



COUNTY ADMINISTRATOR'S OFFICE

PIMA COUNTY GOVERNMENTAL CENTER
115 N. CHURCH AVE., 2nd FLOOR, Suite 231, TUCSON, AZ 85701-1317
520-724-8661, FAX 520-724-8171

JAN LESHER
County Administrator

September 8, 2026

Tom Buschatzke, Director
Arizona Department of Water Resources
1110 West Washington Street, Suite 310
Phoenix, Arizona 85007

Re: Copper World's Groundwater Withdrawal Permit for Mineral Extraction

Dear Mr. Buschatzke,

Pima County continues to have significant concerns regarding anticipated impacts to water resources on both sides of the Santa Rita Mountains associated with Hudbay Minerals' Copper World project. Copper World's 20-year groundwater withdrawal permit for 6,000-acre feet a year expires on January 17, 2028, and the company will likely seek renewal. Given the substantial changes in local and statewide water conditions since the permit was originally issued, Pima County formally requests that the Arizona Department of Water Resources (ADWR) deny renewal of this permit due primarily to the adverse effects pumping will cause to the Green Valley/Sahuarita area communities.

These concerns are certainly more urgent now than when the original permit was issued 19 years ago due to continued ground water declines and localized land subsidence in the Green Valley/Sahuarita area, statewide Colorado River water supply constraints that impact the ability to offset impacts to pumping, as well as changes in regulatory conditions that afford less protections for groundwater-dependent ecosystems. In May 2024, the United States Bureau of Reclamation published the Lower Santa Cruz River Basin Study Final Report. The Report identifies the Green Valley-Sahuarita area as one of four "areas of concern" in the Tucson Active Management Area where groundwater levels are expected to decline under all modeling scenarios and lead to "worsening existing local supply-demand imbalances." The Bureau found that this imbalance is associated with the hydrologic disconnect between where groundwater is being recharged with Central Arizona Project water near the canal and down gradient from where users are pumping groundwater. A renewal of the Copper World permit will only exacerbate this imbalance and further impact the available local water supply for existing users, including municipal water providers serving households and other customers.

Copper World's permit to pump 6,000-acre feet a year is equivalent to the average water use of 18,000 households, which is one and a half times the current number of households in the Town of Sahuarita. Most alarming is the threat that Copper World's withdrawals will

Mr. Buschatzke

Re: **Copper World's Groundwater Withdrawal Permit for Mineral Extraction**

September 8, 2026

Page 2

pose to the hundreds of domestic wells in the area east of the Town of Sahuarita in unincorporated Pima County. The residents who live in this area are located outside of a water service provider area and rely on exempt wells as their source of water. Some of these wells are shared by multiple families by private agreements. Copper World's withdrawals could cause a rapid drawdown of groundwater that will put the water supply of these residents at risk without the time necessary to seek assistance from the state. The possibility of such a scenario raises significant public health and emergency management concerns for Pima County. The County has begun reviewing the well records in this area and the groundwater data to develop a plan to mitigate potential risks for these residents.

Attached is my July 20, 2026 letter to Highbay outlining these concerns, as well as an August 24, 2026 Memorandum to the Pima County Board of Supervisors related to east side water resource impacts. The Pima County Board of Supervisors continues to oppose the Copper World project.

Given these concerns, I am also requesting a formal meeting with you or your staff to review the updated hydrologic information and permit issuance and renewal criteria, and the implications for the Copper World mineral extraction permit.

We appreciate your attention to these significant issues, including your recent participation in the water summit held by the Southern Arizona Hispanic Chamber.

Sincerely,



Jan Leshner
Pima County Administrator

Attachments

c: The Honorable Chair and Members, Pima County Board of Supervisors
Carmine DeBonis Jr., Deputy County Administrator
Steve Holmes, Deputy County Administrator
Chad Kasmar, Deputy County Administrator
Theresa Cullen, MD, MS, Public Health Director
Scott DiBiase, Director, Pima County Department of Environmental Quality
Sandra Espinoza, Director, Emergency Management
Kris Gade, Director, Conservation Lands and Resources
Eric Shepp, Director, Regional Flood Control District
Thomas Drzazgowski, Deputy Director, Development Services
Nicole Fyffe, Senior Advisor, County Administrator's Office

ATTACHMENT 1



COUNTY ADMINISTRATOR'S OFFICE

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JAN LESHER
County Administrator

July 20, 2026

Javier Del Rio
Senior Vice President, US Business Unit
Hudbay Minerals, Inc. and Copper World LLC
5285 East Williams Circle, Suite 2010
Tucson, Arizona 85711

Re: **Pima County's Response to Hudbay's June 1, 2026 Letter**

Dear Mr. Del Rio:

This letter serves as a response to your letter dated June 1, 2026, which is attached.

1. **Water Supply:** We disagree with your assertion that 105% of water pumped will be recharged at or near the location of pumping. Hudbay employees recently provided a tour of the Copper World project to members of my staff and Pima County Supervisor Matt Heinz and his staff. During the tour Hudbay employee Jerry Bustamante stated that sources of recharge water will not be identified in the final feasibility study because they are currently unknown, and to date water has been recharged in Marana which is downstream of the area of pumping. Water recharged in Marana flows north and does not address the declining groundwater levels in the Sahuarita/Green Valley area. Notwithstanding the legality and marketability of long-term storage credits (paper credits) earned from recharge in Marana, these credits do not directly equate actual water.

Furthermore, the County is not ignoring existing large ground water users in the Sahuarita/Green Valley area. On the contrary, our stated concerns that the addition of the proposed Copper Word project will only increase the cumulative burden on the aquifer and deplete water levels even further reflect a legitimate concern for other water users. In addition, your assertion that Copper World's proposed water supply system places zero financial, supply, or risk burden is simply untrue. Hudbay is relying upon the same mineral water extraction permit that Augusta Resources received from the State, which expires in 2027. Under this permit Augusta purchased well insurance for many area well owners precisely because of the risk to those landowners' wells. Similarly, Hudbay's agreement with the Town of Sahuarita holds the Town harmless from any adverse effect in the event

Hudbay's groundwater pumping interferes with the Town's wells – a provision that would be unnecessary if there was zero risk.

2. **Rosemont pit groundwater impacts to riparian areas, plants, and wildlife:** The County's significant concerns regarding the impact of the Rosemont pit does not rely on an obsolete configuration; these concerns continue to be valid. Hudbay's Vice President for Arizona, Warren Flannery, confirmed during County staff's recent site visit that Copper World Phase 1 would indeed include excavating the Rosemont pit to a point below the water table which would then require dewatering of the pit. Vice President Flannery's statement is consistent with information contained in the Pre-Feasibility Study, in Copper World's Aquifer Protection Permit (APP) application, and in the final APP.

The pit is "dewatered" by pumping significant volumes of groundwater via dewatering wells which will create and maintain "hydraulic sink" conditions. This will change the direction of groundwater flows so that groundwater continually enters the pit, preventing the migration of pollutants. This will continue post closure, creating a pit lake and causing evaporation to occur in perpetuity. While preventing the migration of pollutants is a positive action, the pit dewatering and perpetual pit lake evaporation means groundwater will be drawn away from groundwater-supported springs and streams, including those within the Las Cienegas National Conservation Area and the County's Davidson Canyon and Cienega Creek Natural Preserve. The County will provide a more detailed explanation of anticipated east side groundwater and surface water impacts in a separate document.

3. **Tailings storage upstream of residential areas and school:** Pima County continues to have the following concerns and requests related to this issue:
- Copper World's APP application submitted to ADEQ did not include the northern Tailings Storage Facility (TSF) that is proposed to be closest to the residences and the school, so there has been no review of the potential impacts of this facility.
 - The Albion process is new and there is no requirement for a geochemical analysis to determine what contaminants may result and be combined with the flotation tailings and deposited in the TSFs. The APP only regulates discharges of pollutants to Arizona's groundwater to protect groundwater quality. There is no regulation of specific mineral processing methods used for extracting minerals to ensure public health, nor are there monitoring requirements. For these reasons, Pima County requests a geochemical analysis of the waste from the Albion process.
 - Pima County requested that ADEQ require a Stormwater Management Plan which clearly contains, within a single document, the design calculations and design plans for: 1) perimeter drainage channels; 2) stormwater collection galleries under TSFs; 3) perimeter containment areas; 4) retention / detention basins and pools on the TSFs and Waste Rock Disposal Facilities; 5) final cover system and disposal mound side slopes; and 6) all planned perimeter containment areas where surface water will be trapped against the base slope of the tailings and waste rock disposal mounds. To our knowledge, no such analysis exists.

Mr. Del Rio

Re: **Pima County's Response to Hudbay's June 1, 2026 Letter**

July 20, 2026

Page 3

- Pima County has specific concerns about the stormwater collection galleries to be used under the TSFs. Given the length and size of the pipelines there are concerns about: 1) maintenance and long-term performance; 2) potential cross contamination by tailings water seepage; and 3) associated downstream surface water quality impacts should there be cracks or ruptures due to settling.
 - Pima County asks that the TSFs and associated seepage collection system be lined; this is a matter of safeguarding this community's water supplies. These facilities have among the greatest potential for aquifer pollution and yet are prescribed among the least amount of protection. During a 2024 meeting in the County Administrator's Office, Hudbay representative Matt Bingham stated that the company could line the tailings, but that it would not make sense for them to do so when Pima County will still oppose the project. Hudbay claims on its website that *"the community's well-being is at the core of our mining practices. We are committed to responsible resource development that prioritizes the safety and health of our local communities and minimizes the impact to the environment."* If this were truly the case Hudbay would not resist taking this action to protect the community's critical water supplies, regardless of Pima County's official position on the project.
 - The company has committed to Global Industry Standard on Tailings Management (GISTM) standards for dam safety that go beyond Arizona's minimal guidance standard documents. Pima County appreciates this, but it will not help if Hudbay continues to underestimate the potential volumes of rainfall that can be delivered in extreme events.
 - Hudbay's Emergency Response and Preparedness Plan for tailings dam failure requires more detail on: 1) notification actions and procedures, including identifying the fire department and Pima County's Office of Emergency Management as agencies to be notified in the event of dam failure; 2) availability of testing results; 3) remedial measures to be implemented; and 4) potential shutdown of mine operations.
 - A worst-case failure model is requested by Pima County in order to provide emergency planners with the information needed to protect against loss of human life and to avoid building critical public infrastructure in areas that could be inundated by an unplanned release of tailings.
4. **Permitting and Oversight limitations:** Pima County did oppose the previous Rosemont Mine project, and the Copper World project is similarly being proposed in an area that is clearly unsuitable for this type of industrial use. Impacts to the environment and the public from both proposals would be significant and long term. That said, the U.S. Forest Service, U.S. Fish and Wildlife Service, Arizona Game and Fish Department, other state agencies, and Pima County participated in a cooperative agency process for the Rosemont Mine project that made it less damaging than it would have been without the full participation of the County and the other agencies.

Mr. Del Rio

Re: **Pima County's Response to Hudbay's June 1, 2026 Letter**

July 20, 2026

Page 4

The Final Environmental Impact Statement (FEIS) for the Rosemont Mine project acknowledged significant impacts and required mitigation and monitoring measures and also required a multi-agency monitoring team to annually review data on impacts, monitoring, and mitigation. The State is not going to require similar monitoring or mitigation for the Copper World proposal, and we've already seen that the process of state agencies leads to gaps over air quality impacts resulting from increased use of the main access road, and where likely stormwater quality impacts are no longer regulated.

5. **Lack of meaningful mitigation:** The County will be providing a more detailed report on previously requested performance and mitigation measures, as well as those measures outlined in the Rosemont FEIS that are still applicable here. In response to the limited set of items mentioned in Hudbay's letter: 1) there is no certainty that water will be available to recharge as promised; 2) the dust mitigation on Santa Rita Road, while successful in the short term while traffic remains low, will be insufficient if the project proceeds to construction and production; 3) the recent purchase of 160 acres of State trust land will result in more impacts closer to residences and the school, as that portion of the company's property was inaccessible without access to the 160 acres; and 4) the County is unaware of any tribe that has formally signed on in support of the project.
6. **Ongoing litigation and community opposition:** Characterizing opponents as those who "enjoy the benefits of copper while seeking to limit its availability locally and nationally" overlooks that Pima County is already home to several larger copper mines which report ample capacity for continued production and expansion in less environmentally sensitive areas. Similarly, stating that "The local opposition organization continues to waste scarce member donations on fruitless litigation" does not recognize that it was years of persistent litigation that resulted in the federal court ruling that overturned approval of the Rosemont Mine project.
7. **Tribal communities and intergenerational cultural loss:** Again, we are unaware of any tribe that formally supports the Copper World project.
8. **Cumulative operational risk associated with linked operations between the recently announced Cactus Mine and Copper World:** Hudbay's announcement of the acquisition of the Cactus Mine in Pinal County included descriptions of linked operations concerning the generation of sulfuric acid at Copper World that would be transported to the Cactus Mine. This will directly result in increased traffic on public roadways and is just one example of expanded environmental risk that remains unaddressed. We encourage Hudbay to be transparent about potential impacts to the health, safety, and welfare of both Pima County and Pinal County residents. To that end, we look forward to receiving additional information about possible connections between these two projects.

