



# Proposed Plan to Amend the Remedial Action for the Butte Priority Soils Operable Unit

#MTD980502777

October 2024

This Proposed Plan presents the U.S. Environmental Protection Agency's (EPA's) proposed changes to the remedy selected in the [2006 Record of Decision \(ROD\)](#) (as modified by the [2011 Explanation of Significant Differences \[ESD\]](#) and the [2020 ROD Amendment \[RODA\]](#)) for the cleanup of the Butte Priority Soils Operable Unit (BPSOU) of the Silver Bow Creek/Butte Area Superfund Site (the Superfund Site). These three decision documents are referenced collectively as the "Existing Remedy" herein. ***This proposed action seeks to modify only the portion of the Existing Remedy that addresses contaminated residential soils and interior dust (including both living space and attic dust).***

The EPA is the lead agency for the BPSOU and has prepared this Proposed Plan in conjunction with the Montana Department of Environmental Quality (DEQ), the support agency. The Proposed Plan is part of the EPA's public participation responsibilities and is required to be issued by the lead agency to fulfill the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §117(a) and National Oil and Hazardous Substances Pollution Contingency Plan (NCP) §300.430(f)(2).

The EPA, in consultation with DEQ, will carefully evaluate all information received during the public comment period. Significant new information received during the public comment period may result in the EPA changing the proposed modifications described in this Proposed Plan. The public is encouraged to review and comment on the proposed changes presented in this document. The EPA will prepare a future RODA<sup>1</sup> that documents the selected changes to the Existing Remedy and will respond to public comments in a Responsiveness Summary.

The Proposed Plan includes the following information:

- Brief Superfund Site history and background (page 2).
- Summary of nature and extent of residential soils and interior dust contamination (page 5).
- Description of the scope and role of the BPSOU (page 5).

**Public Meeting**

The release of this Proposed Plan starts the 60-day public comment period (October 16 through December 16, 2024). During this public comment period, EPA will give a presentation about this Proposed Plan at a public meeting.

**BPSOU Residential Soils Proposed Plan Meeting**  
**Monday, November 18**  
**The Copper Lounge at Montana Tech**  
**(1300 W. Park St, Butte, MT)**  
**6:00 to 7:30 pm**

A stenographer will be on hand to record verbal comments. Comments can also be submitted in written form through the duration of the public comment period.

<sup>1</sup> Paragraph 92 of the 2020 BPSOU CD states that any modification to the soil, dust and/or vapor action levels set forth in the 2006 ROD "may only be lawfully required under a ROD amendment."

- Summary of Superfund Site risks associated with BPSOU (page 10).
- Review of the remedial action objectives (RAOs) that pertain to residential soils and interior dust (page 11).
- Explanation of the EPA’s [Updated Residential Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities](#) (page 12).
- Review of how the 2024 Lead Guidance is incorporated in revising the BPSOU lead cleanup level for residential soils and interior dust (page 12).
- Description of the proposed changes to the Existing Remedy for the BPSOU (page 13).
- Summary of remedy changes over time specific to lead in residential soils and interior dust (page 17).
- Evaluation of proposed changes specific to lead in residential soils and interior dust (page 18).
- Protectiveness summary (page 20).
- Key documents included in the administrative record file (page 21).
- Information on community engagement and how to participate in the public comment process (pages 21 and 22).

## Site History and Background

The Site is in and around Butte, Montana, and includes 26 miles of stream and streamside habitat downstream from Butte. Since the late 1800s, mining wastes have been dumped into areas in and around Butte, as well as into streams and wetlands near mining operations. Meanwhile, historic mining, milling, and smelting activities contaminated soil, groundwater, and surface water with arsenic and heavy metals.

In 1982, the EPA proposed that Silver Bow Creek be added to the National Priority List (NPL), and it was listed as a Superfund site in 1983. Butte Area was added to the Silver Bow Creek site in 1987. The EPA divided the “Silver Bow Creek/Butte Area” Superfund Site into operable units (OUs) based on common characteristics and conditions to optimize investigation, evaluation and cleanup. Over time, some of the originally defined OUs have been incorporated into the following, current OUs, shown in Figure 1:

- OU1 – Streamside Tailings – cleanup performed under a remedy selected in 1995;
- OU3 – Butte Mine Flooding – cleanup is ongoing under a remedy selected in 1994;
- OU4 and OU12 – Warm Springs Ponds – cleanup is ongoing under an interim remedy selected in 1990;
- OU7 – Rocker Timber Framing – cleanup is ongoing under a remedy selected in 1995;
- OU8 – Butte Priority Soils – cleanup is ongoing under a remedy selected in 2006;
- OU13 – West Side Soils is in the remedial investigation phase; a remedy has not yet been selected.

The BPSOU (OU8) is centered on the “Butte Hill,” the location of the historic Butte Mining District (shown in Figure 2). It is approximately five square miles, and incorporates the Town of Walkerville, part of Butte north of Silver Bow Creek and west of the Berkeley Pit, and a section of land that extends south from Silver Bow Creek to Timber Butte. It includes the alluvial aquifer impacted by the BPSOU surface contamination, the surface water in Silver Bow Creek below its confluence with Blacktail Creek, and a portion of Blacktail Creek. The BPSOU portion of Blacktail Creek starts at the confluence of Grove Gulch Creek and extends downstream to the confluence of Silver Bow Creek. Any part of Blacktail Creek upgradient (above) of Grove Gulch Creek is a part of OU13 (West Side Soils OU). The BPSOU is in a predominantly urban setting, which includes residential neighborhoods, schools and parks, as well as commercial and industrial areas. Extensive underground mining, milling, and mineral processing resulted in widespread distribution of mine waste such as waste rock, mill tailings, and slag. Mine wastes impacted soils, interior dust, groundwater and surface water throughout the BPSOU and became the focus of the environmental cleanup ongoing today.



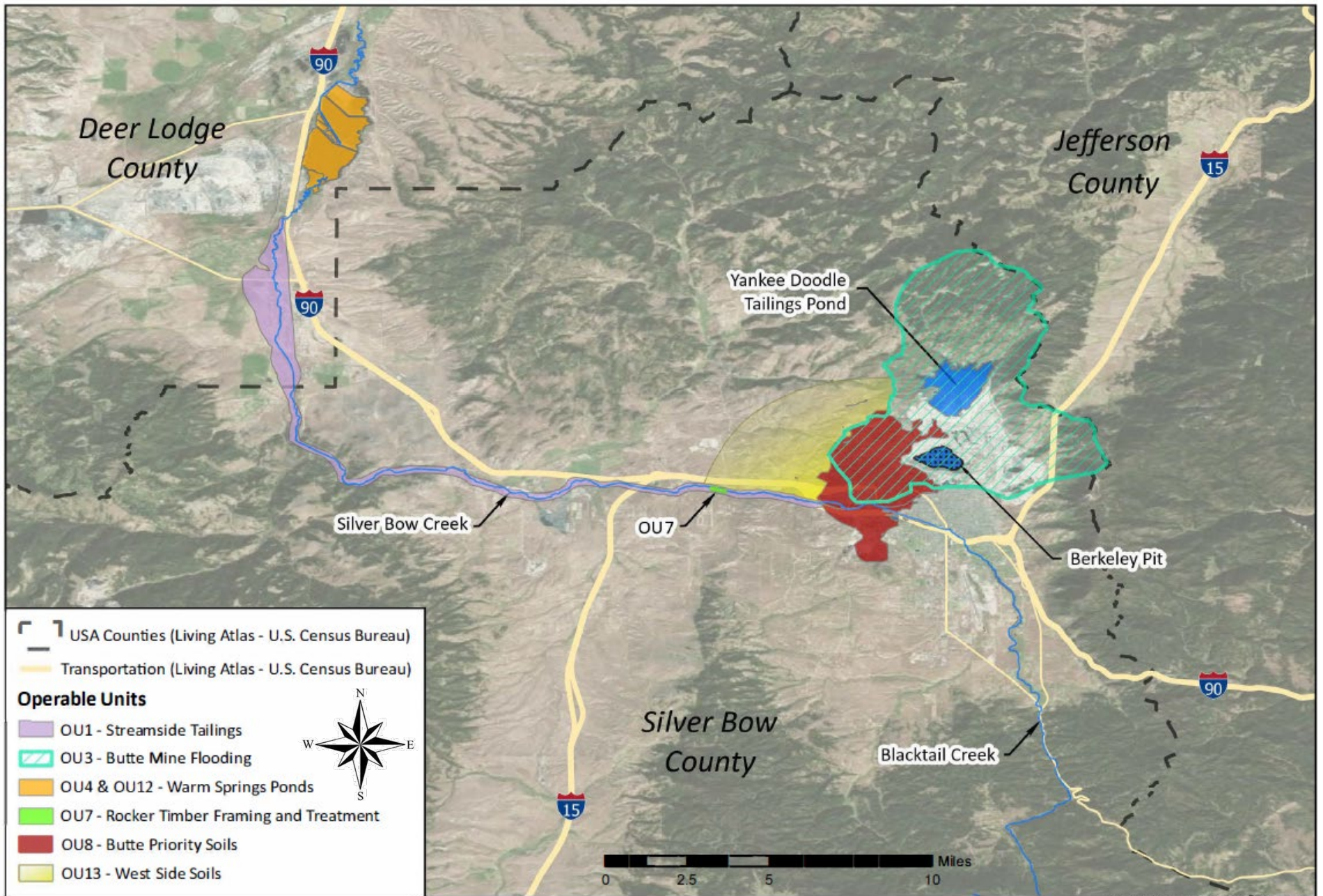


Figure 1 - Site Operable Units (OUs)





