

HEALING TRIBAL LANDS

# The Impact of the Bipartisan Infrastructure Law On Mine Reclamation

ASRS CONFERENCE 2025 BUTTE, MT

PRESENTED BY: HEATHER BRIGHTON, SENIOR CONSULTANT

Sustainability is our business

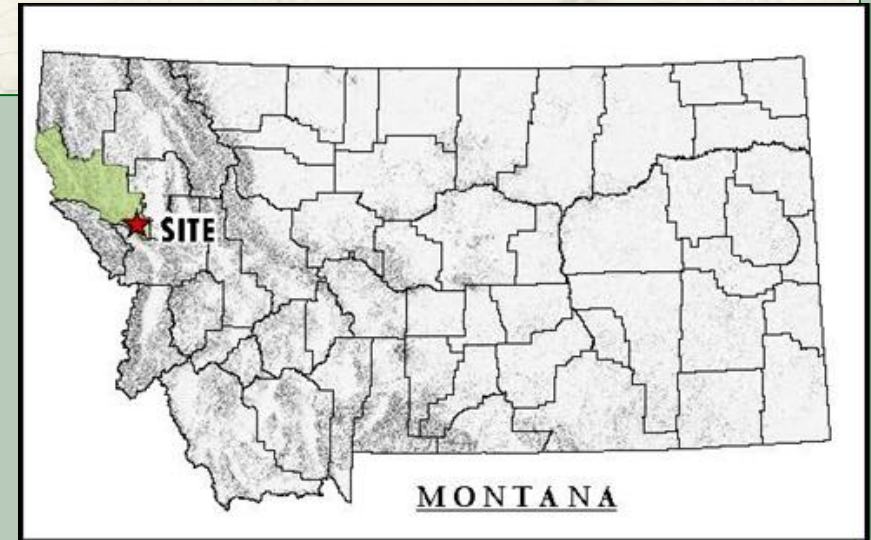
© Copyright 2025 by The ERM International Group Limited and/or its affiliates ("ERM"). All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, without prior written permission of ERM.



# Location

## Project Site

- 6.5 miles northwest of Dixon in Sanders County, MT.
- On Confederated Salish and Kootenai Tribal (CSKT) Trust lands
- Managed by CSKT Natural Resources Department Brownfields Response Program



# Background



# Mine History

## HAULING ORE FROM MINES TO DIXON

WILLIAM DRAKE DOING WELL  
WITH PROPERTY TURNED  
BACK TO HIM.

Dixon, Oct. 10.—(Special.)—William Drake, the owner of the Dixon group of mines, has two four-horse teams hauling ore from the mines on Reveis creek to Dixon.

This is copper ore giving values of \$40 per ton in copper and about \$10 in gold.

Mr. Drake is developing this property by himself and has turned the property back to him.

Ellings of the Dixon group of mines has the option on it.

It is gratifying to see that a man's labor and time has produced plenty of ore. This time the

“William Drake, the owner of the Dixon group of mines, has two four-horse teams hauling ore from the mines on Reveis creek to Dixon.”  
- The Missoula Sentinel  
10/10/1911

## GOOD ORE STRIKE IN SANDERS COUNTY

Copper, Gold and Silver Values  
In a Promising Vein  
Near Reveis  
Creek.

Plains, Aug. 10.—Indications are that there is going to be something doing on the Reveis creek, 30 miles from here as the crow flies. A short while ago a good strike was made on the east side of the creek by William Drake, and now comes the report of an equally rich find on the west. Concerning it the Dixon Herald says: “Returns from assays show that the ore recently discovered by John Drake and O. P. Morgan on the west side of Reveis creek, about five miles southwest of Dixon, carries \$9.00 in copper, 50 cents in silver and 40 cents gold. While this does not, at first thought, appear to be a rich strike, it is really one of the best in the country, considering that the

“Indications are that there is going to be something doing on the Reveis creek, 30 miles from here as the crow flies.”  
- The Butte Miner  
08/11/1913

- The Drake brothers discovered ore strikes on both the east and west sides of Reveis creek in 1910.
- Mined ores consisted of copper, silver, and gold, platinum and palladium.
- Ore was initially hauled out by horse teams to Dixon, then hauled by train to Anaconda.

# Mine History

## Drake Mine Camp at Dixon



The Drake Mine at Dixon, Mont., is shown above. The construction of a 50-ton concentration plant is now underway. Copper, platinum, gold, silver, palladium and irridium are mined.

