

APPENDIX E. ALTERNATIVES IMPACT SUMMARY

Summary of Impacts

One of the core processes of any environmental impact statement (EIS)-level NEPA analysis is public outreach early in the project, which serves to inform the public, stakeholders, tribes, and other Federal, state, and municipal agencies of the nature of the proposed action and provides an opportunity for interested persons to ask questions of the lead Federal agency and to express thoughts or concerns they may have regarding the action. This process is referred to as “scoping” (40 CFR 1501.7).

The scoping process also serves as a means for the lead agency to gather initial ideas for alternative actions to the project that may accomplish the same overall purpose but possibly be less damaging to the environment. And, lastly, the public scoping process is essential to initially identifying potential effects on resources and other issues that will be analyzed in detail in the EIS.

The scoping process for this EIS is detailed in the “Resolution Copper Project and Land Exchange Environmental Impact Statement Scoping Report” (Scoping Report) available here: <https://www.resolutionmineeis.us/documents/usfs-tonto-scoping-report>.

The information gathered during the scoping process was subsequently analyzed by members of the project team and distilled into 14 major issues for consideration in the EIS. Nearly of these major issues include sub-issues to further focus the analysis, and all included specific “factors for analysis” as a means to gauge and compare effects. Details of how comments gathered during scoping were distilled into primary issues and sub-issues are documented in the “Resolution Copper Project and Land Exchange Environmental Impact Statement: Final Summary of Issues Identified Through Scoping” (Issues Report), available at <https://www.resolutionmineeis.us/documents/usfs-tonto-issues-report-201711>.

Table E-1 below provides a complete listing of primary issues and sub-issues that guided the effects analysis and a summary of impacts by project alternative. Please note that this table is organized by major issue as derived from the scoping process and the issues analysis, rather than by the section of the draft EIS (DEIS) in which that resource is addressed; the information in the left-most column points the reader to where in the DEIS the corresponding analysis may be found.

Impacts and differences between alternatives are highlighted at the end of chapter 2 at a high level. While appendix E also summarizes impacts, it is specifically intended to provide a crosswalk between the original issues/sub-issues and the actual results of the analysis, and to provide a more detailed yet succinct comparison between alternatives.

As documented in the footnotes to table E-1, during course of the impacts analysis certain sub-issues were modified or dismissed altogether for the specific reasons cited in each footnote.

Table E-1. Alternatives impact summary

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 1A: Tribal Values and Concerns – Disturbance to Tribal Values and Practices from Combined Resource Disturbance							
3.14.4.2 and 3.14.5	1A-1. Qualitative assessment of how cumulative resource disturbance impacts tribal values and spiritual practices.	Although under this alternative the Resolution Mine would not be developed, other ongoing or reasonably foreseeable transportation, utility, and other projects, and particularly large-scale mining operations such as the Pinto Valley Mine, the ASARCO Ripsey Wash tailings impoundment, and potential mine development in the Copper Butte area, would continue to be likely to adversely affect places and natural resources valued by Native Americans.	Development of the Resolution Mine under this or any other action would directly and permanently damage the NRHP-listed <i>Ch'chil Bildagoteel</i> Historic District TCP at the East Plant Site. In addition, as noted for the no action alternative, other large-scale mine development along with smaller transportation, utility, and private land development projects in the Superior region may adversely affect certain places and resources of value to Native Americans, including historic resource collection sites and culturally valued landforms and features.	Same as noted under Alternatives 1 and 2	Same as noted under Alternatives 1 and 2	Same as noted under Alternatives 1 and 2	Same as noted under Alternatives 1 and 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
<p>Issue 1B: Tribal Values and Concerns – Impacts to Tribal Valued Resources at Oak Flat and Apache Leap</p>							
3.7.1.4 and 3.14.4.2	1B-1. Quantitative assessment of number of sacred springs or other discrete sacred sites impacted.	Under the no action alternative most sacred sites would remain unaltered. However, Resolution Copper would continue dewatering activities at the East Plant Site. As described in DEIS Section 3.7.1, it is possible under the no action alternative that as many as six sacred springs could be adversely affected by drawdown due to continued mine dewatering.	In addition to impacts as under the no action alternative, water table drawdown caused by block caving is anticipated to impact two additional springs in the Superior area. Three additional springs would be buried beneath the tailings impoundment, and two additional springs would be within the subsidence area. A total of 13 sacred springs are anticipated to be lost under Alternative 2.	Same as Alternative 2	In addition to the springs in and around the town of Superior that would be adversely impacted by dewatering and block caving activities at the East Plant Site, under the Silver King Alternative one additional spring would be buried beneath the tailings impoundment. A total of 11 sacred springs are anticipated to be lost under Alternative 4.	Under this alternative, although springs in and around the town of Superior would be adversely impacted by dewatering and block caving activities at the East Plant Site, analysis shows no additional springs at the tailings location would be impacted. A total of 10 sacred springs are anticipated to be lost under Alternative 5.	Under this alternative, although springs in and around the town of Superior would be adversely impacted by dewatering and block caving activities at the East Plant Site, analysis shows no additional springs at the tailings location would be impacted. A total of 10 sacred springs are anticipated to be lost under Alternative 6.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.12.4.1 and 3.14.4.2	1B-2. Qualitative assessment of the impacts on Native Americans of the desecration of land, springs, burials, and sacred sites.	Same as above with respect to springs. Other effects to lands, burials, and other features and places of value to Native Americans would not occur under the no action alternative.	Development of the Resolution Mine under this or any other action alternative would directly and permanently damage the NRHP-listed <i>Chí'chil Bii'dagoteel</i> Historic District TCP at the East Plant site. Similarly, under all action alternatives mine activity and the visual effects of subsidence would be perceptible from within the Apache Leap SMA. Under Alternative 2 the tailings storage facility would be fully in view from Picketpost Mountain, a mountain sacred to Western Apache bands, and the presence of the nearly 500-foot high tailings would constitute an adverse visual effect on the landscape. Numbers and locations of burials would not be known until such sites are detected as a result of mine-related activities. One large TEKP would be impacted by the tailings storage facility.	Same as Alternative 2	Same as Alternative 2, with the exception of TEKPs. With Alternative 4, three TEKPs would be impacted by the tailings storage facility.	Effects from the East Plant Site and subsidence area would be the same as under Alternative 2. For Alternative 5, three TEKPs would be impacted by the tailings storage facility.	Effects from the East Plant Site and subsidence area would be the same as under Alternative 2. For Alternative 6, at this time TEKPs have not been identified, but may be through additional surveys.

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3.7.1.4, 3.12.4.2, and 3.14.4.2	1B-3. [REVISED] ¹ Qualitative assessment of traditional resource collection areas impacted.	No adverse effects to any traditional resource collection areas are foreseen. However, as noted in section 3.7.1, under the no action alternative six springs are anticipated to be impacted by continued dewatering, which may also adversely affect plant availability.	Under all action alternatives, one or more Emory oak groves at Oak Flat, used by tribal members for acorn collecting, will likely be lost. Other unspecified mineral and/or plant collecting locations are also likely to be affected; historically, medicinal and other plants are frequently gathered near springs and seeps, so drawdown of water at these locations may also adversely affect plant availability.	Same as Alternative 2	Impacts at the East Plant Site/Oak Flat would be the same as under Alternative 2. Other impacts to tribal values and concerns would be similar in context and intensity to those under Alternative 2; however, because the tailings storage facility would be in a different location, the specific impacts to potentially meaningful sites, resources, routes, and viewsheds would vary. See DEIS sections 3.11.4 (scenery), 3.12.4 (cultural resources), and 3.14.4 (tribal values) for detailed impact analyses specific Alternative 4.	Impacts at the East Plant Site/Oak Flat would be the same as under Alternative 2. Other impacts to tribal values and concerns would be similar in context and intensity to those under Alternative 2; however, because the tailings storage facility would be in a different location, the specific impacts to potentially meaningful sites, resources, routes, and viewsheds would vary. See DEIS sections 3.11.4 (scenery), 3.12.4 (cultural resources), and 3.14.4 (tribal values) for detailed impact analyses specific to Alternative 5.	Impacts at the East Plant Site/Oak Flat would be the same as under Alternative 2. Other impacts to tribal values and concerns would be similar in context and intensity to those under Alternative 2; however, because the tailings storage facility would be in a different location, the specific impacts to potentially meaningful sites, resources, routes, and viewsheds would vary. See DEIS sections 3.11.4 (scenery), 3.12.4 (cultural resources), and 3.14.4 (tribal values) for detailed impact analyses specific to Alternative 6.