Figure 2 - Butte Priority Soils Operable Unit (BPSOU)



## Nature and Extent of Residential Soils and Interior Dust Contamination

The 2006 ROD describes the nature and extent of contamination in surface water, groundwater, interior dust, and soils at the BPSOU and is summarized in this section. Contaminants found within the BPSOU, including arsenic and heavy metals such as copper, lead, mercury and zinc, are the result of 120 years of hard rock mining, smelting, milling and other processing activities. Sources of ongoing contamination have been identified and include waste rock piles, mill tailings deposits, slag and railroad beds. Many homes in Butte were built near former mines and mineral processing facilities while some were built directly on top of mine wastes.

Early investigations included residential soil sampling, and subsequent investigations characterized the soils and mine wastes in residential, commercial and industrial areas of the BPSOU. The early investigations focused on Walkerville and portions of Butte where historical mining activities were more intensive and where metal levels would be expected to be higher than in other residential areas of Butte. Results informed the BPSOU remedial investigation and delineation of areas with elevated metal content.

From 1988 to 2005, the EPA completed several removal actions to clean up areas around former smelter sites, mine waste dumps, railroad beds, stream banks and channels, and residential yards in Butte and Walkerville to address immediate human health and environmental risks. Remedial design and construction began in 2006 and continue to the present, including collection and evaluation of significant amounts of data.

## Scope and Role of the Butte Priority Soils Operable Unit

The EPA began work within the BPSOU in 1987, starting with strategic removals. Nine time-critical removal actions and four expedited response actions (non-time critical removal actions) addressed contamination between 1988 and 2005.

The work was prioritized to eliminate exposure pathways from source areas and address the most significant exposure pathways and to stop the migration of contamination from the source areas. As a result of the human health risk assessments from the early 1990s, early cleanups (non-time critical removal actions) were completed to address residential areas with lead concentrations greater than 1,200 milligrams per kilogram (mg/kg). Cleanups were prioritized at residences with children under six years old, pregnant women and nursing mothers. These initial cleanups were completed under the original Butte-Silver Bow Lead Intervention and Abatement Program, which was a multi-pathway protocol for identifying properties for lead cleanup. The multi-pathway protocol considered lead-contaminated soils and the presence of other sources of lead associated with residential properties, such as lead-based paint. Lead-based paint is a suspected significant source of indoor lead contamination and was used widely in the older homes in Butte and Walkerville.

Residential cleanups have addressed multiple lead sources at BPSOU for decades, including:

- Testing and removal of lead-contaminated soil from yards;
- Testing and cleanup of earthen basements;
- Testing, source identification, and removal of contaminated interior dust (attic and interior living spaces);
- Testing and remediation of lead-based paint; and
- Testing and mitigation of lead in tap water.

### Work to Address Multiple Lead Sources at the BPSOU

The remedial investigation and feasibility study activities began in the 1990s and were completed in 2005, with the EPA signing the ROD in 2006. The 2006 remedial action selected for residential soils and interior dust included the following:

- Define residential cleanup levels for contaminants of concern as: 1,200 mg/kg for lead, 250 mg/kg for arsenic, and 147 mg/kg for mercury.
- Implement the BPSOU Residential Metals Abatement Program (RMAP), which uses a multi-pathway approach for mitigating residential exposure. The RMAP addresses potential sources of lead, arsenic, and/or mercury exposure from residential yard soils, interior dust, interior and/or exterior lead-based paint, lead in drinking water from pipe solder, and non-living-space dust when exposure pathways are identified. In addition, the program uses

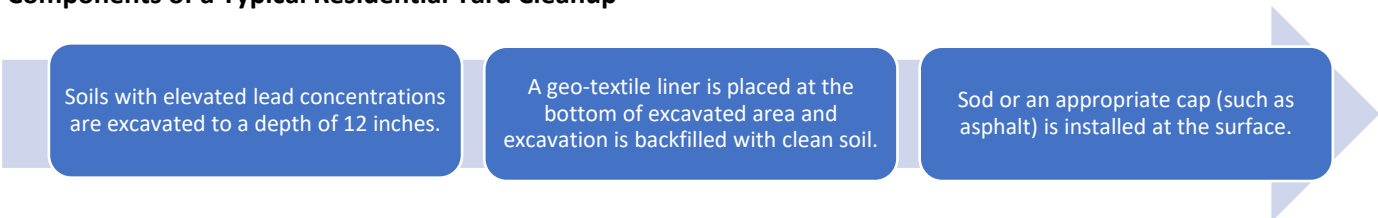
community awareness and education in conjunction with medical monitoring to target affected and sensitive individuals. The program prioritizes sampling and remediation in locations where these people live.

- Sample residential soils, at a minimum, from the 0- to 2-inch depth interval within decision units (e.g., front yard, back yard, play area, driveway, etc.).
- Excavate, remove and replace soils to a minimum depth of 18 inches in those decision units exceeding the cleanup levels. Excavated soils will be transported to the Butte Mine Waste Repository.
- Excavate, remove and replace to a depth of 24 inches in gardens that could be used to grow vegetables for human consumption. Other materials, such as road base, gravel, etc., will be used as replacement material where appropriate (e.g., driveways, walkways, etc.). Excavated soils will be transported to the Butte Mine Waste Repository.
- Install a lightweight geotextile marker fabric beneath the clean soil cover to indicate that the underlying soil may contain lead, arsenic and/or mercury above the cleanup levels.
- Remove and replace contaminated soils in all accessible areas; inaccessible soils under buildings, paved areas, etc., will not be sampled or removed.
- Implement all sampling and remediation activities under a Residential Access Agreement approved by the EPA.
- Sample all residential properties within the current BPSOU boundary and evaluate for remediation based on the sample results.

Since the 2006 ROD, the Existing Remedy has been modified twice. Here are the changes to the Existing Remedy specific to residential soils and interior dust:

- The RMAP area has been modified over time, as anticipated in the 2006 ROD, as shown in Figure 3 below. The RMAP expansion in 2011 and 2020 did not alter the current boundary of the BPSOU established in 2006.
- In the 2011 ESD, the EPA expanded the RMAP area for additional attic-dust cleanups; this area is shaded in pink in Figure 3 below, south and east of the current BPSOU boundary.
- The RMAP area was expanded again in the 2020 RODA for additional residential soil sampling and cleanups (shown by the green perimeter in Figure 3). The 2020 RODA specifically noted that residential soils outside the current BPSOU boundary but within the 2019 RMAP Expansion Area (green perimeter line) would only be sampled on an as-requested basis. The 2019 RMAP Expansion Area includes rural residential development to the north, south and west. Soil cleanup activities in the 2019 RMAP Expansion Area are conducted in the same manner as actions within the BPSOU.<sup>2</sup>
- The 2011 ESD documented that additional time would be needed to complete the sampling and remediation of contaminated residential properties.
- The 2011 ESD modified the sampling protocol for residential soils to include sampling from 0- to 2-inch depth interval, 2- to 6-inch depth interval, and 6- to 12-inch depth interval.
- The 2011 ESD modified the Existing Remedy to excavate, remove and replace soils to a minimum depth of 12 inches in those decision units exceeding the cleanup levels, or at a minimum to the soil/bedrock interface.

