



## Proposed Plan Mine Waste Disposal Alternative Selection

Carpenter-Snow Creek  
Mining District Site  
Cascade County



U.S. EPA Region 8 - Montana Office

July 2014

### Introduction

This Proposed Plan identifies the Preferred Alternative for selecting a secure mine waste disposal location for placing removed mining waste at the Carpenter-Snow Creek Mining District (CSCMD) National Priorities List (NPL) site in Cascade County, Montana, 55 miles south of Great Falls, near the town of Neihart, Montana, and provides the rationale for this preference. In addition, the Proposed Plan includes summaries of other options for secure mine waste disposal locations evaluated for use at this site. The U.S. Environmental Protection Agency (EPA) Region 8 is the lead agency for site activities, in consultation with the Montana Department of Environmental Quality (DEQ), the support agency, and U.S. Forest Service (USFS), a land management agency.



*Photo 1: View of the Carpenter Creek drainage from the Silver Dyke Mill.*



*Photo 2: Sampling acid mine drainage from Dacotah Mine*

EPA, in consultation with DEQ and the USFS, will select a final remedy for this action after reviewing and considering all information submitted by the public during the 30-day public comment period. EPA, in consultation with DEQ and USFS, may modify the Preferred Alternative or select another response action presented in this Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all alternatives presented in this Proposed Plan.

Mine waste from the CSCMD site may be disposed of outside of the site boundaries at an existing, State licensed solid waste landfill, or within the site boundaries in a constructed repository. This Proposed Plan presents the rationale for selecting the location for the secure disposal of mine waste from the CSCMD site – on-site repositories at the Mackay Gulch location and the Silver Dyke Glory Hole location. The goal of this action is to select a disposal area that most effectively limits human and ecological exposure to heavy metals and arsenic found in the mine waste, tailings, contaminated soils and sediment (hereby referred to as mine waste). The preferred alternative selected will provide for a permanent disposal repository for the mine waste.

This Proposed Plan was prepared in accordance with the Comprehensive Environmental Response, Compensation and Liability Act as amended (CERCLA or Superfund), the regulations governing Superfund response actions known as the National Contingency Plan (NCP), and EPA’s applicable guidance.

EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 117(a) of CERCLA and Section 300.430(f)(2) of the NCP. This Proposed Plan summarizes and highlights key information from the Remedial Investigation (RI)/Feasibility Study (FS) Report supporting this action and other documents contained in the Administrative Record for this action. EPA, DEQ and the USFS encourage the public to review the RI/FS Report and Administrative Record file for more information regarding the CSCMD site and this remedial action. Information about the Administrative Record can be found on page 12 of this document.

