximately ten BRES sites per week are prepared for re-seeding in an effort to have one-hundred sites ready before Oct. 15 (opportune time for seeding).

Upcoming

Consent Decree (CD) Negotiations

EPA understands that the aspects of the cleanup as it relates to surface water and groundwater are important to the Butte community. EPA continues to work with responsible parties and the State of Montana Department of Environmental Quality in designing and implementing the 2006 Record of Decision. Discussion continues towards achieving final agreements on the development of schedules and processes for the cleanup of Butte Priority Soils Operable Unit. Recently, a Unilateral Administrative Order (UAO) was issued as an interim step, and EPA believes this will help in completing the CD. The UAO can be viewed online at **http://www.epa.gov/region 8/superfund/mt/sbcbutte/index.html**

West Side Soils Operable Unit (WSSOU)

Located North and West of Butte are several contaminated waste piles. WSSOU is the last area at the Butte site that will undergo the Superfund process. EPA plans to begin a remedial investigation and feasibility study, starting this winter.

Do you Need More Information?

- **U.S. Environmental Protection Agency:** Sara Sparks, Remedial Project Manager, 406-782-7415 or Nikia Greene, Community Involvement Coordinator, 406-457-5019
- **Montana Department of Environmental Quality:** Joe Griffin, Project Officer, 406-560-6060
- **Citizens Technical Environmental Committee:** Janice Hogan, TAG Administrator, 406-723-6247

Silver Bow Creek / Butte Area

2011 Winter Updates

Bulletin #16 **November 28, 2011**

Community Engagement Plan Update:

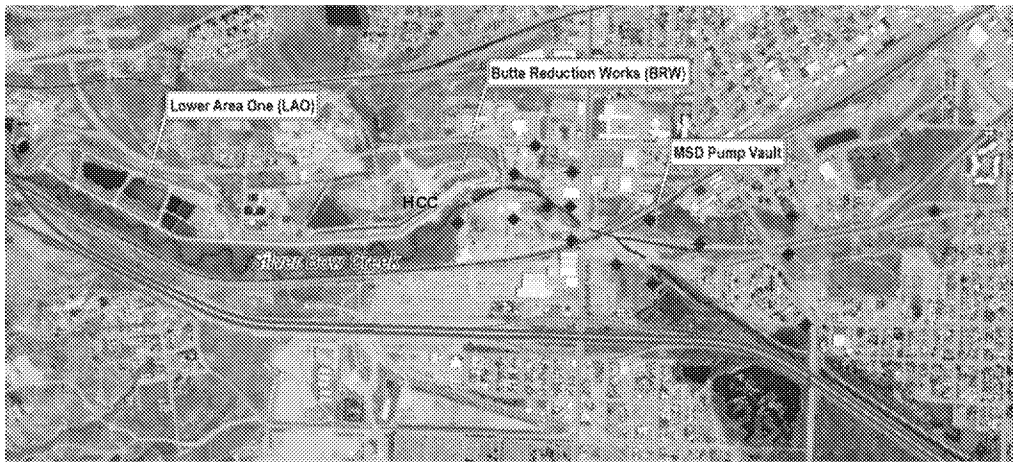
The Environmental Protection Agency is currently soliciting suggestions, ideas, stakeholder relationships and participation through the revision of a Community Engagement Plan. Suggestions implemented before the plan is revised include:

- **Fewer acronyms**
- **More graphics**
- **Website Updates**
- **Progress Reports on the Web**
- **Bulletin distribution in Monday issues of the Montana Standard**
- **Bulletin distribution to the schools**
- **Radio shows (Party Line)**
- **District XII neighborhood outreach**
- **More public interviews**
- **Web links to analytical data**
- **Big picture communication**

Ground Water Characterization Update:

Localized well drilling is being conducted to install groundwater monitoring wells in the area between the Metro Storm Drain Pump Vault and the groundwater collection features at Butte Reduction Works. Twenty six wells are currently scheduled to be drilled. Drilling will last until mid December. The wells will help with a better understanding of groundwater quality and flow in this area. Groundwater will continue to be collected at the Metro Storm Drain Pump Vault and the Hydraulic Control Channel (HCC), directed to Lower Area One, and treated, before entering Silver Bow Creek.