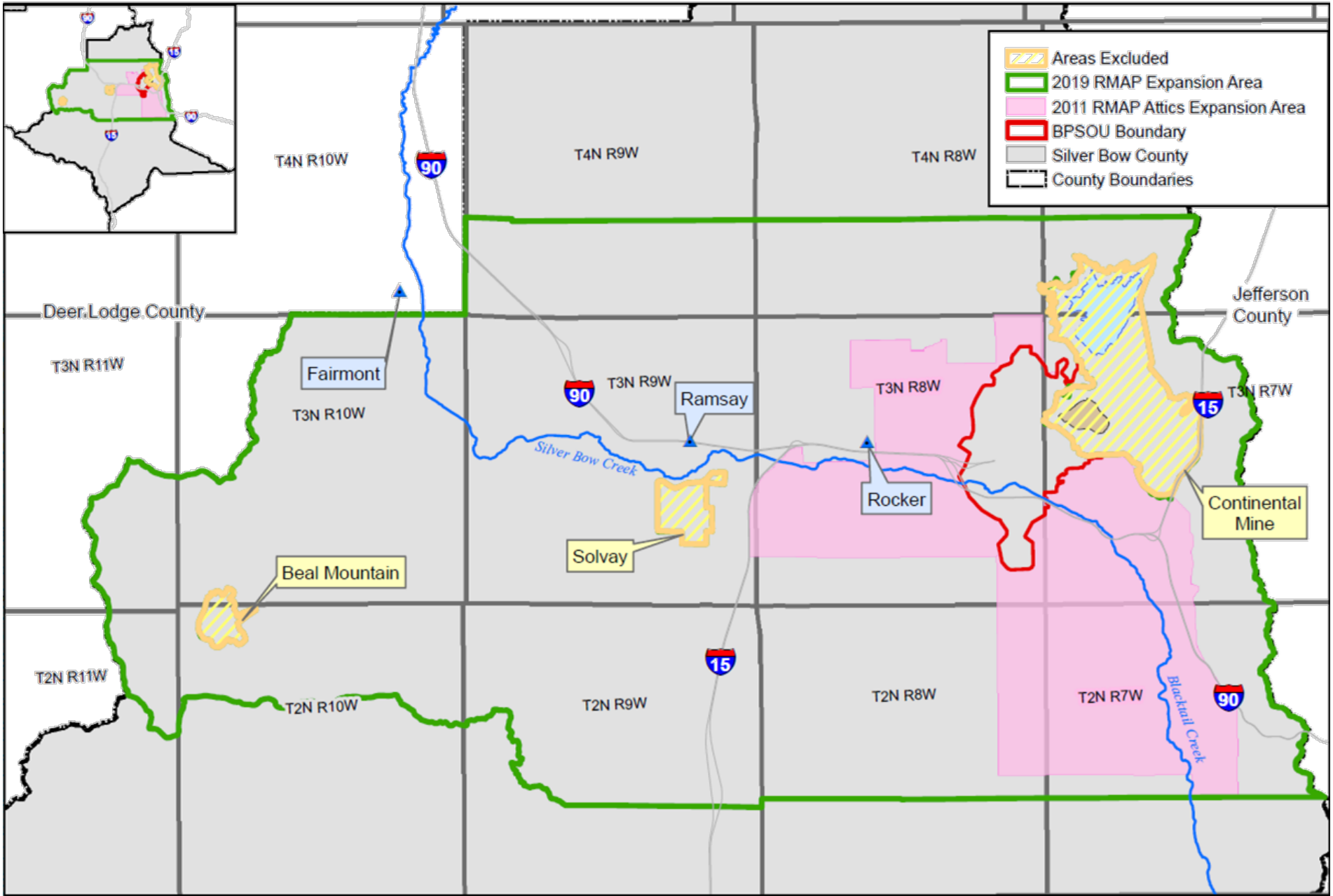
### Components of a Typical Residential Yard Cleanup



<sup>2</sup> Note: In Figure 3, the 2019 RMAP Expansion Area is representative of the changes in the 2020 RODA; however, the year of the 2019 RMAP Expansion Area designation was not updated in the 2020 RODA documentation of the change to be “2020”.

As of 2023, approximately 1,500 residential properties have had remediation of residential soils and/or interior dust. This includes remediation work completed by removal actions, the Butte Lead Intervention and Abatement Program, and the RMAP. Residential soils include schools, parks, playgrounds and daycares where young children frequently play and could be exposed to lead and other metals in soils.

A review of the BPSOU's enforcement activity history is included across the 2006 ROD, 2011 ESD and 2020 RODA. As relevant to the proposed changes to the BPSOU remedy presented in this Proposed Plan, in 2011 the EPA issued a Unilateral Administrative Order (2011 UAO) (EPA Docket No. CERCLA-08-2011-0011) in part directing Atlantic Richfield and Butte-Silver Bow County to implement a 2010 RMAP Plan, which contained a 1,200 mg/kg residential cleanup level for lead. In June 2020, the EPA entered into a Consent Decree (2020 CD) (Civil Action No. CV 89-039-BU-SEH) with Atlantic Richfield, Butte-Silver Bow County and the state of Montana for implementation of the BPSOU remedy, including certain obligations under the 2011 UAO. The RMAP obligations of Atlantic Richfield and Butte Silver Bow County remained in effect under the 2011 UAO. Finally, in August 2020, the 2011 UAO was amended (2020 UAO Amendment) (EPA Docket No. CERCLA-08-2011-0011). The 2020 UAO Amendment directed Atlantic Richfield and Butte Silver Bow County to develop and implement the expanded RMAP and medical monitoring consistent with the 2020 RODA for the BPSOU.





## Outcomes of the Early Actions and the Residential Metals Abatement Program

The early response actions addressed known human health risks at the time, but given the updated science showing adverse effects at lower levels of lead, mine waste in the BPSOU continues to threaten human health and the environment. EPA's selected remedy built on early successes to eliminate or mitigate remaining human health risks. The RMAP was established to conduct sampling and cleanups using a multi-pathway approach that addresses contamination in residential soils and interior dust. As part of the RMAP, blood lead screening is available to all county residents at no charge through Butte-Silver Bow's Women, Infants, Children (WIC) Program. When blood lead monitoring shows a child has an elevated blood lead level, interior and/or exterior paint and household drinking water is also tested for lead.

Blood lead monitoring results are summarized in a comprehensive report to the public every five years. Two reports have been issued to date.

### Blood Lead Monitoring

Blood lead levels have decreased over time, but levels for Butte children are still elevated relative to national levels. The medical monitoring program identifies about a dozen elevated blood lead levels (>3.5 µg/dL) each year.



- [Butte Priority Soils Operable Unit, Public Health Study](#), Phase 1, July 2014.
- [Second Butte RMAP Medical Monitoring Study \(Phase 2\) Report](#), March 2020.

Four additional reports are scheduled between now and 2039. Highlights of the previous reports include:

- Blood lead levels nationwide have declined markedly over the last half century mainly due to the ban on leaded gasoline and lead-based paint and due to corrosion improvements in drinking water systems. The national geometric mean for blood lead in children in the late 1970s was 15 micrograms per deciliter (µg/dL) with 88% of those tested having a blood lead level above 10 µg/dL.
- As reported, blood lead levels in Butte decreased significantly between 2003 and 2016, but the decrease leveled off between 2013 to 2016. In Butte, blood lead samples concentrations have decreased over time, but the percentage of children with elevated blood lead levels in Butte remains higher than reported nationally<sup>3</sup>:

When comparing the percentage of reported blood lead levels greater than 3.3 µg/dL<sup>4</sup> of Butte children and those reported in a national dataset,<sup>5</sup> the percentage of Butte children was higher between 2003 and 2016. In the 2003-2004 dataset comparison, approximately 65% of reported blood lead levels in Butte were higher than 3.3 µg/dL, while the national reference dataset indicated approximately 20% of reported blood lead levels were higher than 3.3 µg/dL. The 2015-2016 dataset indicated that the percentage had leveled off to just below 30% in Butte and less than 10% nationally.

Similarly, comparing the percentage of reported blood lead levels greater than 5 µg/dL of Butte children and those reported in a national dataset, the percentage of Butte children was higher between 2003 and 2016. In the 2003-2004 dataset comparison, less than 40% of reported blood lead levels in Butte were higher than 5 µg/dL, while the national reference dataset indicated just below 10% of reported blood lead levels were higher than 5 µg/dL. The 2015-2016 dataset indicated that the percentage had leveled off to just above 5% in Butte and less than 5% nationally.

---

<sup>3</sup> In Butte, the percentage of children with elevated blood lead levels has generally remained higher than reported nationally. This could be attributed to continued exposure to mining impacted soils yet to be cleaned up, or to a high number of older homes built when leaded paint was still used. It could also be due to the blood lead testing method used in Butte (finger stick versus blood draw), which is known to have a higher potential for being biased high. Finally, children tested in Butte are mostly those who have families with incomes low enough to qualify for the WIC program. Therefore, due to the demographics of this group, children who qualify for the WIC program would be more likely to be more exposed to other lead sources unrelated to mining than the general population.

<sup>4</sup> At the time of these reports, the method detection limit for the Lead Care II kits used by community healthcare providers was 3.3 µg/dL.

<sup>5</sup> The national dataset utilized for comparison in the Second Butte RMAP Medical Monitoring Study (Phase 2) Report is the National Health and Nutrition Examination Survey.