Construction of the 50-ton concentration plant has been started by the Green Mountain Mining Co., operators of the Drake mine at Dixon, it was stated this week by R. A. McDonell, chief construction engineer of the mill.

Ore is being taken from the mine which contains copper, platinum, gold, silver, palladium and Irriidium. The mine contains the largest platinum deposit in the United States, it was further stated.

The mill will employ a mineral separation jug, unit floatation and bulk floatation to take care of the copper deposits and other minerals.

Each month two carloads of high grade sorted ore is being shipped to the Washoe Sampler at Butte. As a result of arrangements with the Anaconda Copper Hining company, payments are ne

in the ore at This increase smelter from it was said.

Mart Sullio of the conce the managin fourteen mer

“The construction of a 50-ton concentration plant is now underway.”

The Flathead Courier  
07/18/1940

- In 1941, a fifty-ton mill was installed on the property below the mine adits and a concentration plant was utilized to further separate the ore.
- Tailings were deposited below the mill and across Revais Creek.
- The separated, high-grade ore was shipped by train to the Washoe Sampler in Butte.
- Overall output yielded 1,277 ounces of gold, 5,752 ounces of silver and 1,392,791 ounces of copper (DEQ,2016).
- Mine operated intermittently until it idled in 1954 (DEQ, 2016).

# Residual Impacts



# Site Investigation

## EPA Preliminary Assessment

### 1989 Assessment Concerns:

- Documented to have **uncontained tailings** materials.
- Site **access is unrestricted**
- These piles **may contain residual heavy metals**
- If heap leaching was done onsite, there is a **potential for cyanide contamination.**
- Area ground water, surface water, air and onsite **exposure pathways may all be impacted by this site.**

(EPA,1989)