Locations of planned groundwater monitoring wells

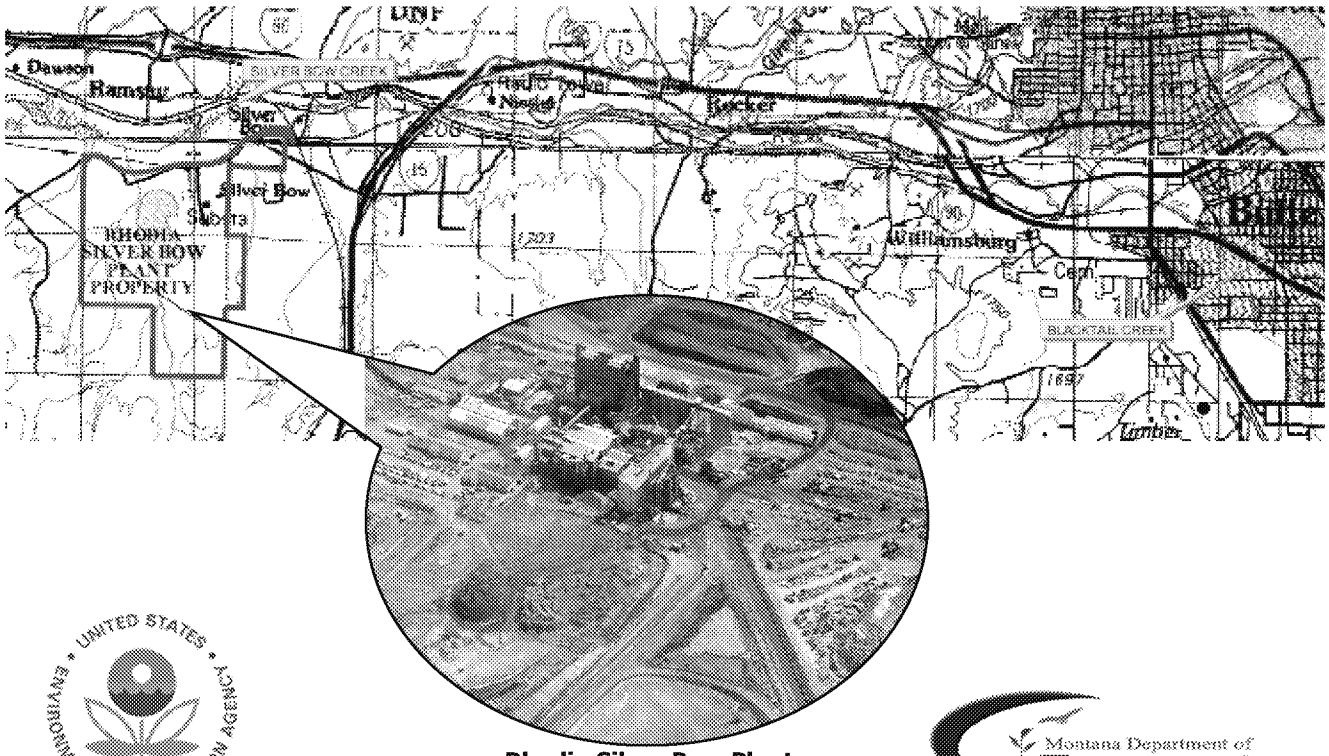


West side of South Montana Street

KOA Campground

Rhodia Silver Bow Plant Site Update:

The Rhodia Silver Bow Plant occupies approximately 1.25 square miles south of Ramsay. The plant was constructed in the early 1950s to produce elemental phosphorus. Operations ended in 1997. Rhodia is conducting clean-up activities at and around the facility primarily under the terms of a Resource Conservation and Recovery Act (RCRA) Corrective Action Order issued by the U.S. Environmental Protection Agency (EPA) in 2004. During the plant's years of operation elemental phosphorus and a variety of hazardous wastes were generated, treated, stored, and disposed of at the facility. Interim cleanup activities have been conducted to address many of the most immediate potential environmental hazards. A facility-wide investigation is in progress to determine appropriate long term remedies.