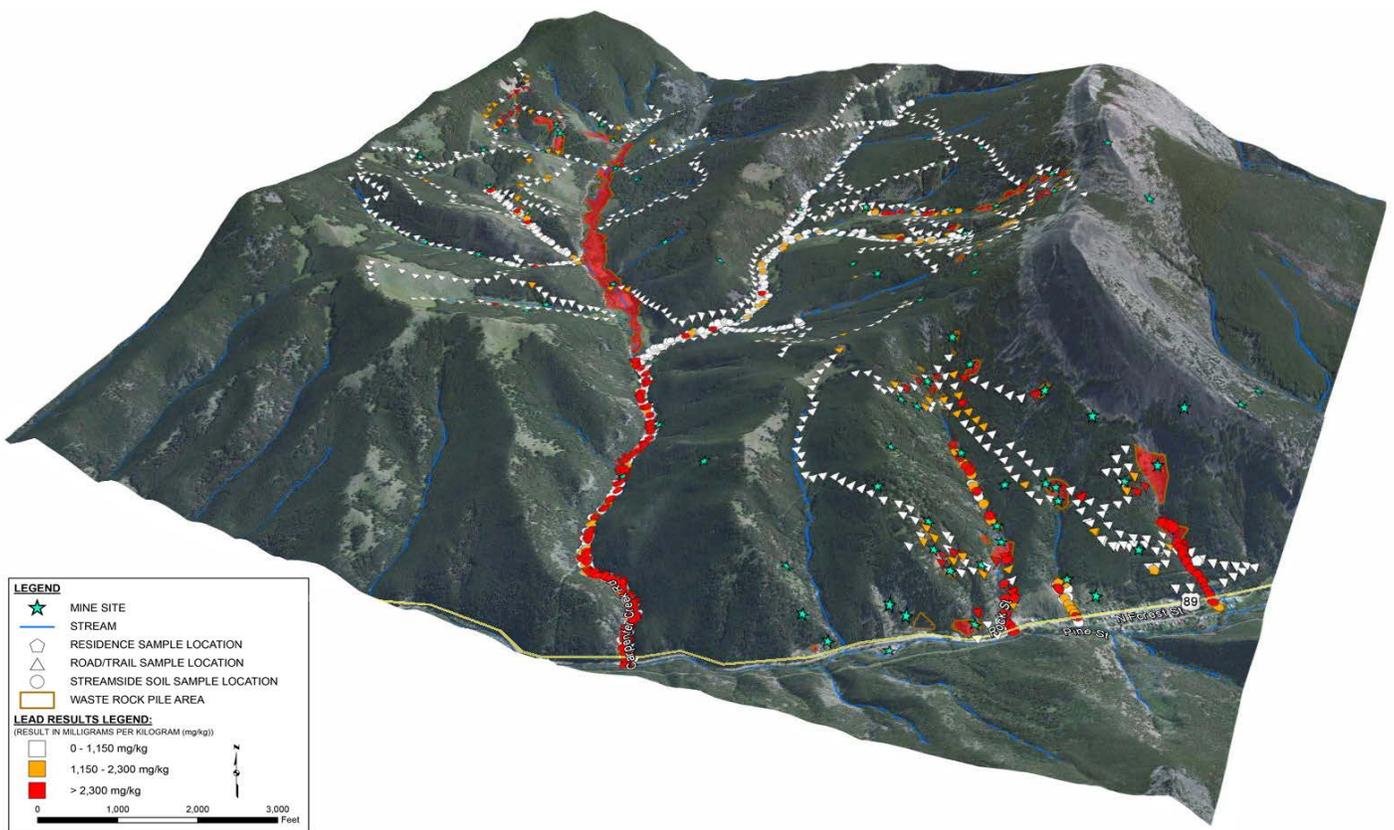


Photo 3: 3-Dimensional model showing lead contamination in the Carpenter-Snow Creek drainages.

## Site Background and History

The Carpenter Snow Creek Mining District was a major silver producer in Montana and the primary producer in Cascade County, producing about \$16 million in silver between 1882 and 1929. The first claim in the district was made in July 1881. Production from the district began to increase in 1891 after the construction of the Great Falls smelter and the Belt Mountain branch of the Great Northern Railroad. Production of mines at the CSCMD site fluctuated for the next 30 years due to variable silver prices.

Beginning in 1921, one million tons of ore were blocked out at the Silver Dyke Mining Complex and a 500-ton flotation mill was constructed. The Silver Dyke operated at capacity until 1929, when the blocked-out ore was depleted and new deposits could not be found. The operations at the Silver Dyke Mining Complex resulted in several tailings deposits which are some of the primary contributors to contamination in the Carpenter Creek drainage.

Since 1930 there has been little production from the CSCMD site. The production that has occurred includes re-mining of waste rock piles and small scale contract mining. Additionally, exploration of new mineral deposits has occurred since 1930. Only small amounts of ore were produced from exploration activities.

The EPA added the CSCMD Superfund Site to the Superfund National Priorities List in September 2001. The CSCMD site has been divided into three subunits called “operable units” or OUs. The EPA has developed or will develop cleanup plans for each OU. This Proposed Plan selects a waste disposal remedy that may be used for the disposal of mine waste from all OUs at the CSCMD site.

The CSCMD site is currently divided in three OUs (Figure 1). OU1 contains the town of Neihart and waste material located in residential yards and streets in the town. OU2 encompasses the mining sites in Snow Creek drainage basin and the western slopes of Neihart Baldy including drainages on the slopes east of Neihart, and mining disturbed areas west of Neihart. OU3 includes mine and creek side waste associated with the Silver Dyke mine and located along Carpenter Creek and Belt Creek downstream to Monarch. The disposal alternative selected in this action will apply to all OUs and prior or ongoing removal actions.

The EPA completed emergency removal actions at multiple locations in the town of Neihart (OU1) in 2004. The USFS conducted a removal action in 2013 at OU3. The USFS removal action included interim response actions at the Silver Dyke tailings and upper and lower Carpenter Creek tailings impoundments to stabilize these tailings until a permanent remedial action is taken. Further work under this removal action is expected. Investigation activities of OU2 and OU3 were started by the USFS in 2001, shortly after the CSCMD site was listed on the Superfund National Priorities List, and is ongoing.

## Superfund Process

At every site designated as a Superfund site, the EPA follows a process that begins with discovery, proceeds through investigation, and if warranted, ends with cleanup (Figure 2). The EPA is currently conducting a site wide remedial investigation at the CSCMD site. This *Proposed Plan* focuses on information pertaining to the selection of a disposal alternative for waste located throughout the CSCMD site. Results, conclusions, and other relevant information available regarding the waste disposal alternatives investigated at the CSCMD site can be found in the following key documents:

*Site-Wide Secure Waste Disposal Area Remedial Investigation Report*. This report summarizes the characterization of the potential repository locations and human health and ecological risk assessments and is available for review as part of the administrative record that supports this Proposed Plan. Eleven potential repository sites were identified in the initial repository investigation report in 2004. One additional site was identified in 2012. Figure 3 shows the locations of all