## Summary of Site Risks

Lead is a metal that can occur naturally in the soil. Lead can also be present in soils because of human-caused source contributions, including those that are mining-related and those that are not mining-related, like leaded gasoline and lead-based paint. Multiple lead exposures from varied sources can increase the risk to children. The Existing Remedy identifies the BPSOU contaminants of concern for residential soils and interior dust to be lead, arsenic, and mercury. At the Silver Bow Creek/Butte Area Superfund Site, mining and ore-processing wastes are the primary sources and come in different forms (waste rock, mill tailings, fallout, slag, and mixed combinations).

### Human Health Exposures

Site cleanup decisions for residential land use are based on the most sensitive receptor (young children less than 6 years old). The primary exposure pathways at the BPSOU relevant to residential soils and interior dust for both adult and child residents are:

- Incidental ingestion of surface soils
- Incidental ingestion of interior dust

Sources of interior dust addressed in BPSOU may include track-in from exterior soils and interior/attic dust originating from historic mining and smelting activities. While people typically do not intentionally eat soil or dust, particles of soil or dust can stick to hands and be ingested. Another secondary exposure pathway for people is inhalation of airborne dust particles that are derived from soil, either by wind or soil-disturbing activities making particles airborne.

### Risk Assessments

The 1991 preliminary baseline risk assessment used data from the 1988 *Butte Soil Screening Study* to identify contaminants at the BPSOU that may pose significant human health risks. The EPA then conducted additional human health risk assessments focused on lead, arsenic, and mercury exposure scenarios, including:

- 1994 *Baseline Human Health Risk Assessment for Lead*
- 1997 *Baseline Human Health Risk Assessment for Arsenic*
- 2003 *Human Health Risk Assessment for the Walkerville Residential Site*

For the BPSOU residential soils, the primary contaminant for cleanup is lead. Lead can cause adverse health effects, such as anemia, behavioral problems and cognitive difficulties. Concern over health effects from elevated lead levels is greatest for young children and the developing fetus. Reasons for a focus on this population include:

- Young children typically have higher exposures to lead contamination.
- Young children typically absorb lead faster than older children and adults.
- The developing bodies of young children and fetuses are more susceptible to effects of lead than are older children or adults.

The EPA's Integrated Exposure Uptake Biokinetic (IEUBK) model was used in 1994 to predict blood lead levels from environmental exposure to lead and derive a soil lead concentration that corresponds to a target blood lead level taking into consideration any site-specific model inputs and adjustments (like bioavailability - ability of a substance to be absorbed and used by the body). This IEUBK model estimated the likelihood that an exposed child would have a blood lead level greater than a specified target. Consistent with the EPA's risk assessment guidance at the time, the baseline human health risk assessment for lead used a blood lead threshold of 10 µg/dL.



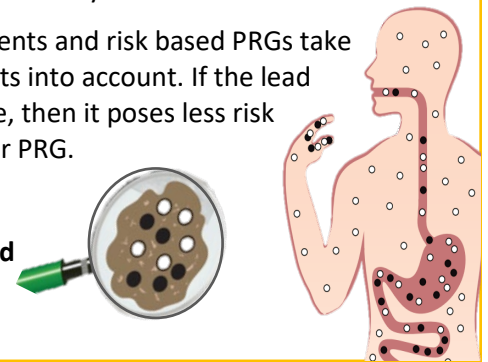
In these risk calculations, a site-specific adjustment was included to account for the fact the lead in Butte soils is less bioavailable than in other lead-contaminated sites. Lead bioavailability is explained in the text to the right. In Butte, the site-specific bioavailability for lead in soils is about 10 to 12%, which is about three times lower than the EPA default value of 30%. To be more conservative, the lead bioavailability default value for interior dust was utilized due to the possibility of the combination of contributions to dust from both site-related sources and lead-based paint. In 1994 the EPA used the IEUBK model to derive a BPSOU-specific lead cleanup level for residential soils and interior dust of 1,200 mg/kg.

In 2003, the EPA completed a human health risk assessment for Walkerville that evaluated potential human health risks to children and adults from exposure to arsenic, lead, and mercury in outdoor soils, interior dust, mercury vapor, and attic dust. In general, concentrations of these metals were highest in attic dust or basement soils, lower in outdoor soils, and lowest in interior living area dust. Because attics are not usually living spaces and typically are infrequently accessed by residents, the EPA determined that there is not always a complete attic dust exposure pathway. However, when a clear exposure pathway is identified, the attic is cleaned up.

### Bioavailability is a vital part of determining risk from lead. Some important things to know about bioavailability are:

- Bioavailability is a measure of what fraction of an ingested chemical dose enters the bloodstream.
- Lead is present in many chemical forms in soils depending on its source. Some forms are more bioavailable than others.
- After lead-contaminated soil is ingested, bioavailable forms of lead are absorbed into the body and processed or stored.
- Lower bioavailability decreases the amount of lead that can be absorbed by the body.
- The bioavailability of lead in soils for a site can be determined from animal studies or laboratory tests.
- Site-specific risk assessments and risk based PRGs take bioavailability adjustments into account. If the lead in soils is less bioavailable, then it poses less risk and may result in a higher PRG.

- Non-bioavailable lead
- Bioavailable lead



## Remedial Action Objectives

Remedial Action Objectives (RAOs) are statements regarding the objectives to be achieved by the final remedial action. The original RAOs identified in the 2006 ROD for contaminated solid media<sup>6</sup> specific to residential soils and interior dust for human health are to:

- Prevent the ingestion of, direct contact with, and inhalation of, contaminated soils, interior dust, waste rock, and/or tailings or other process waste that would result in an unacceptable risk to human health from site-related contamination assuming current or reasonably anticipated future land uses.
- Remediate contaminated solid media to the extent that it will not result in an unacceptable risk to human health and/or aquatic environmental receptors from site-related contamination.

This Proposed Plan for the residential soils and interior dust remedy does not change these RAOs presented in the 2006 ROD. Residential soils and interior dust will be addressed in this Proposed Plan, consistent with the Existing Remedy.

<sup>6</sup>The Existing Remedy documents residential soils and interior dust as “Residential Contaminated Solid Media in the form of contaminated residential soils and interior residential dust.”

## EPA's Updated Residential Soil Lead Guidance

After the EPA selects a remedy in a ROD, new information may be identified that could affect the implementation of or the long-term protectiveness of the selected remedy. In this case, the EPA issued the [Updated Residential Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities](#) on January 17, 2024 ("2024 Lead Guidance") and the [Integrated Science Assessment for Lead](#) on February 7, 2024. These documents reflect updated science showing adverse effects from lead exposure at the lowest levels studied which prompted the EPA to reevaluate the previously-selected residential lead cleanup level of 1,200 mg/kg for the BPSOU.

Given the requirement that remedial actions be protective of human health and the environment, it is essential that new information or changed conditions be effectively evaluated for impacts on human health and the environment. As stated in the 2024 Lead Guidance, evaluations of previously-addressed sites may be conducted in support of a CERCLA five-year review or other technical review.

The EPA's review of the scientific literature has shown health effects from lead exposure can occur when blood lead levels are below 10 µg/dL, which was the blood lead threshold established in the EPA's 1994 Lead Guidance and referenced in setting the residential soil and interior dust cleanup level in the 2006 ROD. The 2024 Lead Guidance decreases the blood lead targets the EPA uses to establish regional screening levels (RSLs) and to develop risk-based preliminary remediation goals (PRGs) for residential soils. The 2024 Lead Guidance also establishes new residential soils RSLs for lead of 200 and 100 mg/kg; the lower RSL applies when an additional source(s) of lead is identified. These RSLs are used during initial site screening to define areas that need further evaluation. However, RSLs are not Superfund cleanup levels.

The new blood lead targets established in the 2024 Lead Guidance are 5 µg/dL and 3.5 µg/dL; the lower blood lead level applies when children may be exposed to multiple sources of lead, such as from lead-based paint or lead plumbing. The target blood lead levels are used to derive risk-based PRGs for lead in soils. Risk-based PRGs take into account site-specific information, like soil lead bioavailability, and inform the soil cleanup levels. The PRGs and selected cleanup levels must also consider background soil lead concentrations, because the EPA generally does not set cleanup levels below these concentrations.

The proposed changes in this Proposed Plan only modify the portion of the Existing Remedy that addresses contaminated residential soils<sup>7</sup> and interior dust, consistent with the new blood lead target established in EPA's 2024 Lead Guidance, to ensure protection of human health and the environment within the BPSOU.

