

Save the San Mateo Creek Basin

New Mexico's scarce surface and groundwater resources in the San Mateo Creek Basin west of Mt. Taylor are at risk during these times of prolonged drought. The basin is a key watershed within the larger Rio San Jose Basin because it captures snowmelt and stormwater runoff from Mt. Taylor for recharge.

There is an urgent need to consider all climate-related impacts in this water-short region. Earlier this year on May 17, 2023, we experienced an earthquake, northeast of San Mateo village near Grants. Another earthquake of similar magnitude was recorded several years ago north of the village of Milan.

Add close to 100 legacy uranium mines and 5 uranium mills into the mix, and the risk for severe degradation of this basin is maximized.

Homestake-Barrick Gold Superfund Site

Seepage from 20.2 million tons of Homestake Mining Company mill waste has catalyzed the growth of contaminant plumes into the San Mateo Creek beneath the large tailings pile and into the alluvial aquifer beneath both piles. Homestake Mining Company is now owned by Barrick Gold Corporation.

San Mateo Creek joins with the Rio San Jose below the Homestake-Barrick Gold Superfund site. Below the confluence of the two streams, the Rio San Jose flows is recharged by the deeper San Andres-Glorieta (SAG) aquifer, which lies directly beneath the shallow alluvium.

The San Andres-Glorieta aquifer, which supplies municipal drinking water wells for the village of Milan and the city of Grants is also at risk. This fresh water source is also used by Homestake to maintain a hydraulic barrier to keep tailings seepage onsite for treatment. It is also used to dilute treated water for re-injection back into the alluvial and Chinle aquifers. Seepage from Homestake-Barrick Gold's two unlined mill waste tailings piles also makes its way into numerous faults and fractures in the Chinle bedrock aquifers underlying the site.

Because seepage of toxic radioactive and chemical pollution from these uranium mill tailings will continue into the foreseeable future, groundwater treatment must likewise continue for as long as these releases pose a threat to our drinking water sources and agricultural way of life.

Homestake Barrick-Gold is trying to convince federal regulators that protectiveness can be achieved by ending its groundwater treatment and fencing our communities out of the danger zone. But first, Homestake-Barrick Gold needs to enlarge its contaminated zone to encompass a much larger area. They plan to install a final cover over the waste piles, but seepage from beneath the unlined piles would be allowed to continue unabated for hundreds of years. Homestake-Barrick Gold would then be relieved of the permanent damage that it has inflicted upon our communities and the San Mateo Creek Basin.

Environmental Justice

Communities in the San Mateo Creek Basin have been historically subjected to radon releases from contaminated soil and imported uranium for processing at the Homestake uranium mill.

Contaminant releases from the two unlined hazardous tailings piles since the 1970s continue to the present day.

Environmental justice, or the equitable sharing of burdens, must not take a backseat to Homestake-Barrick Gold's bottom line. Protectiveness for overburdened populations exposed to toxic releases from the Homestake uranium mill and other sites within the Grants Uranium Mining District, adjacent communities residing next to these sites in the San Mateo Creek Basin, and our downstream communities must remain paramount. Ecological damage to a once healthy stream system and permanent impacts to the regional hydrology that is so essential to our survival into the future must also be factored into the remedy.

Doing otherwise would amount to a sacrifice of our traditional cultures, our agricultural way of life, and will rob New Mexico of the clean water sources we need to survive into the future.

There has also been a disparity in regional mill tailings site cleanup efforts. An estimated \$844 million to \$1.1 billion was spent to remove a much smaller volume of mill tailings from the old Atlas Mill in Moab, Utah. The population in Moab is largely White non-Hispanic. By comparison, the population around the Homestake Superfund site is 65.3% Hispanic and is situated upstream of the Acoma and Laguna Pueblos. The population surrounding the UNC Churchrock mill tailings site is 95% Native American. The estimated costs for removal of mine waste at Churchrock to the top of UNC's mill tailings was estimated to cost \$40-45 million in 2020.

Community input into the selection of a remedy embodies the very essence of what environmental justice means. This what environmental justice demands to counter historical deference to the industry by the regulators, all to the detriment of community health and safety. The cumulative impacts on resident environmental justice communities must also be considered by the regulators during the design and selection of remedies to protect our health and environment for generations to come.