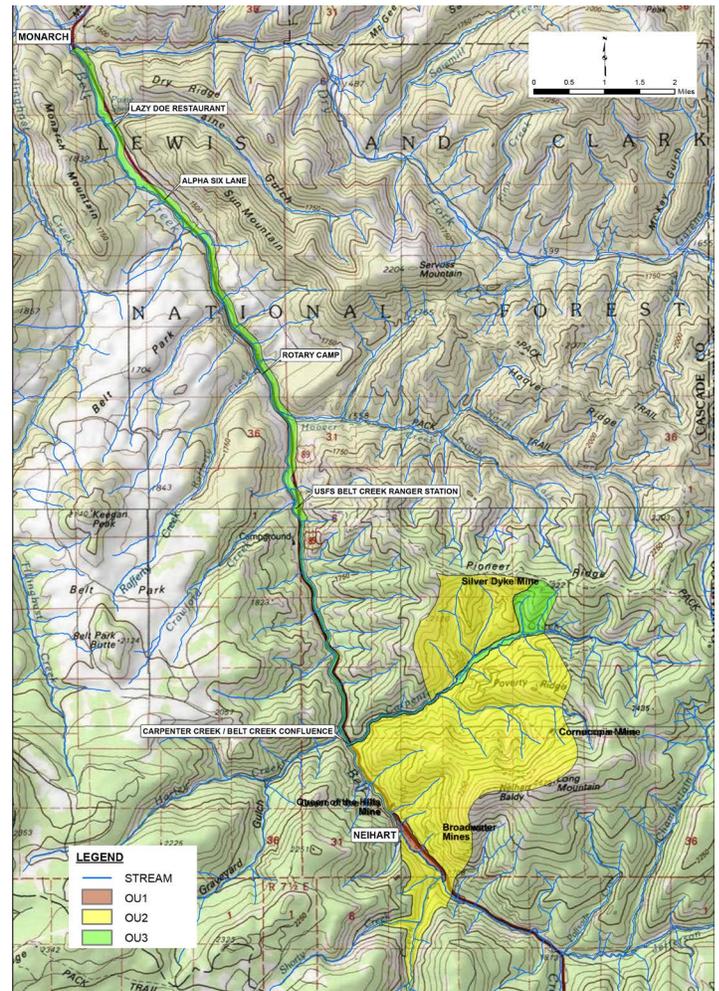
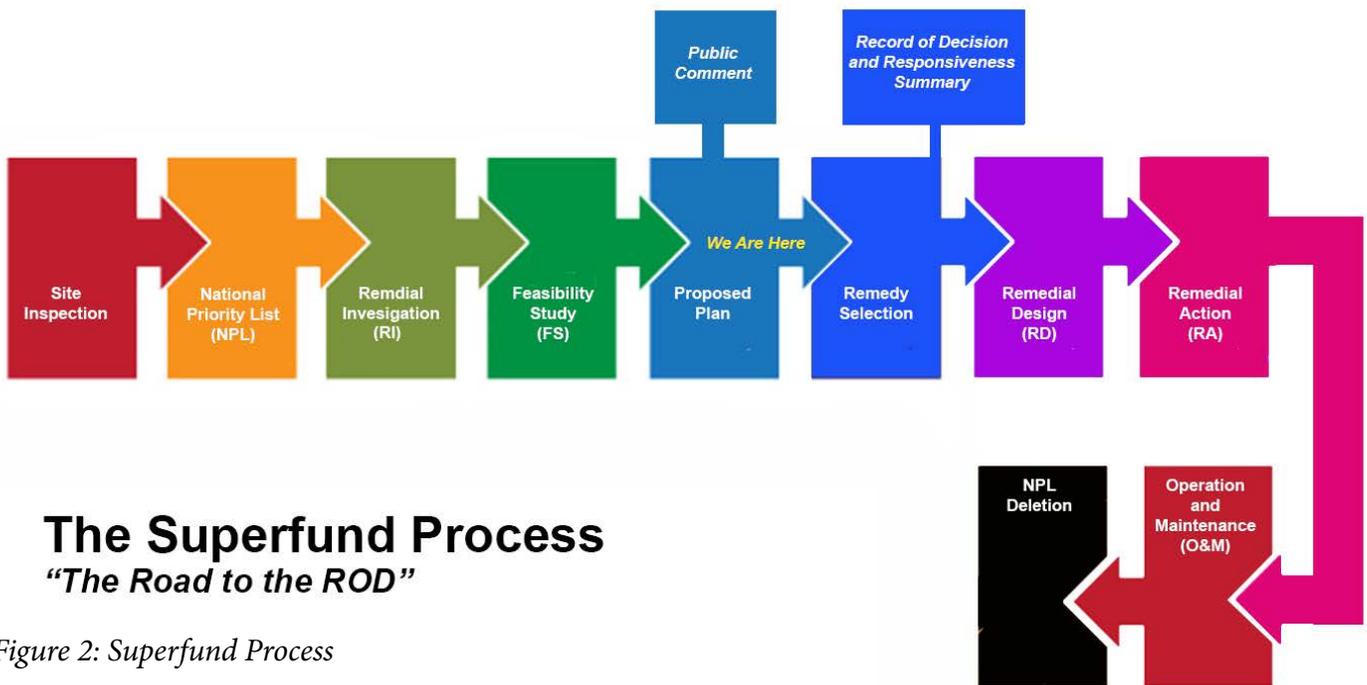


Figure 1: Carpenter-Snow Creek Operable Units



## The Superfund Process

### “The Road to the ROD”

Figure 2: Superfund Process

potential repository sites. Of the twelve sites identified, five (Mackay Gulch, Silver Dyke Glory Hole, Lower Snow Creek, Evening Star, and Neihart Slope) were investigated further to determine their suitability as repository locations.

*Site-Wide Secure Waste Disposal Area Feasibility Study Report.* This report identifies five different remedial alternatives and evaluates their expected protectiveness, effectiveness, implementability, and cost and is available for review as part of the administrative record that supports this Proposed Plan.