Rhodia Silver Bow Plant Elemental Phosphorus Production Facility

Do you Need More Information?

Silver Bow Creek/Butte Area

- **U.S. Environmental Protection Agency:** Sara Sparks, Remedial Project Manager, 406-782-7415

or Nikia Greene, Community Involvement Coordinator, 406-457-5019

- **Montana Department of Environmental Quality:** Joe Griffin, Project Officer, 406-560-6060
- **Citizens Technical Environmental Committee:** Janice Hogan, TAG Administrator, 406-723-6247

Rhodia Silver Bow Plant Butte, Montana Site

- **U.S. Environmental Protection Agency:** Larry Kimmel, RCRA Project Manager, Denver CO, 303-312-6659

Silver Bow Creek / Butte Area

West Camp Pump Station & Hydrodynamic Devices

Bulletin #17 **February 13, 2012**

Last call for community interviews.

The Environmental Protection Agency is taking the steps to develop new processes and implement suggestions from the public as it relates to community outreach and engagement in Butte.

Are you interested in being interviewed?

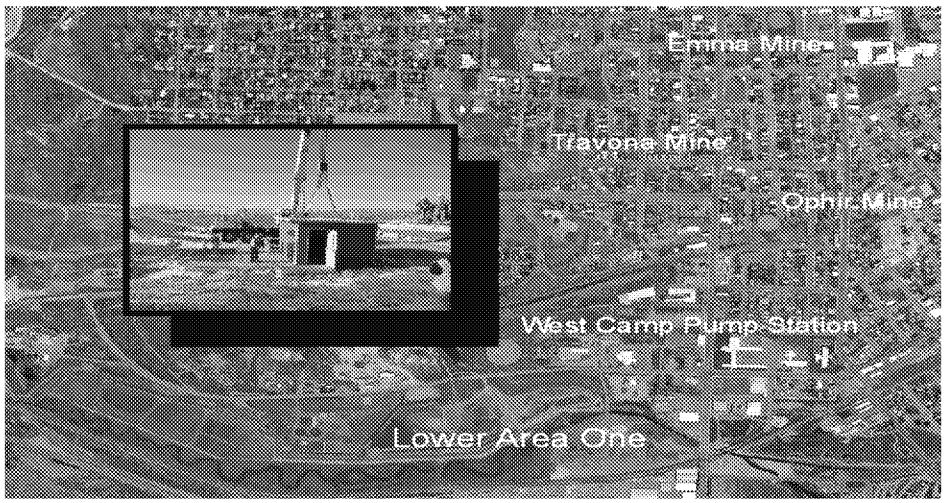
The interview process will end on February 29, 2012

Contact Nikia Greene at:

406-457-5019
Or
greene.nikia@epa.gov

West Camp Pump Station

The West Camp Pump Station is located immediately north of Centennial Avenue (526 Centennial Avenue). Originally West Camp water treatment was part of the Butte Mine Flooding Record of Decision (1994). Now operation of the system and treatment is being done as part of the Butte Priority Soils Operable Unit remedy. The West Camp system includes the Travona, Emma, and Ophir mines and their associated underground workings. The West Camp system is its own hydraulic system separated by bulkheads, installed in the late 1950s to reduce the amount of pumping necessary to dewater the mines.



The function of the West Camp Pump Station is to maintain water levels in the West Camp system below the established critical water level of 5,435 feet. Below 5,435 feet is considered to be a safe level and protective of human health and the environment (Record of Decision 2006). West Camp Pump Station ensures that a perpetual sink is maintained. This sink is kept below the natural recharge level by the pumping and treating requirements. The contaminated water pumped from West Camp Pump Station is sent to the Butte Treatment Lagoons for treatment.