Mr. Del Rio

Re: **Pima County's Response to Hudbay's June 1, 2026 Letter**

July 20, 2026

Page 5

Hudbay and Pima County officials have continued to meet throughout this process. While we disagree on many of the same points, we also remain open to continued meetings with Hudbay as the planning process moves forward.

Sincerely,

A handwritten signature in black ink, appearing to read "Jan Lesh", with a stylized, cursive script.

Jan Lesh
Pima County Administrator

Enclosures

c: The Honorable Chair and Members, Pima County Board of Supervisors
 Laura Belloni, Secretary General, Canadian Securities Administrators
 Grant Vingoe, Chair and CEO, Ontario Securities Commission
 His Excellency Mark D. Wiseman, Ambassador of Canada to the United States
 David Smith, Chair, Hudbay Board of Directors
 Peter Kukielski, President and CEO, Hudbay Minerals

Attachment 1



June 1, 2026

Ms. Jan Leshner, County Administrator
Pima County
115 N. Church Ave., 2nd Floor, Suite 231
Tucson, AZ 85701-1317

VIA EMAIL

RE: Hudbay Response to Your Technical "Pima County's 05.15.2026 Letter"

Dear Administrator Leshner and Pima County Board of Supervisors,

On May 26, 2026, I wrote to acknowledge receipt of your May 15 letter sent on behalf of the Pima County Board of Supervisors. This correspondence serves as our follow-up, specifically addressing the generalized "considerations" your letter identified pertaining to the Copper World project.

As indicated in my May 26 letter, Hudbay has consistently sought to work constructively with all County Supervisors for over a decade. We appreciate Pima County's interest in understanding more about Copper World. Hudbay routinely works collaboratively with the State of Arizona, local jurisdictions, and other members of the community. The project has undergone rigorous review by state agencies, offering ample opportunity for public comment and input by Pima County and the public at large.

We remain committed to engaging in constructive dialogue with Pima County to advance the needs and interests of Pima County citizens. The Copper World project does and will continue to provide high-paying, multi-generational jobs, support local suppliers and vendors, supplement the County tax base, and protect the environment while constructing and operating a sustainable mine that produces an essential metal - Arizona Copper, Made for America.

This letter contains comprehensive, specific, and evidence-based responses to the topics raised in your letter of May 15. Each of Pima County's bulleted considerations is identified directly below and is accompanied by a technical response. The responses include empirical data from various sources, including the certified independent geochemical analysis under the oversight of the Arizona Department of Environmental Quality (ADEQ), a 2025 public opinion survey sponsored by the University of Arizona School of Mining Engineering & Mineral Resources and the Arizona Mining Association, and a geotechnical study of the tailings material, among others.

Hudbay is fully committed to building a productive, long-term relationship with Pima County for the benefit of the community. However, even in the absence of constructive participation by the Pima County Board of Supervisors, Copper World reflects excellence in design, risk management,

environmental sustainability, and will be constructed and operated to the highest standards. While we recognize that all mines include risks that must be responsibly managed, we do not agree with the harms and characterization of these risks alleged by the County.

1. Water Supply

- **Pima County Consideration:** *The project relies on groundwater from a declining basin that is already causing subsidence and impacting well owners, and its proposed recharge depends on highly uncertain Colorado River allocations that do not occur in the watershed of impact, threatening nearby municipal and private well owners.*
- **Copper World Response, Technical Rebuttal & Counter-Facts to Pima County:**
 - **The 105% Voluntary Recharge Commitment:** Through *Project Renews*, Hudbay has voluntarily committed to replacing 105% of groundwater pumped for operations with out-of-basin Central Arizona Project (CAP) water, generating a net positive water inflow contribution to this very same declining basin and regional aquifers with water originating from outside the Tucson Active Management Area. Copper World funding of *Project Renews*, which is tens of millions of dollars, provides long term benefits to area residents that would not otherwise be available.
 - **44,000 Acre-Feet of Secure Water Already Recharged:** For over three decades prior to the 2022 Tier 1 shortage, Arizona was oversupplied with excess Colorado River water. As a demonstration of its good faith and as visible evidence of its commitment, Hudbay commenced pre-purchasing and storing 44,000 acre-feet of out-of-basin CAP water into Tucson Active Management Area groundwater. This means 46% of the Copper World operational water goal has already been securely recharged prior to the commencement of mining, shielding the project from the temporary shortage. The County raises this issue while ignoring the extensive water use by other industries in the area. To our understanding, for example, one local agricultural giant inefficiently irrigates and operates a 4,500-acre pecan farm using up to 22,000 acre-feet of water per year, nearly four times the water that will be used by Copper World. In contrast, Copper World water use is efficient, recharged and sustainable.
 - **Robust Market Liquidity:** The 44,000 acre-feet of Colorado River water that Copper World has already stored will be used to meet its voluntary 105% recharge goal. This mitigation water and other water supplies remain stored and can be legally used, bought, sold or recovered via Long-Term Storage Credits (LTSCs) and other potential means. This open market includes municipalities, tribal communities, and industrial users, ensuring multi-layered options for fulfilling future recharge benchmarks.
 - **Zero Infrastructure Burden & Community Handover:** Copper World's water supply system is entirely self-reliant and physically disconnected from municipal or shared drinking water infrastructure, placing ZERO financial, supply or risk burden on local residents. In fact, at the conclusion of mining, *Project Renews* and associated CAP rights are planned to be transitioned for community water usage.

2. Hydrology

- **Pima County Consideration:** *The planned Rosemont pit is expected to alter groundwater flow, reducing flows to protected riparian systems and biota.*
- **Copper World Response, Technical Rebuttal & Counter-Facts to Pima County:**
 - **Complete Engineering Redesign and Relocation:** For context, Pima County opposed the prior Rosemont project. Following federal court rulings involving Rosemont, Hudbay completely reconfigured the project design and developed the

Copper World project. The County's current concern appears to rely on an obsolete configuration based on the prior Rosemont project. The Copper World design shifts processing operations and tailings management to the west side of the ridge. This design change focuses the project footprint on a 4,500-acre complex of private land. These private lands were patented by the United States for mining purposes, and these lands are now being returned to and utilized for their intended federal land use.

- **Hydrogeological Isolation of Phase I:** Copper World's Pre-Feasibility Study demonstrates that most Phase I operations are geologically separated from the eastern slope drainage system. Processing and tailings facilities are confined to the west side of the ridge.
- **Continuous Monitoring:** The project underwent extensive review and comment by ADEQ for compliance with the Arizona Aquifer Protection Permit program, among other considerations. As part of the permit process and to ensure the protection of regional water quality, ADEQ requested the installation of additional groundwater monitoring wells with mandatory monitoring for various environmental and chemical parameters.

3. Tailings

- **Pima County Consideration:** *The proposed tailings storage is located upstream of residential areas and the Copper Ridge School along a canyon that experiences significant flows during storm events.*
- **Copper World Response, Technical Rebuttal & Counter-Facts to Pima County:**
 - **Expert Review Confirms Tailings are Not Harmful:** Comprehensive chemical characterization managed by a PhD environmental geochemist from a major engineering firm with expertise in evaluating mined materials for potential impacts on human health and the environment confirms that Copper World's tailings are among the most naturally and permanently benign copper tailings containing no harmful constituent exposure nor the potential to generate such exposure.
 - **Acquisition of Mitigation Land Will Allow the Northern Tailings Storage Facility to be Moved Further South and Away from the School:** Pima County opposed this land acquisition despite its mitigation benefit. Please see Mitigation, below, for more details.
 - **Definitive Zero Net Acid Generation:** Each tailings sample (spanning bulk whole parent, sand, and fine slimes across the Broadtop and Rosemont Calcic domains) returned a Net Acid Generation (NAG) value of exactly 0 kg H₂SO₄/t. Paste pH is uniformly alkaline, ranging between 8.3 and 9.1 units, which is well within the range of safety with no potential for acid generation based upon these samples.
 - **Permanent Natural Buffering Capacity:** Because the ore body is hosted within a carbonate-rich skarn deposit, the tailings are naturally packed with alkaline, acid-neutralizing minerals such as Andradite Garnet (4–30%), Calcite (4–22%), Diopside (3–10%), and Wollastonite (up to 7%). This basic mineralization is permanently neutralized and acts as a built-in, natural geological defense mechanism rather than an engineered solution. X-ray diffraction verified that pyrite was undetected in any sample.
 - **Exceeding Safety Thresholds:** The Net Neutralization Potential is strongly acid-consuming (+43 to +292 kg CaCO₃/t), pushing the Neutralization Potential to Acid Potential (NP:AP) ratios between 18:1 and >400:1—exponentially more protective than the standard regulatory safety threshold of 4:1.

- **Leachate Safely Below Drinking Water Standards:** Under EPA Method 1312 Synthetic Precipitation Leaching Procedure (SPLP) simulating heavy acid rain, heavy metal dissolution is well below the strict ADEQ Aquifer Water Quality Standards (AWQS).
- **Soil Comparison and TSM & CDA Alignment:**
 - Total arsenic in Copper World tailings is comparable to or less than pristine US background soil (~7 mg/kg) and 48 times lower than natural rock outcrops in adjacent Santa Cruz County.
 - Hudbay has voluntarily bound itself to the Towards Sustainable Mining (TSM) and Canadian Dam Association (CDA) safety standards, enforcing maximum engineering redundancies to withstand major atmospheric storm events and subjecting the project to regular inspection in accordance with these standards. TSM requires robust tailings system management documentation, including an Operation, Maintenance and Surveillance manual, a Tailings Management System manual, and an Emergency Response/Early Warning System plan, all of which are subject to routine drills and third-party audits.
- **Tailings Governance:** Hudbay's Tailings Governance Charter defines the governance framework for the effective management of tailings facilities throughout all stages of design, construction, operation and closure. This includes an accountable executive officer responsible for the safe management of tailings at all facilities and engagement with Hudbay's Board on any tailings-related issues. It also includes key third-party roles such as an Independent Technical Review Board (ITRB), which is an independent expert panel that conducts systematic evaluations of the technical aspects of tailings facilities and operations at least annually throughout the lifecycle.

4. Permitting and Oversight

- **Pima County Consideration:** *The project's location on private land reduces federal review, increasing reliance on accurate and complete corporate disclosures.*
- **Copper World Response, Technical Rebuttal & Counter-Facts to Pima County:**
 - **Comprehensive State Water Quality Jurisdiction:** For context, Pima County opposed the prior Rosemont project, which included federal oversight. The absence of federal review for private land development **does not** decrease regulatory oversight; instead, it concentrates enforcement under intensive state agency governance and control. Among other regulatory programs, Copper World is bound by the legally enforceable, stringent ADEQ Aquifer Protection and Air Quality permit programs, which are either modeled after or contain the hallmarks of federal regulatory programs. The Copper World air permit took over two years to obtain and involved an extra year of state-imposed air monitoring.
 - **Mandatory Class II State Air Permit and Oversight:** ADEQ conducted extensive public comment and response periods in issuing the air quality permit, which included voluminous comments from Pima County. ADEQ air scientists modeled Copper World's projected emissions and concluded that they do not meet the legal threshold required for a Class I permit. Instead, the facility operates under the more stringent Class II Air Permit, enforcing additional strict air monitoring, regulatory oversight, mandatory emissions caps and more stringent monitoring requirements than a Class I permit. ADEQ monitoring requirements are fully compliant with federal law.