This *Proposed Plan* presents the public with the waste disposal alternatives evaluated in the feasibility study, presenting a preferred alternative, and seeking written and oral comments from the public. The comments will be the basis for the EPA’s community acceptance evaluation criteria and will influence the selected remedy presented in the ROD to be issued in 2014. The EPA, in consultation with DEQ and USFS, will provide written responses to public comments in the section of the ROD known as “Responsiveness Summary.”

## Site Characteristics

The contamination at the CSCMD site is from mine and milling waste from more than 24 mines in the Carpenter Creek drainage, 22 mines in the Snow Creek drainage, and 32 mines on the Neihart slope. The largest mine along Carpenter Creek is the Silver Dyke mine. Remnants of the mine and associated milling include the Silver Dyke glory hole, mill area waste rock and tailings, Silver Dyke tailings, and the upper and lower tailings piles. The other mines in the Carpenter Creek drainage are small by comparison. The largest mines in the Snow Creek drainage are the Benton, Rebellion, and Big 7. On the Neihart slope, the biggest mines are the Queen of the Hills, Dacotah, Moulton, Hartley, and Broadwater. The volume of mine waste (waste rock and tailings deposits) characterized at the CSCMD site thus far is in excess of 1.2 million cubic yards. Much of the mine waste is located in the floodplain of Carpenter Creek and may need to be removed during remedial action. The contaminants of concern (COCs) in the majority of the mine waste include arsenic, cadmium, copper, lead, and zinc.

## Site Risks

### *Human Health and Environmental Risks – Site Wide*

This Proposed Plan presents the proposed locations for mine waste disposal at the CSCMD site. The site risks are being more fully assessed in the ongoing, site-wide remedial investigation which is not yet complete. A risk assessment was completed for OU1. The OU1 risk assessment and preliminary risk evaluation indicates unacceptable risks to human

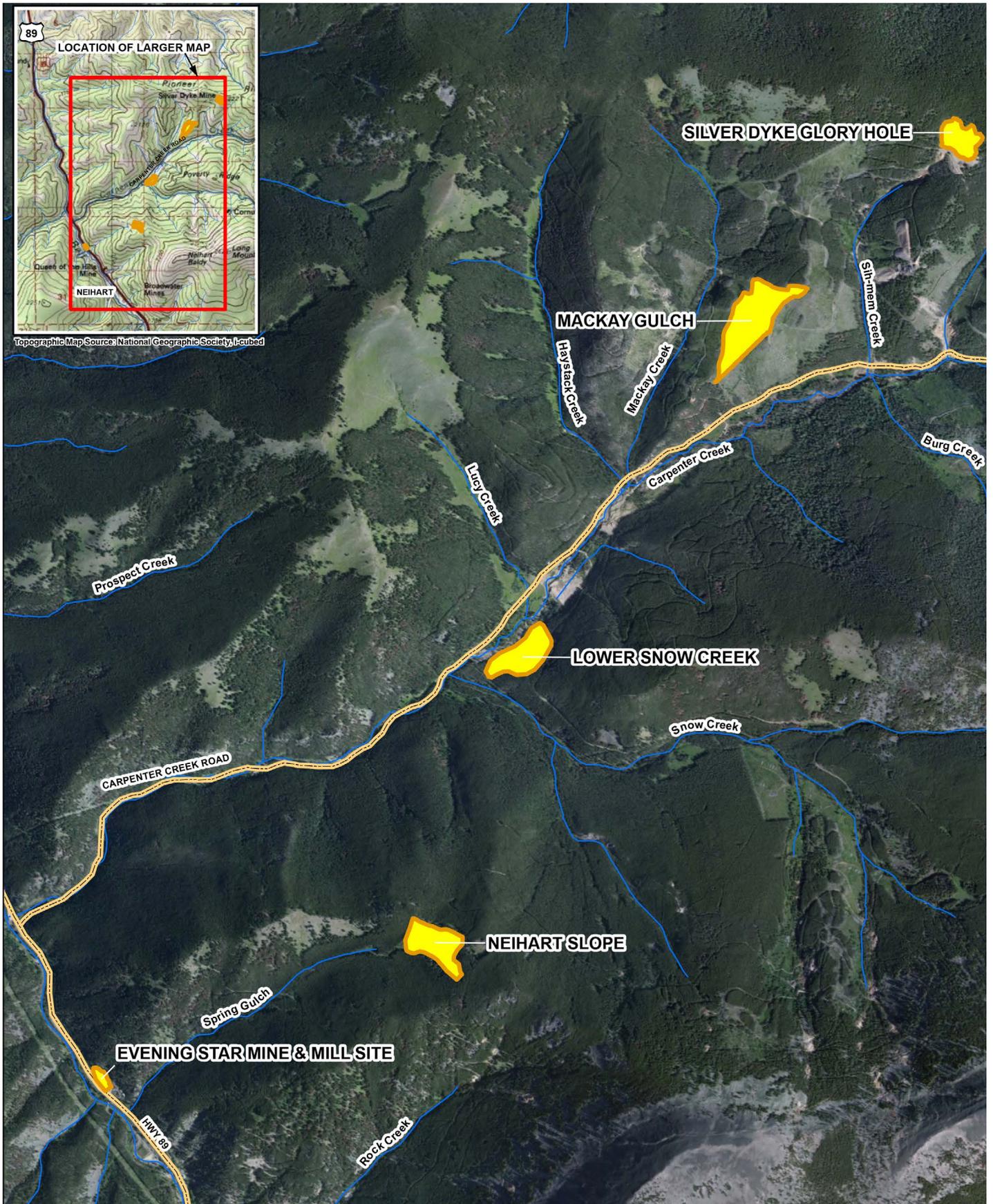


Figure 3: Carpenter-Snow Creek Repository Sites

health and the environment from metals and arsenic contamination in several areas of the CSCMD site.