¹ The original issue factor expected to be analyzed was: “Quantitative assessment of acres of traditional resource collection areas impacted.” As locations for many traditional resource collection areas identified are sensitive, this was changed to a qualitative assessment rather than relying on acreage calculations.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 2A: Socioeconomics – Impacts to Municipal Infrastructure							
3.13.4.2	2A-1. Quantitative assessment of change in employment, labor earnings and economic output over time, including direct and indirect effects	No impacts anticipated.	On average, the mine is projected to directly employ 1,523 workers, pay about \$134 million per year in total employee compensation, and purchase about \$546 million per year in goods and services. Including direct and multiplier effects, the proposed mine is projected to increase average annual economic value added in Arizona by about \$1.0 billion	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
3.13.4.2	2A-2. Quantitative assessment of change in tax revenues per year over time, including changes to payments in lieu of taxes (PILT)	No impacts anticipated.	The proposed mine is projected to generate an average of between \$88 and \$113 million per year in state and local tax revenues and would also produce substantial revenues for the Federal Government, estimated at over \$200 million per year.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

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3.13.4.2	2A-3. Quantitative assessment of change in demand and cost for local road maintenance over time	No impacts anticipated.	Construction and operations of the proposed mine could affect both the Town of Superior's costs to maintain its network of streets and roads as well as those of Pinal County. However, these impacts are difficult to predict as no precise figures have been available that break out road maintenance costs vs. total municipal expenditures. Based on projected changes in the effective population served by Pinal County, the proposed mine could increase the total costs of county service provisions (of which maintenance of County roads is one expenditure) by approximately \$3 million to \$6 million per year.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

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3.13.4.2	2A-4. Qualitative assessment of change in demand and cost for emergency services over time	No impacts anticipated.	The Town of Superior anticipates that its costs of providing services related to public safety (police and fire protection) would increase by about 50% if and when the proposed mine becomes fully operational. Based on Superior's current expenditures to provide these services, this would represent an increase of about \$375,000 per year in costs for the Town. Resolution Copper has entered into an agreement with the Town of Superior to provide \$1.65 million to support emergency response services by the Town over the period from 2016 to 2021.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

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3.13.4.2	2A-5. Quantitative assessment of change in tourism and recreation revenue over time	No impacts anticipated.	The effects of the proposed mine at the East Plant Site would reduce the number of hunting days per year by approximately 188, and result in a direct reduction of \$10,510 annual wildlife-related recreation spending in the local economy, which would equal a nominal value of \$630,480 over the 60-year life of the proposed mine. The Near West tailings alternative site would reduce the number of hunting days per year on the site by approximately 1,200, amounting to a reduction in direct wildlife-related recreation expenditures of \$66,920 per year or \$4.0 million over a 60-year mine life.	Same as Alternative 2.	Effects from East Plant Site are the same as Alternative 2. The Silver King alternative site would reduce the number of hunting days per year by approximately 1,078, and reduce the amount of direct wildlife-related recreation expenditures by about \$60,368 per year or \$3.6 million over a 60-year mine life.	Effects from East Plant Site are the same as Alternative 2. The Peg Leg alternative site would reduce the number of hunting days per year by approximately 219, and reduce the amount of direct wildlife-related recreation expenditures by about \$12,254 per year or \$735,269 over a 60-year mine life.	Effects from East Plant Site are the same as Alternative 2. The Skunk Camp alternative site would reduce the number of hunting days per year by approximately 1,269, and reduce the amount of direct wildlife-related recreation expenditures by about \$70,554 per year or \$4.2 million over a 60-year mine life.
Issue 2B: Socioeconomics – Impacts to Property Values							
3.13.4.2	2B-1. Quantitative assessment of change in property values over time	No impacts anticipated.	Properties values within a 5-mile radius of the tailings storage facility would be reduced by approximately \$3.1 million, a reduction of 4.1%.	Same as Alternative 2.	Property values within a 5-mile radius of the tailings storage facility would be reduced by approximately \$5.5 million, a reduction of 10.6%.	Property values within a 5-mile radius of the tailings storage facility would be reduced by approximately \$69,000, a reduction of 6.3%.	Property values within a 5-mile radius of the tailings storage facility would be reduced by \$58,000, a reduction of 4.0%.

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Issue 2C: Socioeconomics – Impacts to Groundwater Availability/Usability							
3.7.1.4	2C-1. Qualitative assessment of effect of reduced groundwater availability on property values	No impacts anticipated.	While drawdown caused by mine dewatering and block-caving could impact wells at Top-of-the-World and Superior, Resolution Copper has committed to mitigation (replacement of water sources) that would result in no net loss of water supplies.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
3.7.2.4; Appendix M	2C-2. Qualitative assessment of effect of reduced groundwater quality on property values	No impacts anticipated.	While concentrations of metals and other constituents (sulfate, total dissolved solids) are expected to increase above background concentrations due to seepage from the tailings storage facility, no concentrations above Arizona Aquifer Water Quality Standards are anticipated that would render downgradient water supplies unusable.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

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Issue 2D: Socioeconomics – Impacts to Local and Regional Living Standards							
3.13.5	2D-1. Qualitative assessment of the ability to meet rural landscape expectations as expressed by Federal, state and local plans	No impacts anticipated.	Large-scale mining projects such as the Resolution Mine may also adversely affect what are considered desirable but less tangible qualities of a rural setting and lifestyle. Applicant-committed environmental protection measures would be effective at expanding the economic base of the local community and improving resident quality of life, and could partially offset the expected impacts.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
2D-2. [DROPPED] ²							

² The original issue factor expected to be analyzed was: “Quantitative assessment of economic effects on amenity-based relocation.” Based on the BBC Research and Consulting report titled *Socioeconomic Effects Technical Report: Resolution Copper Mine Environmental Impact Statement* (BBC 2018), amenity-based relocation in Pinal and Gila Counties was already low in comparison, for example, to Maricopa County. Development of the Resolution Mine is not expected to substantially alter existing conditions with respect to amenity-based resident populations or future relocations in these two counties.

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3.13.4.2	2D-3. Quantitative assessment of economic effects from change in visitor uses of Tonto National Forest and other public lands	No impacts anticipated.	The affected areas are used for a variety of activities, including OHV use, camping, and hunting, by visitors from outside Pinal County. AGFD estimates the East Plant Site and subsidence area would affect about 6 miles of public access motorized routes and eliminate 421 acres of dispersed camping. AGFD estimates that the Near West Tailings alternative would affect about 23 miles of public access motorized routes and eliminate 1,737 acres of dispersed camping	Same as Alternative 2.	Effects of the East Plant Site and subsidence area are the same as under Alternative 2. AGFD estimates that the Silver King tailings alternative would affect about 20 miles of public access motorized routes and eliminate 1,434 acres of dispersed camping.	Effects of the East Plant Site and subsidence area are the same as under Alternative 2. AGFD estimates that the Peg Leg tailings alternative would affect about 45 miles of public access motorized routes and eliminate 1,009 acres of dispersed camping (excluding pipeline corridors).	Effects of the East Plant Site and subsidence area are the same as under Alternative 2. AGFD estimates that the Skunk Camp tailings alternative would affect about 32 miles of public access motorized routes and eliminate 861 acres of dispersed camping (excluding pipeline corridors).
Issue 3: Environmental Justice							
3.15.4.3	3-1. Quantitative assessment of economic effects on environmental justice communities and qualitative assessment of whether these effects are disproportionate.	Beneficial or adverse economic impacts to environmental justice populations would not occur, as the mine would not be developed and current land use would remain unchanged.	Overall, while both adverse and beneficial economic effects would impact environmental justice communities, they would not be disproportionately high or adverse.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