5. Mitigation

- **Pima County Consideration:** *The Preliminary Feasibility Study stated that Hudbay intended to engage key stakeholders to solicit input to develop an effective mitigation plan, but we question the extent to which this has occurred considering the continued community opposition.*
- **Copper World Response, Technical Rebuttal & Counter-Facts to Pima County:**
 - **Substantial Efforts to Engage Community and Local Government:** Copper World coordinates regularly with local community members and many community organizations; outreach that is not publicized by Copper World. However, certain local governmental bodies and opposition organizations steadfastly oppose the project and largely refuse to meet with company leadership. In fact, one group's sole purpose is to completely stop mining in the Santa Rita mountains, specifically referencing Copper World, and has shown no interest in dialogue beyond the courtroom. Furthermore, Pima County has issued four resolutions opposing the mine while deflecting attempts by Copper World to meaningfully communicate. Despite the views of this fraction of the population, polling indicates that most Arizona residents support copper mining in the state and in Southern Arizona (see *infra*). Copper World remains willing to work with anyone and everyone to meaningfully resolve their concerns.
 - **Copper World's Proactive Stakeholder Engagement has led to Concrete Results. Some Examples Include:**
 - **Bringing CAP Water to the area through Project Renews:** Our partnership with the Community Water Company of Green Valley will develop essential infrastructure to deliver CAP water to a new area, in close proximity to Copper World's well fields. This is a voluntary mitigation project that will allow Copper World to replace 105% of the water pumped from the ground with out-of-basin CAP water.
 - **Proactive Dust Mitigation Program:** Demonstrating Copper World's clear commitment to stakeholders, Hudbay has proactively stepped forward to address the pre-existing dust issue on South Santa Rita Road. Hudbay formed an inter-governmental working group alongside local and state experts and has invested nearly \$2 million of private corporate capital (zero public funds utilized) to apply an eco-safe, non-toxic, and biodegradable dust suppressant that has delivered immediate air quality improvements to the area.
 - **Purchase of 160 acres of Arizona State Land for Mitigation:** Copper World secured 160 acres of Arizona State Land for mitigation purposes. The acquisition of this land unlocks an excellent opportunity to increase the buffer between Copper World operations and neighboring homes by nearly one mile. Close to \$1 million was paid in a fair, public process that fulfills the State Land Department's fiduciary duty to Arizona schools. Pima County opposed the auction of this land most valuable for its mitigation purpose.
 - **Tribal Engagement and Mitigation:** Since 2022, Copper World has voluntarily engaged with 11 distinct Tribal nations including the Tohono O'odham Nation, Salt River Pima-Maricopa Indian Community, Gila River Indian Community, Ak-Chin Indian Community, Pascua Yaqui Tribe, Hopi Tribe, Pueblo of Zuni, Mescalero Apache Tribe, San Carlos Apache Tribe, Yavapai-Apache Nation, and White Mountain Apache Tribe to recover and protect cultural history located on Copper World private land.

This proactive, direct engagement by Hudbay shares project plans, provides updates, and offers formal partnerships centered on the monitoring and data recovery of cultural heritage. Furthermore, the company promotes active participation through site tours, where tribal representatives can learn about the project and its management of cultural resources. This outreach focuses on data and artifact recovery, while also offering tribal representatives the opportunity to collect on-site plants and minerals for traditional, medicinal, and ceremonial uses.

6. Litigation

- **Pima County Consideration:** *The sustained legal and political challenges from community groups, elected officials and local governments, continue to cause uncertainty for project timing, cost, and corporate reputation.*
- **Copper World Response, Technical Rebuttal & Counter-Facts to Pima County:**
 - **Free Speech Protection and Institutionalized Opposition:** Like private property rights, free speech is protected under the Constitution. While opposition to Copper World is hardly universal, those who oppose the project may voice their views under the Constitution. Although they have the right to do so, these opponents consistently enjoy the benefits of copper while seeking to limit its availability locally and nationally. These views are largely individualistic and not uniform across the population. Mine opponents rarely consider economic and other benefits desired by most segments of the population and afforded to the state of Arizona and the local community, which include high-paying, multi-generational jobs and a substantial tax contribution. Hudbay has an excellent reputation and has been recognized widely for its sustainable environmental and mining practices. It is a self-fulfilling prophecy for opponents to file litigation, conduct small protests for media attention and disrupt bona fide government processes in the name of a small segment of the population with a history of opposition.
 - **Status of Ongoing Litigation:** Cases filed by organizations with the sole or primary mission of stopping mining are not precluded by law. The local opposition organization continues to waste scarce member donations on fruitless litigation instead of seeking to achieve real community benefits through constructive dialogue with the company. Currently, it has opposed:
 1. a Right-of-Way issued by the Arizona State Land Department (ASLD), which it currently is appealing to the Arizona Appellate Court after losing at the Superior Court;
 2. an air quality permit upheld by the Office of Administrative Hearings Judge and then upheld by the Director of ADEQ, and which it currently is appealing to the Arizona Superior Court; and,
 3. a land auction of 160 acres of state land that will increase the project buffer between a nearby community and a school, the funds from which are used to support Arizona school funding, which it has appealed to the Arizona Courts.

In essence, opposition litigation wins are limited to small procedural victories that have been remedied without bringing about any substantive changes to the result of the lawful government action.
 - **Former Federal Lands Patented by the U.S. for Mining Purposes:** The preponderance of the lands on which the Copper World mine is being built are lands the federal government patented to be used for mining and ancillary mining activities. Copper World now owns these constitutionally protected, private

property rights. Importantly, the original federal objective now is being achieved by the production of a critical U.S. mineral - Arizona Copper, Made for America.

- **Verified Majority Public Support:** Independent, scientifically controlled public polling entirely refutes the suggestion of pervasive opposition. A late-2025 live-interview survey sponsored by the University of Arizona School of Mining Engineering & Mineral Resources and the Arizona Mining Association conducted with a balanced sample across party affiliation, age, and region, reveals that a clear majority supports copper mining in Arizona and the Copper World project. The study revealed that:
 - 61.8% of Southern Arizona voters support copper mining in the region (with only 29.7% opposing).
 - 56.5% of regional voters specifically support the Copper World project.
 - *Cross-Party Consensus:* The project is supported by 85.6% of Republicans, 63.8% of Independents/PND voters and 42.7% of Democrats.

These survey results are consistent with surveys from prior years.

7. Tribal Communities

- **Pima County Consideration:** *Tribal opposition centers on anticipated irreversible impacts to sacred places and traditional practices, resulting in intergenerational cultural loss and creating sustained social and reputational risk to the project.*
- **Copper World Response, Technical Rebuttal & Counter-Facts to Pima County:**
 - **Voluntary Collaborative Engagement with 11 Sovereign Nations:** Since 2022, Hudbay has voluntarily engaged with 11 distinct Tribal communities and leaders to recover and preserve cultural history across the project's private land boundaries. This comprehensive partnership includes active engagement with:
 - The Tohono O'odham Nation
 - The Salt River Pima-Maricopa Indian Community
 - The Gila River Indian Community
 - The Ak-Chin Indian Community
 - The Pascua Yaqui Tribe
 - The Hopi Tribe
 - The Pueblo of Zuni
 - The Mescalero Apache Tribe
 - The San Carlos Apache Tribe
 - The Yavapai-Apache Nation
 - The White Mountain Apache Tribe
 - **Proactive Transparency & Direct Communications:** Hudbay's corporate leadership and specialized environmental teams voluntarily maintain open, regular communication channels with Tribal leadership. This collaborative framework is designed to transparently provide project development updates, create a forum for sharing ideas and strategies, and identify opportunities for partnerships focused on long-term data recovery and the preservation of cultural heritage.
 - **Active Site Participation & Collaborative Cultural Preservation:** Hudbay voluntarily hosts local stakeholders to participate in ongoing mine tours. This includes visits designed specifically for Tribal representatives. These tours provide Native communities with hands-on opportunities to inspect operations and actively participate in and contribute to how cultural resources are managed.
 - **Data Recovery and Traditional Resource Access:** The current phase of Copper World's voluntary tribal outreach is focused on comprehensive data and artifact

recovery. Furthermore, Hudbay extends open invitations to Tribal representatives, offering them safe access to project lands to harvest and collect native desert plants and minerals for traditional, medicinal, and ceremonial practices. These partnerships and programs recognize the impact on these cultural resources but also seek opportunities to preserve traditional practices and mitigate intergenerational cultural loss through management practices and education. Working with native community leadership, Copper World has established a nursery for the salvage and maintenance of native plant species.

8. Cumulative Operations

- **Pima County Consideration:** *Hudbay's announced intent to acquire the Cactus Mine, a separate mine in Pinal County to the north, raises the potential for linked operations and expanded environmental exposure.*
- **Copper World Response, Technical Rebuttal & Counter-Facts to Pima County:**
 - **Pima County sees risks where others see opportunity and benefit.** The planned acquisition of Arizona Sonoran Copper Company is anticipated in summer 2026 and demonstrates Hudbay's commitment to growing its business in the State of Arizona. Following acquisition, evaluation of the Cactus mine and its operations will be further considered.

As mentioned previously, we would welcome the opportunity to meet with you, the Board of Supervisors, and your staff to discuss these matters further and to explore opportunities for informed direct communications in the future.

Sincerely,



Javier Del Rio
Senior Vice President, US Business Unit
Hudbay Minerals, Inc. and Copper World LLC

Cc:

Ms. Laura Belloni

Mr. Grant Vingoe

His Excellency Mark D. Wiseman

Attachment 2



COUNTY ADMINISTRATOR'S OFFICE

PIMA COUNTY GOVERNMENTAL CENTER
115 N. CHURCH AVE., 2nd FLOOR, Suite 231, TUCSON, AZ 85701-1317
520-724-8661, FAX 520-724-8171

JAN LESHER
County Administrator

May 15, 2026

Mr. David Smith, Chair, Board of Directors
Hudbay Minerals Inc.
25 York Street, Suite 800
Toronto, ON M5J 2V5
Canada

Re: Considerations for Copper World Project Sanctioning

Dear Mr. Smith,

I am writing at the direction of the Pima County Board of Supervisors as you consider future decisions regarding the Copper World project proposed by Hudbay Minerals.

Pima County is located in Southern Arizona and includes the Tucson metropolitan area, one of the fastest-growing regions in the Southwest. This region is recognized for its extraordinary ecological diversity—home to an exceptional array of plants, wildlife, and landscapes—and its natural beauty is a major attractor for visitors, residents, and businesses alike. Pima County has a long-standing commitment to balancing economic development with conservation through the Sonoran Desert Conservation Plan.

The proposed Copper World project is located in the Santa Rita Mountains—an area of significant ecological, cultural, and hydrologic importance that serves as the headwaters for key regional watersheds. Pima County is not anti-mining and in fact we have worked successfully with other mining projects in less environmentally sensitive areas of the County.

Attached are the most recent resolutions approved by the Pima County Board of Supervisors and the City of Tucson Mayor and Council, in opposition to the Copper World project. In early 2026, the Mayor of Tucson and all six members of the Tucson City Council publicly opposed the project, joining three members of the Pima County Board of Supervisors, four state legislators, and two leaders of the Tohono O'odham Nation in signing a joint public statement opposing a state land auction for Copper World. Community opposition is similarly strong, well organized, and well-funded, with active resistance led by longstanding regional

organizations and residents who have opposed large-scale mining in the Santa Rita Mountains for almost 50 years.

With the expectation of the release of the final feasibility study in the near term, we are writing now to ensure that the following risks are carefully evaluated as part of your deliberations to sanction the project.

Based on our review of Hudbay's 2023 pre-feasibility study, state permit applications, and related public disclosures, Pima County has identified unresolved risks that we believe warrant careful consideration from an investor disclosure perspective:

- **Water supply uncertainty and impacts:** The project relies on groundwater from a declining basin that is already causing subsidence and impacting well owners, and the proposed recharge is dependent on Colorado River allocations that are highly uncertain and are not occurring in the watershed of impact.
- **Other hydrologic impacts:** The planned Rosemont pit is expected to alter groundwater flow, reducing flows to protected riparian systems, plants and wildlife.
- **Tailings risk:** The proposed tailings storage is upstream of residential areas and a school along a canyon that experiences significant flows during storm events.
- **Permitting and oversight limitations:** The project's location on private land reduces federal review, increasing reliance on accurate and complete corporate disclosures.
- **Lack of meaningful mitigation:** The Preliminary Feasibility Study stated that Hudbay intended to engage key stakeholders to solicit input to develop an effective mitigation plan, but we question the extent to which this has occurred considering the continued community opposition.
- **Ongoing litigation and community opposition:** The sustained legal and political challenges from community groups, elected officials and local governments, continue to cause uncertainty for project timing, cost, and corporate reputation.
- **Tribal communities and intergenerational cultural loss:** Tribal opposition centers on anticipated irreversible impacts to sacred places and traditional practices, resulting in intergenerational cultural loss and creating sustained social and reputational risk to the project.
- **Cumulative operational risk:** Hudbay's announced intent to acquire the Cactus Mine, a separate mine in Pinal County to the north, raises the potential for linked operations and expanded environmental exposure.

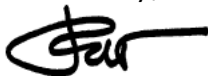
Given your fiduciary responsibilities, we encourage you to carefully evaluate whether these risks have been fully mitigated, appropriately disclosed, and adequately reflected in project economics prior to any sanctioning decision.

Mr. David Smith, Chair, Board of Directors
Re: **Considerations for Copper World Project Sanctioning**
May 15, 2026
Page 3

We also wish to inform you that Pima County is sharing these concerns with a range of relevant stakeholders, including the Canadian Securities Administrators, Ontario Securities Commission, the Board of Directors for Mitsubishi Corporation and Wheaton Metals, and other major investors, to ensure a comprehensive understanding of the risks associated with this project.

We would welcome the opportunity to provide additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jan Leshner', with a stylized flourish extending from the end.

