



South32 Hermosa Project | Frequently Asked Questions

Last Updated March 2022

In August 2018, Arizona Minerals (AMI) as part of South32, completed the acquisition of Hermosa in the Patagonia Mountains – a site in which the land has been historically mined since 1875.

In an effort to remain consistent with our goals surrounding community involvement and development, Santa Cruz County is committed to keeping the community informed and working closely with South32 to ensure that project progress is carried out in a transparent and collaborative way.

General

1. How does the Hermosa Project fit in with the general plans of Santa Cruz County and the Town of Patagonia?

As part of the vision of Santa Cruz County, growth is accommodated in a manner that preserves our sense of community and protects and enhances our quality of life. Differing development patterns and economic activities, such as the development of South32's Hermosa Project, will provide benefits for people living, working or visiting the County, and natural resources will be protected and sustained.

The purpose of the Santa Cruz County Comprehensive Plan is to provide guidance in its totality to the County Board of Supervisors in maintaining the diverse development styles, cultures, and environments that make Santa Cruz County unique.

[Click here to learn more about Santa Cruz County's Comprehensive Plan.](#)

While the proposed Hermosa Mine is located in an unincorporated part of Santa Cruz County, it is in close proximity to the Town of Patagonia. The Town of Patagonia's General Plan is intended to provide an adaptable framework for future decision making for all interrelated functions.

Recognizing ongoing development due to Arizona's population growth, active mining proposals, and the overall attractive living quality that characterizes Patagonia, the Mayor and Town Council formed a citizen-based planning committee. The committee, with extensive public input, assisted in the development of a plan that expresses their vision of a unique, prosperous, and diverse community with adequate supporting services.

[Click here to learn more about the Town of Patagonia's General Plan.](#)

2. Who has authority over local site changes for the Hermosa Project?

The Hermosa Project is taking place on primarily private land that is owned by South32. Accordingly, most permitting processes for local site changes are handled administratively at the State level with the [Arizona Department of Environmental Quality](#) and the [Arizona Department of Water Resources](#).

Santa Cruz County is responsible for maintaining many of the roads and potential transportation routes near the site.

3. What is the status of the water permits applied for by South32?

Arizona Minerals, Inc., as part of South32, was granted two amended permits from the Arizona Department of Environmental Quality (ADEQ) related to continuing exploration on their private lands that would require pumping, treatment, and discharge of groundwater into Harshaw Creek.

1. Arizona Pollutant Discharge Elimination System (AZPDES) Permit for the addition of Outfall 002 with the proposed discharge of up to 6.48 million gallons per day of treated mine drainage water, tailings seepage, groundwater, core cutting water, drilling water, and stormwater from the treatment plant at the Hermosa Project site to Harshaw Creek.
2. Aquifer Protection Permit (APP) pursuant to Arizona Administrative Code, Title 18, Chapter 9, Article 1.

The Patagonia Area Resource Alliance is in the process of appealing the APP and has asked for additional data collection, increased transparency, and the establishment of locations where ADEQ will monitor contamination prior to dewatering.

4. What are the other permits being pursued by South32?

South32 has submitted an Exploratory Drilling Plan of Operations for their proposed drilling on the Flux Prospect in Flux Canyon from the United States Forest Service (USFS). The USFS will determine the scoping dates and timeline regarding this submittal.

Following the public scoping period and detailed review by a USFS Interdisciplinary team, the plan would authorize construction of up to 1.3 acres of temporary access roads, construction of up to 0.5 acres of drill pads, maintenance of existing roads, and reclamation of disturbed areas. The proposed temporary construction, drilling, and reclamation activities would be completed in less than one year from project start.

5. What is the agreement between South32 and Santa Cruz County regarding communication and conduct?

Recognizing that Arizona Minerals Inc. (AMI), as part of South32, has the right to explore the possibility of a development and redevelopment of their property which has had [previous mining activity dating back to 1875](#) and that the Santa Cruz County Board of Supervisors want to make sure that if there is any development/redevelopment of the property that it does not negatively impact the surrounding community, both parties recently entered into a Memorandum of Understanding (MOU) on November 10, 2020. This MOU provides a framework for how the County and AMI will seek to collaborate, work together, and learn from each other to understand respective responsibilities and achieve their respective objectives -- the County wishes to protect its communities and natural resources and enhance quality of life for all residents.

As part of this understanding, AMI will communicate timely Project benchmarks for the commencement of exploration, development, and operations clearly and transparently to Santa Cruz County. As such, the County will seek to understand and respect AMI's corporate policies, practices, and the profession of Project exploration, development and operation and the permitting processes associated with each respective stage as a baseline for the nature and extent of requested community investment commitments.

[Click here to learn more about the Memorandum of Understanding by and between Santa Cruz County Arizona and Arizona Minerals, Inc.](#)

6. What information was provided in the pre-feasibility study released by South32?

The purpose of the pre-feasibility study for the Hermosa project released by South32 was to determine whether the probable mineral reserve for the Taylor Deposit is economically viable. This study includes information about the composition of zinc, lead, and silver.

Separately, a scoping study for the spatially linked Clark Deposit was conducted to confirm the potential for a separate, integrated underground mining operation producing battery-grade manganese, zinc, and silver.

[Click here for details on the pre-feasibility study for the Hermosa project released by South32.](#)

7. What information will the feasibility study provide and when will the information be available?

The feasibility study will provide detailed information on the various costs and economics surrounding the operations of Hermosa project. Completion of the feasibility study is expected to be in the Summer of 2023.