## Revising the Lead Cleanup Level for Residential Soils and Interior Dust

The 2024 Lead Guidance establishes more stringent RSLs and blood lead targets in circumstances where multiple lead sources are identified within a community. The blood lead monitoring data in Butte are consistent with the conclusion that the remedy has been effective in reducing blood lead levels for children in the area. Even so, the BPSOU residential soil lead cleanup level of 1,200 mg/kg was based on a target blood lead level of 10 µg/dL in children, which can no longer be viewed as protective, based on the EPA's review of current scientific literature referenced in the 2024 Lead Guidance. For the remedy to be protective, the residential soil cleanup level needs to be revised to meet the lower target blood lead level set forth in the 2024 Lead Guidance. The EPA considered several factors to select a revised target blood lead

### Defining Residential Soils

Per the 2024 Lead Guidance, a residential site with soil lead contamination is defined as any areas where children have unrestricted access to lead contaminated soil which include, but are not limited to:

- properties containing single-and multi-family dwellings,
- apartment complexes,
- vacant lots in residential areas,
- schools, day-care centers,
- community centers,
- playground, parks, and other recreational areas and greenways.

---

<sup>7</sup> Residential soils will continue to include schools, parks, playgrounds, and daycares where young children frequently play and could be exposed to lead and other metals in soils.



level, including the likelihood for lead-based paint within homes in the community, presence of lead pipes, and the results of blood lead testing in the community.

The EPA calculated a new risk-based PRG for lead in Butte residential soils and interior dust using the current EPA version (2.0) of the IEUBK model. The site-specific model inputs and bioavailability adjustments used to develop the original lead risk-based PRG in the 1990s were also used to calculate the revised risk-based PRG. However, the new risk-based PRG was derived using the lower target blood lead levels as determined in the 2024 Lead Guidance. The 2024 Lead Guidance recommends a 5 µg/dL target blood lead level unless an additional source of lead is identified, in which case the guidance recommends a target blood lead level of 3.5 µg/dL. The EPA utilized both identified target blood lead levels 5 µg/dL and 3.5 µg/dL as inputs to assess the IEUBK model results for the BPSOU. Incorporating site-specific bioavailability, the risk-based PRG value result determined from the IEUBK model at 5 µg/dL is 456 mg/kg lead in residential soils and interior dust, while the result of the model at 3.5 µg/dL is 175 mg/kg lead in residential soils and interior dust. Under the 2024 Lead Guidance, the blood lead level of 3.5 µg/dL applies when an additional source of lead is identified. Multiple sources of lead are present in the Butte community; therefore, the EPA is proposing that the BPSOU-specific, risk-based PRG for lead in residential soils and interior dust to be 175 mg/kg.<sup>8</sup>

In proposing the new lead cleanup level for residential soils and interior dust, the EPA considered the risk-based PRG of 175 mg/kg, as well as information on local background concentrations of lead. Soil background is the term used to describe the ambient or typical presence of a particular constituent (here, lead) in a defined area. Lead can occur naturally in the environment, in forms that have not been influenced by human activity. Lead can also be found in an urban environment, influenced both by naturally-occurring lead levels in the soil and from human-made sources, including lead-based paint and leaded gasoline. Within the BPSOU, it is important to understand the known presence of lead in soils both as they occur in the geology of the area and also from the effects of an urban environment. The EPA has determined that naturally-occurring, background lead in Butte, Montana, ranges from concentrations of 15 to 20 mg/kg.<sup>9</sup> Through statistical analysis of urban (or anthropogenic) impacts from human-made sources, the EPA determined urban background to be 134 mg/kg.<sup>10</sup>

Because the EPA generally does not establish cleanup levels lower than background concentrations, the EPA reviewed soil data in several studies to determine whether both naturally occurring and urban background concentrations of lead in soils within the BPSOU are below the calculated PRG value of 175 mg/kg. As stated above, the EPA determined that both naturally-occurring and urban background concentrations of lead in soils within the BPSOU are below the calculated PRG value of 175 mg/kg. Therefore, the proposed cleanup level for lead in residential soils and interior dust is the PRG value of 175 mg/kg; the final cleanup level will be selected in the RODA.

## Proposed Changes to the Existing Remedy for the Butte Priority Soils Operable Unit

Based on the revised blood level target established in the EPA's 2024 Lead Guidance and the new risk-based PRG, the EPA is proposing three primary changes to the Existing Remedy, which are described in the following sub-sections:

1. New Residential Lead Cleanup Level,
2. Proposed expansion to the Current BPSOU Boundary specific to residential soils and interior dust (including both living space and attic dust), and
3. Additional Time for Cleanup.

---

<sup>8</sup> EPA 2024b. Calculation of Updated Residential Soil Lead Preliminary Remediation Goals for the Butte Priority Soils Operable Unit, Silver Bow Creek/Butte Area Superfund Site. U.S. EPA, April 2024, Memorandum.

<sup>9</sup> EPA 2024c. Butte Priority Soils Operable Unit – Summary of Naturally Occurring Background Soil Lead Concentrations, U.S. EPA, May 2024, Memorandum.

<sup>10</sup> EPA 2024d. Butte Priority Soils Operable Unit – Anthropogenic Background Source and Concentration Summary, U.S. EPA, August 2024, Memorandum.

## New Residential Lead Cleanup Level

The EPA has incorporated the 2024 Lead Guidance to update the risk-based PRG value for the BPSOU and evaluated the presence of lead in background soil to determine the proposed cleanup level for lead for the BPSOU, as described in the above section. The proposed BPSOU-specific residential soils and interior-dust cleanup level is set at the PRG value of 175 mg/kg. The proposed cleanup level will be applied to all residential properties. Properties where residential cleanup has already been conducted under the Existing Remedy will be reassessed to determine if additional cleanup is required. Similarly, properties that were previously sampled but did not warrant cleanup, based on the existing cleanup level, will be reassessed to determine if cleanup is required.

## Proposed Expansion to the Current BPSOU Boundary

As a part of this proposed change, the residential area that will require evaluation will be expanded from the current BPSOU boundary (shown in red on Figure 4 and Figure 5) to also include the proposed BPSOU boundary expansion (shown in purple on Figure 4 and Figure 5). As described in this Proposed Plan, the RMAP area has been modified over the course of remedy implementation. Evaluation (sampling, and remediation as necessary) in the 2019 RMAP Expansion Area<sup>11</sup> (shown in green on Figure 5) is on an as-requested basis under the Existing Remedy. The Existing Remedy requires all residential properties be evaluated within the current BPSOU boundary. This current boundary was defined based on the intensity of historic mining activity (the Berkeley Pit and present-day active mining areas excepted) and that the intensity generally diminishes with distance; therefore, the likelihood of current cleanup level exceedances was observed to be less in areas outside of the current BPSOU boundary. However, RMAP data collected on properties, outside the current BPSOU boundary, sampled in response to requests by property owners, has identified that densely-populated neighborhoods south and east of the current BPSOU boundary have also been impacted by historic mining. Therefore, sampling properties in the south and east neighborhoods on an opt-in basis is not sufficient to identify and reduce the exposure to lead in these areas.

Given EPA's 2024 Soil Lead Guidance's blood lead target, the EPA anticipates that there could be a significant number of people being exposed to lead within both the current BPSOU boundary and the proposed BPSOU boundary expansion. The BPSOU boundary expansion, shown on Figures 4 and 5, is being proposed for required sampling, and cleanup as needed, and may be modified based on information received during the public comment period. The BPSOU boundary expansion will be finalized in the RODA.