# Site Investigation

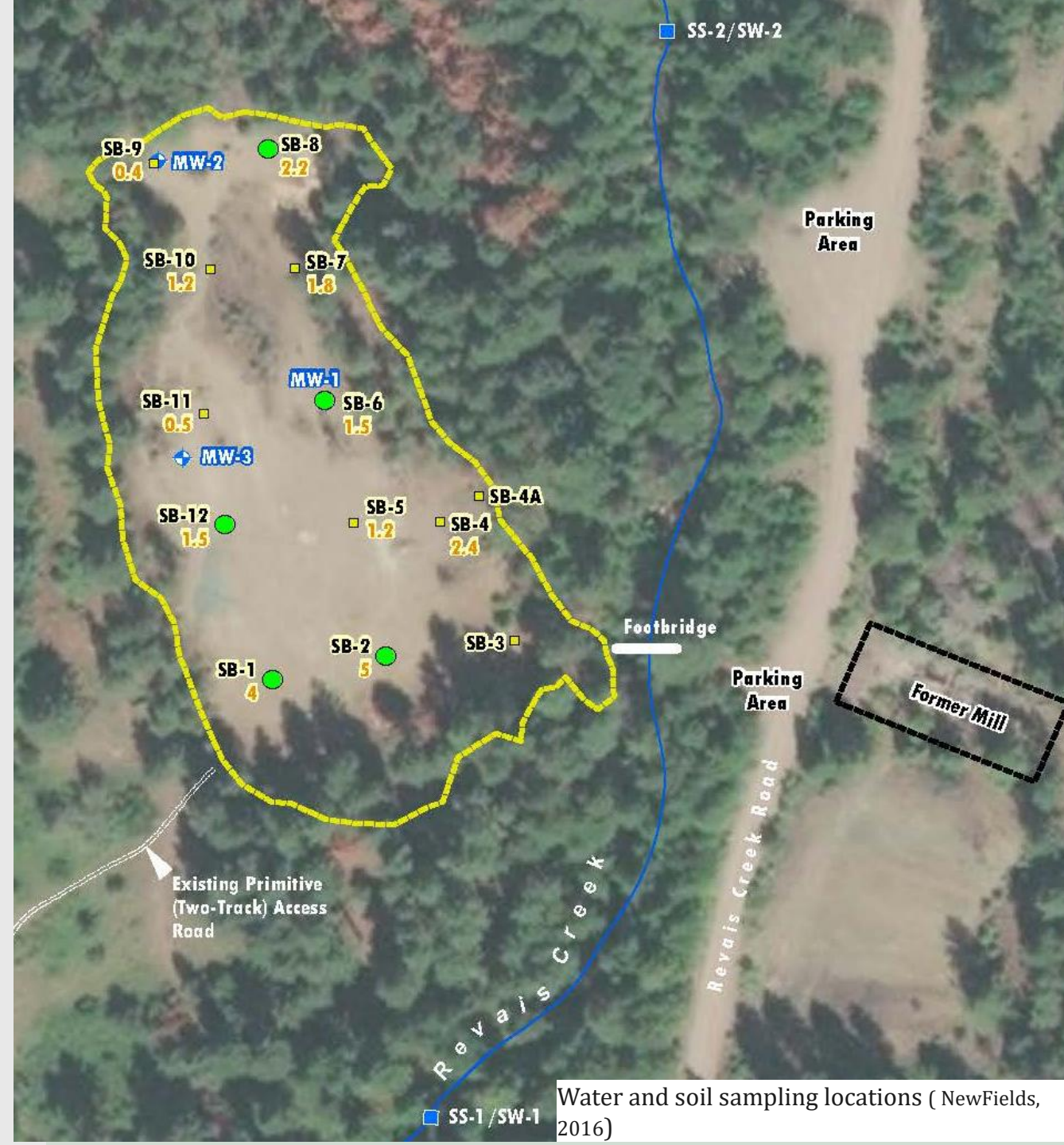
## Phase I and II Investigations

- 12 Soil Bore Samples
- 3 Groundwater Monitoring Wells
- 2 Surface Water Samples

### Results

“The results indicate that arsenic, copper, iron, and silver exceed the Ecotoxicity Screening Levels that are applicable to material eroding as sediment from the tailings area into the adjacent creek.” (NewFields, 2016).

“Several sample results for arsenic also exceeded the recreational screening level for direct contact with soils.” (NewFields, 2016).



# Need for Reclamation

- A 30 foot long retaining wall constructed with river rock and wood pilings had eroded away allowing tailings material to migrate back towards Revais Creek.
- Locals had built campfire rings and a paintball course on the milled tailings pile
- Tailings are located in the 100-year floodplain
- Revais creek is one of the only streams on the Reservation with pure strains of westslope cutthroat trout.



# Cleanup Planning



# Remediation Alternatives



## In-Situ

**Remediation of contaminated soils on site. Cap 1 acre of tailings with imported soil and seed with native seed.**

## Partial Remediation

**Partial tailings excavation and transport to on reservation repository.**

## Full Remediation

**Full removal to repository off reservation  
Restore floodplain and fence.**

# Journey to Reclamation

## A Timeline of Planning and Funding Activities



EPA preliminary assessment



Phase I and II investigations.

Siting study for potential repository on Reservation



CSKT receives DNRC grant award.

CSKT stakeholders require off-Reservation tailings removal.

**\*\*Not enough funding for this alternative.\*\***

# Bipartisan Infrastructure Law \$1.2 Trillion

On November 15, 2021  
Biden signed the Bipartisan  
Infrastructure Law (BIL), which  
authorizes 1.2 trillion for  
transportation and infrastructure.

\$60 Billion for Tribal Nations

EPA works with States and Tribes to  
allocate funding through grants.

\$60 Million Section 128(a)  
Tribal Response  
Program

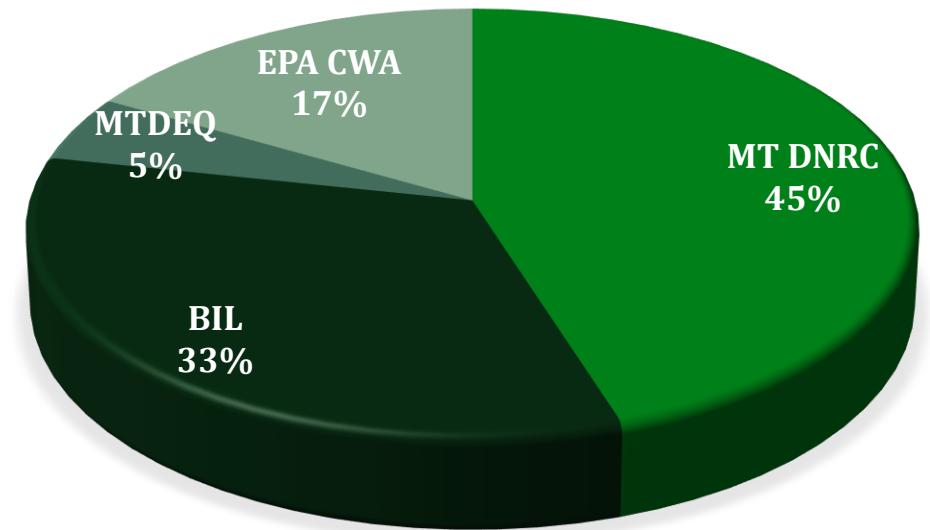
CERCLA Section 128(a) authorizes EPA to  
award a grant to a State or Indian Tribe that  
has a response program.

