

**Site -Specific Justification for the Partial Deletion**  
**from the National Priorities List of Operable Unit 3 (OU3), North Property**  
**Redevelopment,**  
**of the Eagle Mine Superfund Site**

**I. Purpose**

The U.S. Environmental Protection Agency (EPA) Region 8 is proposing the partial deletion of a portion of the surface soils and subsurface soils of Operable Unit 3 (OU3), North Property Redevelopment, of the Eagle Mine Superfund Site (Site) from the National Priorities List (NPL). This document provides justification for the deletion of this portion of the Site from the NPL, which EPA terms a partial deletion. The OU3 partial deletion consists of approximately 5.31 acres of soils in the OU3 North Property Redevelopment: Trestle Area. The OUs that remain on the NPL are the remainder of OU3 and OU1. Fifty acres of soils in the Town of Gilman (OU2) were deleted on September 14, 2021 (86 FR 51010). All response activities at the OU3 Trestle Area are complete, and the Trestle Area poses no unacceptable risk to human health or the environment under the current land use. Therefore, the EPA, with the support of the Colorado Department of Public Health and Environment (CDPHE) have determined that no further response is necessary at the OU3 Trestle Area of the Site.

The EPA requested concurrence from CDPHE to partially delete the OU3 North Property Redevelopment: Trestle Area from the NPL in an email dated October 25, 2022. CDPHE issued a concurrence letter on January 9, 2023.

A Notice of Intent to Partially Delete (NOIPD) is expected to be published in the *Federal Register* in the near future. The publication of the NOIPD will open the 30-day public comment period for the partial deletion. The document provides justification for the partial deletion. The entire Site, including deleted areas of OU2, areas proposed for deletion of OU3, and areas of OU1 and OU3 remaining on the NPL will continue to require Five-Year Reviews. Operation and maintenance will be required for all Site areas except the Trestle Area of OU3 proposed for deletion.

Partial deletion of an OU from the NPL does not itself create, alter, or revoke any individual's rights or obligations. Partial deletion of an OU from the NPL also does not in any way alter the EPA's right to take enforcement actions as appropriate. The NPL is designed primarily for informational purposes and to assist the EPA management. Section 300.425(e)(3) of the National Contingency Plan (NCP) states that deletion of releases from the NPL does not preclude eligibility for future response actions, should future conditions warrant such actions. In a November 1, 1995, Notice of Policy Change: Partial Deletion of Sites Listed on the National Priorities List, published in the *Federal Register* (60 FR 55466), the EPA further clarified its deletion policy to include the partial deletion of sites.

**II. Determination that the Site Meets the Criteria for Deletion**

The implemented remedies achieve the degree of cleanup or protection specified in the 2017 OU3 ROD.

All selected removal and remedial action objectives and associated cleanup goals for OU3 are consistent with agency policy and guidance. The proposed partial deletion meets the completion

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requirements as specified in the Office of Land and Emergency Management (OLEM) Directive 9320.2-23 Close Out Procedures for National Priorities List Sites.

All response activities at the OU3 Trestle Subarea are complete and the OU3 Trestle Subarea poses no unacceptable risk to human health or the environment. The EPA has consulted with CDPHE on the proposed partial deletion of this portion of OU3 of the Eagle Mine Superfund Site from the NPL. The remedy will be evaluated in the next Five-Year Review.

### **III. Community Involvement**

Public participation activities have been satisfied as required in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 113(k), 42 U.S.C. 9613(k) and CERCLA Section 117, 42 U.S.C. 9617. During the development and implementation of the remedy for this operable unit, comment periods were offered for the proposed plan and five-year reviews. Additionally, the EPA conducted other public meetings. The documents that the EPA relied on for the partial deletion of the OU3 Trestle Subarea from the Site are in the docket and are available to the public in the information repositories. Publicly available docket materials are available electronically in <http://www.regulations.gov> under Docket ID no. EPA-HQ-OLEM-2022-0966 or by calling EPA Region 8 at (303) 312-7279 and leaving a message. A notice of availability of the Notice of Intent for Partial Deletion will be published in the Vail Daily to satisfy public participation procedures required by 40 CFR 300.425 (e) (4).