Jan Leshner

Enclosures

c: The Honorable Chair and Members, Pima County Board of Supervisors
Peter Kukielski, President and CEO, Hudbay Minerals
Javier Del Rio, Senior Vice President, US Business Unit, Hudbay Minerals

Attachment 1

RESOLUTION NO. 2025-49

**RESOLUTION OF THE PIMA COUNTY BOARD OF SUPERVISORS REAFFIRMING
OPPOSITION TO THE PROPOSED COPPER WORLD PROJECT**

WHEREAS, in January 2007, the Pima County Board of Supervisors approved Resolution No. 2007-15 opposing the proposed Rosemont Mine in the Santa Rita Mountains because of the significant impacts the proposal would likely have on the area's natural and cultural resources;

WHEREAS, in April 2019, Pima County Board of Supervisors approved Resolution No. 2019-28, reaffirming Resolution 2007-15 opposing the Rosemont Mine, and considering Rosemont Copper Company's failure to address the County's concerns regarding the significant impacts the proposal would likely have or to offer sufficient mitigation for those impacts;

WHEREAS, in June 2022, Pima County Board of Supervisors approved Resolution No. 2022-32 reaffirming Resolution 2007-15 and Resolution 2019-28 after plans were announced to develop portions of the mine on the west side of the Santa Rita Mountains on private land east of Sahuarita and Green Valley and south of Corona de Tucson, and the name of the project was changed to Copper World;

WHEREAS, the proposed Copper World Project ("Project") includes the construction of up to five open-pit mines as well as new waste rock and tailing storage facilities, processing facilities, and associated infrastructure such as new haul roads and new water production wells;

WHEREAS, the proposed Project would cause irreparable harm to the network of ephemeral streams in and around the project area, as well as downstream perennial waters, including Cienega Creek, an Arizona Outstanding Water, and aquifers that contribute to Tucson's groundwater;

WHEREAS, the Project is proposing to pump thousands of acre feet of water a year from wells adjacent to the Santa Cruz River, significantly increasing groundwater withdrawals from the Tucson Active Management Area with minimal replenishment in the area of withdrawal;

WHEREAS, the Project will likely drastically increase heavy truck traffic across the unpaved portion of Santa Rita Road, and correspondingly drastically increase the amount of fugitive dust released into nearby communities, which may result in exceedances of the health standards for particulate matter that could lead to a nonattainment area designation by the Environmental Protection Agency against Pima County;

WHEREAS, the air permit issued to Copper World by the Arizona Department of Environmental Quality does not regulate fugitive dust pollution generated from Project traffic on the dirt roads outside of the Copper World facility boundaries because it is outside of the boundaries of the proposed project facilities;

WHEREAS, the proposed Project would result in significant harm to the County's Maeveen Marie Behan Conservation Lands System and associated wildlife habitat including habitat for threatened and endangered species;

WHEREAS, the proposed Project would have significant destructive impacts on cultural and archaeological resources known to occur in and near the area of the Project.

NOW THEREFORE BE IT RESOLVED THAT:

1. The Pima County Board of Supervisors reaffirms its opposition to the proposed Project;
2. The Board of Supervisors directs the County Administrator and staff, as federal, state, and local authorities allow, to:
 - a. Provide information to other entities as needed to document the County's continuing concerns about the impacts of the proposed Project as the Project evolves;
 - b. Take all necessary measures to protect the health, safety, and welfare of residents of, and visitors, to Southern Arizona using or enjoying County infrastructure and resources affected by the Project;
 - c. Take all necessary measures to protect the health, safety, and welfare of people using the air and water resources affected by the Project;
 - d. Take all necessary measures to protect County Conservation Lands, and all lands within the Maeveen Marie Behan Conservation Lands System, that may be affected by the Project;
 - e. Actively advocate at the State and Federal level against the Project, including the Project's proposed acquisition of 160 acres of State Trust land, that will facilitate the development of mine tailings near residential homes and the Copper Ridge Elementary School.

Passed, adopted and approved, this 21 day of Oct., 2025.

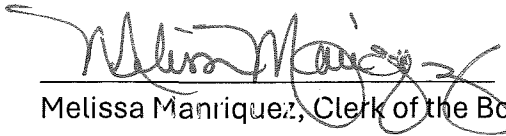


OCT 21 2025

Rex Scott, Chair
Pima County Board of Supervisors

ATTEST:

APPROVED AS TO FORM:



Melissa Manriquez, Clerk of the Board



Bobby Yu, Deputy County Attorney

Attachment 2

ADOPTED BY THE
MAYOR AND COUNCIL

May 5, 2026

RESOLUTION NO. 24114

RELATING TO ENVIRONMENTAL AND CULTURAL RESOURCES; OPPOSING THE
HUSBAY MINERALS' PROPOSED COPPER WORLD MINE AND MINING IN THE
SANTA RITA MOUNTAIN RANGE; AND DECLARING AN EMERGENCY.

WHEREAS, foreign corporation Hudbay Minerals is seeking to acquire 160 acres
of State Trust Land at the western base of the Santa Rita Mountains southeast of
Tucson for their Copper World (formerly Rosemont) mining development ("Copper
World"); and

WHEREAS, the Mayor and Council has consistently opposed open-pit mining
operations in the Santa Rita Mountains as a threat to the City of Tucson's water,
environmental, wildlife and cultural resources; and

WHEREAS, decisions by the United States District Court for the District of
Arizona ("District Court") in 2019 and the Ninth Circuit Court of Appeals ("Ninth Circuit")
in 2022 halted the construction of the then proposed Rosemont Mine on the eastern
slopes of the Santa Rita Mountains and the proposed dumping of mining waste on
federal lands; and

WHEREAS, Hudbay Minerals Inc., the current owner of the land proposed for
Copper World, has shifted its mine processing operations from the eastern slope of the
Santa Rita Mountains to the western slope; and

WHEREAS, Hudbay Minerals Inc. alongside their partners Japan-based
Mitsubishi Corp., are seeking to develop Copper World as a four to six open pit mine

complex on 4,000 acres of land just south of the City of Tucson to include the Rosemont pit; and

WHEREAS, the proposed mining operations at Copper World threaten to diminish our regional groundwater supply significantly as our state prepares for Colorado River shortages, and

WHEREAS, the Copper World development could significantly undermine regional water quality, risking contamination to our aquifers and to two Outstanding Arizona Waters that are protected by law from degradation, and

WHEREAS, in a time of drought, the Copper World development could undercut critical groundwater resources as the Santa Rita Mountains provide a disproportionately high amount of water for runoff and groundwater recharge for the Tucson basin; and

WHEREAS, the area proposed for the Copper World development is recognized for its extraordinary biodiversity and its recreation and tourism value to our region, and

WHEREAS, conservation, watershed protection, climate mitigation, traditional uses by Tribal Nations, cultural and historic preservation, healthy forest management, and other uses of this land contribute significantly to the local, state, and national economies; and

WHEREAS, on April 21, 2026, the Mayor and Council unanimously voted to oppose the State Trust Land sale to Hudbay Minerals & Copper World to facilitate the expansion and development of the project.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF TUCSON, ARIZONA, AS FOLLOWS:

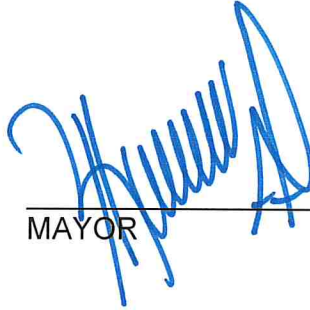
SECTION 1. The Mayor and Council unanimously oppose the development of Hudbay's Copper World Mine, a project that would undermine conservation, watershed protection, climate mitigation, tourism and recreation, traditional uses by Tribal Nations, cultural and historic preservation, healthy forest management, and other uses that contribute significantly to the local, state, and national economies and communities.

SECTION 2. The Mayor and Council call on elected leaders representing the region to join in expressing concern and opposition to the development of the Copper World mine in the Santa Rita Mountains and the destruction of valuable environmental, cultural, wildlife and water resources.

SECTION 3. The Mayor and Council direct staff to take the necessary measures to communicate the City of Tucson's opposition to Copper World mine and support for key environmental resources.

SECTION 4. WHEREAS, it is necessary for the preservation of the peace, health, and safety of the City of Tucson that this Resolution become effective immediately, an emergency hereby is declared to exist, and this Resolution shall be effective immediately upon its passage and adoption.

PASSED, ADOPTED AND APPROVED by the Mayor and Council of the City of
Tucson, Arizona, May 5, 2026.



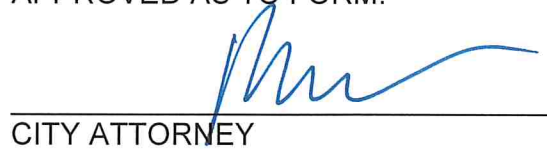
MAYOR

ATTEST:



CITY CLERK

APPROVED AS TO FORM:



CITY ATTORNEY

REVIEWED BY:



CITY MANAGER

LD/RL/lv
4/27/26

ATTACHMENT 2



MEMORANDUM

Date: August 24, 2026

To: The Honorable Chair and Members
Pima County Board of Supervisors

From: Jan Leshner 
County Administrator

Re: **Copper World and Water Resource Impacts East of the Santa Rita Mountains**

Background

Attached is a report entitled "Copper World East of the Santa Rita Mountains". The report examines anticipated impacts of Hudbay's proposed Copper World Phase 1 mining activities on the east side of the Santa Rita Mountains, with particular emphasis on groundwater resources, springs and streams, and water quality.

On [July 20, 2026](#), I responded to Hudbay's correspondence regarding the proposed Copper World project and advised that the County continues to be concerned about the proposed project's impacts to water resources on the east side of the Santa Rita Mountains. I indicated that a more comprehensive review of those issues was underway. This report provides this additional review and will also be forwarded to Hudbay.

Impacts to the Cienega Watershed

While much of the recent discussion surrounding the Copper World project has focused on the proposed mine's west-side facilities and impacts to the Santa Cruz watershed, Phase 1 of the project continues to include two pits and associated infrastructure within the Cienega Creek watershed on the east side of the mountain range. Hudbay has also continued to describe Phase 1 as the foundation for a future Phase 2 expansion that could ultimately affect 6,500 acres total including public land within Coronado National Forest if the mining industry is successful in their efforts to overcome the legal constraints that currently restrict the disposal of waste rock and tailings on national forest lands.

The report concludes that many of the concerns Pima County raised during the prior federal Environmental Impact Statement (EIS) process for the Rosemont Mine remain applicable today. These include aquifer depletion, impacts to groundwater-dependent springs and streams, degradation of water quality, loss of wildlife habitat, and inadequate reclamation planning. However, unlike the former Rosemont Mine proposal, Phase 1 of Copper World is proceeding without an EIS because the current proposal is limited to private land and is thus not subject to the National Environmental Policy Act (NEPA). As a result, many of the federal monitoring, reporting, and mitigation requirements that previously applied are no longer required, and

changes in federal and state regulatory frameworks have further reduced environmental oversight over projects like this.

Reduction in Stream Flows

Among the principal concerns are impacts from dewatering of the Rosemont (East) Pit, creation of a hydraulic sink that alters the direction of groundwater flows towards the pit, and long-term groundwater depletion associated with perpetual pit lake evaporation following mine closure. All these impacts are expected to reduce the groundwater available to sustain Cienega Creek, Empire Gulch, Davidson Canyon, and other groundwater-dependent ecosystems. The report notes that protecting these irreplaceable resources has been the focus of decades of conservation investments by Pima County, the State of Arizona, the Bureau of Land Management, and numerous other partners.

Water Quality Impacts

The report also identifies significant concerns regarding water quality impacts. Because groundwater extracted from the Rosemont Pit cannot be transferred across the Tucson Active Management Area boundary for use in the mine's west-side operations, Hudbay has proposed discharging excess groundwater into natural drainages on the east side. Questions remain regarding the quality of that water, the location of any proposed discharges, and whether these discharges will be subject to permitting requirements or other oversight. In addition, the report notes that the project's Aquifer Protection Permit exempts the Rosemont Pit from groundwater quality compliance monitoring requirements that would otherwise provide additional regulatory oversight.

Additional concerns discussed in the report include potential mobilization of naturally occurring metals during blasting and excavation of the Broadtop Butte area, the absence of commitments to continue pre-construction surface water quality monitoring that occurred under the Rosemont Mine proposal, and the adequacy of reclamation planning and financial assurances based on an evolving mine design. The County's Regional Flood Control District will continue its own surface water monitoring efforts, including water quality monitoring on County-owned and District properties, where recent increases in dissolved metals in base flows have warranted continued attention.

The report documents other actions that have reduced water quality protections over time. For example, beginning in 2012, mine technical staff encouraged the Arizona Department of Environmental Quality (ADEQ) to remove the Outstanding Waters designation from lower Davidson Canyon, a designation that provided enhanced protections under the Clean Water Act. The report states that ADEQ subsequently removed that designation in 2022 and later revised its Outstanding Waters rules in ways that narrowed future application of these protections to streams across Arizona. These regulatory changes, combined with reductions in federal Clean Water Act jurisdiction, further limit the environmental safeguards that were available during the earlier Rosemont Mine review process.