For OU1, action levels for contaminants in soils (yards and roads) were established (400 ppm for lead and 100 ppm for arsenic) to address unacceptable threats to human health. Mining waste in areas of residential or recreational use comes from various mining sources, and contaminants from those areas can be inhaled or come into dermal contact with human receptors. Contaminants can also be taken in by human receptors through the mouth or through garden products.

Mine waste at the CSCMD site can be mobilized by precipitation and snow melt events and oxidations and erosion. This releases metals and arsenic into ground and surface water. Wind erosion mobilizes small particles from tailings and waste rock into the air and to the surrounding area, where mine waste was used to build roads or trails, vehicle traffic crushes the mine waste into fine powders. All of these exposure pathways lead to contaminants entering surface water and presents risks to wildlife and fish at the CSCMD site.

Ground water contamination presents human health risks through intake by potential drinking water users (ground water at the CSCMD is classified as a potential drinking water source by the State of Montana).

All of these pathways and potential exposures may present a risk to human health and the environment. Because of this, the removal and secure disposal of mine waste into a repository, such as is required under the OU1 ROD, is needed to address unacceptable site risks.

A properly constructed mine waste repository with clean fill over an impermeable liner (altogether referred to as the “cap” or “repository cap”) will prevent exposure of the public to mine waste. Controls may be erected around the repository to provide for protection of the repository and to reduce the potential for exposure of the public. Operations and Maintenance (O and M) will continue to maintain the integrity of the repository cap. An off-site, State-licensed solid waste landfill is assumed to be operated and maintained correctly and in accordance with its permit, and would eliminate exposure routes that effect human health and the environment from exposures to mine waste placed in the landfill.

The engineering controls that may be put in place to prevent recreational access to the repository are not expected to prevent access by some ecological receptors. However, because mine wastes will be capped with clean fill and an impermeable cap, no exposure to contaminated materials is expected. The repository cap will prevent wind erosion as well as preventing infiltration of surface water through the contaminated material. This will ensure that surface waters surrounding the repository area are not contaminated by the mine waste. Similarly, an existing, State-licensed solid waste landfill is assumed to be managed and run in accordance with the permit and all applicable statutes and regulations, and will mitigate access by ecological receptors to mine wastes placed in the landfill.

## **Preliminary Remedial Action Objectives**

Preliminary Remedial Action Objectives (PRAOs) are media specific non-numeric objectives for preventing unacceptable exposure to contaminants in order to protect human health and the environment. The PRAOs for mine waste disposal at the CSCMD site are as follows:

- Prevent exposure of humans and the environment to removed mine waste placed in a secure disposal location;
- Prevent the migration of mine waste contamination out of a secure disposal location through erosion and leaching; and
- Site secure disposal locations appropriately in practical places where access and proximity issues can be addressed readily.

## **Summary of Alternatives**

During the feasibility study, five primary remedial alternatives were evaluated and are briefly described here. A more detailed description of the alternatives can be found in the feasibility study. The alternatives were developed to consider the range of categories defined by the NCP (40 CFR 300.430(e)) including, as appropriate:

1. No action.
2. No further action with continued monitoring.
3. Off-site disposal of mine waste at an existing State-licensed solid waste landfill, approximately 68 miles from the CSCMD site (High Plains Landfill northeast of Great Falls, Montana).
4. On-site disposal of mine waste at the Mackay Gulch Repository.
5. On-site disposal of mine waste at the Silver Dyke Glory Hole Repository.

#### **Alternative 1: No Action**

The no action alternative will involve no further remedial action or monitoring at the CSCMD site. There is no cost associated with this alternative.

#### **Alternative 2: No Further Action with Continued Monitoring (Estimated Cost \$268,000)**

The no further action with continued monitoring alternative will involve no further remedial action or land use controls at any of the currently contaminated locations at the CSCMD site. The only action associated with this option is annual monitoring of the CSCMD site to document conditions and to determine if there is further deterioration of the impacted areas.

#### **Alternative 3: Off-site Disposal at an Existing State-Licensed Solid Waste Landfill (Estimated Cost \$90,304,000)**

The off-site disposal at an existing State-licensed solid waste landfill alternative would utilize High Plains Landfill as a mine waste disposal location. This alternative would eliminate exposure routes which effect human health and the environment from exposures to mine waste placed in the repository. For cost purposes it is assumed that all 1.2 million cubic yards of mine waste and contaminated soils and roadways identified at the CSCMD site would be placed in the repository. This results in a high cost component.