The docket can be found at [www.regulations.gov](http://www.regulations.gov) under Docket ID no. EPA-DQ-OLEM-2022-0966.

CDPHE is supportive of the partial deletion of the Trestle Area of OU3. CDPHE signed a letter of concurrence on January 9, 2023.

### **IV. Site Background and History**

The 500-acre Eagle Mine Superfund Site (CERCLIS ID: COD081961518) is in the Rocky Mountains approximately 8,000 feet above sea level, one-mile south of the town of Minturn in Eagle County, Colorado. The Eagle River and a number of its tributaries flow through the Site, which is an area impacted by heavy metal contamination from past mining activities. The Site includes an estimated 70 miles of underground mine tunnels; underground mill workings; the abandoned company town of Gilman; and various mine waste features such as former roaster pile areas; waste rock piles; tailings piles; a tailings slurry line and trestle, and the Belden Mill and load out area. Contaminants include arsenic, cadmium, copper, lead, and zinc in the soils, structures, surface water, sediments, and groundwater across the Site.

Miners began mining for gold and silver in the Battle Mountain area between the towns of Minturn and Red Cliff in the late 1870s. In 1912, the Empire Zinc Company began consolidating individual mining claims into what is now known as the Eagle Mine. In 1929, miners constructed a mill underground within the mine workings and slurried the tailings through a pipeline/trestle

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system to a location downstream known as the Old Tailings Pile. In the mid-1940s, the Old Tailings Pile reached capacity. Tailings were then deposited across the Eagle River from the Old Tailings Pile in an area known as Rex Flats. In 1942, they extended the pipeline to a location near Cross Creek using an elevated wooden trestle to cross Rex Flats, and the New Tailings Pile (now known as the Consolidated Tailings Pile) was constructed. The New Tailings Pile also included a water retention pond known as the Historic Pond. Tailings were again deposited in Rex Flats in the mid-1950s to cover the vegetation and mitigate fire hazards to the elevated trestle during the dry season.

In December 1977, the previous owner of the mine Site, Gulf + Western Industries, Inc., closed the mill, and most mining activities ceased. Some copper and silver production continued until the mine workings were allowed to flood when the mine closed in 1984. Remaining workers vacated the company town of Gilman immediately after the mine closed. Portions of the site were bought and sold numerous times in the years that followed.

The Site was proposed to the NPL on October 15, 1984 (49 FR 40320) and became final on the NPL on June 10, 1986 (51 FR 21054). The background and history, the Remedial Investigations and Feasibility Studies (RI/FS), Removal and Response Actions, Selected Remedies, Cleanup Standards, and Operation and Maintenance activities for OU3 are discussed below.

### **OU3 Background and History**

A map of OU3 is attached and can also be found in the docket at [www.regulations.gov](http://www.regulations.gov) under Docket ID no. EPA-HQ-SFUND-1986-0005. Eagle Mine OU3 is owned in whole by a development company, Battle North, LLC. OU3 is approximately 116 acres, according to a survey performed by the property owner. OU3 was established to evaluate potential human health risks at the Site from residual contamination in the soils in the areas of the Old Tailings Pile (OTP), Rex Flats, Maloit Park, and the Trestle Area. The Trestle Area represents approximately 5.31 acres within OU3.

In 2017, the OU1 Record of Decision (ROD) Amendment redefined the operable units at the Site. OU1 is media-based, focusing on protecting surface water at the Site by reducing metals loading to the Eagle River. OU2 is geographically based to focus on evaluating potential human health risks in the historic town of Gilman. OU3 is media-based and focuses on protection of human health for residential use through reduction of exposures to surface soil. Geographically, OU1 and OU3 overlap except for the area of Belden, which is OU1 only. Historical background information indicates that the nearby Bolts Lake area did not receive mine tailings from the Eagle Mine operations.