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3.15.4.3 (Continued)	3-1. Quantitative assessment of economic effects on environmental justice communities and qualitative assessment of whether these effects are disproportionate. (Continued)		<p>All environmental justice communities would experience socioeconomic benefits such as an increase in tax revenues and direct and indirect employment opportunities. There would also be negative socioeconomic effects. The expected influx of new workers may lead to shortages of housing and/or pressures on municipal infrastructure such as roads, schools, and medical facilities, and may be accompanied by price increases. Property values may be affected by the proximity of the tailings storage facility.</p> <p>Adverse or beneficial economic effects from the mine would be most apparent in the environmental justice community of the town of Superior. A number of applicant-committed measures would increase quality of life and opportunities within the town of Superior, offsetting some negative effects.</p>				

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3.15.4.3	3-2. Qualitative assessment of disproportionate effects of adverse resource impacts to environmental justice communities.	Disproportionate effects on environmental justice populations would not occur, as the mine would not be developed and current land use would remain unchanged.	The proposed East Plant Site, West Plant Site, area of subsidence, and auxiliary facilities would have disproportionately high and adverse impacts on the environmental justice community of the town of Superior for scenic resources and dark skies. In addition, impacts on cultural resources and tribal concerns and values would have a disproportionately adverse impact on Native American communities. Other environmental justice communities (with the exception of Native American communities) would not experience adverse impacts as a result of the proposed project because they would be located outside the geographic area of influence for most resources, or impacts are not disproportionately high or adverse on the community. For Alternative 2, the same impacts are true of the tailings storage facility.	Same as Alternative 2	Same as Alternative 2. For the Alternative 4 tailings storage facility, the scenic impacts from the Silver King alternative tailings storage would be felt most strongly in the town of Superior, due to the proximity and location of the facility.	Same as Alternative 2, but the Alternative 5 tailings storage facility would not impact any environmental justice communities.	Same as Alternative 2, but the Alternative 6 tailings storage facility would not impact any environmental justice communities.

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Issue 4: Impacts to Cultural Resources							
4-1. [DROPPED] ³							
4-2. [DROPPED] ⁴							
3.12.4	4-3. Quantitative assessment of number of NRHP-eligible historic properties, sacred sites, and other landscape-scale properties, to be buried, destroyed, or damaged.	If, under this alternative, the GPO is not approved but the land exchange occurs, 31 NRHP-eligible sites and one TCP would be adversely affected. If the GPO is not approved and the land exchange does not occur, there would be no effect.	101 NRHP-eligible and 31 sites of currently undetermined eligibility would be adversely affected. One TCP at the East Plant Site would also be adversely affected.	Same as Alternative 2	Impacts would be similar to Alternative 2; 122 NRHP-eligible sites and 15 currently undetermined sites would be directly and adversely impacted. About 72% of this area has been fully pedestrian surveyed for cultural resources.	Impacts would be similar to Alternative 2; 125 NRHP-eligible sites and 27 currently undetermined sites would be directly and adversely impacted for the east pipeline option, and 114 NRHP-eligible sites and 11 currently undetermined sites would be directly and adversely impacted for the west pipeline option. Between 74% to 78% of the area has been fully pedestrian surveyed for cultural resources, depending on pipeline route.	Impacts would be similar to Alternative 2; 343 NRHP-eligible sites and 17 currently undetermined sites would be directly and adversely impacted for the south pipeline option, and 318 NRHP-eligible sites and 5 currently undetermined sites would be directly and adversely impacted for the north pipeline option. About 96% of this area has been fully pedestrian surveyed for cultural resources.

³ The original issue factor expected to be analyzed was: “Qualitative assessment of the impacts to places of traditional and cultural significance to Native Americans including natural resources.” This is largely duplicated by issue factors 1B-1, 1B-2, and 1B-3.

⁴ The original issue factor expected to be analyzed was: “Qualitative assessment of the impacts on other non-tribal communities in the region in terms of impacts on resources, such as historical townsites, cemeteries, mines, ranches, and homesteads.” Any historical sites are already incorporated into the analysis described by issue factor 4-3.

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3.12.4	4-4. Quantitative assessment of number of NRHP-eligible historic properties expected to be visually impacted.	If, under this alternative, the GPO is not approved but the land exchange occurs, 31 NRHP-eligible sites and one TCP would be adversely affected. If the GPO is not approved and the land exchange does not occur, there would be no effect.	In addition to direct impacts, historic properties within the indirect analysis area and atmospheric analysis area could be impacted visually. This includes 29 historic properties within the indirect analysis area (2 NRHP-listed, 8 NRHP-eligible, and 19 unevaluated), and 48 sites within the atmospheric analysis area.	Same as Alternative 2	In addition to direct impacts, historic properties within the indirect analysis area and atmospheric analysis area could be impacted visually. This includes 25 historic properties within the indirect analysis area (2 NRHP-listed, 11 NRHP-eligible, and 12 unevaluated), and 48 sites within the atmospheric analysis area.	In addition to direct impacts, historic properties within the indirect analysis area and atmospheric analysis area could be impacted visually. For the eastern pipeline route, this includes 44 historic properties within the indirect analysis area (2 NRHP-listed, 23 NRHP-eligible, and 19 unevaluated), and 48 sites within the atmospheric analysis area. For the western pipeline route, this includes 29 historic properties within the indirect analysis area (1 NRHP-listed, 16 NRHP-eligible, 12 unevaluated), and 48 sites within the atmospheric analysis area.	In addition to direct impacts, historic properties within the indirect analysis area and atmospheric analysis area could be impacted visually. For the northern pipeline route, this includes 25 historic properties within the indirect analysis area (2 NRHP-listed, 12 NRHP-eligible, and 11 unevaluated), and 45 sites within the atmospheric analysis area. For the southern pipeline route, this includes 41 historic properties within the indirect analysis area (2 NRHP-listed, 19 NRHP-eligible, 20 unevaluated), and 45 sites within the atmospheric analysis area.
3.4.4	4-5. Qualitative assessment of potential for vibrations to damage cultural resources within and adjacent to the project areas.	If the GPO is not approved and the land exchange does not occur, there would be no effect.	The vibration analysis indicates that within given levels of explosive loading, neither blasting nor non-blasting vibrations exceed selected thresholds based on structural damage.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

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	4-6. [DROPPED] ⁵						
3.14.4	4-7. [REVISED] ⁶ Qualitative assessment of number of impacted sites known/likely to have human remains.	If the GPO is not approved and the land exchange does not occur, there would be no effect.	At this time, no sites have been determined to contain human remains; this would be determined during data recovery activities, and a burial plan would be in place to properly handle any human remains identified.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
	4-8. [DROPPED] ⁷						
	Issue 5A: Public Health and Safety – Health Impacts						
	5A-1: [DROPPED] ⁸						
3.2.4	5A-2: [REVISED] ⁹ Qualitative assessment of the public health risk from geologic hazards, including seismic activity.	If the GPO is not approved and the land exchange does not occur, there would be no effect.	Induced mine seismicity has been observed at other mines and is possible, but unlikely to be of sufficient magnitude to cause structural damage.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

⁵ The original issue factor expected to be analyzed was: “Qualitative assessment of impacts to historic properties including visual impacts.” Any historical sites are already incorporated into the analysis described by issue factor 4-3.

⁶ The original issue factor expected to be analyzed was: “Quantitative assessment of number of impacted prehistoric sites known/likely to have human remains.” The issue factor was modified to incorporate issue factor 4-8, and changed from a quantitative to a qualitative assessment.

⁷ The original issue factor expected to be analyzed was: “Quantitative assessment of number of historic sites likely to have human remains.” The issue factor was incorporated into issue factor 4-7.

⁸ The original issue factor expected to be analyzed was: “Qualitative assessment of the public health risk from mine operations and facilities, including the potential for exposure to historically contaminated soil.” The issue factor was generic and duplicative of more specific risks to human health analyzed by issue factors 5A-2, 5A-3, 5A-4, 5B-1, 5B-2, 5C-1, 5C-2, 5C-3, and 5C-4.

⁹ This issue factor largely overlapped with issue factor 9A-3: “Qualitative assessment of the impact of the project to seismic activity.” Issue factor 5A-2 has been modified to incorporate this aspect, and issue factor 9A-3 has been dropped.