#### **Alternative 4: On-site Disposal at Mackay Gulch (Estimated Cost \$20,025,000)**

Under this alternative, mine waste from the CSCMD site would be placed in a repository at the Mackay Gulch location. The location would be designed to accept waste in multiple stages from multiple remedial actions. Use of this location would provide ample cover and top soil (clean material for a borrow source) for a repository cap. Current site capacity estimates are approximately 675,000 cubic yards, which could be increased or decreased during design.

#### **Alternative 5: On-site Disposal at the Silver Dyke Glory Hole (Estimated Cost \$17,065,000)**

Under this alternative, mine waste from CSCMD site would be placed in the Silver Dyke Glory Hole. The Silver Dyke Glory Hole is a large, unvegetated excavation of the former Silver Dyke Mine. There is adit drainage with high concentrations of heavy metals (particularly zinc) and sulfides coming from the adit underneath the Silver Dyke Glory Hole. Filling the Silver Dyke Glory Hole to create positive drainage may reduce the amount of adit drainage. The estimated waste volume to completely backfill the Silver Dyke Glory Hole is 569,000 cubic yards. There is no cover soil or topsoil at this location, so these would have to be imported from an off-site borrow source such as Mackay Gulch. The Silver Dyke Glory Hole would need to be filled rapidly (likely 3 years or less) to reduce the potential for ponding of water or leaching of metals from mine waste.

### **Evaluation of Alternatives**

The Superfund law and the NCP require that the EPA, in consultation with DEQ and USFS, evaluate and compare the remedial cleanup alternatives based on the nine NCP criteria. These nine criteria are derived from the Superfund law and are presented in Figure 4.

Any selected remedy must meet the threshold criteria of “overall protectiveness of human health and the environment” and “compliance with ARARs.” Only the alternatives that meet these criteria are considered further by EPA. The balancing criteria of long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment; short term effectiveness; implementability; and cost are used by the EPA to identify and consider advantages and disadvantages between the alternatives. The modifying criteria, State acceptance and community acceptance, are

Evaluation Criteria
The following criteria are used by EPA to evaluate all cleanup alternatives:
1. <u>Overall protection of human health and the environment</u> addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled.
2. <u>Compliance with state or federal regulatory standards</u> addresses whether or not a remedy will meet all federal and state environmental laws or provide justification for a waiver.
3. <u>Long-term effectiveness and permanence</u> refers to the ability of a remedy to provide reliable protection of human health and the environment over time.
4. <u>Reduction of toxicity, mobility, or volume through treatment</u> refers to the preference for a remedy that reduces health hazards, the movement of contaminants, or the quantity of contaminants at the site through treatment.
5. <u>Short-term effectiveness</u> addresses the period of time needed to complete the remedy and any adverse effects to human health and the environment that may be caused during the construction and implementation of the remedy.
6. <u>Implementability</u> refers to the technical and administrative feasibility of the remedy, including the availability of materials and services needed to carry out the remedy and coordination of federal, state, and local governments to work together to clean up the site.
7. <u>Cost</u> evaluates the estimated capital and operation and maintenance costs of each alternative in comparison to other, equally protective measures.
8. <u>State acceptance</u> indicates whether the State of Montana agrees with, opposes, or has no comment on the Preferred Alternative.
9. <u>Community acceptance</u> indicates whether the town of Neihart and Cascade County governments agree with, oppose, or have no comment on the preferred remedy.

Figure 4: Nine EPA Evaluation Criteria used for Cleanup Alternatives

evaluated as the preferred alternative is selected and more thoroughly evaluated after the public comment period.

The EPA evaluates these criteria in detail in both the “Detailed Analysis” and the “Comparative Analysis of Alternatives” sections of the feasibility study. The EPA, along with DEQ and USFS evaluated the five alternatives using the threshold and balancing criteria. A summary of the individual alternatives is provided below.

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

The No-Action and No-Action with Monitoring alternatives are not protective since they do nothing to prevent migration of mine waste or exposure of humans and the environment. Both repository alternatives (4 and 5) and the off-site State permitted solid waste landfill alternative (3) are equally protective because they would prevent migration of mine waste and protect humans and the environment.

### **Compliance with ARARS**

The two repository alternatives are equally able to comply with ARARs. The no action and no-action with monitoring alternatives do not comply with ARARs such as regulations pertaining to floodplain management, the Clean Water Act, the Montana Water Quality Act, and Montana solid waste regulations. ARARs would not apply to an existing off-site State permitted solid waste landfill in terms of location and design for the landfill (ARARs apply to on-site actions only). ARARs regarding the hauling of materials to the landfill, before leaving the CSCMD site, would be complied with for the two repository alternatives and the off-site disposal area alternative.

### **Long Term Effectiveness and Permanence**

The two repository alternatives and the off-site State permitted solid waste landfill alternative are permanent methods for reducing exposure to mine waste. Assuming the repositories and landfill were properly maintained, they should be permanent and effective in the long-term. The no action and no-action with monitoring alternatives are not effective at reducing exposure to mine waste in the long-term and are not permanent.

## Reduction of Toxicity, Mobility, and Volume through Treatment

None of the alternatives involve treatment, so all alternatives rank equally under these criteria.

Treatment of mine wastes may be addressed in OU specific feasibility studies. While the wastes being placed in the repository or landfill may not be treated, the remedy will reduce the mobility of the waste by isolating them in a protective repository or landfill that will effectively contain the hazardous substances.