Economy and Quality of Life

1. How many jobs will the Hermosa project create?

Per an Economic Impact Study conducted by South32, the Hermosa project is expected to create a total of 1,646 annual direct and indirect/induced jobs during a typical year of mining operations.

During the construction period (2022 – 2027), the project is expected to create over 1,000 direct and indirect/induced jobs.

[A summary document of the Economic Impact Study can be accessed at this link.](#)

2. Will there be any impacts to schools?

Based on modeling provided by South32, enrollment is expected to increase in schools in Santa Cruz County by approximately 2% (160 students). These additional students equate to approximately \$1.0M in incremental costs. It is anticipated that school districts will have an additional \$5.2M in revenues, resulting in a net positive of \$4.2M.

Most of these revenues will likely be in the Patagonia Public Elementary School District due to its proximity to the Hermosa Project.

3. Has a decision been made on what transportation routes will be used by South32?

If the Hermosa Project is to be developed, it will be important that the necessary public infrastructure, such as roads, be installed to haul the material effectively and safely to market. Accordingly, there would need to be additional roads and related infrastructure built.

In late 2019, South32 held in-person meetings with specific neighborhoods in Patagonia that are proximal to potential access routes being contemplated for the Hermosa Project. South32 made a commitment during those engagements to come back to these neighborhoods and share the results once study work for the routes was more advanced. In August 2020, a virtual presentation was given to neighbors in the Cross Creek area, the neighborhood most proximal to the route currently identified as the likely preferred route for the Hermosa Project.

A comprehensive route study was provided as part of the prefeasibility study. Over a dozen routes and numerous modes of transportation were studied, including routes using Duquesne Road that proved not to be feasible due to significant impacts on the forest and biological resources, as well as technical constraints with turn radius due to the terrain.

During 2021, South32 heard route selection concerns on the original Cross Creek area road alignment and revised their approach with plans to construct a temporary road and to do so with reduced earthwork, reduced speed limits, temporary bridges, and post-use restoration of that land for open conservation space.

South32 has proposed to dedicate 134 acres of land surrounding the temporary road for parks to Santa Cruz County. There will be a public comment process on the proposed land dedication.

The road alignment for South32's preferred long-term route through Flux Canyon would be within county right of way and will require federal permitting, with the road upgrade itself fully funded by South32.

4. Will there be an impact on traffic flow?

South32 is anticipating less than 30 trucks per day initially. After the first 3 years, the number of trucks is expected to increase to 65 trucks per day on average, with some days having up to a maximum of 80 trucks per day.

Additionally, South32 tracks deliveries to the Hermosa site to ensure compliance with the Town of Patagonia's trucking ordinance and follow the town's process to obtain any relevant permits and approvals.

[Click here to learn more about the Town of Patagonia's Traffic Ordinances.](#)

5. What street improvements were made to the area surrounding the Hermosa Project?

The phase 2 road improvement project with the Town of Patagonia concluded in Summer 2021. Phase 2 included paving in the downtown area, including the helicopter landing pad; rebuilding McKeown Ave between Third and Taylor Avenues; and adding sidewalk and improving drainage on the south end of the McKeown Avenue.

Environmental

1. Will there be any impact on flora, fauna, and wildlife due to dewatering and discharges?

Regarding exploration and associated dewatering and discharges, only minor seasonal flow changes to neighboring seeps and springs are anticipated as a result of pumping activity. Preliminary studies and environmental surveys indicate that these flows would have minimal to no impacts to local flora, fauna, and wildlife, including protected species. Some seeps and springs in the area could have reduced seasonal flows, but these reductions are not likely to affect availability of water suitable for wildlife.

Further questions regarding wildlife can be directed to the Arizona Department of Game and Fish, as they have jurisdiction in these matters. [Click here for the Agency Directory & Contact Information.](#)

2. Will there be any impact on water resources?

Issuing permits is the primary way the government balances environmental protection with social and economic considerations. By the issuance of the AZPDES and APP permits, the Arizona Department of Environmental Quality ensures facilities are legally built and operated and that discharges into the water are within healthy standards established by law.

South32 is preparing to construct a state-of-the-art water treatment plant to treat the pumped groundwater before discharging it into Harshaw Creek. The average discharge rate is anticipated to be less than 3,500 gallons per minute, with an upper limit of 4,500 gallons per minute, then dropping to around 3,000 gallons per minute within the first several years.

The Town of Patagonia together with South32 selected a neutral third party, [Clear Creek Associates](#), to perform a data review and independent hydrologic evaluation related to potential impacts associated with the proposed discharge to Harshaw Creek.

[Click here to review the Evaluation of Planned Discharges to Harshaw Creek prepared by Clear Creek Associates.](#)

[Click here to review the Hermosa Project Spring and Seep Survey Sample Site Summary in Patagonia, Arizona.](#)

Additional Resources

[Patagonia Area Resource Alliance Presentation – Assessment of Hydrologic Risks and Concerns Related to the Hermosa Mine Project – as part of Santa Cruz County’s August 3, 2021 Study Session](#)

[South32 Public Presentation – Patagonia Street Improvements](#)

[South32 Public Presentation – Continued Exploration and Permitting](#)

[Santa Cruz County Advisory Panel on the South32 Hermosa Project](#)