In late December, 2011 a new 13-foot by 16.5 foot precast concrete building (seen above) was installed to house new pumping equipment and controls. The purpose of upgrading the West Camp Pump Station is to improve function, ensure long term operation, and improve safety and environmental conditions. A final punchlist will be completed in February, 2012 and the West Camp system will continue to provide a safe water level.

Hydrodynamic Devices

The design and installation of 6 hydrodynamic devices will be completed by early spring of 2012. A hydrodynamic device is an important storm water control designed to reduce large sediment, suspended solids, oil, grease, and other pollutants, especially pollutants conveyed with sediment transport. Flows and sediment capture will be monitored after installation to determine the effectiveness of the hydrodynamic devices.

Warren Avenue Hydrodynamic Device

Hydrodynamic Devices will be installed at:

- **Texas Avenue**
- **Warren Avenue**
- **Anaconda Road**
- **Montana Street**
- **Buffalo Gulch (2)**

The **2010 Ground Water Data Analysis Report** was complete on February 1, 2012. The report summarizes ground water monitoring and remedial design activities for the Butte Priority Soils Operable Unit between 2007 and 2010. The public has requested that EPA present complex information in a digestible manner. The 2010 Ground Water Data Analysis Report is a response to that request.

Approximately 36 new groundwater monitoring wells are being installed within Butte Priority Soils Operable Unit. EPA will continue to provide periodic reports on the developing monitoring well network. Additionally, a comprehensive and accessible groundwater data base is under development. The groundwater data base will be available on the Silver Bow Creek/Butte Area website in the spring of 2012. The data base will provide a way to keep up to date with groundwater monitoring.

2010 Ground Water Data Analysis Report can be viewed at:

- **EPA- Butte Office**
  400 North Main Street
  Mon. - Fri., 9 am - 4 pm

- **CTEC - Citizens' Technical Environmental Committee**
  27 West Park Street
  Mon. - Thu., 10 am - 3 pm

- **Montana Tech Library**
  1300 West Park Street
  Mon.-Fri., 7:30 am- 4 pm

Or online at: http://www.epa.gov/region8/superfund/mt/sbcbutte/index.html

Silver Bow Creek/Butte Area Residential Metals Program

Bulletin #18 **April 2, 2012**

Sampling and Cleanup for Property Owners

Call:
(406) 497-5040

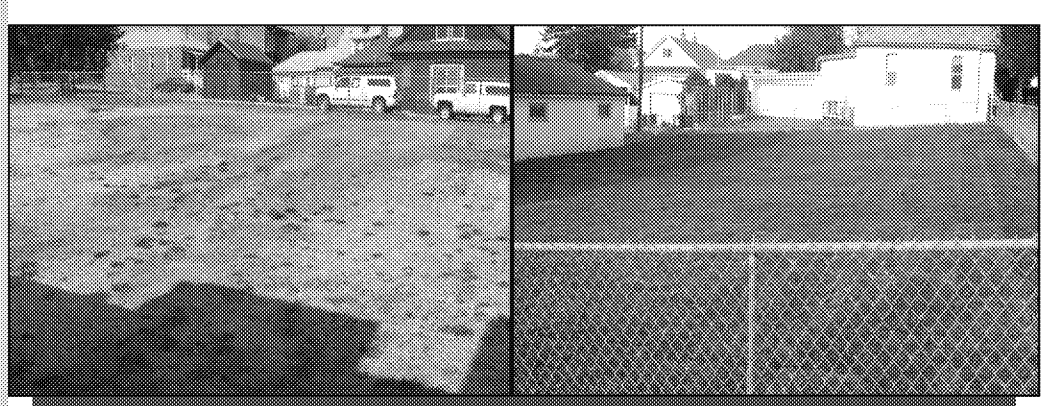
Do you live or own property in Uptown/Central Butte or the surrounding area?

Then you are eligible to have your home tested for heavy metals.

If you live in a home or apartment built before 2006, and you live in Uptown/Central Butte, your home, apartment or yard may contain contaminated dust, soil, or paint. Certain levels of metals can threaten your health or the health of your children. Arsenic, lead and mercury can cause cancer, nervous system disorders, learning disabilities, heart problems and other health problems. Children are particularly at risk from exposure to arsenic, lead and mercury.