## Short Term Effectiveness

The two repository alternatives would be effective in preventing migration of mine waste and protecting human health and the environment in the short-term. The development of the Mackay Gulch repository can begin as soon as the location is accessible and would allow for relatively quick site preparation and construction. The development of the Silver Dyke Glory Hole repository will likely take 6 months to 1 year to stabilize the high walls on the southern and eastern sides to reduce physical hazards to construction workers. The Silver Dyke Glory Hole repository alternative would not allow for scheduled excavation and disposal of contaminated soils in the town of Neihart OU1 remedial action as well as the removal action at the former Silver Dyke tailings impoundment, scheduled to proceed in 2014. The off-site landfill alternative would be less effective at protecting human health and the environment in the short-term. Anticipated risks are associated with occupational hazards to workers using heavy construction equipment for transportation to the licensed solid waste landfill and increased traffic risks due to the long hauls associated with this alternative. The no action alternatives (1 and 2) are not effective in the short-term.

The alternatives are ranked for short-term effectiveness, from most effective to least effective.

1. Mackay Gulch repository (Alternative 4) ranked highest because site development will not delay the proposed 2014 tailings removal. This is most protective of the community and the environment and also provides the on-site borrow source needed, reducing additional impacts to the community.
2. Silver Dyke Glory Hole repository (Alternatives 5) ranked next highest because site development would not prevent residential soils and tailings removals, but may delay them.
3. Off-Site Disposal at a Licensed Facility (Alternative 3) ranked as less effective than alternatives 4 and 5 because of the risks associated with the transport of solid waste materials to the solid waste landfill approximately 68 miles away.
4. No Action (Alternatives 1 and 2) ranked lowest because they are not effective in the short-term.



*Photo 4: Acid mine drainage from the Moulton Mine North of the town of Neihart.*

## Implementability

Both repository alternatives are technically and administratively feasible. Necessary materials are available. The construction of the Mackay Gulch requires less technical expertise because it does not involve the blasting required at the Silver Dyke Glory Hole. Construction of both repository alternatives can be completed with standard construction labor and equipment available in the area. The development of the Silver Dyke Glory Hole repository will require additional technical expertise to address site specific conditions (e.g. blasting of the southern headwall to address safety concerns and construction of the haul road). Long term operation, maintenance, and monitoring would be necessary to ensure the integrity of the repositories. EPA will need to resolve access issues prior to use of the locations as repositories.

Utilizing an existing State permitted solid waste landfill will require an agreement with the licensed landfill to accept the large volume of mine waste contemplated for removal at the CSCMD site, and the necessity to work with the county and state road maintenance personnel concerning the adverse effects on roads of hauling excavated mine waste to a repository and this issues make this alternative less implementable.

The alternatives are ranked for implementability, from most implementable to least implementable.

1. No Action (Alternative 1) ranked highest because no-action is easiest to complete.
2. No Action with Monitoring (Alternative 2), no-action with continued monitoring, ranked the next highest because it requires minimum continued monitoring at the CSCMD site.
3. Mackay Gulch Repository (Alternative 4) ranked next highest because it is technically and administratively feasible, and the construction methods are less technical than Alternative 5.
4. Silver Dyke Glory Hole Repository (Alternative 5) ranked next because site development requires more technical expertise than Alternative 4.
5. Off-site Disposal at a Licensed Facility (Alternative 3) ranked the least implementable because of the agreements necessary to transport and place wastes at the off-site landfill, as well as the uncertainty of whether agreement between the parties can be reached. Additional effort will be required to move large amounts of mine waste (approximately 1.2 million cubic yards) 68 miles to the off-site landfill.

## **Cost**

Proposed alternative costs consist of direct and indirect capital costs and long-term (30-year) operation and maintenance costs. Direct capital costs pertain to construction, materials, land, and transportation for proposed alternatives. Indirect costs pertain to design, legal fees, and permits. O&M costs pertain to maintenance and long-term monitoring and are presented as a present worth value. The alternative costs are ranked for cost, from lowest to highest (rounded to the highest \$1,000).

1. No Action (Alternative 1) – \$0
2. No Action with Monitoring (Alternative 2) – \$268,000
3. Silver Dyke Glory Hole Repository (Alternative 5) – \$17,065,000
4. Mackay Gulch Repository (Alternative 4) – \$20,025,000
5. Off-site Disposal at a Licensed Facility (Alternative 3) – \$90,304,000

## **State and Community Acceptance**

State and community acceptance will be evaluated through the community involvement process. As members and representatives of the State, local governments, and community provide comments, remedial action alternatives will be re-assessed and potentially modified. State, local government, and community concerns will be considered by the EPA during preparation of the Record of Decision.