Available and Evolving Information

It is important to recognize that the report is based on publicly available information, much of which continues to evolve. Hudbay has indicated that the project design remains subject to change pending completion of a definitive feasibility study, and inconsistencies currently exist among various permitting documents, investor presentations, and technical reports. The recently acquired Cactus Mine in Pinal County and its connections to Copper World could also affect operations and related impacts. The absence of a comprehensive federal environmental review makes it very difficult, if not impossible, for both the public and reviewing agencies to fully understand the full scope of impacts that could result from this project.

Summary

County staff will continue to review project developments, monitor water quality on County-owned properties within affected watersheds, and engage with state agencies regarding the project. Departments are currently reviewing past performance standards and mitigation requirements associated with prior iterations of this project and are identifying which measures continue to be applicable, in preparation for staff's review of the final feasibility study which is expected this year. The results of that review will be also shared with the Board.

JKL/anc

Attachment

c: Carmine DeBonis Jr., Deputy County Administrator
Steve Holmes, Deputy County Administrator
Chad Kasmar, Deputy County Administrator
Theresa Cullen, MD, MS, Director, Health Department
Scott DiBiase, Director, Department of Environmental Quality
Kris Gade, Director, Conservation Lands and Resources
Lauren Ortega, Director, Development Services
Eric Shepp, Director, Regional Flood Control District
Kathryn Skinner, Director, Department of Transportation
Nicole Fyffe, Senior Advisor, County Administrator's Office

Copper World East of the Santa Rita Mountains

Julia Fonseca, Madrean Resources

Summary of Concerns

Copper World's Phase 1 proposes to mine both sides of the crest of the Santa Rita Mountains. This report focuses on the east-side land and water impacts of Phase 1 mining. The effects largely remain the same as those Pima County expressed to the regulatory agencies during the development of the Rosemont Environmental Impact Statement (EIS) and the mine's associated permits. These include aquifer depletion, loss of wildlife habitat, and impacts to runoff and recharge on adjacent public lands that have been under stress already due to over two decades of drought and increased heat. Specific concerns regarding Phase 1 Copper World include:

1. The conversion of thousands of acres of the northern Santa Rita Mountains to an industrial zone for resource extraction, for without Phase 1 investments of power, water, access and ore processing, there can be no later expansions.
2. Perpetual and unmitigated loss of groundwater and alteration of groundwater gradients caused by the pit lake that would form at closure of the Rosemont (East) pit. Partial backfilling could reduce the long-term effects of perpetual losses to the aquifer caused by a pit lake, but is not proposed.
3. Significant impacts to and diversion of surface water that will, with onsite groundwater pumping and the Rosemont pit lake evaporation, deplete the aquifer in perpetuity, threatening springs and streams that are currently adjacent and downgradient from the mine.
4. The inadequacy of reclamation planning, bonds and standards to remediate and maintain the site after closure.
5. Underestimation of flood volumes and peak discharges, which creates greater risks for the success of approaches intended to control movement of pollutants from disturbed areas.
6. Inadequate standards and mitigation measures for water quality protection under state and federal law. Given that this setting is more sensitive than many others, the concern was always that state and federal regulatory requirements and mitigation commitments for the Rosemont mine were inadequate.

Now, many of the reporting, monitoring and mitigation commitments associated with the Rosemont proposal are gone. Important state and federal regulatory requirements under the Clean Water Act that used to apply have also been weakened or no longer exist.

Background and Purpose

Since the 1970s, Pima County residents have been concerned about the potential effects of open-pit mining in the northern Santa Rita Mountains. Pima County has a long history of providing copper; the effects of open-pit mines are not unknown to its populace. At the same time, groundwater-dependent ecosystems associated with Cienega Creek, Empire Gulch and Davidson Canyon have been the focus of decades of water and habitat protection efforts by local governments, the state, and U. S. Bureau of Land Management.

Reflecting popular sentiment, Pima County Board of Supervisors opposed this mine in the 1990s, and opposed it again after participating in studies of the Rosemont Copper Project's environmental impacts earlier this century. The county's position is rooted in the deep and permanent impacts that this particular mine would have on land and water in the Coronado National Forest and beyond, including County-owned lands dedicated as mitigation for urban development under the Endangered Species Act.

The proposed mine configuration has changed somewhat to include new areas on the west flank of the mountain. While much attention has been placed on the potential impacts of Copper World on residents of the Santa Cruz valley, in a tour of Hudbay lands on May 22, 2026, Hudbay representatives said they still plan to mine on the eastern side as well. During the tour with Pima County officials, Hudbay confirmed that early Phase 1 operations would require excavations below the water table, which is currently a source of recharge to the Cienega groundwater basin.

This memorandum describes in general terms what is known about the proposed construction and operation of the first 20 years of Copper World on the east side of the mountain crest. The impacts on water resources, the proposed mitigations and monitoring will be the primary focus. The description of proposed operations and impacts is based on various publicly-available reports submitted by Hudbay and its contractors to investors and regulatory agencies. In reading the description, bear in mind that the entire proposal is a moving target for a number of reasons, among them:

1. The mine layout has changed due to changes in law, and Hudbay's acquisition of additional lands or property interests in lands.
2. Additional drilling and exploration, and changes in the market for various metals expand the potential to exploit minerals on lands beyond what was originally proposed. Hudbay continues to improve its understanding of potential mineral resources in the Santa Rita Mountains outside the confines of the current mine proposal.

3. Proposed operations have changed and will change due to market considerations, influx of capital, geochemical tests, acquisition of the Cactus mine, and related studies that have not yet been released or completed.

As a result of various factors, Hudbay iterates its so-called Phase 1 proposal and adjusts. As a result, there are inconsistencies between the various permitting documents and the most recent descriptions of Copper World presented by Hudbay to investors and others.

Hudbay and its partner Mitsubishi will use results from a new feasibility study, yet to be issued, as a basis for deciding whether to proceed with Copper World, and if so, how. Hudbay's ongoing acquisition of the former Cactus mine near Casa Grande has delayed their final investment decision on Copper World, according to a [May 2026 presentation](#). The Cactus mine has greater access to existing infrastructure and lower start-up and operational costs. The May 2026 Hudbay presentation (slides 32-35/39) mentions the potential for combining operations of the two. We expect that the companies may reveal more changes to their plans later this year, after they release the definitive feasibility study for Copper World in compliance with Canadian law.

Most of the Copper World reports currently available describe only the first phase. Further, there will be no environmental impact statement (EIS) for Copper World Phase 1, so long as the proposed layouts in permitting documents are confined to their private land. With no definitive and complete proposal to review and no revised EIS, the public is at a significant disadvantage in understanding the full impacts of Copper World.

Location of east-side mining impacts

The east side of the Santa Rita Mountains drains toward Tucson via the Cienega Creek watershed. This watershed has been a focus of land and water conservation efforts dating back to the 1970s, when mining and subdivision proposals arose. The predominant land use in the watershed remains livestock grazing, with several low-density ex-urban residential developments accessed mainly by state highway 83.

A Ninth Circuit Court of Appeals decision in 2022 invalidated the Forest Service's past assumption of Hudbay's rights to dispose of waste and tailings on National Forest lands. Hudbay's revised plans, renamed Copper World, include different shapes for the Rosemont pit (also called the East pit), and additional excavations near the crest of the mountains that were not part of earlier plans.

Figure 1 shows the location of all six proposed pits and waste rock facilities (WRFs) associated with the Phase 1 Copper World proposal in relation to the private land owned by Hudbay. The current design reflects the relocation of mineral processing operations proposed in the Rosemont EIS, as well as the initial disposal of tailings, to the west side of the crest. Phase 1 pit excavations and waste rock disposal would still occur east of the crest.

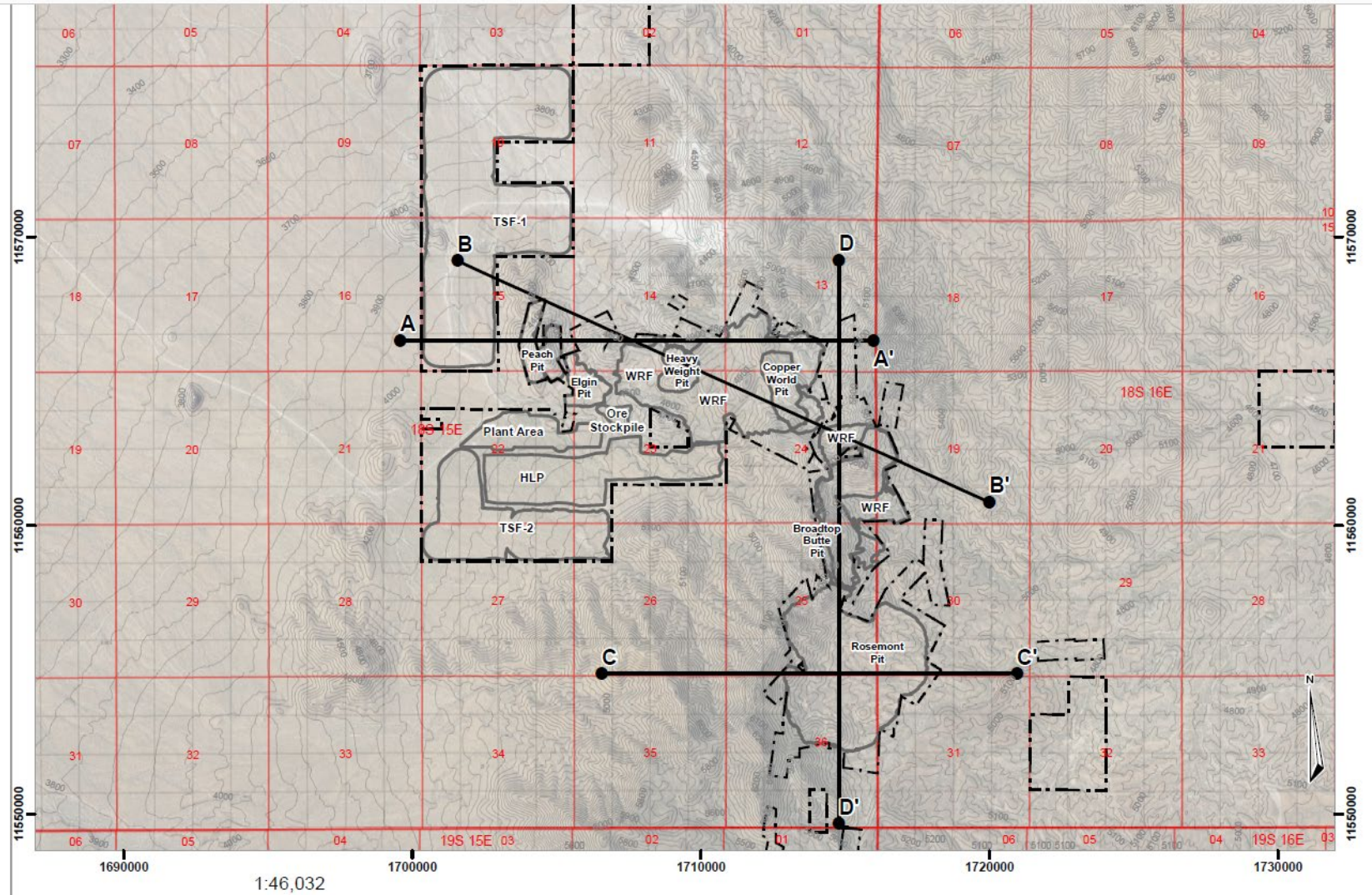


Figure 1. Phase 1 open pits and waste rock disposal locations, relative to Hudbay's private property. Darkest lines represent locations of geological cross-sections (from Figure 62-1 March 31, 2023 map by Piteau)

Hudbay still hopes for a second phase of mining, albeit with a different configuration than was previously approved by the Forest Service (Figure 2 and 3). The total impact area is very large, around 6500 acres, not counting the Sahuarita wellfield and utility corridors. Overall mine life for both phases of Copper World is now estimated to be 44 years, not 25-30 years as was cited in the earlier Rosemont Environmental Impact Statement (EIS).

RESERVE AND RESOURCE BASE

- NI 43-101 compliant Reserve and Resource statement supported by extensive drilling totalling 355,371 meters
 - PFS mine plan and reserve and resource statement independently reviewed and validated by leading mining consultant WSP
- Reserves only account for 30% of M&I Resources
 - 83% of Reserves are classified as Proven

Significant resources lie outside of the PFS reserve pits with future opportunity to unlock in Phase II, particularly in the East Pit

Figure 2. Excerpt from June 2026 slide deck (Hudbay presentation to investors)

Phase 2 would require a legal entitlement to use public lands administered by the U. S. Forest Service and Bureau of Land Management. In the wake of the Ninth Circuit's decision, the National Mining Association has taken up Hudbay's cause to lobby Congress for a bill that, if approved, provides easy access to federal lands for waste and tailings disposal. A land exchange approved by Congress might also provide the means for a second phase of mining and dumping on federal lands.