But, there is a free and easy way to test and clean up your home or apartment—**Butte's Residential Metals Program**.

The Butte/Silver Bow Health Department's Residential Metals Program exists to address the problem of metals exposure in Uptown/Central Butte. The program will sample and analyze dust and soil at your home and clean it up, if needed, at no cost to you. The program cleans up contaminated attic dust, indoor dust, and yards.



Before After

You can make sure that you and your family are protected from harmful levels of metals in and around your home by following the simple process provided by the Residential Metals Program.

The Process is Free, Quick and Easy

Here's all you need to do:

1. Make an appointment to have your home sampled. (Just a quick phone call: **406-497-5040**)
2. Fill out a sample request form. (The property owner needs to do this.)

Here's what the Health Department will do:

1. We will collect attic dust, indoor dust and soil samples.
2. We will have a certified lab analyze the samples to see if contamination is present.
3. We will mail the results to you or the property owner. (All results are confidential.)
4. We will let you know what the results mean.

What happens next?

- If you don't have a level of contamination that requires cleanup, great-nothing need be done.
- If we find lead, mercury or arsenic contamination and a level that requires cleanup in order to protect your health, the property owner fills out an access agreement and we will clean it up.

Free of charge at a time convenient for you.

Do you Need More Information?

Butte Silver Bow Health Department
Residential Metals Program:

Eric Hassler, Residential Metals Abatement Program Manager, 406-497-5042
ehassler@bsb.mt.gov
Michele Bay, Residential Metals Program Sampling/Outreach Coordinator, 406-497-5045
mbay@bsb.mt.gov

Appendix C

Contacts and Locations

This appendix lists key community leaders, interested parties, and agency representatives, along with their contact information. It also includes information about public meeting spaces and the document repository. The following tables are included:

- Table C-1: Montana Department of Environmental Quality
- Table C-2: Federal Elected Officials
- Table C-3: State Elected Officials
- Table C-4: Local Officials (Elected and Appointed)
- Table C-5: Environmental Protection Agency Officials
- Table C-6: Montana Natural Resource Damages Program
- Table C-7: Public Interest Groups
- Table C-8: Media
- Table C-9: Local Schools
- Table C-10: Local Community Groups
- Table C-11: Meeting Rooms and Document Repositories

Table C-1 Montana Department of Environmental Quality

Name / Position	Address	Contact Information (area code 406)
Joe Griffin State Project Officer	1100 N. Last Chance Gulch P.O. Box 200901 Helena, Montana 59620-0901	jgriffin@mt.gov 841-5042
Jenny Chambers Administrator, Remediation Division	1100 N. Last Chance Gulch P.O. Box 200901 Helena, Montana 59620-0901	jchambers@mt.gov 841-5001 Fax: 841-5050
Tracy Stone-Manning Director	1520 E. Sixth Avenue P.O. Box 200901 Helena, MT 59620-0901	 444-2544 Fax: 444-4386
Jeni Garcin Public Relations Specialist Remediation Division	1100 N. Last Chance Gulch P.O. Box 200901 Helena, Montana 59620-0901	jgarcin@mt.gov www.deq.mt.gov/rem 841-5016 Fax: 841-5050