# Funding Remediation

## Funding Sources

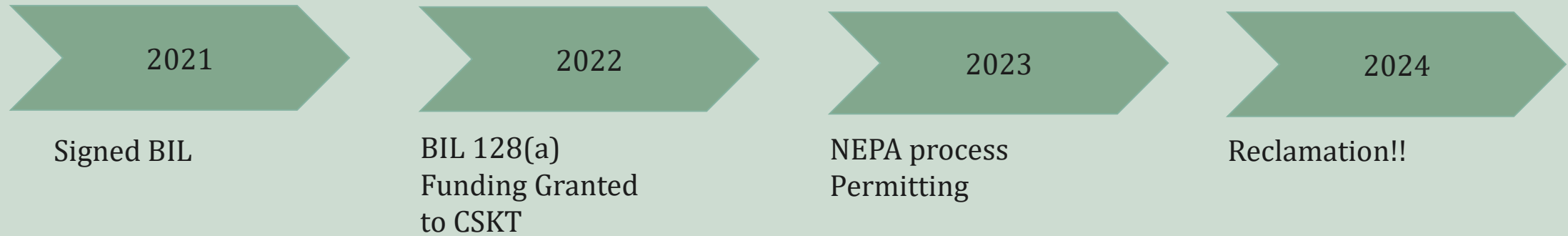
- Montana Department of Natural Resources and Conservation: Reclamation and Development Grant
- Bipartisan Infrastructure Law through 128(a)
- Environmental Protection Agency Clean Water Act Funding
- Montana Department of Environmental Quality

## Funding Distribution



# Journey to Reclamation

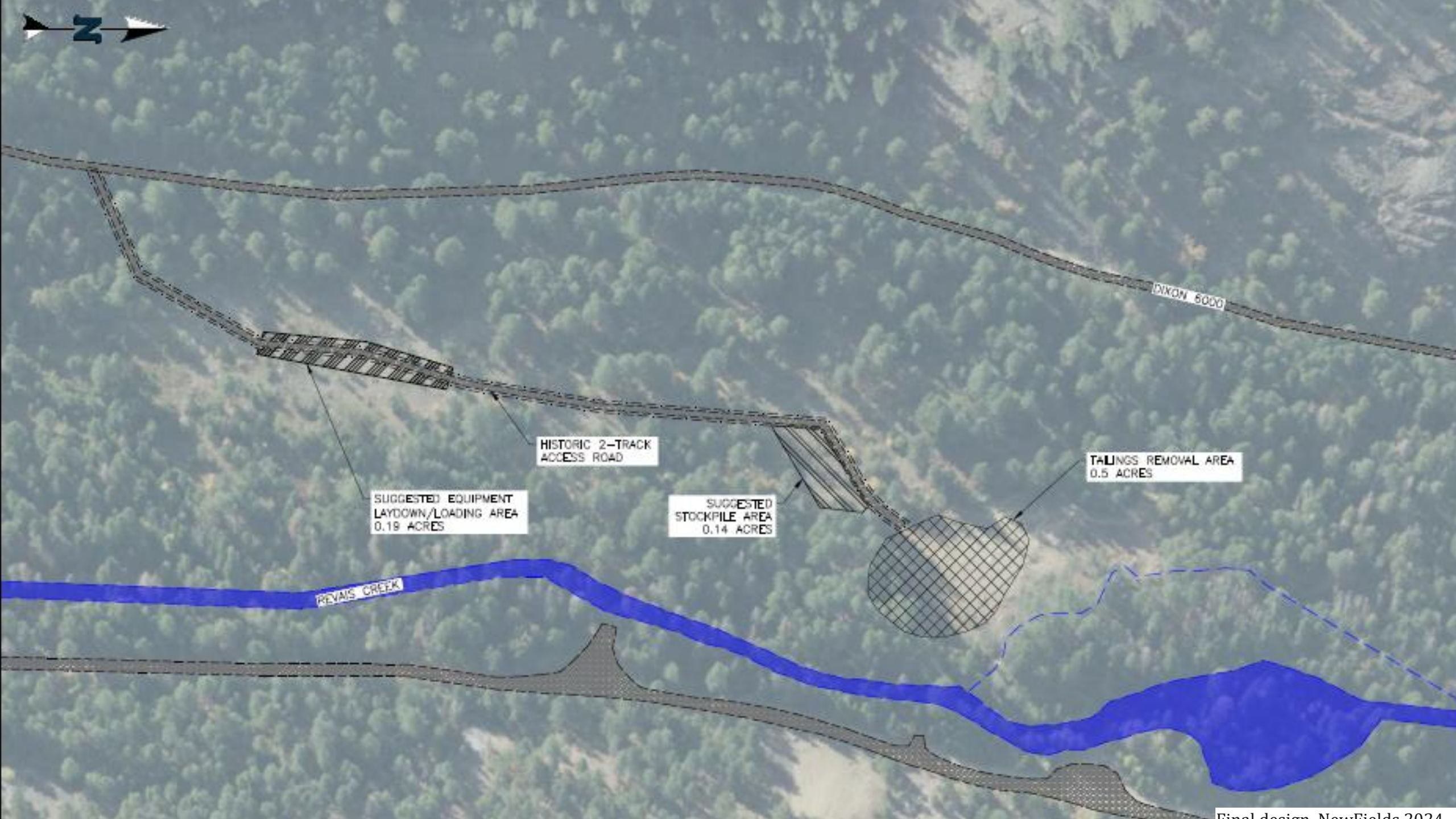
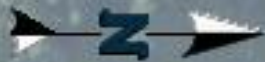
## Planning and Funding Timeline