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3.4.4	5A-3: Qualitative assessment of the public health risk from noise and vibrations.	If the GPO is not approved and the land exchange does not occur, there would be no effect.	Noise and vibration levels from mine construction and operation are expected to occasionally be perceptible to residents of the town of Superior and visitors to the immediate area of the East Plant Site, West Plant Site, filter plant and loadout facility, and this or other tailing storage facility location, particularly during construction phases, and from haul trucks during active operations, but mine-related noises and vibrations are not expected to represent either short- or long-term threats to public health and safety.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

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3.6.4	5A-4: Quantitative assessment of the ability to meet air quality standards for human health.	No mine activities other than ongoing dewatering would occur; it is expected that current air quality standards would be met.	Air quality impacts from construction and operation of the Resolution Mine are not expected at any time to exceed NAAQS criteria pollutant thresholds, including those for particulates, and are therefore not anticipated to represent a threat to public health. A supplemental health impact analysis was conducted to assess the potential for both cancer risk and non-carcinogenic chronic health effects from exposure to airborne NPAG tailings. The analysis determined that Alternative 2 does not exceed selected thresholds for health risk.	Same as Alternative 2	Same as Alternative 2. The health impact analysis for Alternative 4 considered exposure to both NPAG and PAG airborne tailings. The analysis determined that Alternative 4 does not exceed selected thresholds for health risk.	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
	Issue 5B: Public Health and Safety – Safety Concerns Related to Tailings Impoundment						
	5B-1: [REVISED] ¹⁰ Qualitative assessment of the risk of failure of tailings dam or concentrate/tailings pipelines and potential impacts downstream in the event of a failure.	No risk of failure, as no tailings facility or pipelines would be built.	Risk of failure is minimized by required adherence to National Dam Safety Program and APP standards, and applicant-committed environmental protection measures. Alternative 2 embankment is less resilient than Alternatives 5 and 6 due to: modified-centerline construction, long embankment (10 miles), freestanding structure	Alternative 3 embankment is less resilient than Alternatives 5 and 6 due to: modified-centerline construction, long embankment (10 miles), freestanding structure. Alternative 3 is more resilient than Alternative 2 due to ultrathickening.	Alternative 4 represents the least risk of all alternatives. Failure of filtered tailings would result in localized slump or landslide, not a long downstream runoff.	Alternative 5 embankment is more resilient than Alternatives 2 and 3 due to: centerline construction, shorter embankment (7 miles). Double embankment for PAG using a downstream dam, and use of multiple PAG cells, reduces risk of PAG release.	Alternative 6 embankment is more resilient than Alternatives 2, 3, and 5 due to: centerline construction, shortest embankment (3 miles), cross-valley construction with tie-in to solid rock on each side. Double embankment for PAG using a downstream embankment, and use of multiple PAG cells, reduces risk of PAG release.
	5B-2: Quantitative assessment of the seismic stability of the tailings impoundment.	No tailings facility would be built.	The design earthquake meets the most stringent of all standards (Maximum Credible Earthquake), and static factor of safety (1.5) and seismic factor of safety (1.2) meet the most stringent of all standards.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

¹⁰ The original issue factor only referenced the tailings storage facility, and has been modified to include both concentrate and tailings pipelines.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 5C: Public Health and Safety – Transportation-Related and General Safety Risks							
3.5.6.1	5C-1: Quantitative assessment of the potential change in traffic accidents.	No change from current traffic volumes and patterns.	Under Alternative 2 increased traffic associated with mine worker commuting and truck traffic to and from the mine is expected to result in increased traffic congestion and increased risk of traffic accidents.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
5C-2: [DROPPED] ¹¹							

¹¹ The original issue factor expected to be analyzed was: “Quantitative assessment of the trip count per day for all hazardous materials and qualitative assessment of potential effectsl.” The issue factor was combined with issue factor 5C-3.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.10.3.4	5C-3: Qualitative assessment of the risks to public health from potential accidents or spills during the transport of hazardous materials.	No impacts anticipated.	Potential releases of hazardous materials during transportation could occur, but the fate and transport of those hazardous materials depend entirely on where the release occurs and the quantity of the release. In general, there would be direct impacts on plants and wildlife in the immediate vicinity, direct impacts on soil in the immediate vicinity, and possible migration into surface water either directly or via stormwater runoff from contaminated areas. Queen Creek and tributary washes (like Silver King Wash) are the locations most likely to be affected in the event of a transportation release.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.5.6.1, 3.10.3.4, and 3.13.4.2	5C-4: Qualitative assessment of the impacts to local emergency response to accidents or spills on public roadways.	No change from current conditions.	Under Alternative 2, increased traffic associated with mine worker commuting and truck traffic to and from the mine is expected to result in increased risk of traffic accidents. There may also be an increased risk of hazardous materials simply due to an increased presence of hazardous materials at mine facilities and the regular transport of these materials to and from these facilities. The Town of Superior anticipates that its costs of providing services related to public safety would increase by about 50%; Resolution Copper has entered into an agreement with the Town of Superior to provide \$1.65 million to support emergency response services by the Town over the period from 2016 to 2021.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Issue 5D: Public Health and Safety – Risks Related to Subsidence							
5D-1: [DROPPED] ¹²							

¹² The original issue factor expected to be analyzed was: “Qualitative assessment of the public health risk from geological hazards.” This duplicates issue factor 5A-2.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.10.2	5D-2: Qualitative assessment of increased fire risk due to mine operations and subsidence	No change from current conditions.	While increased risks of fire ignition from mine activities (i.e., blasting, construction, increased traffic) cannot be entirely prevented, risks are expected to be substantially mitigated through adherence to a fire plan that requires mine employees to be trained for initial fire suppression and to have fire tools and water readily available.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Issue 6A: Water Resources – Groundwater Availability							
3.7.1.4	6A-1. Direction and magnitude of change in aquifer water level, compared with background conditions.	Drawdown from mine dewatering anticipated under the no action alternative up to >50 feet at six springs. No effects anticipated to perennial streams.	Additional drawdown caused by block caving anticipated at two additional springs; one spring (DC-6.6W) feeds perennial flow in Devil's Canyon, contributing up to 5% of flow.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.1.4	6A-2. Geographic extent in which water resources may be impacted.	Geographic area impacted by groundwater drawdown under the no action alternative shown in figure 3.7.1-8.	Geographic area impacted by groundwater drawdown caused by mine dewatering shown in figure 3.7.1-3; geographic area impacted by groundwater drawdown caused by the Desert Wellfield shown in figure 3.7.1-2.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
3.7.1.4	6A-3. Duration of the effect (in years).	Takes ~150–200 years to see maximum drawdown from mine dewatering; recovery of water levels would continue longer. No drawdown would occur at Desert Wellfield.	Takes ~500–900 years to see maximum drawdown from mine dewatering at some GDE locations; recovery of water levels would continue longer. Drawdown at Desert Wellfield recovers within ~130 years after closure.	Same as Alternative 2	Same as Alternative 2 for mine dewatering Drawdown at Desert Wellfield recovers within ~20 years after closure	Same as Alternative 2	Same as Alternative 2
3.7.1.4	6A-4. Comparison of mine water needs and water balance with overall basin water balance, both total volume (acre-feet) and annual rate (acre-feet per year).	No water would be pumped from Desert Wellfield. Mine dewatering pumping would continue indefinitely.	Desert Wellfield pumping over life of mine = 590,000 acre-feet 87,000 acre-feet pumped over life of mine for dewatering	Desert Wellfield pumping over life of mine = 490,000 acre-feet 87,000 acre-feet pumped over life of mine for dewatering	Desert Wellfield pumping over life of mine = 180,000 acre-feet 87,000 acre-feet pumped over life of mine for dewatering	Desert Wellfield pumping over life of mine = 540,000 acre-feet 87,000 acre-feet pumped over life of mine for dewatering	Desert Wellfield pumping over life of mine = 540,000 acre-feet 87,000 acre-feet pumped over life of mine for dewatering