### **OU3 Remedial Investigations and Feasibility Study (RI/FS)**

Risks at OU3 were originally investigated in the 2006 Remedial Investigation (RI) Report conducted for OU1 and further investigated in the 2011 Remedial Investigation Report Addendum of OU1 focusing on the “North Property” now known as OU3. The RI Addendum

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further investigated surface water samples, seep/pond water surveying, surface and subsurface soils, along with installing additional groundwater monitoring wells. Risks evaluated included exposure to metals in soils which exceed residential human health remedial goals to allow for unrestricted human use of the property. Soil analyses resulted in exceedances of arsenic and manganese. Cadmium, chromium, copper, lead, and zinc did not exceed remedial goals as they were addressed in the OU1 cleanup. Ecological risks were not evaluated for OU3 as it focuses on the soil exposure pathway to human receptors under residential use. Ecological risk is also addressed under OU1.

In 2007, an initial Feasibility Study (FS) identified areas of contamination that exceeded unlimited use for human health and the environment. The FS identified a remedy containing a “cap and cover” component. In 2013, an updated FS for OU3 was published that was not reliant on waste isolation or containment. The FS was finalized by the EPA and CDPHE January 2016. The Proposed Plan was published in June 2017.

**OU3 Response Actions**

Cleanup actions began by Gulf & Western in 1988 with oversight from the State of Colorado. Cleanup included removal, redistribution and capping of tailings and waste materials, and runoff controls to reduce the transport of contaminants by stormwater. Approximately 1 million cubic yards of roaster material and tailings from Old Tailings Pile, Rex Flats, and Maloit Park was relocated to Consolidated Tailings Pile and contained beneath an engineered cover. The EPA and a bona fide prospective purchaser (BFPP), Battle North, LLC, entered an Administrative Settlement Agreement and Order on Consent (ASAOC) for Response Action and Release and Waiver of CERCLA for OU3 in July 2018. In November 2020, a Restrictive Notice was placed on the Trestle Area and groundwater contamination area placing land-use restrictions and groundwater-use restrictions within the contaminated groundwater area. In March 2021, the BFPP conducted a response action and obtained a “Certificate of Work Completion” from the EPA and CDPHE for the Trestle Area, pursuant to procedures laid out in the OU3 ASAOC on September 30, 2021. A Subarea Response Action Completion Report was issued December 2021. As a result, CDPHE plans to lift the Restrictive Notice from the land use restriction on Trestle Area in the near future.

**OU3 Selected Remedy**

The EPA issued the OU3 ROD on September 28, 2017. The selected remedy in the OU3 ROD was media-based and focused on surface soil remediation to protect human health. OU3 was carved out of OU1 due to interest in developing the area into a residential community. The OU3 ROD identified two Remedial Action Objectives (RAO): 1) to prevent exposure to contaminants in surface soils within OU3 above levels that are acceptable for current and future land use and 2) to avoid or minimize adverse impacts to the existing engineered remedial features within OU3. The Proposed Plan initially identified Alternative 4 – Soil Exposure Barrier, Grading and Institutional Controls and Alternative 5 – Demolition and Containment/Disposal of Structures for the Former Tailings Slurry Pipeline as the preferred alternatives. During the public comment period, the EPA and CDPHE received a suggestion to also include the Alternative 3 - excavation

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and containment/disposal. As a result of public comment, the EPA ultimately combined Alternatives 3, 4, and 5 to create the Selected Remedy in the OU3 ROD.

The Selected Remedy allowed for future residential use of OU3 through a combination of remedial activities including: 1) Excavation of up to 8,500 cubic yards of non-principal threat waste materials exhibiting concentrations of contaminants of concern above the cleanup levels (Table 1) to a maximum depth of three feet; 2) Containment/disposal of the excavated materials in an approved solid waste disposal facility; 3) Installation of a soil exposure barrier three feet thick over 48 acres of either excavated or non-excavated areas; 4) Grading 70 acres across OU3 including the reconstruction of diversion ditches to reduce the flow of surface water runoff into the Old Tailings Pile and other areas; 5) Demolition of up to 1,000 linear feet of pipe and 150 cubic yards of the Former Tailings Slurry Pipeline; 6) Containment/disposal of the demolition waste in an approved solid waste disposal facility; and 7) Implementation of Institutional Controls.