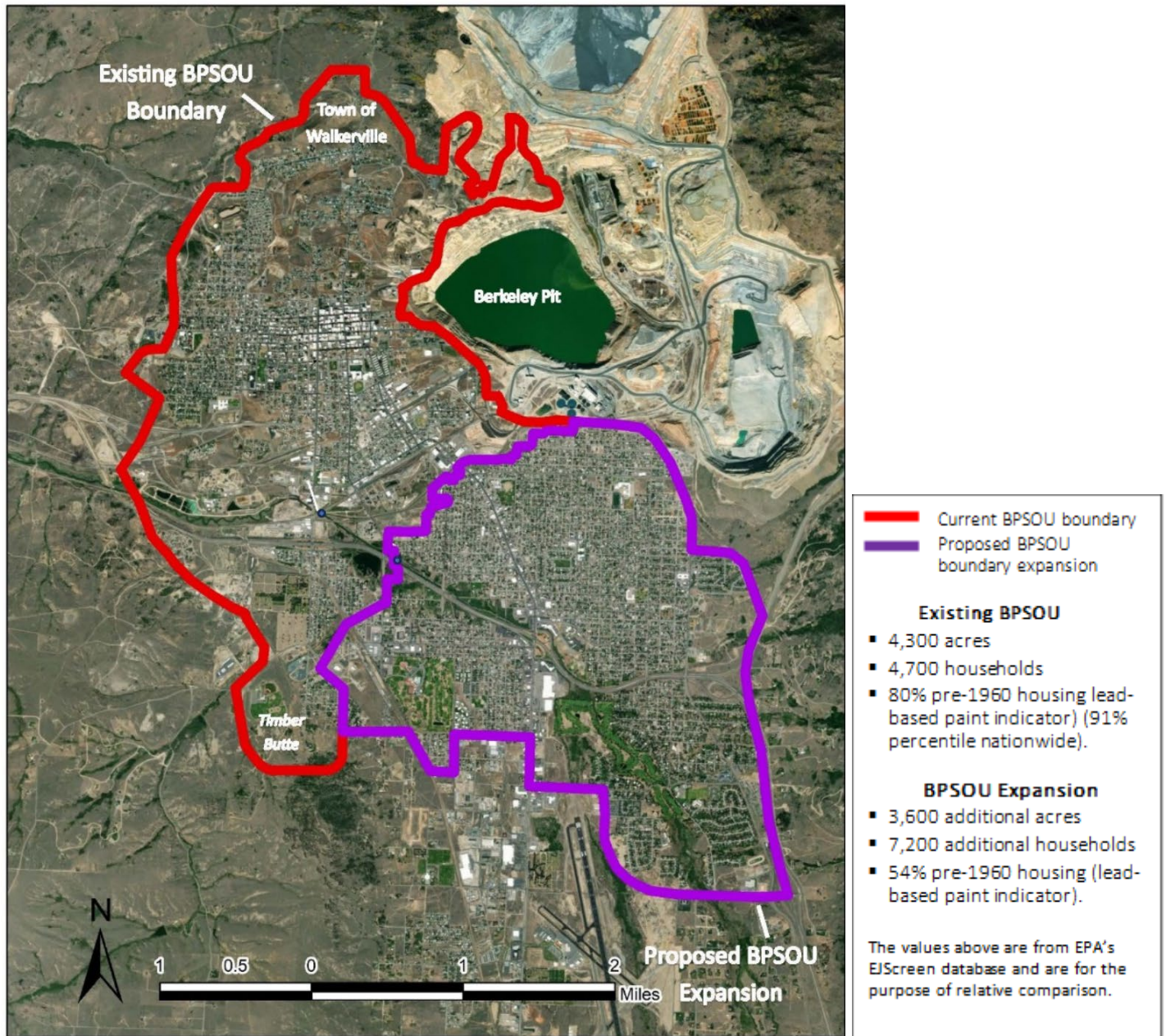
The EPA anticipates that the proposed lower lead cleanup level of 175 mg/kg will significantly increase the number of residential properties that will be identified for cleanup. The proposed boundary change is estimated to increase the size of the BPSOU by approximately 83% (~3,600 additional acres) and the number of residential properties requiring sampling by approximately 154% (~7,200 additional residences).

The proposed expansion of the BPSOU boundary will not affect or change the ongoing work within BPSOU or within the West Side Soils OU (OU13). Furthermore, the residential properties that fall outside the proposed BPSOU boundary expansion (outside the red and purple outlined area in Figure 4 and Figure 5) and within the 2019 RMAP Expansion Area (green outline on Figure 5), would continue to be sampled upon request with cleanups performed if sampling results indicate that action is warranted, provided access is granted.

---

<sup>11</sup> Note: In Figure 5, the 2019 RMAP Expansion Area is representative of the changes in the 2020 RODA; however, the year of the 2019 RMAP Expansion Area designation was not updated in the 2020 RODA documentation of the change to be "2020".





**Figure 4 - Current BPSOU Boundary and Proposed BPSOU Boundary Expansion**

### Additional Time for Cleanup

With the significant estimated number of additional properties that may require sampling and evaluation for cleanup, additional time to complete the activities will be necessary. This will expand the originally-anticipated timeline described in the Existing Remedy. At this time, the EPA expects that sampling of approximately 640 residences per year within the current and proposed BPSOU boundary expansion will require an additional 15 years to complete from today. While the exact number of properties requiring cleanup within the proposed BPSOU boundary expansion is unknown, the EPA expects that the cleanup could take an additional 25 years from today to complete.

The EPA will prioritize the most vulnerable populations, including young children, pregnant women and nursing mothers, in the evaluation for cleanups.

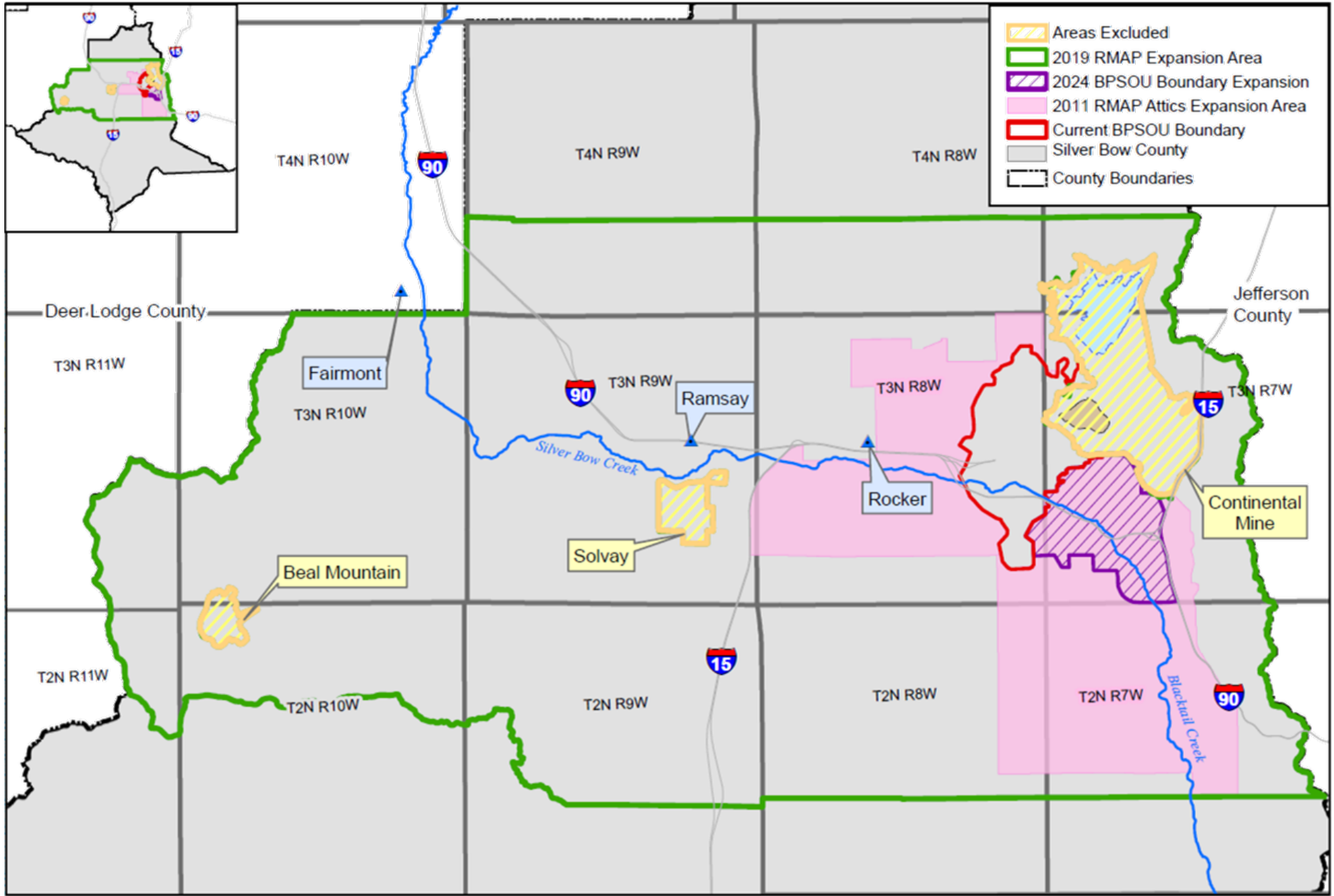
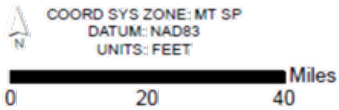


Figure 5 – Proposed BPSOU Boundary Expansion and RMAP Areas



# Summary of Remedy Changes for Residential Soils and Interior Dust

The Existing Remedy for residential soils and interior dust is the result of three previous decisions: the 2006 ROD, the 2011 ESD, and the 2020 RODA. The table below provides a summary of the modifications to the ROD in 2006 through the 2011 ESD and the 2020 RODA and the changes proposed in this action.