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.1.4	6A-5. REVISED ¹³ Assessment of impact to general groundwater supply areas (feet of water-level decrease).	No impacts anticipated.	For wells connected to regional aquifers, drawdown from mine dewatering up to 30 feet anticipated in Top-of-the-World and Superior. Wells in shallow alluvium or fractures are unlikely to be impacted. Maximum drawdown impacts from Desert Wellfield anticipated to be 40–50 feet at NMIDD, 110–140 feet near wellfield.	Same as Alternative 2	Same as Alternative 2 for mine dewatering Maximum drawdown impacts from Desert Wellfield anticipated to be less than 20 feet at NMIDD, 30–35 feet near wellfield	Same as Alternative 2	Same as Alternative 2
3.7.1.4	6A-6. Potential for subsidence to occur as a result of groundwater withdrawal.	No impacts anticipated.	Drawdown associated with the Desert Wellfield would contribute to lowering of groundwater levels in the East Salt River valley basin, including near two known areas of known ground subsidence. There is the potential for Desert Wellfield pumping to contribute to regional subsidence.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

¹³ The original issue factor expected to be analyzed was: “Number of known private and public water supply wells within the geographic extent of the water-level impact and assessment of impact to these water supplies (feet of water-level decrease).” The Forest Service determined that analyzing impacts to individual wells was not feasible (see section 3.7.1). Impacts on representative wells were assessed instead.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 6B: Water Resources – Groundwater Quality							
3.7.2.4, Risk of Seepage Impacting Groundwater or Surface Water Quality (sections for each alternative)	6B-1. [REVISED] ¹⁴ Quantitative assessment of anticipated groundwater quality changes, compared for context to Arizona water quality standards	No tailings seepage would occur; no changes in groundwater quality beyond existing conditions would be anticipated.	Concentrations are not anticipated to be above standards in aquifers downgradient of tailings facility. Selenium concentrations are anticipated to be above surface water standards at Whitlow Ranch Dam. Most concentrations are anticipated to increase from baseline conditions; sulfate concentrations are anticipated to be above secondary standards.	Concentrations are not anticipated to be above standards in aquifers or surface waters downgradient of tailings facility. Selenium and cadmium concentrations are anticipated to increase from baseline conditions.	Concentrations are not anticipated to be above standards in aquifers downgradient of tailings facility. Selenium concentrations are anticipated to be above surface water standards at Whitlow Ranch Dam. Most concentrations are anticipated to increase from baseline conditions; sulfate concentrations are anticipated to be above secondary standards.	Concentrations are not anticipated to be above standards in aquifers or surface waters downgradient of tailings facility. Most concentrations are anticipated to increase from baseline conditions; sulfate concentrations are anticipated to be substantially above secondary standards.	Concentrations are not anticipated to be above standards in aquifers or surface waters downgradient of tailings facility. Most concentrations are anticipated to increase from baseline conditions; sulfate concentrations are anticipated to be above secondary standards.
3.7.2.4, Risk of Seepage Impacting Groundwater or Surface Water Quality (sections for each alternative)	6B-2. [REVISED] ¹⁵ Qualitative assessment of seepage control techniques	No seepage control needed.	Modeled seepage control efficiency of 99%. Risk of not meeting desired efficiency is high.	Modeled seepage control efficiency of 99.5%. Risk of not meeting desired efficiency is high.	Estimated seepage control efficiency of 90%. Risk of not meeting desired efficiency is moderate.	Modeled seepage control efficiency of 84%. Risk of not meeting desired efficiency is moderate.	Modeled seepage control efficiency of 90%. Risk of not meeting desired efficiency is moderate.

¹⁴ The original issue factor expected to be analyzed was: “Quantitative assessment of the ability to meet Arizona Aquifer Water Quality Standards at points of compliance designated in the aquifer protection permit.” The authority to determine the ability to meet water quality standards lies with the State of Arizona. The Forest Service disclosure focuses on anticipated impacts to groundwater and surface water quality; comparison to water quality standards is presented for context, but is not a regulatory determination.

¹⁵ The original issue factor expected to be analyzed was: “Qualitative assessment of the ability to demonstrate best available demonstrated control technology.” Assessment of the ability to meet best available demonstrated control technology is under the authority of the State of Arizona. The Forest Service has instead assessed the expected seepage control techniques and the ability of the project to control seepage to the point that water quality standards are likely to be met.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.2.4, Risk of Seepage Impacting Groundwater or Surface Water Quality (sections for each alternative)	6B-3. Quantitative assessment of the estimated changes in groundwater quality in situ in the area of block caving, including the estimated fate and transport.	No block-caving would occur; no changes in groundwater quality beyond existing conditions would be anticipated.	Thallium concentrations modeled to be above standards at end of operations. Substantial uncertainty with effect of oxidation over time, which would further degrade water quality.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
	6B-4. [DROPPED] ¹⁶						

¹⁶ The original issue factor expected to be analyzed was: “Quantitative assessment of the estimated changes in groundwater quality as a result of seepage from tailings area, including the estimated fate and transport.” This duplicates issue factor 6B-1.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.10.3.4	6B-5. Qualitative assessment of the potential for spills or inadvertent release of contaminants to groundwater.	No impacts anticipated.	<p>The process water temporary storage ponds are double-lined with leak detection. Infiltration is unlikely to occur under normal operating conditions, and leak detection is incorporated into the process water portion of the pond. If an unplanned spill were to occur, releases underground or at the East Plant Site would be unlikely to migrate due to the hydraulic sink created by dewatering; releases at the tailings storage facility would be likely captured by seepage controls. The primary concern would be spills within the West Plant Site that could likely migrate toward Queen Creek and eventually downstream. Emergency response and material handling plans minimize the risk of release and provide for rapid emergency cleanup.</p>	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 6C: Water Resources – Surface Water Availability							
3.7.1.5	6C-1/6C-2. [REVISED] ¹⁷ Qualitative assessment of the potential lowering of the water table or reduced groundwater flow to Queen Creek, Devil's Canyon, Arnett Creek, Mineral Creek, or other perennial waters that results in permanent changes in flow patterns and that may affect current designated uses	No impacts anticipated.	No direct impacts to perennial flow in Queen Creek, Devil's Canyon, Arnett Creek, or Mineral Creek are anticipated from groundwater drawdown. However, additional drawdown is anticipated to impact spring DC-6.6W which feeds perennial flow in Devil's Canyon, contributing up to 5% of flow.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
3.16.4	6C-3. [REVISED] ¹⁸ Quantitative assessment of the number of water sources that would be lost to direct disturbance or dewatering	No impacts anticipated.	25 water sources anticipated to be impacted	Same as Alternative 2	24 water sources anticipated to be impacted	14 water sources anticipated to be impacted	21 water sources anticipated to be impacted

¹⁷ Originally two issue factors were expected to be analyzed: “6C-1. Quantitative assessment of the number of stream miles changed from intermittent/perennial flow status to ephemeral flow status as a result of the project;” and “6C-2. Quantitative assessment of the potential lowering of the water table or reduced groundwater flow to Queen Creek, Devil’s Canyon, Arnett Creek, Mineral Creek, or other perennial waters that results in permanent changes in flow patterns and that may affect current designated uses.” Given the limitations of the groundwater model to predict surface water impacts, these factors were combined and modified.