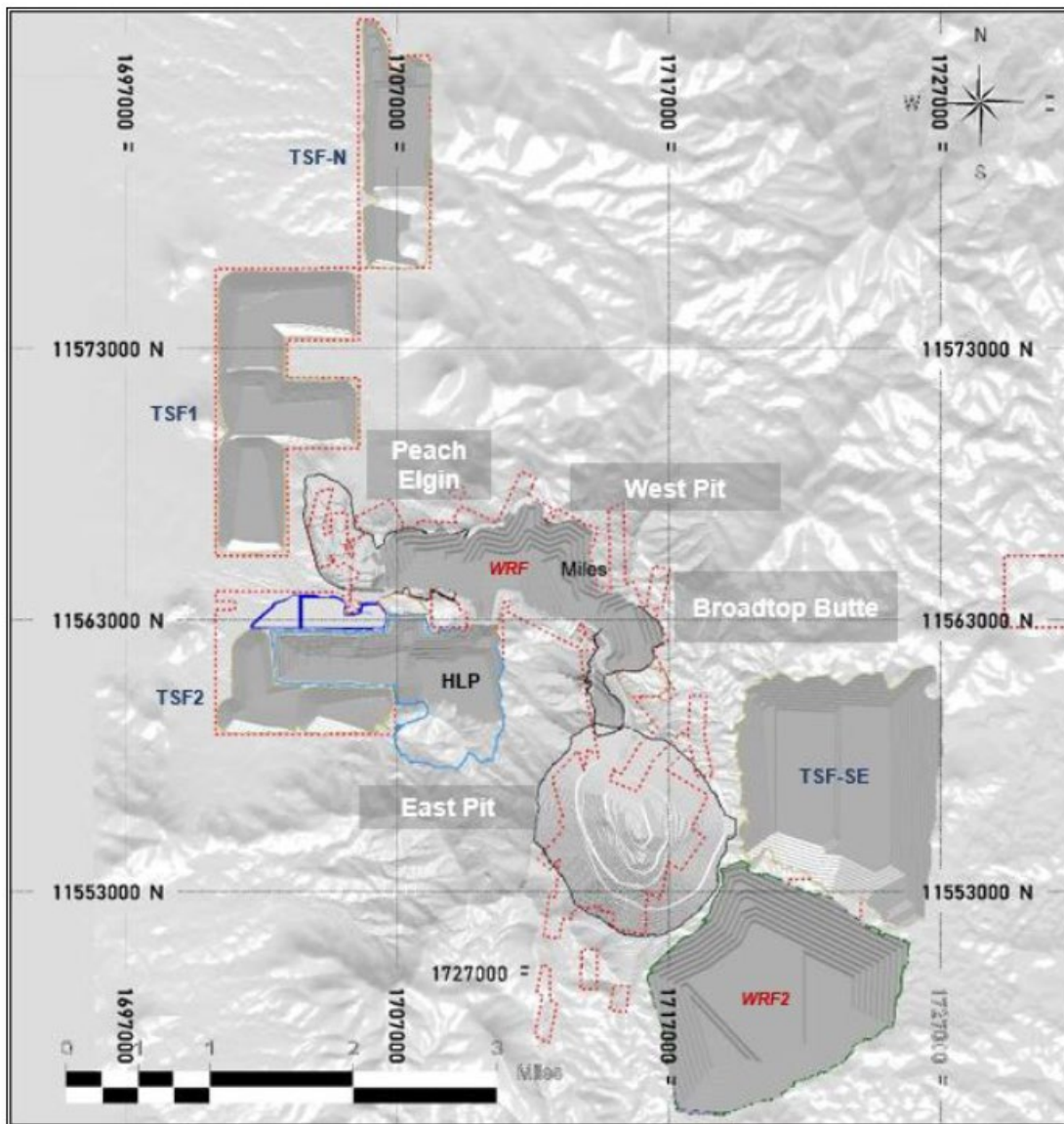


Figure 3. Waste rock (WRF2) and tailings storage features (TSF-SE) for Copper World Phase 2 on the east side of the Santa Rita Mountains. Red outlines Hudbay's private land (from Figure 16-21 of the Copper World Preliminary Feasibility Study)

Two of the six pits proposed for Copper World's Phase 1 activities, the East or Rosemont pit and the Broadtop Butte pit, would be excavated along and below the mountain crest, mostly within the Cienega Creek basin (Figure 4). All of the other pits lie in the Santa Cruz basin. Figure 4 was created using the [Rosemont Pimamap](#), where readers can find additional data layers to compare and contrast Copper World to the previous mine configurations. Figure 4 shows the Phase 1 pit outlines in red, relative to Phase 2 pit expansion in orange.

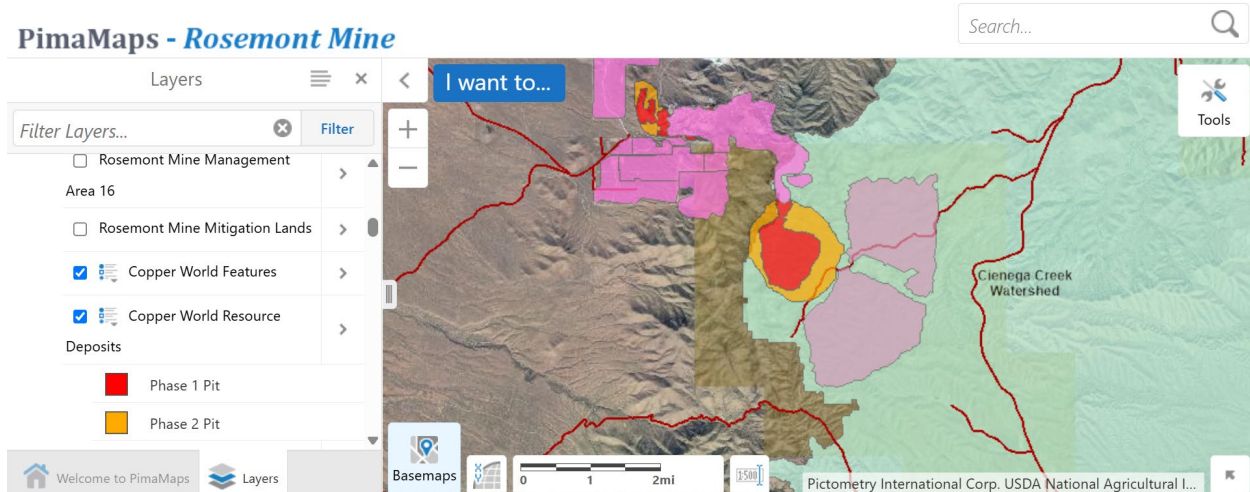


Figure 4. Copper World Phase 1 and Phase 2 pits, and Phase 2 east-side waste rock and tailings placement (brown) in relation to Cienega Creek watershed (green).

For a closer look at the pits and waste rock facilities on the east side of the mountain, begin by referring to Figure 1, which shows the location of cross-section D-D' which runs north to south, just east of the mountain crest. The Phase 1 configuration includes two new pits situated near the crest of the mine: Copper World and Broadtop Butte. Copper World drains north into Sycamore Canyon; this is part of the Santa Cruz watershed, so it is not discussed further here. The Broadtop Butte pit is shown in cross-section in Figure 5. This pit would be carved into the crest of the mountain. It would then be backfilled with waste rock to a height similar to the existing topography.

The East/Rosemont pit remains the single largest and deepest of the six proposed open-pits associated with Copper World, but it would have a sub-optimal shape in Phase 1 due to its confinement to private land. The Phase 2 pit would be extended farther toward the crest of the mountains and be slightly larger than what was analyzed in the Rosemont EIS.

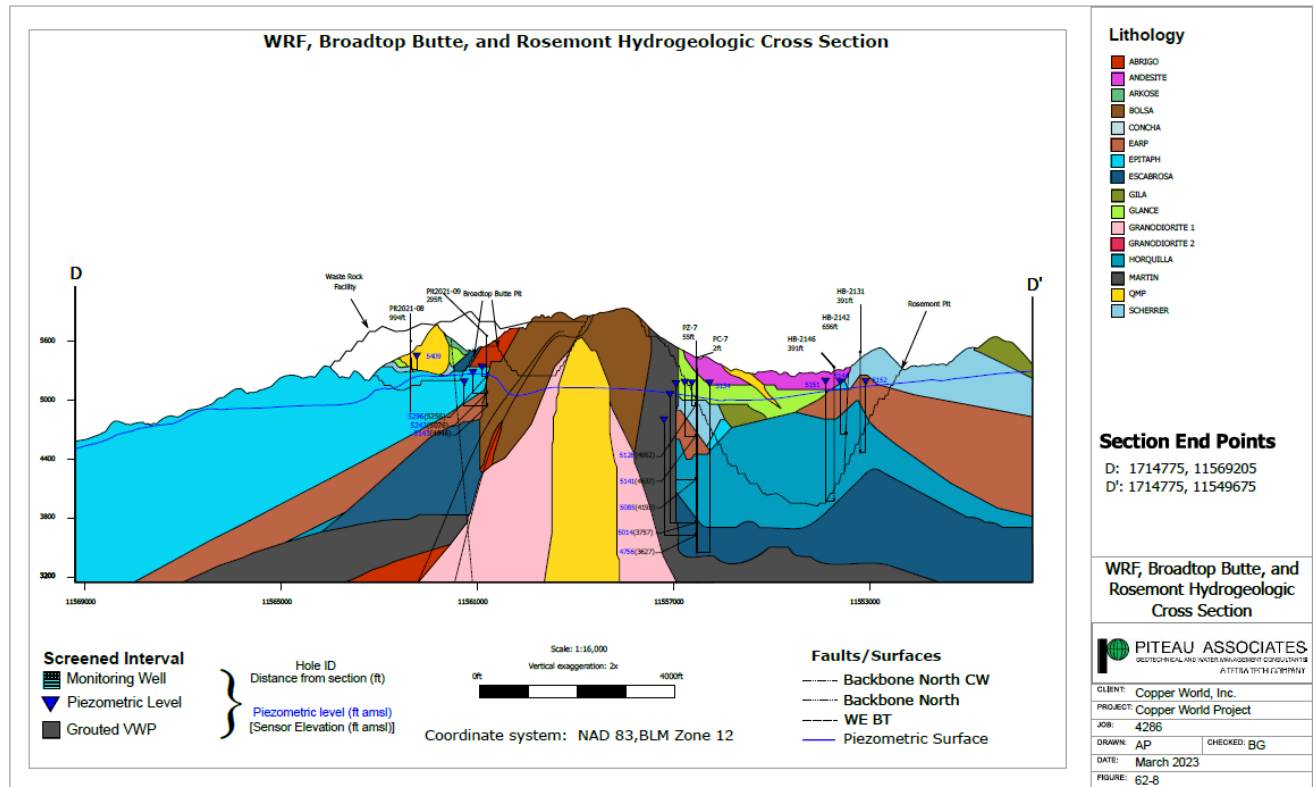


Figure 5. Broadtop Butte and East/Rosemont pit features relative to local geology as referenced in cross-section D-D' of Figure 1. (Piteau Associates)

For a closer look at the East/Rosemont pit, see Figure 6 cross-section. The Phase 1 pit wall would impinge on the high slopes of the mountain (Figure 6). The Phase 1 wall facing Highway 83 would be much more visible than described in the Rosemont Copper EIS, unless and until Phase 2 waste rock and tailings would be stacked high enough to obscure the sightlines.