Institutional Controls for OU3 include 1) Unapproved/unmanaged excavation greater than three feet below ground surface is prohibited; 2) Approved excavations deeper than the three foot barrier will be performed pursuant to a CDPHE-approved Materials Management Plan; and 3) Any action that may damage or interfere with the proper operations or maintenance of any engineered component of the OU1 remedy within OU3, including Mine Water Transport Pipeline, trestle, Consolidated Tailings Pile cover, surge ponds, water treatment plant, access road, collection systems, vaults, manholes, monitor wells, sumps and underground groundwater collection system, is prohibited. Because the Selected Remedy will leave waste-in-place at depth, OU3 is part of the on-going Five-Year Review process for the Site. Institutional Controls will be implemented and enforced by CDPHE with the support of the EPA.

Contaminant of Concern	Soil Cleanup Level (mg/kg)
Arsenic	40
Cadmium	37
Chromium	210
Copper	3,100
Lead	400
Manganese	1,800
Zinc	23,000

Table 1. OU3 ROD Cleanup Goals

**V. Monitoring Results and Attainment of Clean-up Criteria – (OU3 Cleanup Standards)**

Delineation of OU3 areas warranting cleanup was conducted in June and July of 2021. Contaminated soils totaling a volume of 43 cubic yards were deemed necessary for excavation in the Trestle Area. Upon completion, a total volume of 52 cubic yards of contaminated soil, driven primarily by arsenic, was removed. Totality of soils excavated in OU3 was 486 cubic yards. Areas where soil excavation was not feasible (CTPSS-212) were included in the Consolidated

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Tailings Pile Restrictive Notice and capped instead of excavated. Areas that were capped are not subject to the partial delisting of OU3. Response Actions were inspected following Site restoration activities and deemed complete on September 30, 2021. RAOs of removing soils with arsenic concentration above the residential remedial goal in the Trestle Area have been met and Institutional Controls are no longer needed for soil in the Trestle Area as all other OU3 contaminants of concern were addressed in the initial cleanup of OU1. Groundwater restriction in the Trestle Area will be incorporated into the Groundwater Contamination Area Restrictive Notice.

**VI. Demonstration of Cleanup Activity Quality Assurance/Quality Control**

All quality assurance, quality control and other technical activities and chain of custody procedures for all samples were consistent with *EPA Requirements for Quality Assurance Project Plans* EPA May 2006, *Guidance for Quality Assurance Project Plans* EPA December 2002, and *Uniform Federal Policy for Quality Assurance Project Plans* EPA March 2005.

Field data was verified by the Partner's, Battle North, LLC's contractor, Quality Assurance Manager by reviewing field documentation on chain-of-custody records. Data read directly from X-ray Fluorescence (XRF) field instruments analyzing arsenic were verified internally by reviewing calibration and operating records. Laboratory analyses were verified by review of documenting sample receipt, sample preparation, sample analysis, data reduction, and reporting. Thirty-three XRF analyzed soil samples were sent to the laboratory for confirmation. Data was validated following the QAPP and identified acceptable based upon precision, accuracy/bias, representativeness, completeness, comparability and sensitivity. All objects of the QAPP were met for laboratory analyses as verified in the Subarea Response Action Completion Report.

**VII. Summary of Operation and Maintenance Required – (OU3 Operation and Maintenance)**

Operation and maintenance is not required for the proposed partial deletion of the Trestle Area. Soils have met residential remedial goals. CDPHE conducts an annual spring inspection at the Site and issues an inspection report with detailed recommendations for maintenance and improvement of the remedy and to ensure all restrictive notices are in compliance.