¹⁸ The original issue factor expected to be analyzed was: “Quantitative assessment of the number of stock watering tanks that would be lost to direct disturbance or reductions in surface flow.” Most changes to water sources for both stock and wildlife are from loss of springs, not stock tanks. This issue factor was changed to reflect all water sources lost due to direct or indirect disturbance.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.3.4	6C-4. Quantitative assessment of the change in volume, frequency, and magnitude of runoff from the project area.	No impacts anticipated.	Reduction in annual average runoff of 3.5% at mouth of Devil’s Canyon due to subsidence crater. Reduction in annual average runoff of 6.5% in Queen Creek at Whitlow Ranch Dam.	Same as Alternative 2	Reduction in annual average runoff of 3.5% at mouth of Devil’s Canyon due to subsidence crater. Reduction in annual average runoff of 19.9% in Queen Creek at Boyce Thompson Arboretum, and 8.9% at Whitlow Ranch Dam.	Reduction in annual average runoff of 3.5% at mouth of Devil’s Canyon due to subsidence crater. Reduction in annual average runoff of 21.3% at mouth of Donnelly Wash, and 0.2% in Gila River.	Reduction in annual average runoff of 3.5% at mouth of Devil’s Canyon due to subsidence crater. Reduction in annual average runoff of 12.9% at mouth of Dripping Spring Wash, and 0.5% in Gila River.
Issue 6D: Water Resources – Surface Water Quality							
3.7.2.4, Potential Surface Water Quality Impacts from Stormwater Runoff	6D-1. [REVISED] ¹⁹ Quantitative assessment of anticipated surface water quality changes from runoff, compared for context to Arizona water quality standards.	No impacts anticipated.	No impacts anticipated due to operational stormwater controls and post-closure reclamation cover; runoff is not allowed to be released after operations until appropriate water quality standards are met.	Same as Alternative 2	Same as Alternative 2. Some potential for Alternative 4 to require treatment of collected PAG runoff prior to recycling.	Same as Alternative 2	Same as Alternative 2
3.7.3.4	6D-2. Qualitative assessment of the change in geomorphology and characteristics of downstream channels.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.	No impacts anticipated.
	6D-3. [DROPPED] ²⁰						

¹⁹ The original issue factor expected to be analyzed was: “Quantitative assessment of the ability to meet Arizona Surface Water Quality Standards for the appropriate designated uses.” The authority to determine the ability to meet water quality standards lies with the State of Arizona. The Forest Service disclosure focuses on anticipated impacts to groundwater and surface water quality; comparison to water quality standards is presented for context, but is not a regulatory determination. Note that surface water quality impacts potentially caused by tailings seepage are assessed under issue factor 6B-1.

²⁰ The original issue factor expected to be analyzed was: “Quantitative assessment of the acres and locations that may be affected by surface water quality impacts and the duration (in years) of those impacts.” This duplicates issue factor 6D-1.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.3.4	6D-4. Quantitative assessment of the acres of potentially jurisdictional waters of the U.S. impacted.	No impacts anticipated.	No jurisdictional waters are located above Whitlow Ranch Dam (as determined by U.S. Army Corps of Engineers)	No jurisdictional waters are located above Whitlow Ranch Dam (as determined by U.S. Army Corps of Engineers)	No jurisdictional waters are located above Whitlow Ranch Dam (as determined by U.S. Army Corps of Engineers)	Preliminary impacts estimated as 182.5 acres; delineation not yet reviewed by U.S. Army Corps of Engineers	Preliminary impacts estimated as 120.0 acres; delineation not yet reviewed by U.S. Army Corps of Engineers
Issue 6E: Water Resources – Seeps, Springs, Riparian Areas, and Groundwater-Dependent Ecosystems							
3.3.4	6E-1. Acres of riparian areas disturbed, by vegetation classification.	No impacts anticipated.	Riparian = 28 acres Xeroriparian = 135 acres	Same as Alternative 2	Riparian = 44 acres Xeroriparian = 184 acres	Riparian = 35 acres Xeroriparian = 171–195 acres (varies by pipeline route)	Riparian = 90–92 acres (varies by pipeline route) Xeroriparian = 766–813 acres (varies by pipeline route)

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.1.4	6E-2. [REVISED] ²¹ Number of GDEs degraded or lost.	Under the no action alternative Resolution Copper would continue dewatering activities at the East Plant Site. It is anticipated under the no action alternative that as many as six sacred springs could be adversely affected by drawdown due to continued mine dewatering.	Two additional springs would be impacted by dewatering once block-caving begins. Three additional springs would be buried beneath the tailings impoundment, and two additional springs would be within the subsidence area. In addition, two GDEs associated with Queen Creek and one GDE associated with Devil's Canyon would experience some reduction in surface flow due to runoff captured by the subsidence area or tailings facility. A total of 16 GDEs would be impacted under Alternative 2.	Same as Alternative 2	Same as Alternative 2 for mine dewatering, subsidence, and changes to surface flow (13 GDEs). Two additional springs would be buried beneath the tailings impoundment, but one of these would already be impacted by drawdown. A total of 14 GDEs would be impacted under Alternative 4.	Same as Alternative 2 for mine dewatering, subsidence, and changes to surface flow (13 GDEs). No GDEs have been identified that would be lost due to tailings facility, but one additional GDE (the Gila River) would be impacted by reductions in surface flow due to the tailings facility. A total of 14 GDEs would be impacted under Alternative 5.	Same as Alternative 2 for mine dewatering, subsidence, and changes to surface flow (13 GDEs). No GDEs have been identified that would be lost due to tailings facility, but one additional GDE (the Gila River) would be impacted by reductions in surface flow due to the tailings facility. A total of 14 GDEs would be impacted under Alternative 6.

²¹ The original issue factor expected to be analyzed was: “Number of seeps and springs degraded or lost.” Many springs on the landscape are not perennial sources or water or support riparian vegetation. While the impacts to livestock/grazing focused on any named springs of water sources, regardless of their connection to groundwater (see factor 6C-3), the focus of the groundwater analysis was on specific areas with perennial flow and riparian vegetation that were determined to be groundwater-dependent ecosystems. This factor was changed to reflect only groundwater-dependent ecosystems.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.1.4; 3.7.3.4	6E-3. Change in the function of riparian areas.	Riparian function of six springs anticipated to be lost due to mine dewatering; mitigation measures would not be in place to replace flow to these springs.	A total of 13 springs anticipated to be impacted due to mine dewatering, subsidence, and direct disturbance. Mitigation measures would be effective at replacing water such that there would be no net loss of riparian ecosystems or aquatic habitat on the landscape, although ecosystems would change to adapt to new water sources. Devil's Canyon would receive less runoff and less inflow from one spring anticipated to be impacted (DC-6.6W), anticipated at 5 to 10%. Queen Creek would receive less runoff, ranging from 13% to 19% above Boyce Thompson Arboretum. Losses could contribute to a reduction in the extent and health of riparian vegetation. Complete drying of the downstream habitat, loss of dominant riparian vegetation, or loss of standing pools would be unlikely.	Same as Alternative 2	Same as Alternative 2, except 11 springs anticipated to be impacted. Greater flow losses are seen in Queen Creek, which could result in larger impacts than Alternative 2, but similar in nature.	Same as Alternative 2, except 10 springs anticipated to be impacted. Gila River would receive less runoff, but watershed losses (as a percentage change in perennial flow) are relatively low for Alternative 5 (0.2% at Donnelly Wash), largely due to the large watershed and flow of the Gila River.	Same as Alternative 2, except 10 springs anticipated to be impacted. Gila River would receive less runoff, but watershed losses (as a percentage change in perennial flow) are relatively low for Alternative 6 (0.3% at Donnelly Wash), largely due to the large watershed and flow of the Gila River.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.1.4; 3.7.3.4 (Continued)	6E-3. Change in the function of riparian areas. (Continued)		There are no anticipated impacts to riparian areas along Telegraph Canyon, Arnett Creek, or Mineral Creek.				
	6E-4. [DROPPED] ²²						
	Issue 6F: Water Resources – Floodplains						
3.7.3.4	6F-1. Quantitative assessment of the acreage of 100-year floodplains impacted (acreage)	No impacts anticipated.	8.5 acres (based on available floodplain maps)	Same as Alternative 2	Same as Alternative 2	167–171 acres of floodplain (varies by pipeline route; based on available floodplain maps)	794 acres (based on available floodplain maps)
	6F-2. [DROPPED] ²³						

²² The original issue factor expected to be analyzed was: “Ability to meet legal and regulatory requirements for riparian areas.” This was originally considered in the event that some riparian areas had special designations under Arizona regulation, such as designated Outstanding Arizona Waters. No riparian areas were identified with special designations.