Original 2006 Record of Decision (ROD)	Modification to 2006 ROD by Decision Document Specific to Residential Soils and Interior Dust		
	2011 Explanation of Significant Differences (ESD)	2020 ROD Amendment (RODA)	2024 Proposed Plan (in preparation for a 2024 RODA)
<ul style="list-style-type: none"> <li>Target <b>blood lead level</b> = 10 µg/dL.</li> <li>Residential <b>lead cleanup level</b> for residential soils and interior dust = <b>1,200 mg/kg</b>.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>Target <b>blood lead level</b> = 3.5 µg/dL.</li> <li>Proposed residential <b>lead cleanup level</b> is <b>175 mg/kg</b>.</li> </ul>
<ul style="list-style-type: none"> <li><b>Assess (sample)</b> all BPSOU properties in <b>8 years</b> for residential soils and interior dust.</li> <li><b>Remediate</b> contaminated residential properties in <b>15 years</b>.</li> </ul>	<ul style="list-style-type: none"> <li><b>Assess (sample)</b> all BPSOU properties in <b>10 years</b>.</li> <li><b>Remediate</b> contaminated residential properties in <b>20 years</b>.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li><b>Assess (sample)</b> all BPSOU properties in <b>15 years</b> [from 2024] for residential soils and interior dust.</li> <li><b>Remediate</b> contaminated residential properties in <b>25 years</b> [from 2024].</li> </ul>
<ul style="list-style-type: none"> <li>Current <b>BPSOU boundary established</b>.</li> <li><b>All residential properties</b> within established BPSOU boundary <b>require soil and interior dust sampling and, if warranted, cleanup</b>.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li><b>BPSOU boundary proposed to expand</b> to require residential soil and interior dust sampling and, if warranted, cleanup. BPSOU boundary expansion includes neighborhoods east of current BPSOU boundary.</li> </ul>
<ul style="list-style-type: none"> <li>Allows for expansion of RMAP.</li> </ul>	<ul style="list-style-type: none"> <li>RMAP area expanded for required <b>attic evaluation</b> south and west of the BPSOU boundary.</li> </ul>	<ul style="list-style-type: none"> <li>RMAP area expanded <b>access to residential sampling and evaluation for cleanup by request</b> of property owner to urban and rural residential areas outside BPSOU boundary.</li> </ul>	<ul style="list-style-type: none"> <li>No change, see above.</li> </ul>
<ul style="list-style-type: none"> <li>Yard soil <b>sample depth</b> = 0 to 2 inches.</li> </ul>	<ul style="list-style-type: none"> <li>Yard soil <b>sample depth</b> = 0 to 2 inches, 2 to 6 inches, and 6 to 12 inches.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
<ul style="list-style-type: none"> <li><b>Geotextile fabric installed</b> beneath the clean fill to show underlying soils may have contamination above cleanup levels.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
<ul style="list-style-type: none"> <li>Soil <b>removals to</b> a minimum depth of <b>18 inches</b>. <b>Garden removals to</b> a minimum depth of <b>24 inches</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Soil <b>removals to</b> a minimum depth of <b>12 inches</b> or to soil/bedrock interface. No change to garden removals.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>
<ul style="list-style-type: none"> <li><b>Deed notices required</b> for contaminated material capped in place.</li> <li>County <b>zoning, ordinance/permit requirements</b>.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>	<ul style="list-style-type: none"> <li><b>BPSOU Institutional Control Implementation and Assurance Plan</b> finalized as Appendix E to the 2020 Consent Decree.</li> </ul>	<ul style="list-style-type: none"> <li>No change.</li> </ul>



# Proposed Changes to the Existing Remedy Evaluation

In this section, the proposed changes are compared to the Existing Remedy (as the “no action alternative”) using the nine Superfund evaluation criteria (40 Code of Federal Regulations [CFR] 300.430 (e)(9)(iii)). “No action” is defined as no adjustment to the Existing Remedy.

In applying the 2024 Lead Guidance, the EPA evaluated the IEUBK model results for the BPSOU utilizing both target blood lead levels of 5 µg/dL and 3.5 µg/dL. The EPA then determined that utilizing a target blood lead level of 3.5 µg/dL for the BPSOU is required to comply with the 2024 Lead Guidance because additional sources of lead were identified in the Butte community. Therefore, the proposed changes presented in this document and compared against the Existing Remedy (“no action”) are based on the cleanup level that aligns with the 2024 Lead Guidance. The proposed cleanup level is 175 mg/kg for lead in residential soils and interior dust.

The proposed changes to the Existing Remedy must first meet the two threshold criteria outlined in the NCP (40 CFR 300.430 (f)(1)(i)) (See Superfund Remedy Evaluation sidebar at right.) The five primary balancing criteria are then used to compare the Existing Remedy to the proposed changes identified in this Proposed Plan. The EPA will evaluate the two modifying criteria after the public comment period ends and all comments are reviewed because comments are an important indicator of public acceptance.

## Threshold Criteria

### *Overall Protection of Human Health and the Environment*

The proposed change of the residential soils and interior dust cleanup level for lead is needed to further reduce the potential for lead exposures from residential soils and interior dust to people. The proposed residential cleanup level for lead is much lower than the previous 1,200 mg/kg cleanup level established by the Existing Remedy. By using 3.5 µg/dL as the target blood lead level in the most current IEUBK model, the resulting site-specific, risk-based PRG for lead in residential soil is 175 mg/kg.

The Proposed Plan also proposes to expand the BPSOU boundary to require sampling and evaluation in additional neighborhoods where the EPA expects additional residential properties with lead contamination exceeding the proposed cleanup level to exist. The proposed BPSOU boundary expansion will allow for a more protective approach of identifying residential properties that may require cleanup.

Lowering the existing cleanup level for lead in residential soils and interior dust, and expanding the BPSOU boundary, will reduce exposure and risks to more people and, therefore, is protective of human health.

Without the proposed changes (“no action”), the cleanup level for lead would remain at 1,200 mg/kg for residential soils and interior dust as defined as the Existing Remedy. The cleanup level of 1,200 mg/kg is not protective based on the EPA’s review of current scientific literature referenced in the 2024 Lead Guidance. Additionally, properties in the proposed BPSOU boundary

## Threshold Criteria

1. **Overall Protection of Human Health and the Environment.** Are human health and the environment protected by eliminating, reducing, or controlling exposures?
2. **Compliance with ARARs.** Are federal and state environmental statutes, regulations, and other requirements met? If not, is a waiver justified?

## Primary Balancing Criteria

3. **Long-term Effectiveness and Permanence.** What risk remains from untreated wastes? Are human health and the environment protected over time?
4. **Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment.** Is treatment used to reduce harmful effects of contaminants, their ability to move, and their volume?
5. **Short-term Effectiveness.** How much time is needed to construct and implement the remedy, and what are the risks to workers, the community, and the environment during that time?
6. **Implementability.** What are the technical issues and feasibility of implementation. Are goods and services available?
7. **Cost.** What are the estimated costs?

## Modifying Criteria

8. **State/Support Agency Acceptance.** Does the state agree with the proposed change?
9. **Community Acceptance.** Does the community agree with the proposed change?

## Superfund Remedy Evaluation Criteria

expansion would only be sampled when a property owner contacted the RMAP for an evaluation of their property. This is not sufficient to identify and reduce the exposure to lead in these areas based on RMAP data collected to date.

### *Compliance with ARARs*

Applicable or relevant and appropriate requirements (ARARs) are existing laws and regulations that help define remedy protectiveness. ARARs are intended to ensure that a Superfund cleanup meets existing regulations and statutory provisions. It should be noted that ARAR waivers may be appropriate under certain site-specific circumstances. The resulting cleanup with the proposed changes and the Existing Remedy will meet the ARARs identified in the Existing Remedy documents (identified within Appendix A to the 2006 ROD). ARARs for this action will be finalized in the RODA.

### **Balancing Criteria**

The proposed changes result in no significant changes to long-term effectiveness and permanence; to reduction of toxicity, mobility, or volume through treatment; or to implementability. Short-term effectiveness and cost are impacted by the number of additional properties that will require cleanup.

### *Long-Term Effectiveness and Permanence*

Soil removal (followed by placement of geotextile marker if underlying soil exceeds action levels, backfill and revegetation or cover) and interior dust removal is an effective, long-term cleanup method with a long history of success at this Site and others. Additionally, existing institutional controls through a Butte-Silver Bow County Ordinance establishes requirements to ensure that capped areas in yards are not disturbed, mismanaged or inappropriately developed. These methods are a major part of the Existing Remedy and have performed well. The remedy remains effective in the long-term and is permanent. The proposed changes do not alter the implementation of the Existing Remedy, which has been found to be effective and permanent. The proposed changes will increase the volume of residential soils (material) to be removed; therefore, the proposed changes will reduce exposure and risks to more people and is protective of human health.

### *Reduction of Toxicity, Mobility, or Volume through Treatment*

Like the Existing Remedy, the proposed changes do not reduce toxicity, mobility, or volume through treatment. The excavated soils can be disposed of in a repository located within the Silver Bow Creek/Butte Area Superfund Site without treatment and without impacts to other media. Active treatment was screened out as an option for solid media in the 2005 feasibility study because of technical difficulties preventing effective treatment of various metals present, large volume, and low contaminant of concern concentrations. There is no significant difference in reduction of toxicity, mobility, or volume of solid wastes through treatment between the Existing Remedy and the proposed changes.