**Five-Year Review**

The remedy at the Site, including all operable units, requires ongoing five-year reviews in accordance with CERCLA Section 121(c) and Section 300.430(f)(4)(ii) of the NCP. The fifth statutory five-year review dated September 18, 2018, was conducted for OU1, OU2 and OU3 for the Site. At the time of the fifth statutory five-year review, the OU3 selected remedy had not yet been implemented. Therefore, there were no recommendations or issues for OU3. OU3 will be evaluated in the Five-Year Review conducted in 2023. Pursuant to CERCLA Section 121(c) and the NCP, the EPA will conduct the next five-year review by September 18, 2023, to ensure the continued protectiveness of remedial actions where hazardous substances, pollutants, or

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contaminants remain at the Site and in other portions of OU3 not deleted from the NPL above levels that allow for unlimited use and unrestricted exposure.

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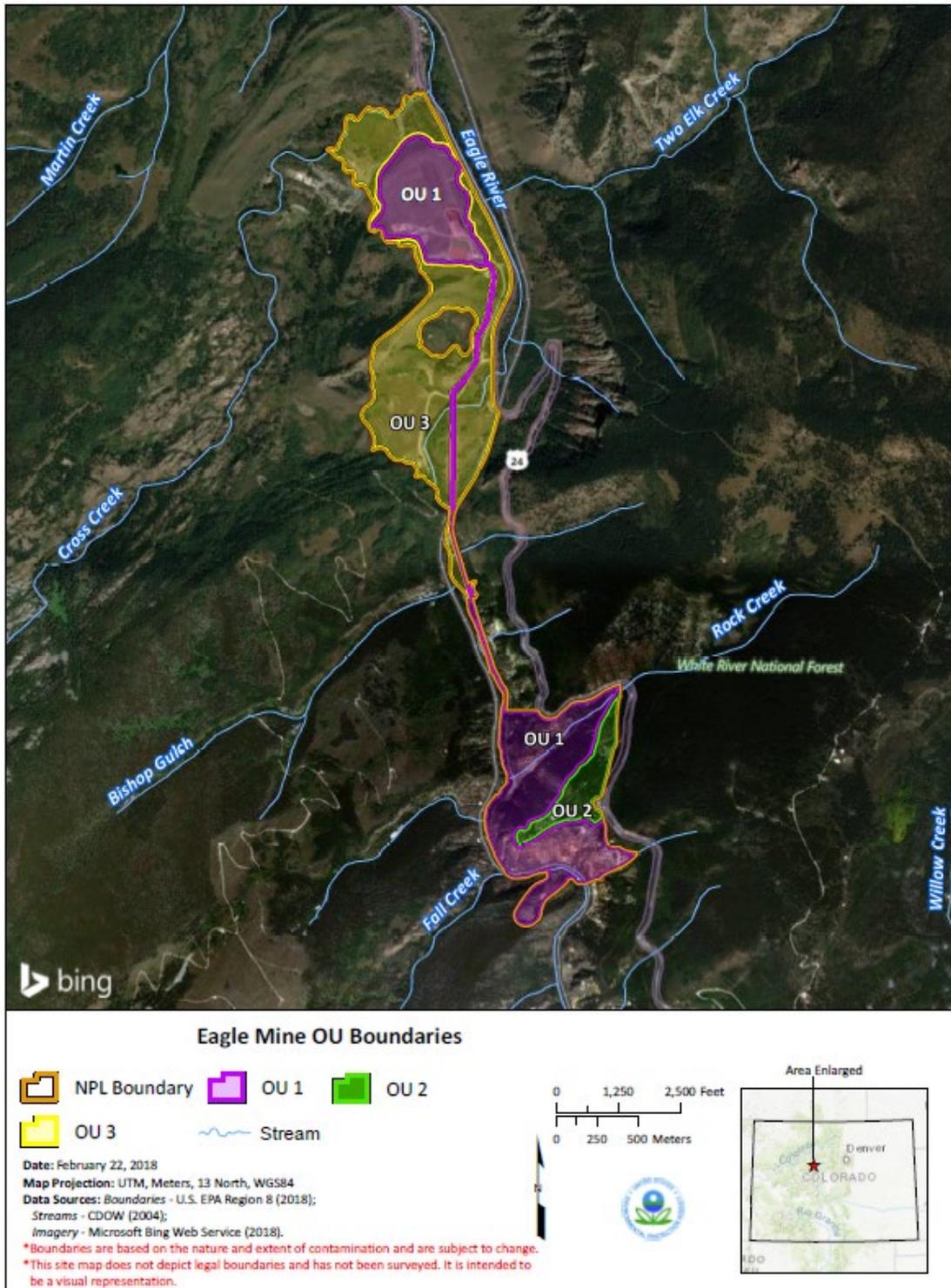