²³ The original issue factor expected to be analyzed was: “Qualitative assessment of the impact of floodplain changes to upstream or downstream users or residents.” Ultimately, the mapping coverage for floodplains is inconsistent and impacts to downstream users would require more specific designs for how washes would be filled. For instance, while pipelines might cross mapped floodplains, if they are buried, there would be no anticipated impacts to downstream users or residents.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Water Resources – Additional Issue Factors Analyzed							
3.7.3.4	Acres of wetland impacted, based on National Wetland Inventory	No impacts anticipated.	92.5 acres associated with ephemeral washes 5.1 acres associated with stock tanks 1 acre associated with Benson Spring and in subsidence area	Same as Alternative 2	86.2 acres associated with ephemeral washes 4.1 acres associated with stock tanks 0.2 acre in subsidence area	(Varies by pipeline alternative) 200.9–219.6 acres associated with ephemeral washes 8.6–8.8 acres associated with stock tanks 0.2 acre in subsidence area Includes crossings of Gila River, which may not require disturbance	(Varies by pipeline alternative) 229.6–232.9 acres associated with ephemeral washes 25.4–28.2 acres associated with Queen Creek, Devil’s Canyon, Mineral Creek 11.9–12.7 acres associated with stock tanks 0.2 acre in subsidence area

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 7A: Biological Resources – Adverse Effects of Dewatering at the East Plant Site or Pumping at the West Plant Site							
3.7.1.4; 3.8.4	7A-1. Qualitative assessment of effects on riparian habitat and species due to changes in flow to Queen Creek, Devil's Canyon, Arnett Creek, Mineral Creek, or other perennial or intermittent waters. [This assessment will be based on the results of the Issue 6 Analysis Factors]	Riparian function of six springs anticipated to be lost due to mine dewatering; mitigation measures would not be in place to replace flow to these springs.	Impacts on fish species include mortality from loss or modification of habitat due to changes in surface water levels or flows, including changes due to changes in groundwater elevation and contribution to surface flows. Would occur for all action alternatives and would have the greatest potential to impact fish species along areas of Devil's Canyon and Queen Creek that currently have surface flows. Impacts are to non-native fish populations (no native fish known to occur) in these locations.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.1.4; 3.8.4 (Continued)	7A-1. Qualitative assessment of effects on riparian habitat and species due to changes in flow to Queen Creek, Devil's Canyon, Arnett Creek, Mineral Creek, or other perennial or intermittent waters. [This assessment will be based on the results of the Issue 6 Analysis Factors] (Continued)		No impacts are anticipated in Mineral Creek to longfin dace or Gila chub. Riparian changes impacting amphibious or invertebrate species could occur along areas of Devil's Canyon and Queen Creek that currently have perennial surface flows that would be reduced by changes in runoff. Most water sources potentially impacted by the project would be replaced.				
Issue 7B: Biological Resources – Loss or Harassment of Individual Plants and Animals							
3.8.4	7B-1. Quantitative assessment of acres of suitable habitat disturbed for each special status species, including impacts to designated and proposed critical habitat.	No changes from current conditions are anticipated.	Please see DEIS table 3.8.4-2; this acreage information is too extensive to be summarized here.	Please see DEIS table 3.8.4-2; this acreage information is too extensive to be summarized here.	Please see DEIS table 3.8.4-2; this acreage information is too extensive to be summarized here.	Please see DEIS table 3.8.4-2; this acreage information is too extensive to be summarized here.	Please see DEIS table 3.8.4-2; this acreage information is too extensive to be summarized here.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.8.4	7B-2. Qualitative assessment of the potential to affect the population viability of any species and qualitative assessment of mortality of various animal species resulting from the increased volume of traffic related to mine operations.	No changes from current conditions are anticipated.	Under this or any action alternative there would be a high probability of mortality and/or injury of wildlife individuals from collisions with mine construction and employee vehicles, as well as the potential mortality of burrowing animals in areas where grading would occur. Some species could see impacts on local populations in the action area, but no regional population-level impacts are likely.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.8.4	7B-3. Qualitative assessment of the potential for disturbance to create conditions conducive for invasive species.	No changes from current conditions are anticipated.	Ground disturbance, particularly during project construction, would be likely to increase the potential for the introduction and colonization of disturbed areas by noxious and invasive plant species. These potential vegetation changes may decrease suitability of disturbed areas to support breeding, rearing, foraging, and dispersal activities of wildlife and special status species, and may also lead to a shift over time to more wildfire-adapted vegetation that favors noxious or invasive exotic species over native species.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.8.4	7B-4. Qualitative assessment of effects on wildlife behavior from noise, vibrations, and light.	No changes from current conditions are anticipated.	<p>Noise, vibrations, and light from mine construction and operations may change habitat use patterns for some species. Some individuals would be likely to move away from the sources of disturbance to adjacent or nearby habitats. Project-related noise, vibration, and light may also lead to increased stress on individuals and alteration of feeding, breeding, and other behaviors.</p> <p>Some species could see impacts on local populations in the action area, but no regional population-level impacts are likely.</p>	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 7C: Biological Resources – Habitat Fragmentation and Loss							
3.8.4	7C-1. Qualitative assessment of the change in movement corridors and connectivity between wildlife habitats.	No changes from current conditions are anticipated.	Potential impacts to wildlife movement corridors from all action alternatives would include the loss and fragmentation of movement and dispersal habitats from the subsidence area and from the tailings storage facility. Ground-clearing and consequent fragmentation of habitat blocks for other mine-related facilities would also inhibit wildlife movement. Obstacles to wildlife movement would also be created by pipeline corridors and other linear facilities, though restrictions to movement across linear features may be eased through mitigation.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.8.4	7C-2. [REVISED] ²⁴ Quantitative assessment of acres by type of terrestrial habitat lost, altered, or indirectly impacted.	No changes from current conditions are anticipated.	Projected losses of habitat acres under each action alternative are itemized in table 3.8.4-3; this information is too extensive to be summarized here.	Projected losses of habitat acres under each action alternative are itemized in table 3.8.4-3; this information is too extensive to be summarized here.	Projected losses of habitat acres under each action alternative are itemized in table 3.8.4-3; this information is too extensive to be summarized here.	Projected losses of habitat acres under each action alternative are itemized in table 3.8.4-3; this information is too extensive to be summarized here.	Projected losses of habitat acres under each action alternative are itemized in table 3.8.4-3; this information is too extensive to be summarized here.

²⁴ The original issue factor expected to be analyzed was: “Quantitative assessment of acres by type of terrestrial and aquatic habitat lost, altered, or indirectly impacted.” Aquatic habitat was removed from this issue factor because it is duplicated by issue factor 7A-1.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.8.3.2; 3.8.5; 3.7.1.4	7C-3. [REVISED] ²⁵ Qualitative assessment of impacts to surface water that support wildlife and plants such as stock tanks, seeps, and springs.	Six springs (not designated as wildlife waters) are anticipated to be lost due to mine dewatering; mitigation measures would not be in place to replace flow to these springs.	Of the 15 wildlife waters (waters built or improved such as stock tanks and wildlife guzzlers) within 5 miles of the project footprint, three would occur within the project facility area under this or other action alternatives. Benson Spring would be permanently lost beneath the tailings storage facility for Alternative 2. Mitigation would maintain or replace access to wildlife waters. An additional 12 springs not designated as wildlife waters are anticipated to be lost due to mine dewatering; mitigation would replace these waters as well.	Same as Alternative 2	Wildlife water Silver King Spring would be within the footprint of the tailings storage facility for Alternative 4 and would be permanently buried. Mitigation would maintain or replace access to wildlife waters. An additional 11 springs not designated as wildlife waters are anticipated to be lost due to mine dewatering; mitigation would replace these waters as well.	Wildlife water Mineral Mountain spring would be within the west pipeline route under this alternative. Mitigation would maintain or replace access to wildlife waters. An additional 10 springs not designated as wildlife waters are anticipated to be lost due to mine dewatering; mitigation would replace these waters as well.	No wildlife waters would be impacted under Alternative 6. Ten springs not designated as wildlife waters are anticipated to be lost due to mine dewatering; mitigation would replace these waters.
	7C-4. [DROPPED] ²⁶						

²⁵ The original issue factor expected to be analyzed was: “Qualitative assessment of impacts to aquatic habitats and surface water that support wildlife and plants such as stock tanks, seeps, and springs.” Aquatic habitat was removed from this issue factor because it is duplicated by issue factor 7A-1. This issue factor focuses instead on wildlife waters identified by the Arizona Game and Fish Department and springs.

