

3.18 Irreversible and Irretrievable Commitment of Resources

The Proposed Action could result in the irreversible commitment of resources (e.g., the loss of future options for resource development or management, especially of nonrenewable resources such as minerals or cultural resources) or the irretrievable commitment of resources (e.g., the lost production or use of renewable natural resources during the life of the proposed project operations). Irreversible and irretrievable impacts as a result of implementation of the Proposed Action are summarized for each resource in **Table 3.18-1**.

Table 3.18-1 Irreversible and Irretrievable Commitment of Resources by the Proposed Action

Resource	Irreversible Impacts	Irretrievable Impacts	Explanation
Geology and Minerals	Yes	Yes	Approximately 158 MT of copper ore would be mined during operations. This would result in the irreversible and irretrievable commitment of this resource.
Water Resources and Geochemistry	No	Yes	Groundwater would be used for the process make-up solutions for leaching the Phoenix and Reona copper heap leach pads. The total estimated groundwater used for both of the proposed heap leach pads over the life of the project is 23,000 acre-feet. This would result in the irretrievable commitment of groundwater resources.
Soils and Watershed	No	Yes	Suitable growth media would be salvaged from the proposed disturbance areas for use in reclamation. There would be a temporary loss of soil productivity and irretrievable commitment of this resource on approximately 902 acres during operation until reclamation is completed.
Vegetation	No	Yes	There would be a temporary loss of vegetation productivity and irretrievable commitment of this resource on approximately 902 acres during operation until reclamation is completed.
Wildlife and Fisheries	No	Yes	There would be a temporary loss of wildlife habitat and irretrievable commitment of this resource on approximately 902 acres during operation until reclamation is completed.
Range	No	Yes	There would be a temporary loss of livestock grazing opportunity (15 AUMs) and irretrievable commitment of this resource on approximately 902 acres during operation until reclamation is completed.
Paleontological	No	No	No disturbance to unique or site-specific paleontological resources is anticipated.

Table 3.18-1 Irreversible and Irretrievable Commitment of Resources by the Proposed Action

Resource	Irreversible Impacts	Irretrievable Impacts	Explanation
Cultural	Yes	Yes	Twenty-two archaeological sites and three loci would be affected by the project. All of the archaeological sites and two of the loci are recommended as not eligible for the NRHP; the remaining locus is considered a contributing component of a previously recorded NRHP-eligible site.
Native American Traditional Values	No	No	To date, no traditional cultural properties or places of cultural and religious importance have been identified by tribal representatives participating in the ongoing Native American consultation process.
Air Quality	No	No	Project emissions would not exceed federal or state AAQS. Air quality would return to existing conditions upon completion of the proposed project.
Land Use and Access	No	No	There would be no irreversible or irretrievable impacts to land use or access; public access patterns would be maintained.
Recreation and Wilderness	No	Yes	There would be no irreversible impacts related to dispersed recreation on public lands in the vicinity. There would be an irretrievable commitment to dispersed recreation on approximately 194 acres of public land during operations until reclamation is achieved. There would be no irreversible or irretrievable impacts to wilderness.
Social and Economic Values	No	No	There would be increased employment for construction and operation personnel during the life of the proposed project. State and local government revenues also would benefit. There would be no irretrievable commitment of community resources.
Visual Resources	Yes	Yes	Permanent visual changes would result from construction of the heaps for copper leaching. Impacts would be reduced through successful reclamation of the heaps and other disturbed areas.
Environmental Justice	No	No	No disproportionate impacts are anticipated to any minority populations.
Hazardous Materials and Solid Waste	No	No	No irreversible impacts or irretrievable commitment of resources are anticipated in relation to hazardous materials or solid wastes; however, if a spill were to affect a sensitive resource, an irretrievable impact could occur pending the recovery of the resource.