### *Short-Term Effectiveness*

Differences in short-term effectiveness between the Existing Remedy and the proposed changes to the Existing Remedy come from the increased number of properties that would need to be addressed due to the proposed cleanup level, and the proposed expansion of the BPSOU boundary. Sampling and remediation based on the proposed changes will take additional time to complete. Properties where young children or other vulnerable populations are present will be a higher priority for cleanup because of higher risk. The time required for completing the work needed due to the proposed changes, as compared to the Existing Remedy, will extend the period of disruption to the community.

Additional crews will be needed to support the updated timeframes to complete the sampling within 15 years and the remediation of residential soils and interior dust within 25 years from 2024. There is a significant difference in short-term effectiveness between the Existing Remedy and the proposed changes because of the additional properties to be evaluated and remediated.

### *Implementability*

There are no changes to the current construction practices; standard equipment, such as excavators and trucks, will continue to be used to clean up residential properties. Implementability of the proposed changes to the Existing Remedy

will be affected by the need for additional crews to conduct the work as well as the ability to secure backfill for residential properties identified for cleanup. The logistics to bring in enough fill material to support cleanup of the properties within the proposed expansion to the BPSOU boundary should be considered. Based on these considerations, there is a minor difference between the Existing Remedy and the proposed changes when applying this particular Superfund evaluation criteria. However, the proposed changes result in a protective remedy that reduces exposure and risks to more people, outweighing the implementability considerations.

### *Cost*

The proposed expansion of the BPSOU boundary will increase the number of residential properties to be sampled to over 7,000 properties. The proposed lower cleanup level is expected to greatly increase the number of additional residential properties that may require cleanup and, therefore, the cost associated with those activities. This includes costs to sample residential properties in the proposed BPSOU boundary expansion and reevaluate residential properties previously sampled. Properties that were previously remediated will also be reevaluated to ensure that the remedy in place remains protective.

**Estimated Annual Capital Costs: \$13 million**

**Estimated Annual Operation and Maintenance Costs: \$50,000**

**Estimated Total Cost (Present Value): \$134 million**

The numbers of additional properties to sample and remediate can only be estimated at this time using broad assumptions. The EPA estimates the annual capital costs to include direct and indirect costs of residential sampling (i.e., residential soils and interior dust), data management, remedial design activities, construction (remedial action) activities, project management, and construction management. The annual capital costs are estimated to be approximately \$13 million. The EPA estimated that 640 properties will be sampled each year for 15 years. The EPA estimated that half (50%) of the properties in the current BPSOU boundary will require re-sampling based on historic sample data. The EPA broadly estimates that 60% of properties to be sampled within the proposed BPSOU boundary (approximately 5,000) will require cleanup over a period of 25 years, where 230 properties would be cleaned up each year. While Operation and Maintenance costs are not included for residential properties in the 2006 ROD, costs associated with institutional controls and the EPA Five-Year Review have been assumed to be broadly \$50,000 per year.

The total costs representing the present value of sampling for a duration of 15 years and a present value of cleanup activities for 25 years are approximately \$134 million. The present value calculation includes a discount rate of 7% consistent with EPA policy. There is a significant difference, increase in cost, between the Existing Remedy, presented as approximately \$30 million in the 2006 ROD, and the proposed changes.

## **Modifying Criteria**

### *State Acceptance and Community Acceptance*

The modifying criteria can be fully evaluated only after public comment is received on this Proposed Plan. Based on DEQ's initial review, DEQ agrees with the analysis and recommendations outlined in the Proposed Plan and will continue to review and provide comment during the public comment period. The EPA will assess this criterion based on comments received on this Proposed Plan.

## **Protectiveness Summary**

The Existing Remedy, with the proposed changes described in this 2024 Proposed Plan, addresses potential or actual threats to human health resulting from lead in residential soils and interior dust. The Existing Remedy, with the proposed changes, will achieve the RAOs for the BPSOU, is protective of human health and the environment, and meets the ARARs established for the BPSOU. All other components of the Existing Remedy not proposed to be changed in this Proposed Plan remain in effect and will continue to be implemented.





## Key Documents included in Administrative Record

Key documents used to prepare this Proposed Plan are available to the public at the EPA Superfund Records Center, 10 W. 15th Street, Suite 3200, Helena, Montana, Monday through Friday, 8:00 to 4:30. Please call ahead at (406) 457-5046 or (866) 457-2690 (toll free). The documents are also available at the EPA's BPSOU website: <https://www.epa.gov/butte>. The complete administrative record file for this Proposed Plan and the administrative record for the RODA (when issued) can be accessed at the Montana Tech Library, 1300 W. Park Street, Butte, Montana.

Some key documents in the administrative record file for this Proposed Plan include:

- Environ 2014. Butte Priority Soils Operable Unit Public Health Study Phase 1, July 2014.
- EPA 2002. Role of Background in the CERCLA Cleanup Program, U.S. EPA, April 26, 2002, OSWER 9285.6-07P.
- EPA 2024a. Updated Residential Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities.
- EPA 2024b. Calculation of Updated Residential Soil Lead Preliminary Remediation Goals for the Butte Priority Soils Operable Unit, Silver Bow Creek/Butte Area Superfund Site. U.S. EPA, April 2024, Memorandum.
- EPA 2024c. Butte Priority Soils Operable Unit – Summary of Naturally Occurring Background Soil Lead Concentrations, U.S. EPA, May 2024, Memorandum.
- EPA 2024d. Butte Priority Soils Operable Unit – Anthropogenic Background Source and Concentration Summary, U.S. EPA, August 2024, Memorandum.
- EPA 2024e. Residential Lead Screening Level Checklist for Silver Bow Creek/Butte Area NPL Site, Butte Priority Soils Operable Unit 8 (BPSOU), August 5, 2024.
- Ramboll 2020. Second Butte RMAP Medical Monitoring Study (Phase 2) Report, March 2020.

## Public Participation and Community Engagement

### Public Meeting

The release of this Proposed Plan starts the 60-day public comment period (October 16 through December 16, 2024). During the public comment period the EPA will give a presentation about this Proposed Plan at a public meeting:

**BPSOU Residential Soils Proposed Plan Meeting**  
**Monday, November 18, 2024**  
**The Copper Lounge in the Student Union Building at Montana Tech**  
**1300 W. Park Street, Butte, MT**  
**6:00pm to 7:30pm**

A stenographer will be on hand to record verbal comments.  
Comments can also be submitted in written form through the duration of the public comment period.

### Open House

The EPA BPSOU Site Team will be hosting an informational learning session, in the form of an open house. The open house will be held:

**Tuesday, October 29, 2024**  
**The Copper Lounge in the Student Union Building at Montana Tech**  
**1300 W. Park Street, Butte, MT**  
**6:00pm to 7:30pm**

Verbal comments provided on the Proposed Plan during this open house **will not** be translated into the record; however, written comments can be provided to EPA at the open house.

### **Office Hours**

The EPA remedial project managers (RPMs) Molly Roby and Emma Rott will be available for office hours at the following times:

**Tuesday, October 22, 2024 and Thursday, December 5, 2024**  
**Noon – 2:00pm**  
**CTEC office (27 West Park Street, Butte, MT)**

Verbal comments provided on the Proposed Plan during these office hours **will not** be translated into the record; however, written comments can be provided during these office hours.

### **Providing Written Comments**

**The 60-day public comment period runs from October 16 through December 16, 2024.**

Please send written comments to:  
**U.S. Environmental Protection Agency**  
**ATTN: Butte Superfund Site Team**  
**10 West 15th Street, Suite 3200**  
**Helena, MT**  
**59626**

Or send your comments via email to:  
**EPAButtePPcomments@epa.gov**

### **Site Contacts**

#### **U.S. Environmental Protection Agency (EPA), Region 8**

Molly Roby, Remedial Project Manager, (406) 457-5021, [robymolly@epa.gov](mailto:robymolly@epa.gov)

Emma Rott, Remedial Project Manager, (406) 438-0823, [rott.emma@epa.gov](mailto:rott.emma@epa.gov)

Mackenzie Meter, Community Involvement Coordinator, (406) 970-5806, [meter.mackenzie@epa.gov](mailto:meter.mackenzie@epa.gov)

#### **Montana Department of Environmental Quality (DEQ)**

Daryl Reed, Project Officer, (406) 444-6433, [dreed@mt.gov](mailto:dreed@mt.gov)

Nolan Lister, Public Information Officer, (406) 444-6469, [nolan.lister@mt.gov](mailto:nolan.lister@mt.gov)