The most protective remedy, as evidenced by the Uranium Mill Tailings Radiation Control Act of 1978 and NRC regulations 10 CFR Part 40 Criteria is to effectively isolate the source of the pollution for 1,000 years. Relaxing the applicable groundwater standards at the Homestake-Barrick Gold Superfund site that have formed the benchmark of remediation efforts for the last 30 years is an affront to our environmental justice communities. We want existing groundwater protection standards to be strengthened so that they more accurately reflect historic background water quality values.

As Homestake-Barrick Gold and the regulators evaluate the most protective cleanup options for the San Mateo Creek Basin and watershed, public health and safety must be prioritized over corporate profits. Homestake and its parent company Barrick-Gold, are zeroing in on the least protective alternative - which would bring groundwater treatment to a halt, annex more surrounding property into its licensed boundary, and relax existing groundwater protection standards. Relaxation of those standards would allow groundwater contamination from onsite mill tailings to continue unabated. This alternative would also relieve other corporate mining interests in the Grants Mining District, from cleaning up their respective contributions to groundwater contamination within the San Mateo Creek Basin.

This alternative could also open the door for new uranium mining in the Grants Mining District, turning the SMCB into a “sacrifice zone” where protective regulation is nonexistent, further degrading our water and air quality in the basin.

DP-200

The renewal of Homestake’s discharge permit DP-200 has been administratively continued since 2014 as the regulators study the alternative cleanup options proposed by Homestake.

Conclusion

The Multicultural Alliance for a Safe Environment (MASE) urges that all regulations and remedies rely on the best available science, and their implementation guided by the best available technology, with the expertise of affected environmental justice communities.

MASE further urges that the burden of proving the need for regulatory waivers and exemptions be science-based, not cost-based. And cost-effective measures should not be tolerated when they pose unacceptable risks to human health and the environment.

The San Mateo Creek Basin must not be sacrificed to the uranium industry.

Submitted by:

Laura Watchempino, Member
Multicultural Alliance for a Safe Environment

Disparity in Regional Mill Tailings Site Cleanup Efforts

	Durango Mill, Colorado	Atlas Mill, Moab, Utah	United Nuclear Corp. Mill, Church Rock, NM	Homestake Mill, Milan, NM
Tailings volume (yd ³)	2.5 million	9.1 million tailings	2.0 million + 1.0 million mine waste	12.6 million
Contaminated area (acres)	127	130	125	274
Distance from nearest community (miles)	0.25	3	0.5	<0.25
Offsite disposal/Source removal?	Yes	Yes	No ¹	No
Cost	\$120 million (1995)	\$844 million to \$1.1 billion (2008)	\$40-45 million (2012 mine wastes to mill) ¹	\$34.9 million NPV (2021 Draft FS, preferred alternative)
Demographics	80.9% White non-Hispanic	90.3% White non-Hispanic	95.0% Native American	65.3% Hispanic Close to Acoma/Laguna Pueblos

Sources: (using 1.76 tons/yd³ for conversions)
 Durango: DOE, 2020. Durango Fact Sheet; GAO, 1995. Uranium Mill Tailings Cleanup Continues, but Future Costs Are Uncertain. <https://www.gao.gov/assets/rced-96-37.pdf>.
 Moab: DOE, 2020 <https://www.energy.gov/sites/prod/files/2020/06/f75/EM-By-the-Numbers-MOAB-5.19.20-v4-FINAL.pdf>; Costs <https://www.wise-uranium.org/udmoa.html>.
 Church Rock: UNC-Church Rock Mill U Recovery Facility, NRC 2020 <https://www.nrc.gov/info-finder/decommissioning/uranium/united-nuclear-corporation-unc.html>; ¹ Wastes from mine to be moved to tailings impoundment. NRC, 2020. Draft EIS Disposal Mine Wastes UNC Mill Site. <https://www.nrc.gov/docs/ML2028/ML20289A621.pdf>
 Homestake Mill: HMC, 2020 GCAP, p. 2-2, HMC, 2021 Draft Feasibility Study presentation.
 Demographics: <https://datausa.io/profile/geo/durango-co/>; <https://datausa.io/profile/geo/moab-ut/>; <https://datausa.io/profile/geo/church-rock-nm#demographics>; <https://datausa.io/profile/geo/milan-nm>.