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Title:

Comments: My name is Janet Espe and I am a full time resident of Rio Rico. I am opposed to the South32 Hermosa Mining project. Further impact studies must be done to allow them to proceed any further. I ask that the possible impacts listed below, be included in the NEPA EIS study process.

#### Water Resources

\*To allow for drilling at depths that have not even been established, there will be pumping out of ancient water which will lower the natural water tables.

oWhat effect will this draining of the water table have on all lands around the project? Will natural springs disappear that the native flora and fauna depend upon?

oWill water tables be erased that current vegetation depend on which could potentially change the entire ecosystem we now experience?

oWill the overflow of this drained water into Alum and Harshaw Creeks cause flooding issues, change of water quality and potential distress to flora and fauna downstream?

\*What effect will the effluent that the mining project produce?

oWill this cause change to the current aquifers that the area of Patagonia now depend on for their water supply? Who will monitor any potential hazards created and how will they be remedied if hazards are found in the future? Who will pay for this?

oWhat possible changes may occur that will impact the wildlife in the area? What monitoring will be in place to measure any changes in current conditions? How often should this monitoring be in place? What will the planned response be if changes are found?

Please study in detail water resource points listed above and how they may be affected by the Hermosa Project.

# Effect on Wildlife

The mine brings into this pristine wilderness various levels of intrusion from its normal 24/7 operations. Some, but not all of these intrusions are, clearing of land, running of heavy equipment, traffic on all roads being utilized, noise of drilling and exploration, and light pollution from 24/7 hours of operations.

### \*Loss or change in habitat

oHow will this affect the movements of mammals, birds, reptiles and insects? Will migratory routes be changed to such an effect as to eliminate established patterns all together? Will this change the north/south corridor for the thousands of birds that use the Santa Cruz corridor on their journey from their winter grounds in Mexico/Central America to their breeding grounds in Arizona and beyond? What will happen to the endangered species of yellow-billed cuckoos and jaguars, as well as hummingbird population, lizards, bees and butterflies?

#### \*Invasive species

oWill the disruption caused by destruction of native habitat bring in invasive species of plants that will drive out native species that all wildlife depend upon?

oThese invasive species are often fire hazards as they burn hotter than native plants, potentially changing habitat permanently.

## \*Increase in traffic

oWill the massive increase of traffic, particularly large vehicles on the normally unused roadways in the mountains, cause increased roadkill to wildlife that are trying to exist in this changed environment? What kind of numbers would you expect? Will this adversely affect future generations of certain wildlife? Please study in detail points listed above and how they may be affected by the Hermosa Project.

Threats to the Nature-Based Restorative Economy

In reference to in a University of Arizona study from 2021 ("The Nature-Based Restorative Economy in Santa Cruz County, Arizona" https://economics.arizona.edu/nature-based-restorative-economy-santa-cruz-county-arizona)

Recreation in the area includes birding, gravel biking, horseback riding, hiking, and water activities. The Hermosa Project will foreseeably impact current patterns of recreation and lead to loss of recreation areas and as such loss of nature based economy income.

\*Birding

oBirding will be affected regionally due to mining operations which affect loss of habitat including water sources, noise pollution and light pollution. Migratory patterns will be foreseeably changed and possibly eliminated.

\*Gravel biking and horseback riding

oMine activities will continue to sever connectivity of existing roads and trails on Forest Service lands and further limit recreational access, especially for gravel bikers who use Harshaw road to access the San Rafael Valley, and horseback riders who use a number of trails in and around Flux Canyon.

\*Hiking

 $o Mine\ operations\ will\ for esee ably\ affect\ nearby\ trail\ user\ experience,\ including\ the\ famous\ Arizona\ Trail.$ 

\*Water activities

oWater quality in Patagonia Lake may be harmed by release of treated water into the Sonoita Creek watershed. Effects on recreation will possibly include short-term impacts during construction and operation, as well as long-term impacts during the reclamation and post-closure phases.

Also affected are the reasons people come to experience these activities. Examples include: quiet, scenery, lack of pollution, wildlife viewing and safety.

Please study in detail current regional recreation patterns and how they may be affected by the Hermosa Project.

In conclusion, Santa Cruz County is a unique, pristine and beautiful part of this world. It has been recognized as an area to be preserved for its diversity in bird life, insects and reptiles. It lives on a fragile balance of a culmination of unique ecosystems that contribute to its diversity. Any, I repeat, ANY, disruption to this delicate balance could forever take it all away. I ask that you proceed with detailed impact studies for all points listed above that may be affected by the South32 Hermosa Project.

Thank you, Janet Espe