Figure 1. Eagle Mine Superfund Site Boundary

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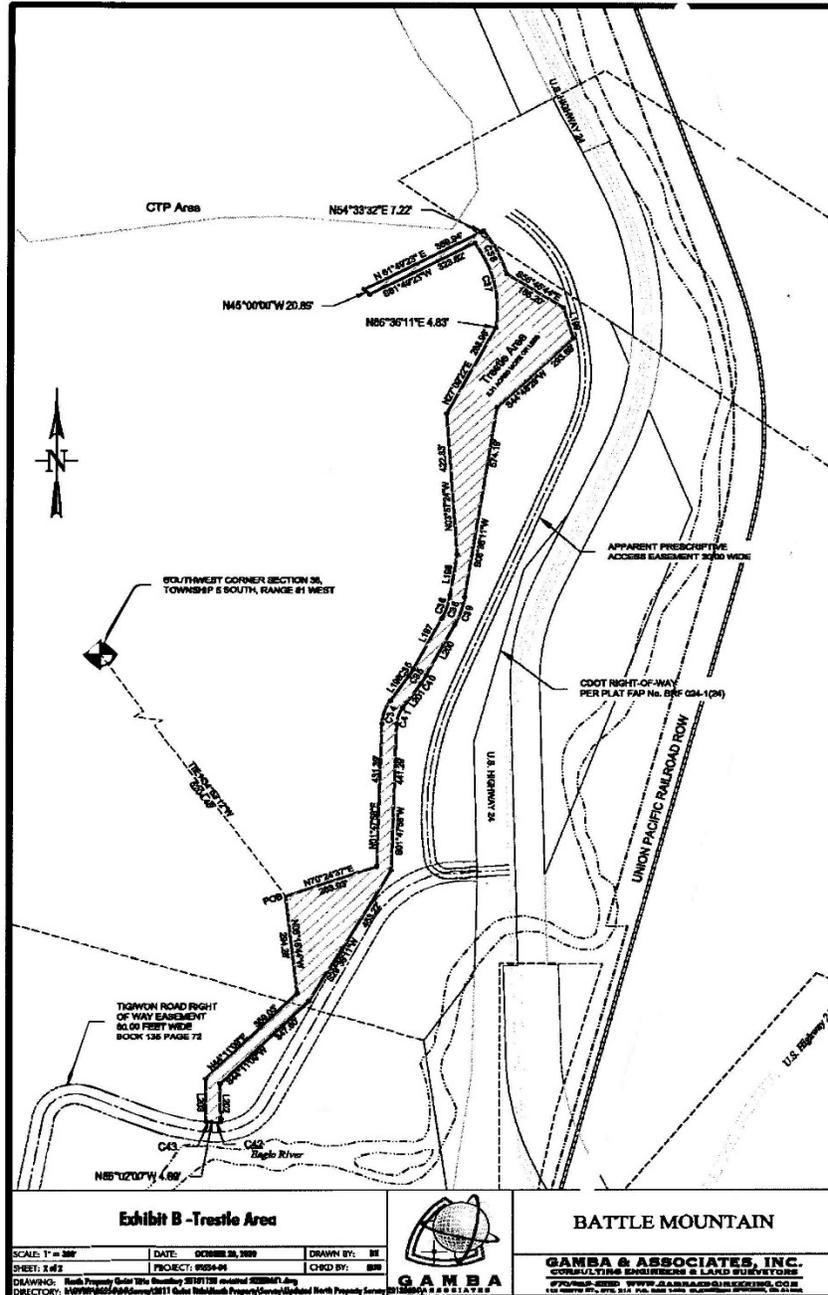


Figure 2. Trestle Subarea Proposed for Deletion