# Reclamation



Deepest point of tailings (57 inches) 8/8/2024



SUGGESTED EQUIPMENT  
LAYDOWN/LOADING AREA  
0.19 ACRES

HISTORIC 2-TRACK  
ACCESS ROAD

SUGGESTED  
STOCKPILE AREA  
0.14 ACRES

TAILINGS REMOVAL AREA  
0.5 ACRES

REVAIS CREEK

DIXON 6000

# Excavate and Haul

August 5 – August 16, 2024

- Excavated and hauled 3,400 tons of tailings to the Republic Waste Landfill in Missoula
- Haul route 50 miles one way
- 116 truck loads , average weight: 30 tons
- The deepest tailings section was 57 in.



Removed tailings in contrast to adjacent forest 8/7/2024



Excavating tailings 8/7/2024



Drone flight: 10/07/23



Drone flight: 8/16/24

# Re-Grade and Restore

August 13 – September 13, 2024

- Graded to form a natural drainage that blended with the floodplain and uphill adjacent forest.
- Topsoil was imported and spread over the newly graded area up to 6 inches thick.
- Floodplain roughened up creating micro-swales
- Wood debris and boulders scattered over floodplain
- Area tracked by excavator then hydroseeded with native seed
- Wildlife-friendly fence installed surrounding entire project area to protect restored area from livestock



Topsoil spread over regraded floodplain 8/13/2024



Final treatment with rock, woody debris and, hydroseed 9/13/2024

# Next Steps



# Monitoring

## Data collection and analysis

Purpose: To evaluate the efficacy of the project and its aim to reduce the contribution of fine tailings sediment into Revais Creek.

| Activity             | Campaign 1 | Campaign 2 | Campaign 3 |
|----------------------|------------|------------|------------|
| Vegetation Transects | 7/22/24    | 7/19/25    | 7/18/26    |
| Photo Points         | 7/22/24    | 7/19/25    | 7/18/26    |
| BEHI                 | _____      | 7/19/25    | 7/18/26    |
| Fence Inspection     |            | 7/19/25    | 7/18/26    |
| Final Report         |            |            | 12/23/26   |

## Revais Creek Tailings Reclamation Project Monitoring Plan

Montana Department of Environmental Quality Contract No: 225021



**Project Sponsor:**

Mary Rose Morigeau  
Confederated Salish Kootenai Tribe, Tribal Response Program Manager  
301 Main Street, Polson, Montana 59860  
Tel: 406-883-2888  
Email: Maryrose.morigeau@cstk.org

**Grant Manager:**

Meagan Gilmore, Grant Manager  
Water Quality Planning Bureau  
Montana Department of Environmental Quality  
1520 E 6<sup>th</sup> Ave,  
Helena, MT, 59601

February 2025  
Project 150.3572.014

# Thank you

For more information, contact  
[hbrighton@ermnewfields.com](mailto:hbrighton@ermnewfields.com)