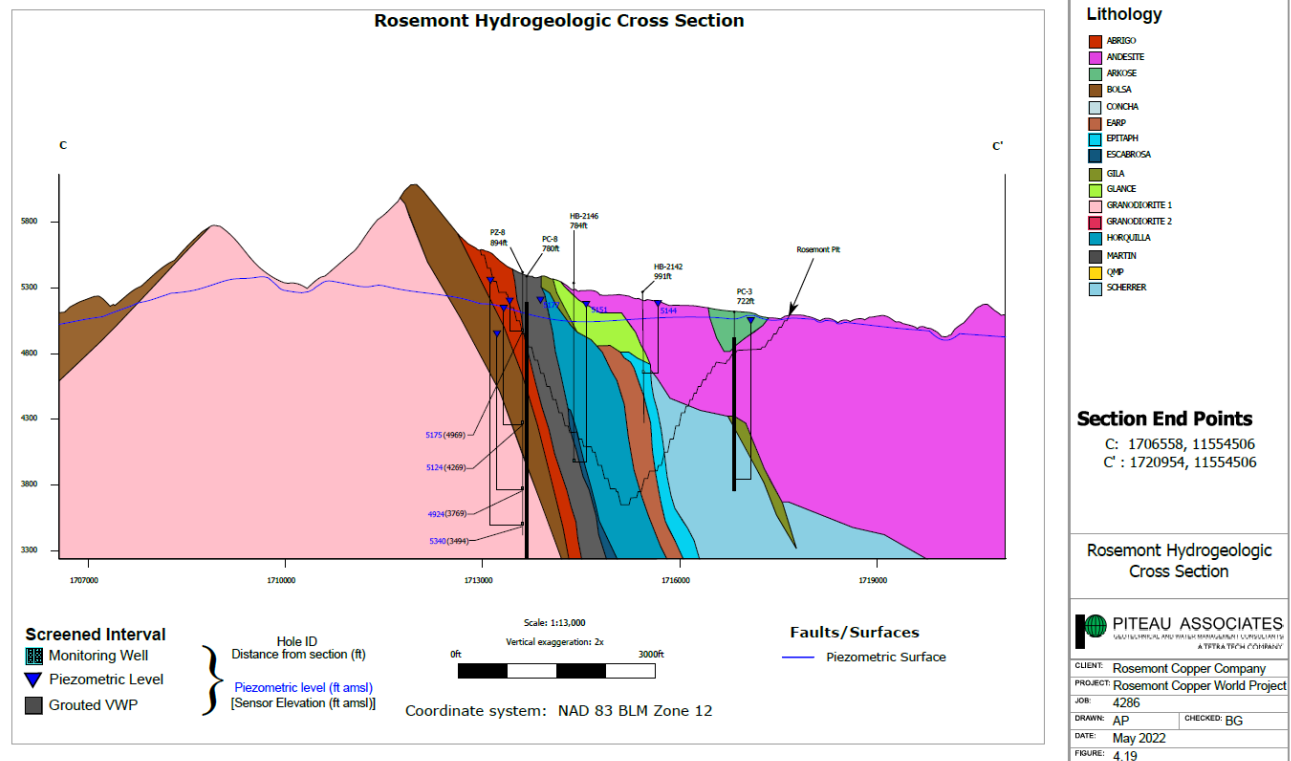


Figure 6. Rosemont or East pit geological cross-section C-C' as marked on Figure 1 (Piteau Associates)

Some Specifics Regarding the Phase 1 Copper World Proposal

Dewatering the aquifer

The Phase 1 East/Rosemont pit extends to a much deeper level than the Broadtop Butte pit. Note the “piezometric surface” as shown on Figure 5; this is the level to which groundwater currently rises in boreholes. Both pits would penetrate below the water table into alluvial and limestone aquifer materials, but only the Broadtop Butte pit would be backfilled.

Even during Phase 1, the depth of the pit, the type of material intersected, and the steepness of the East/Rosemont pit walls would require a substantial groundwater pumping operation at the East/Rosemont pit to “dewater” the geologic formations that would be penetrated. Hudbay’s 2023 Preliminary Feasibility Study for Copper World (PFS) and more recent communications with County staff during the June 2026 field tour indicate that dewatering would commence during the earliest phases of construction. Dewatering is done to prevent flooding of the pit, increase pit wall stability, and improve worker safety (Figure 7). Much of the dewatering would occur during the first two years to reduce pore pressures in the formations prior to excavation.

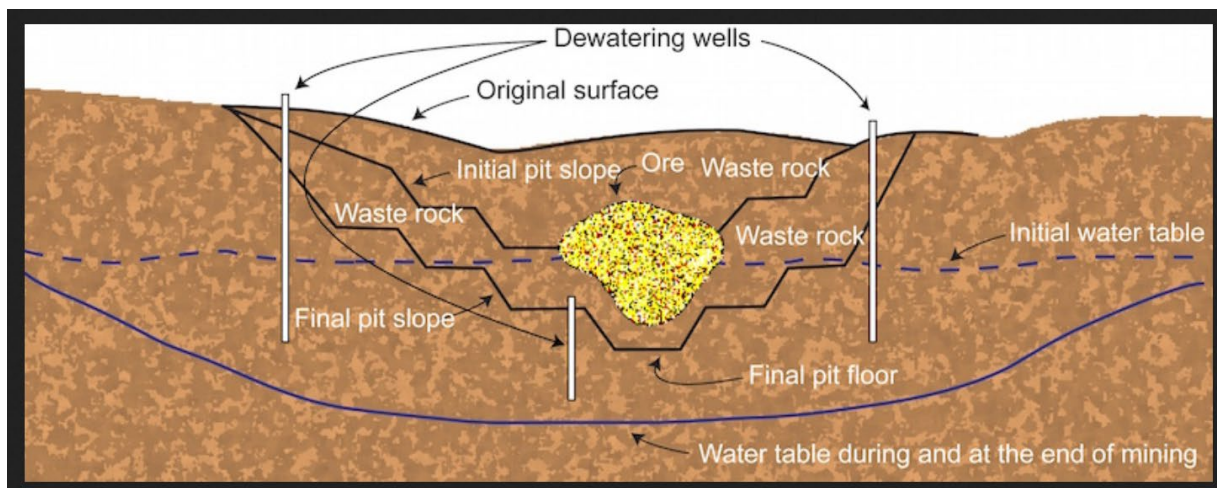


Figure 7. Conceptual cross-sectional diagram of mine pit dewatering (Great Basin Watch)

Both the PFS and the Rosemont Copper dewatering strategy called for drilling horizontal and vertical wells. The Forest Service limited the amount of pre-production groundwater dewatering to 18,500 acre-feet, but that mitigation measure no longer applies to Copper World Phase 1 operations so long as no Forest Service permissions are needed for construction or operations. Pre-production refers to the first two years of stripping the land surfaces to expose the ore.

The Copper World PFS calls for a minimum of 12,000 acre-feet of pumping from vertical dewatering wells over the mine life, however that source does not indicate how much might be extracted during pre-production phase, nor how much might come from the horizontal dewatering wells in Phase 1. In practice, no one can predict exactly how much removal of groundwater would actually need to occur, or how fast; this is usually determined through monitoring the effects of pumping on water levels in nearby monitoring wells.

Additional pumping of rainfall and runoff from the pit would need to occur in both pits during construction and operation, but these are expected to be minor considerations for the Broadtop Butte pit in comparison to the runoff into East/Rosemont pit, which has a much larger area of collecting surfaces. Over 700 acre-feet per year of rainfall would be expected in a 467-acre East/Rosemont pit based on the configuration in the [Aquifer Protection Permit](#) application (Table 6-03).

Groundwater pumping and disposal

By superimposing the Tucson Active Management Area (TAMA) boundary on the Rosemont Pimamap, one can see that much of the Broadtop Butte pit and all of the East/Rosemont pit lie outside the TAMA boundary. The location of the TAMA boundary affects where groundwater pumped from the Cienega basin may be taken.

Arizona Revised Statutes 45-551 prohibits the direct or indirect transportation of groundwater from outside the TAMA to inside the TAMA. This limits the use of groundwater extracted from the East/Rosemont pit. It can be used for dust control on the east side of the mountains. Groundwater cannot legally be conveyed for construction or mineral processing operations of the Copper World facilities that are now located on the west side of the mountains.

The rate of pumping for dewatering may not always balance with needs for construction dust control on the mine's east side. There may also be periods of temporary closure during operations when dewatering remains necessary. Excess groundwater extracted from the East/Rosemont pit could be discharged as runoff on the east side of the Santa Rita Mountains, however any such discharges would need to conform to state water quality standards, and possibly require Forest Service permission. The Copper World APP application (p. 45) proposed to discharge groundwater to streambeds in the area:

Water management for the Rosemont Pit will be different than the west side pits due to its location outside of the Tucson Active Management Area (AMA). Water from the Rosemont Pit dewatering wells will be used for general dust suppression with excess water released to a natural drainage on the east side of the pit. Water collected in the pit sump, whether from groundwater inflow, precipitation or stormwater runoff, can be used either for dust suppression inside the pit shell or pumped to the process circuit.

Pumped groundwater is likely to be rich in metals, and it is unknown whether it would meet standards for discharge to any streambeds. Water quality from the pit sump is also of unknown quality. Both sources would have to be monitored and possibly treated before release to streams, as is done at the South32 mine near Patagonia. Pima County requested ADEQ to ask Hudbay to disclose the location of any discharges to natural drainages. We do not have this information. As of August 2024, Arizona Department of Environmental Quality noted in their [APP responsiveness summary](#) that Hudbay had not applied for a permit to discharge groundwater as runoff to streams.

Groundwater impacts

One of the major premises underlying the east-side operations has always been the perpetual maintenance of a “hydraulic sink” to control the direction of flow of any contaminants arising from the fragmentation and exposure of sulfide minerals to oxygen and other weathering processes. Evaporation from the East/Rosemont pit will draw down aquifer levels and alter normal direction of groundwater movement from the mountain crest toward the lower elevations in the Cienega basin, but the question is how quickly and to what degree.

Hudbay's contractors predict that the East/Rosemont Pit would be a hydrologic sink during post-closure but it was not demonstrated that it will always be so during construction, operation,

closure or temporary closure periods. Pima County requested additional safeguards. Verification that the sink is maintained was formerly required by the Forest Service and has been incorporated into the aquifer protection permit. Reporting will continue until the end of the post-closure period.

However, no aquifer water quality protection compliance requirements will be in force at the Rosemont pit during Phase 1. The exemption of the East/Rosemont pit from compliance with the aquifer water quality standards occurred during deliberations on the Aquifer Protection Permit (APP) in 2025. Pima County wanted the groundwater quality around the East/Rosemont pit to be regulated under the APP and monitored via water samples taken at point-of-compliance wells.

In response to Pima County comments in the Copper World APP review, Hudbay agreed to install two wells to the east and downgradient of the East/ Rosemont Pit to monitor water levels, but these are not permit compliance wells. ADEQ exempted the pit under Arizona Revised Statutes Section 49-250(B), so no groundwater quality sampling can be required at these downgradient wells. ADEQ cannot enforce any impairments of groundwater quality standards at the water-level monitoring wells nearest the pit. The Forest Service had formerly required reporting of water quality from an extensive monitoring network beyond the APP compliance wells, but this is no longer part of Hudbay's commitments.

Pima County also requested that ADEQ consider how sustained discharges from dewatering operations to the washes may affect the early development and maintenance of the hydraulic sink conditions at the East Pit, but this was not done. Hudbay assures us that Phase 1 dewatering will be sufficient to keep contaminants from the regional aquifer, but it is not demonstrated that this would be true if discharges to washes and recharge from sustained, multi-day storms occurs. Dewatering would also need to continue during periods of temporary closure.

The sink is a double-edged sword: if it forms too slowly, contaminants may be discharged to downgradient locations during operations, but when it does form, it has the effect of reducing the natural discharge of groundwater to streams and springs. In the long-term, these evaporative losses from the aquifer affect more and more area, resulting in lowering of the water table, with consequent impacts to domestic and stock wells, and surface flows in streams and springs.

After closure, pumping ceases, and then the evaporation of groundwater seeping into the pit lake becomes an essential requirement for maintaining the hydraulic sink. Perpetual evaporation from the pit lake surface is supposed to keep groundwater flowing into the pit forever, which in theory prevents the migration of pollutants from the 600-foot deep pit lake to

the downgradient aquifer as minerals weather. For various reasons, the hydraulic sink conditions may [not always be maintained](#) even in areas where evaporation rates are usually high.

After mine closure, as the pit lake grows in size, the Rosemont pit lake will be increasingly looked at by migratory waterfowl as a place to rest. The Rosemont EIS concluded that the Rosemont pit lake would have concentrations of thallium and possibly ammonia that exceed aquifer water quality standards. The pit lake water quality is exempted from state water quality standards, so if the water quality is impaired, ADEQ lacks authority to impose remediation. The Forest Service required additional studies of pit lake geochemistry to inform potential mitigation measures. This does not apply to any pit lakes under Phase 1.

Impacts to reliability of spring and stream flows

Reduction in the volume and reliability of flows to tributary to streams in the National Forest would occur quickly due to construction of various mine features such as the pits and berms that would intercept runoff. The original Rosemont analyses identified 104 springs in the area, many of which were thought to respond to seasonal precipitation more than groundwater discharge per se. If this is true, then when flow paths from the crest are impeded by roads, pits and fills, spring reliability will be less.

The Forest Service attempted to minimize effect of waste rock and tailings on Forest streams through various mitigation measures, which are no longer in effect. McCleary Canyon's watershed was chosen for greater protection because of the presence of intermittent springs, wetlands, rare plants and streams. Phase 1 operations will interfere with runoff to this watershed more than was previously anticipated, because Hudbay now proposes mining at Broadtop Butte, part of the headwaters for this stream.

The pumping during dewatering might reduce flows at various groundwater-dependent springs and wetlands nearest the mine. The EIS analyses did not anticipate that any water from the dewatering would be released to streams, as is currently proposed in the APP for Phase 1. Such releases might offset some of the effects of pumping, but water from the pumps could require pre-treatment to meet state standards for discharge.

