

Site Update Illinois Gulch



Operational Period

July 19-23, 2021

Current Situation

The Illinois Gulch Site is an area of historic mining activity along Boreas Pass Road in Breckenridge, Colorado. The Site includes two collapsed mine adits referenced herein as the Willard No. 1 and Willard No. 2, the Willard waste rock pile, the Cally waste rock pile, the Puzzle Extension Shaft ("PES"), and seven privately owned residential lots on Brooks Hill Drive.

Water from the Illinois gulch flows into the Puzzle Extension Shaft through infiltration and ultimately drains out of the Willard 1 adit. The water discharging from the two adits and the natural seeps drain through Willard waste rock pile (herein the "waste pile"). This contaminated water, characterized by elevated levels of heavy metals and low pH, works its way down the watershed to Illinois Gulch, the Blue River and ultimately Dillon Reservoir

Beginning in 2013 the EPA, in conjunction with DRMS, CDPHE, and the USGS, conducted an area assessment of mine impacts in the Illinois Gulch drainage (completed in 2018) and determined that the Illinois Gulch Site was significantly impacting the water shed, and was the largest loader of heavy metals into the Illinois Gulch.

As a result, EPA began negotiations with the current owner of the historic mine features, TransAmerica, in 2019, which resulted an Administrative Settlement Agreement on Consent (ASAOC), signed in May 2020 to:

- a) Reduce the flow of water from the adits by preventing water from entering a nearby mine shaft.
- b) Control the flow of water through the wetland and move it away from the waste piles.
- c) Design and install a water treatment system to improve water quality.
- d) Consolidate and cap the waste piles.
- e) Sample nearby residential properties and remediate them as necessary.

Site Description

Illinois Gulch is located in Iron Springs Gulch along the Boreas Pass Road (County Road 10) approximately ½-mile southeast of the Stephen C. West Ice Arena. The Site includes two collapsed mine adits, the Willard waste rock pile, the Cally waste rock pile, the Puzzle Extension Shaft (“PES”) and a waste rock pile, and seven privately owned residential lots on Brooks Hill Drive. Water flowing from the adits and runoff from the uncovered waste rock piles flow to the Illinois Gulch, the Blue River and ultimately Dillon Reservoir.

Site Objectives

- Safety of the public and response personnel is top priority.
- Maintain site security to prevent public exposure.
- Reduce the degree of saturation at the base of the Willard waste rock pile.
- Reduce the flow rate and potentially improve the quality of water emanating from the Willard No. 1 adit.
- Reduce inflows to the underground workings and physical hazards associated with the PES.
- Minimize the potential for direct human and wildlife contact with material comprising the Willard, Cally and PES waste rock piles.
- Reduce the amount of water that infiltrates into the Willard waste rock pile due to direct precipitation and snowmelt.
- Investigate whether there are potential human health risks associated with arsenic and/or metals in soil at residences on Brooks Hill Drive and eliminate any identified unacceptable exposure risks.

Safety Message

EPA will adhere to all CDC and local recommendations pertaining to COVID-19 during the site work.

The removal crew have been briefed on the HASP with emphasis on working around heavy equipment.

Operational Period Objectives

The following are the Objectives for the Operational Period of July 19 to July 23, 2021:

- Continue construction of the Site access road (with appropriate drainage).
- Clear vegetation as needed from waste pile and continue grading.
- Maintain the temporary collection and diversion systems on Willard Adits 1 and 2.
- Maintain environmental, erosion, and safety best management practices

Current Activities

The following are the current activities being conducted for the Operational Period of July 19 to July 23, 2021:

- Compaction of the access road is currently underway.
- Installation of two 36" culverts completed on July 21, 2021.
- Clearing and grubbing of the vegetation on the waste pile was completed on July 19, 2021.
- Re-grading of the Willard waste pile is currently underway.

Planned Activities

For the next Operational Period, the removal team will be continuing with the following activities:

- Remove metals laden sediment from the drainage paths around the waste pile and in Iron Gulch.
- Finish the access road including the installation of 2 more culverts.
- Complete the rough grade of the waste pile and begin cut to fill.
- Stabilization of soil at the North West side of the Willard waste rock pile (tentative on the soil composition and strength at the North West toe of the waste rock pile).

EPA will distribute the next Site Update on July 30, 2021.

For additional information please visit the EPA Illinois Gulch Response page:

https://response.epa.gov/site/site_profile.aspx?site_id=14757