Table C-2 Federal Elected Officials

Name / Position	Address	Contact Information (area code 406)
Senator Max Baucus	Washington D.C. 511 Hart Senate Office Bldg. Washington, D.C. 20510	max@baucus.senate.gov (202) 224-2651 Fax: (202) 224-0515
Holly Luck / Jillian Morgan	Empire Block 30 West 14th Street Suite 206 Helena, MT 59601	jillian_morgan@baucus.senate.gov 449-5480 Fax: 449-5484
Kim Krueger / Jake Maciag	Silver Bow Center 125 West Granite Suite 100 Butte, MT 59701	kim_krueger@baucus.senate.gov 782-8700 Fax: 782-6553
Kirby Campbell-Rierson	8 3rd Street E Kalispell, MT 59901	kirby_campbell-rierson@baucus.senate.gov 756-1150 Fax: 752-1152
David Cobb	32 E Babcock Bozeman, MT 59715	David_cobb@baucus.senate.gov 587-9177 Fax: 586-6104
Senator Jon Tester	204 Russell Senate Office Building Washington, DC 20510-2604	rjt@tester.senate.gov (202) 224-2644 Fax: (202) 224-8594
	Capital One Center 208 N Montana Avenue, Suite 202 Helena, MT 59601	449-5401 Fax: 449-5462
Pamela Haxby-Cote Field Director	Silver Bow Center 125 W Granite, Suite 200 Butte, MT 59701	pamela_haxby-cote@tester.senate.gov 723-3277 Fax: 782-4717
Congressman Steve Daines	Washington, DC Office 2448 RHOB Washington, DC, 20515	steve.daines@mail.house.gov (202) 225-3211 Fax: (202) 225-5687

Table C-3 State Elected Officials

Name / Position	Address	Contact Information (area code 406)
Governor Steve Bullock	Office of the Governor Montana State Capitol Bldg. Rm 204 P.O. Box 200801 Helena MT 59620-0801	 444-3111 Fax: 444-5529
Lieutenant Governor John Walsh	Office of the Lt. Governor Montana State Capitol Bldg. PO Box 200801 Helena, MT 59620-1901	 444-3111 Fax: 444-4648
Mike Volesky Natural Resource Policy Advisor	Helena P.O. Box 200801 Helena MT 59620	mvolesky@mt.gov
House District 73 Silver Bow County Pat Noonan (D)	**PO Box 90** Ramsay, MT 59748	**565-0518** pnoonan73@yahoo.com
House District 74 Silver Bow County Ryan Lynch (D)	**PO Box 934** Butte, MT 59703	**498-6625** (no email listed)
House District 75 Silver Bow County Edie McClafferty (D)	**1311 Stuart Avenue** Butte, MT 59701	**490-5873** ediemcclafferty@gmail.com
House District 76 Silver Bow County Amanda Curtis (D)	**1117 N. Emmett Avenue** Butte, MT 59701	**782-4149** (no email listed)
Senate District 37 Silver Bow County Jon Sesso (D)	**811 W. Galena Street** Butte, MT 59701	**490-7405** jonsesso@yahoo.com
Senate District 38 Silver Bow County Jim Keane (D)	**2131 Wall Street** Butte, MT 59701	**723-8378**

Table C-4 Local Officials (Elected and Appointed)

Name / Position	Address	Contact Information (area code 406)
Butte Silver Bow County Chief Executive Matt Vincent	Courthouse, Room 106 155 West Granite Street Butte, MT 59701	497-6220
Butte-Silver Bow County Planning Department Jon Sesso	Courthouse, Room 108	497-6250
Butte-Silver Bow County Weed Control Jon Sesso	Courthouse, Room 108	497-6250
Butte Silver Bow County Commission District 1 Mark Moodry District 2 Sheryl Ralph District 3 John Morgan District 4 John Sorich District 5 Dennis Henderson District 6 Jim Fisher District 7 Bud Walker District 8 Brendon McDonough District 9 Dan Foley District 10 Bill Andersen District 11 Cindi Shaw (Chairman) District 12 Dave Palmer	Courthouse, Room 12	497-6200
Butte-Silver Bow County Health Department Terri Hocking Health Administrator	25 West Front Street	497-5020

Table C-5 Environmental Protection Agency Officials

Name / Position	Address	Contact Information (area code 406)
Region 8 Organization		
MT OPERATIONS OFFICE Director Julie DalSoglio		DalSoglio.Julie@epa.gov 457-5001 toll-free: 866-457-2690
Deputy / Superfund Joe Vranka	U.S. Environmental Protection Agency Baucus Federal Building 10 West 15th Street Suite 3200 Helena, MT 59626	457-5039 Vranka.joe@epa.gov
Administrative Officer Deb Clevenger		457-5004
Remedial Project Manager Nikia Greene		greene.nikia@epa.gov (406)-457-5019
Remedial Project Manager Sara Sparks	400 N. Main Street, Rm 339 Butte, MT 59701	sparks.sara@epa.gov 782-7415