## **Key Guidance Documents**

Key guidance documents used in the study and evaluation of remedial options for the CSCMD site are as follows:

- The NCP regulations (found at 40 CFR Section 300), and the statutory requirements of CERCLA—especially Section 121 of CERCLA, 42 U.S.C. Section 9621 are the mandatory requirements that the EPA (and DEQ as the support agency) must follow in selecting a remedy.
- In addition, the EPA uses guidance as appropriate in the remedy selection process. Key guidance documents used for the CSCMD are as follows:

- *A Guide to Principal Threat and Low Level Threat Wastes*, OSWER No. 9380.3-06FS (EPA, November 1991)
- *Rules of Thumb for Superfund Remedy Selection*, OSWER No. 9355.0-69 (EPA, August 1997)
- *Incorporating Citizen Concerns into Superfund Decision Making*, OSWER No. 9230.0-18 (EPA, January 1991)
- *The Role of Cost in the Superfund Remedy Selection Process*, OSWER No. 9200.3-23FS (EPA, September 1996)
- *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents*, OSWER No. 9200.1-23P (EPA, July 1999).
- *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, EPA OSWER Directive 9355.3-01 (EPA 1998)

These and other guidance documents are available at:

<http://www.epa.gov/superfund/policy/remedy/index.htm>

Copies are also available from the EPA upon request.

## Preferred Alternative

EPA, in consultation with DEQ and the USFS, proposes the following preferred alternative. This section presents the rationale used in selecting the repository locations and the recommended approach for developing the repositories. The preferred alternative includes a phased approach to development. The preferred remedial alternative does not preclude the future use of a repository screened out in the initial screening.

The agencies have decided that both Alternative 4 (Mackay Gulch) and Alternative 5 (the Silver Dyke Glory Hole) are preferred locations for repositories at the CSCMD site. The selection of an on-site repository satisfies the mine waste disposal recommendation in the Neihart OU1 ROD.



*Photo 4: Boiler located at the Compromise Mine just north of the town of Neihart*

The Preferred Alternative achieves substantial risk reduction and is feasible, implementable, and cost effective. It can be implemented in a near term time frame, and at substantially less cost than the off-site disposal option. It does not satisfy the statutory preference for treatment as a principal element of the remedy, unless treatment of wastes is part of the remedial decisions for OU2 and OU3. EPA will need to resolve access issues prior to use of the locations as repositories.

## Phased Approach

Since it is the easiest to implement, the Mackay Gulch repository will be developed first to meet the timeline requirements for the ongoing Silver Dyke tailings impoundment site removal and the town of Neihart OU1 remedial action. While waste is being placed in the Mackay Gulch Repository, the Silver Dyke Glory Hole Repository will be developed to begin accepting waste when the Mackay Gulch repository is full. The rationale behind this decision is that the estimated 1.2 million cubic yards of mine waste at the CSCMD site will eventually require both repositories. These two repositories have the capacity to hold the majority of the mine waste from the CSCMD site. The development of Mackay Gulch will also produce cover soil and topsoil for the Silver Dyke Glory Hole Repository. This phased approach for constructing two repositories will meet the short-term and long-term needs of the CSCMD site and is implementable.

## Community Involvement

EPA, DEQ and the USFS provide information regarding this action and the CSCMD site through public meetings, the Administrative Record file for this action and administrative record files for the ongoing removal and three OUs, and announcements in local newspapers. EPA, DEQ and the USFS encourage the public to gain a more comprehensive understanding of the CSCMD Site and the Superfund activities that have been or are being conducted at the site.

EPA, DEQ and the USFS will accept written or oral comments on this Proposed Plan.

## Written Comments

Send written comments to:

**Carpenter Snow Creek Repository Selection Comments**  
**Roger Hoogerheide**  
**U.S. EPA Region 8 (8MO)**  
**10 W. 15th St.; Suite 3200**  
**Helena, MT 59626**

Email comments to:

[Hoogerheide.Roger@epa.gov](mailto:Hoogerheide.Roger@epa.gov)

You may also comment in-person on the record at the public meetings listed below.

## Public Meetings

The EPA will hold a public meeting on August 7, 2014, from 6:30 to 8:30 p.m. at the Community Center in Neihart, Montana.

This will be an opportunity to provide written or oral comments.

## Who to Contact with Questions or Concerns

### U.S. Environmental Protection Agency

Roger Hoogerheide, Remedial Project Manager  
406-457-5031  
[hoogerheide.roger@epa.gov](mailto:hoogerheide.roger@epa.gov)

### Montana Department of Environmental Quality

Keith Large, State Project Officer  
(406) 841-5039  
[klarge@mt.gov](mailto:klarge@mt.gov)

## Public Comment Period

EPA will accept written comments on this Proposed Plan for 30 days beginning on July 30, 2014, and ending on August 29, 2014. EPA will make its final decision on the cleanup only after considering public comments. At the end of the comment period, EPA will include a responsiveness summary addressing the comments in the ROD. EPA will place all written comments and the Responsiveness Summary in EPA's Administrative Record for this action at the Carpenter Snow Creek Site.

## Documents

The Administrative Record for this action at the CSCMD site contains the documents that have been used to make decisions on siting a secure disposal location for the CSCMD Site. There is also an administrative record for the OU1 remedial decision. Administrative records for the other OUs are in development. The administrative records can be reviewed at:

**EPA Records Center**  
10 West 15th Street, Suite 3200  
Helena, MT 59626

Phone: [\(406\) 457-5046](tel:(406)457-5046)  
Monday through Friday

**Information Repositories**  
Great Falls Public Library  
301 2nd Ave North  
Great Falls, MT 59401

Monarch/Neihart Community Center  
Neihart, MT 59463