The pit lake is what causes the long-term damage to more distant riparian ecosystems such as Empire Gulch, Davidson Canyon and Cienega Creek. Surface water flow in Davidson Canyon to Lower Cienega Creek are primarily sourced not from direct or local precipitation and runoff, but rather from recharge in the mountain block which induces outflows of deeper, older, regionally recharged groundwater. A large pit lake re-directs mountain recharge to feed the perpetual evaporation of water from the lake surface.

The Rosemont EIS used several groundwater models and interagency review to predict how far and how fast the impacts of groundwater loss (due to the pit lake evaporation) might affect springs and stream flows.

Multiple models were needed because of the uncertainties regarding the subsurface conditions outside the mining area. The pit lake takes a long time to fully fill, and a full examination of the effects takes even longer, so the period of analysis used affects the conclusions. Compounding the difficulty of prediction of long-term impacts from the pit lake is the ongoing drought, and the uncertain trajectory of climate. The Forest Service required the mine to update the model based on new information gathered over an extensive monitoring network. This does not apply to Phase 1 of Copper World.

Pit lake effects on downgradient rivers and springs are common in many mined landscapes in the semi-arid West. Figure 8 illustrates schematically this process of the pit lake evaporation altering the direction of aquifer flows away from recharge to springs and streams.

The EIS generally predicted that the pit lake evaporation after closure would cause impacts to groundwater-dependent ecosystems. These impacts would begin in the immediate Rosemont area before spreading to more distant areas. Empire Gulch in Las Cienegas National Conservation Area was predicted to go from perennial to intermittent by the end of the first 50 years. Changes from perennial to intermittent flow status in upper Cienega Creek and Gardner were predicted occur 100 to 150 years, respectively.

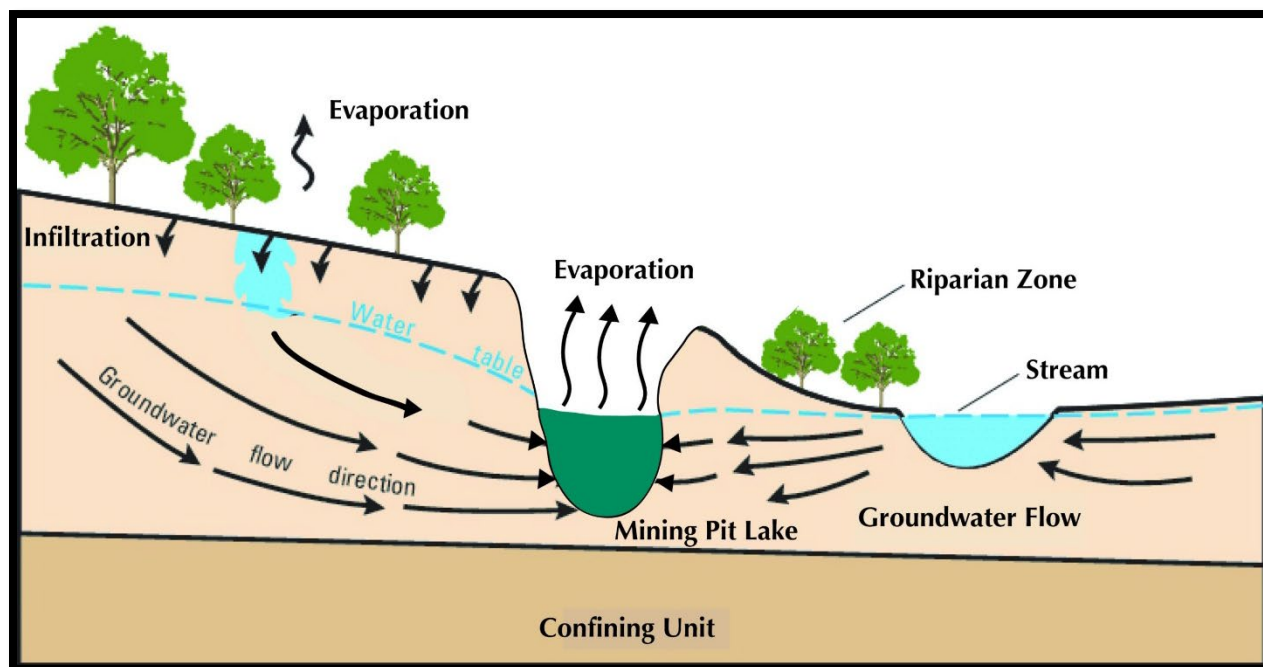


Figure 8. Conceptual diagram showing interception of groundwater from mountains to the west to the pit lake. Evaporation from the lake acts upon the aquifer like pumping a large-diameter well. (Great Basin Watch)

There will be no comparable monitoring, reporting, review and re-analysis for Copper World Phase 1 impacts, even if there is a permanent closure.

The original Rosemont proposal included many forms of mitigation for losses of wetlands and aquatic species, none of which will apply to Phase 1 of Copper World. The Forest Service and U. S. Fish and Wildlife Service had the power to impose additional mitigation measures for wildlife over time. Hudbay currently offers no mitigation for loss of wetlands or associated plants and animals. There are no replicates for the low-elevation wetland habitats at risk, which are nearly intact, in terms of native aquatic fauna. The already low volume of water discharge at the springs and streams on the eastern slopes of the mountain make them more vulnerable to loss.

Surface water quality impacts

Under the Copper World proposal, blasting, excavations and grading activities will begin at Broadtop Butte. The Broadtop Butte ore body has a different geology than was analyzed in the Rosemont EIS. According to Hudbay 2023 PFS, the rock that would be blasted and mined there is primarily a well-mineralized intrusive volcanic porphyry, with adjacent altered limestone. Stripping, blasting and excavation of Broadtop Butte and the adjacent slopes to the south would begin here while the Rosemont pit area is being dewatered. According to geochemical analyses by U. S. Geological Survey in 1973, there are indications of elevated concentrations of lead, arsenic, antimony, cadmium, zinc, silver, tellurium, and molybdenum in the rocks along the crest and eastern slopes of the Santa Ritas from the Broadtop deposit south.

The federal agencies have performed no new evaluations of surface water quality impacts of mining at Broadtop Butte and areas south along the crest. This is because Phase 1 layout is designed to avoid any U. S. Forest Service or the U. S. Bureau of Land Management lands. The Phase 1 aquifer protection permit issued by ADEQ examined the effect of backfilling the Broadtop Butte pit, but did not examine what metals might be released to surface-water streams from grading or construction activities.

Fortunately, Hudbay analyzed actual runoff from these eastern slopes into tributaries of Barrel Canyon. The Broadtop Butte area drains into McCleary Canyon. Barrel Canyon collects runoff from the proposed mine site via Wasp and McCleary Canyons. As part of the original Rosemont permitting process, Hudbay committed to continue to monitor and report the metals in surface runoff before construction to an interagency team that included the Forest Service, U. S. Fish and Wildlife Service and U. S. Environmental Protection Agency.

Based on Hudbay's monitoring during 2008 to 2015, both HudBay and the Forest Service Supplemental EIS acknowledged that the stormwater flows in Barrel Canyon or its tributaries Wasp and McCleary exceeded standards for certain metals, particularly copper and lead, less often for arsenic, selenium, thallium and silver. Hudbay discontinued surface water quality monitoring in Barrel Canyon and its tributaries following a flood in 2015, and no commitment has been made by Hudbay to renew surface water-quality monitoring or reporting.

Various additional design elements and mitigation measures were adopted to minimize surface water quality impacts during the Rosemont EIS process. The Pima County Regional Flood Control District felt the models used in designing various stormwater features underestimated the potential for runoff in the watersheds on the east flank of the mountains. The design and mitigation measures were accepted by the U. S. Forest Service and ADEQ as part of ensuring that they would not degrade surface water in lower Davidson Canyon. Although Pima County did not believe that the surface water mitigation measures were reliable or sufficient, none of these measures apply today.

The Rosemont mining facility once held Arizona Pollutant Discharge Elimination System (AZPDES) permits for construction and industrial activities under state statute ARS §49-255 that protects surface water quality and was which was adopted under section 402 of the Clean Water Act. Rosemont Copper obtained AZPDES Multi-sector General Permit (MSGP) coverage in 2013. The permit was terminated on August 31, 2023.

The regulatory scope of the Clean Water Act has been reduced since the original MSGP was issued and especially on May 25, 2023, when the United States Supreme Court released their decision in *EPA vs Sackett*, No. 21-454. This ruling redefined Waters of the United States to cover only permanent bodies of water with a "continuous surface connection" to "traditional interstate navigable waters." The decision reduces protections to many Arizona waterways that may not have a continuous connection to a permanent body of water. Under these current interpretations, Pima County does not believe that ADEQ will require Hudbay to obtain a permit for pollution management of stormwater runoff or surface water discharges.

Hudbay has no active permitting effort with ADEQ or the U. S. Army Corps of Engineers for permits under the Clean Water Act. Without effective control measures, pollutants can seep into the alluvium and fractured bedrock and migrate into the aquifer during blasting, stripping and grading activities.

Undoubtedly Hudbay would use some kind of runoff control measures during construction, but Pima County Regional Flood Control's earlier review of east-side hydrology indicated that Hudbay's contractors underestimated flood risks. The success of any approaches intended to control movement of pollutants from disturbed areas remains in question.

More ground disturbance in these watersheds has occurred since Hudbay's 2008-2015 runoff monitoring effort, including additional drilling and road construction. Hudbay attributed "background soils" as the source material for the observed exceedances in stormwater runoff in Barrel Canyon and its tributaries, as does the FEIS. If native rock and soils in this historic mining district are the principal source of metals in surface water runoff, grading of additional roads and stripping of vegetation and topsoil can be expected to mobilize more metals into runoff.

The metals liberated from natural soil disturbance, erosion of historic mining waste and tailings, mineral exploration drilling and blasting, and the stripping and grading that precede the actual excavations of the mine were regarded by the state as part of establishing the background or ambient water quality for any future permit conditions under state law and rules. Thus, more degradation of the surface water and aquifer water quality is allowed before any new standards are applied to operations of the mine.

The ecological significance and unimpaired water quality of base flows on the County's Bar V Ranch property in lower Davidson Canyon was documented and reviewed by the state in the early 2000s as a basis for an Outstanding Waters designation. (Base flows are the sustained flows in intermittent streams.) This protective designation was granted despite opposition by the mining industry's lobbyists.

Unanticipated increases in metal contaminants on County property in lower Davidson Canyon's base flows of water have been observed in recent years, including dissolved copper, lead, arsenic, and zinc. Although high concentrations of metals might be expected in transient flows of runoff coming from mineralized areas, the increased metal detected in sustained base flows on County property is surprising.

Under the Clean Water Act, the Outstanding Waters designation required the state to safeguard against impacts to lower Davidson Canyon and Cienega Creek, because it prohibited any degradation of water quality arising from sediment discharged to Barrel Canyon and its tributaries. As a result, the potential effects of the mine's sediment discharges were hotly contested among the federal agencies, including the U. S. Environmental Protection Agency, the U. S. Army Corps of Engineers. In 2012, public records show that the mine's technical staff began encouraging ADEQ to remove the Clean Water Act's protective designation from Davidson Canyon, or as they called it in [2016 emails to ADEQ](#), to "un-O" the Outstanding Waters.

That effort bore fruit. In 2022, the state withdrew the Outstanding Waters designation from lower Davidson Canyon on the basis of stormwater runoff showing elevated metals. The state also modified the rules governing how Outstanding Waters may be designated to narrow the potential application of antidegradation protections for Arizona streams in general.

The typical response for dealing with metal impairment in streams under the Clean Water Act is to establish a total maximum daily loading rate for each pollutant. However, the way that the Clean Water Act is interpreted relative to intermittent and ephemeral streams has changed since the original permits were obtained for the Rosemont project. It seems unlikely that any Clean Water Act provisions will apply to future mining in the northern Santa Rita Mountains.

Reclamation of the mine site is important in protecting surface waters long-term. How mine features are reclaimed is important in long-term stability of the land surface. Copper World's reclamation bonds were based on a premature 2021 plan that was submitted to the state mine inspector and approved in absence of a mine plan. The Phase 1 mine plan is still under development. Inadequate closure plans can lead to excessive erosion and surface water quality degradation down the road. Inadequate bonding means problems that emerge cannot be corrected with the available funds.

Conclusions

Phase 1 construction and operations on the east side of the Santa Rita mountains include the development of two open-pit mines. Mine development activities would quickly affect waters of the Coronado National Forest, with longer-term impacts on the aquifer and more distant streams and springs.

Federal, state and local government comments developed under the Rosemont EIS process were directed at making all phases of the mine less damaging and making the compensations more robust. Most of the streamflow, wetland, and aquifer protections and mitigations that come out of the Rosemont mine deliberations no longer apply to Copper World Phase 1.

Hudbay's plans for all phases of potential mining on the east side of the Santa Rita Mountains are still evolving. Additional discussions with Hudbay and ADEQ are warranted regarding the final layout, standards and mitigations applicable to east-side activities, should Hudbay decide to proceed with Phase 1.