Table C-6 Montana Natural Resource Damages Program

Name / Position	Address	Contact Information (area code 406)
Program Chief, NRDP Carrol Fox	1301 East Lockey Helena MT 59620	cfox@mt.gov 444-0209
NRDP Advisory Committee Natural Resource Damage Program	Montana Department of Justice 1301 East Lockey P.O. Box 201425 Helena, MT 59620-1425	E-mail: nrdp@mt.gov 444-0205 Fax: 444-0236

Table C-7 Public Interest Groups

Name / Position	Address	Contact Information (area code 406)
Butte Local Development Commission	480 E. Park Street Suite 101 Butte, MT 59701	723-4349 www.bldc.net
Butte Restoration Alliance Nick Jaynes, Exec.Co-chair Suzzann Nordwick, Exec.Co-chair		 498-7818 565-1537
Butte-Silver Bow Chamber of Commerce	1000 George Street Butte, MT 59701	723-3177 bsbchamber@gmail.com chamber@buttechamber.org
Citizens Technical Environmental Committee (CTEC) Dr. John Ray, President Janice Hogan, TAG administrator	27 West Park Street P.O. Box 0593Butte MT 59703-0593	723-6247 ButteCTEC@hotmail.com
Clark Fork Coalition	140 4th St. W., Unit #1 Missoula, MT 59801 PB Box 7593 Missoula, MT 59807	info@clarkfork.org 542-0539 Fax 542-5632
Clark Fork River Technical Advisory Committee (CFRTAC) Darryl Barton	PO Box 224 Deer Lodge, MT 59722	darrylbbarton@yahoo.com 846-1929 Cell: 498-5959
Clark Fork Watershed Edu. Program Matt Vincent - Program Administrator Jen Titus - Science Coordinator	Technical Outreach PET 003, Montana Tech Technical Outreach PET 003, Montana Tech	mvincent@mtech.edu 496-4832 jtitus@mtech.edu 496-4691
Mainstreet Uptown Butte George Everett	66 W. Park St., Suite 211 P.O. Box 696 Butte, MT 59703	www.mainstreetbutte.org/ 497-6464 geverett@montana.com
Montana Board of Env. Review Joe Russell, Chairman	1035 First Ave West Kalispell, MT 59901	jrussell@mt.gov Office: 751-8101 Home: 752-6199
State Historic Preservation Office (SHPO) Helena/Lewis & Clark Co *Historic Preservation Officer* : Paul Putz	Historic Preservation Program 316 N Park Helena MT 59623	pputz@co.lewis-clark.mt.us 447-8357 Fax: 447-8398
Upper Clark Fork River Basin Remediation & Restoration Advisory Council (UCFRB)		
Attorney General Steve Bullock	Department of Justice P.O. Box 201401 Helena, MT 59620-1401	contactdoj@mt.gov 444-2026 Fax: 444-3549

Table C-8 Media

Name / Position	Address	Contact Information (area code 406)
KTVH (NBC), channel 12 Don Dunwell	100 W. Lyndale Helena, MT 59601	457-2700 Fax: 442-5106 Ddunwell@KTVH.com
KXLH (CBS) Kay Rossi	State Capital Building Helena, MT 59620	Kay@KXLH.com 442-4641 Cell: (406) 459-9858
KXLF (CBS), channel 4	1003 S. Montana St. Butte, MT 59701	News@kxlf.com jsherer@kxlf.com 782-0444 496-8475 Fax: 782-8906
KTVM (NBC), channel 8	750 Dewey Boulevard Butte, Montana 59701 P.O. Box 3118 Butte, Montana 59701	news@KTVM.com Fax: 494-2572 494-7603
The Montana Standard (Daily) Carmen Winslow, Editor	Butte Office 25 W. Granite St. Butte, MT 59701	editor@mtstandard.com 496-5510 (800) 877-1074
Silver State Post Sarah Frazer	PO Box 111 Deer Lodge, MT 59722	sspoffice@bresnan.net 846-2424 Fax: 846-2453
Anaconda Leader (Bi-Weekly) Kathie Miller, Editor	121 Main Street Anaconda, MT 59711	leadernews@anacondaleader.com 563-5283 Fax: 563-5284
Missoulian Sherry Devin, Editor	500 S. Higgins Missoula MT 59802	newsdesk@missoulian.com 523-5200 Toll free: 1-800-366-7102 Fax: 523-5294
Helena Independent Record John Doran, Editor	P.O. Box 4249 Helena, MT 59604	irstaff@helenair.com 447-4000 Fax: 447-4052

Table C-9 Local Schools

School	Address	Contact Information (area code 406)
High Schools		
Butte High School	401 S. Wyoming	783-9008
Butte Central High School	9 South Idaho Street	782-6761
Capstone Christian Academy	1485 Continental Drive	782-7777
Middle Schools		
East Middle School	2600 Grand Ave.	533-2600
Butte Central Junior High School	1100 Delaware Ave.	782-4500
Capstone Christian Academy	1485 Continental Drive	782-7777
Elementary Schools		
Emerson Elementary	1924 Phillips Ave.	533-2800
Hillcrest Elementary	3000 Continental Dr.	533-2850
Butte Central Elementary School	1100 Delaware Ave.	782-4500
Kennedy Elementary	West Hornet St.	533-2450
Margaret Leary Elementary	4 ½ Mile Vue Rd.	533-2550
West Elementary	Emmett & Steele Sts.	533-2700
Whittier Elementary	2500 Sherman.	533-2890
Butte-Silver Bow Montessori	1800 Sunset Rd.	494-1033
Webster Garfield Complex	1050 S. Montana St.	533-2990
Capstone Christian Academy	1485 Continental Drive	782-7777

Table C-10 Local Community Groups

Group	Address	Contact Information (area code 406)
Big Brothers/Sisters	405 W. Park	Ann Courtney 782-9644
BPOE (Elks)	206 W. Galena	Al Bersanti 782-3278
Butte Citizens for Preservation and Revitalization	27 N. Excelsior	Larry Smith 496-4379
Butte Historical Society	2003 Argyle	Jim Courtney 782-9287
CTEC	27 W. Park	Janice Hogan 723-6247
Exchange Club	PO Box 430	Steve Daniel 782-4235
Food Bank	PO Box 54	JoAnn and Jim Cortese 782-6230
Habitat for Humanity	66 W. Park, Suite 214	Barb Miller 782-8145
Kiwanis, Butte-Silver Bow	40 E. Broadway	Betsy Pahut 497-2609
Montana Landlords Association	849 W. Galena	Jean Ruppert 782-2721
National Affordable Housing Network	66 W. Park, Suite 214	Barbara Miller 782-8145
Rotary Club	2000 Ottawa	Ron Johnson 782-0280
Senior Citizens (Belmont)	615 E. Mercury	Nancy Gibson 723-7773

Table C-11 Meeting Rooms and Document Repositories

Meeting Rooms

Name / Position	Address	Contact Information (area code 406)
Montana Tech Library Auditorium	1300 West Park, Butte, MT	846-3680
Butte Archive	17 W Quartz St.	782-3280

Repositories

Name / Position	Address	Contact Information (area code 406)
Montana DEQ Remediation Division	1100 North Last Chance Gulch Helena, MT 59620	457-5000 Toll Free: 800-246-8198
EPA Records Center	10 West 15th Street; Suite 3200 Helena, MT 59626	457-5046
EPA Butte Office	400 N. Main Street, Rm 339 Butte, MT 59701	782-7415
Montana Tech Library	1300 West Park Butte, MT 59701	496-4281

Documents may also be viewed on EPA website:www.epa.gov/region8/superfund/mt/sbcbutte/index.html