²⁶ The original issue factor expected to be analyzed was: “Qualitative assessment of how changes in the function of riparian areas could impact wildlife habitat.” This duplicates issue factor 7A-1.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 8: Impacts to Air Quality							
3.6.2.2; 3.6.4.2	8-1. Quantitative estimate of particulate emissions (particulate matter less than or equal to 2.5 microns in diameter (PM2.5) and particulate matter less than or equal to 10 microns in diameter (PM10)), compared with background (pounds per hour [for 24-hour impacts] and tons per year [tons/year]) and expected seasonal dust patterns and impact area	No impacts anticipated.	The PM10 emissions are estimated as 328.9 tons per year. Maximum emission concentration is modeled as 26 µg/m ³ (24-hour) and 7 µg/m ³ (annual), compared to background concentrations of 71 µg/m ³ and 17 µg/m ³ , respectively. The PM2.5 emissions are estimated as 77.8 tons per year. Maximum emission concentration is modeled as 11 µg/m ³ (24-hour) and 2 µg/m ³ (annual), compared to background concentrations of 6 µg/m ³ and 4 µg/m ³ , respectively. Impact area does not extend beyond fence line.	Same as Alternative 2	Similar to Alternative 2	Similar to Alternative 2	Similar to Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.6.2.2	8-2. Volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions and emission rates (tons/year)	No impacts anticipated.	The estimated potential HAP emissions from the project (0.17 tons per year) are less than the major source thresholds (10 tons per year of any one HAP or 25 tons per year of all HAPs) The estimated VOC emissions from the project are 102.7 tons per year.	Same as Alternative 2	Similar to Alternative 2	Similar to Alternative 2	Similar to Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.6.2.2; 3.6.4.2	8-3. Quantitative assessment of total mine emissions (lb/hour and tons/year), compared with the current total regional emissions (tons/year), including criteria and other pollutants (carbon monoxide, lead, sulfur dioxide, nitrogen dioxide, particulate matter, and carbon dioxide). Include tabulation of greenhouse gas emissions of CO ₂ , CH ₄ , and N ₂ O. Depict location of sources for considered alternatives	No impacts anticipated.	CO: 616 tons/year; 4,531 µg/m ³ project (1-hour), 8,081 µg/m ³ combined with background. NO ₂ : 118 tons/year; 138 µg/m ³ project (1-hour), 146 µg/m ³ combined with background. PM ₁₀ : 329 tons/year; 26 µg/m ³ project (24-hour), 97 µg/m ³ combined with background. PM _{2.5} : 78 tons/year; 11 µg/m ³ project (24-hour), 18 µg/m ³ combined with background. SO ₂ : 18 tons/year; 92 µg/m ³ project (1-hour), 117 µg/m ³ combined with background. Lead: 0.017 tons/year, below analysis threshold of 0.6 tons/year. CO ₂ and greenhouse gas: 173,000 equivalent tons/year.	Same as Alternative 2	Similar to Alternative 2	Similar to Alternative 2	Similar to Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.6.4.2	8-4. Quantitative assessment of the ability to meet air quality standards, include impacts based on representative background air quality levels and analyze cumulative emissions and impacts	No impacts anticipated.	The analysis of air quality impacts for the proposed action and alternatives shows that all impacts would be within the ambient air quality standards and are below the PSD increments. The proposed emission sources would comply with applicable regulations, and impacts on air quality-related values would be within the established thresholds for of acceptability.	Same as Alternative 2	Similar to Alternative 2	Similar to Alternative 2	Similar to Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.6.2.2	8-5. Quantitative assessment of the off-site impacts of hazardous or toxic air pollutants compared to health-based levels	No impacts anticipated.	The ability to meet air quality standards is considered protective of public health. In addition, levels of metals deposition associated with particulate emissions were estimated and compared with Regional Screening Levels for which the EPA has derived carcinogenic and/or non-carcinogenic chronic health effects. For all alternatives, the estimated human health risk associated with the maximum air concentrations of inorganic metals is less than established thresholds.	Same as Alternative 2	Similar to Alternative 2	Similar to Alternative 2	Similar to Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.6.4.2	8-6. Quantitative assessment of the ability to meet NAAQS for criteria pollutants (carbon monoxide, lead, sulfur dioxide, nitrogen dioxide, ozone, and particulate matter), as modeled at the perimeter fence line of the mine facility, taking into account all mobile and stationary emission sources. Include spatial depictions of impacts for the area around the mine and alternative sites	Existing and ongoing impacts to air quality from fugitive dust and vehicle emissions are expected to increase over time with continued population growth in central Arizona. However, it is expected that monitoring and remedial actions by Maricopa County, Pinal County, and ADEQ would be effective in keeping these gradual changes within NAAQS.	None of the predicted results are anticipated to exceed the NAAQS at the ambient air boundary/fence line.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.6.4.2	8-7. Quantitative assessment of the impacts at Class I airsheds, specifically, changes to air quality–related values (AQRVs) of visibility, ozone, and deposition of sulfur dioxide and nitrogen oxides, as modeled at perimeter of Class I airsheds, and compared with current deposition rates and critical loads ²⁷	No impacts anticipated.	All impacts are projected to be less than the PSD increments at the Class I areas and, except for the Superstition Wilderness Area, would have an insignificant ²⁸ impact at those areas. The highest 24-hour impacts of PM ₁₀ and PM _{2.5} emissions on air quality at the Superstition Wilderness Area consume up to 50% of the Class I PSD increments. Sulfur and nitrogen deposition impacts are lower than thresholds established by guidance.	Same as Alternative 2	Similar to Alternative 2	Similar to Alternative 2	Similar to Alternative 2

²⁷ See Federal Land Managers’ Air Quality Related Values Work Group (FLAG) Phase I Report—Revised (2010) Natural Resource Report NPS/NRPC/NRR—2010/232.

²⁸ Comparisons to the PSD Class I Significant Impact Levels are provided for information only. No formal further analysis is required because the proposed action and alternatives do not trigger review and approval under the PSD regulations.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.6.4.2	8-8. Assessment using best available science of long-term trends in precipitation and temperature that may affect resources	Increases in global surface air temperatures in the Southwest have caused markedly increased average annual temperatures and reduced water storage due to early spring snowpack runoff. The trends in temperature and effects of snowmelt runoff, with declining river flow, are predicted to continue into the foreseeable future.	The proposed action would lead to emissions of greenhouse gases based largely on fuel use by mobile sources with a minor contribution from process combustion sources. The total greenhouse gas emissions would amount to 173,328 tons per year, based on year 14 with the highest emission rates. Project emissions would contribute to ongoing climate trends.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 9A: Long-term Land Stability – Subsidence							
3.2.4	9A-1. Quantitative assessment of the extent, amount, and timing of land subsidence, with estimates of uncertainty.	No changes from current conditions are anticipated.	Subsidence crater is estimated to first become evident at the surface at Oak Flat in mine year 6 or 7. At mine closure subsidence crater is expected to be approximately 800–1,100 feet deep and approximately 1.8 miles in diameter. Modeling indicates there would be no damage to Apache Leap, Devil’s Canyon, or U.S. 60. Monitoring would take place and Resolution Copper has stated they would modify mining plans if it appears any of these areas would be impacted.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
3.2.4	9A-2. [REVISED] ²⁹ Qualitative assessment of the potential to impact caves or karst resources, and paleontological resources.	No changes from current conditions are anticipated.	A small area of Martin limestone with potential paleontological resources is within the footprint of Alternative 2; otherwise, no impacts to cave/karst resources or paleontological resources are anticipated.	Same as Alternative 2	No impacts to cave/karst resources or paleontological resources are anticipated.	No impacts to cave/karst resources or paleontological resources are anticipated.	No impacts to cave/karst resources or paleontological resources are anticipated.

²⁹ This issue factor originally focused solely on caves and karst resources. It has been expanded to include paleontological resources. These two resources are similar in that assessment of the potential to occur is largely based on types of geologic units present.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
	9A-3. [DROPPED] ³⁰						
	Issue 9B: Long-Term Land Stability – Impact to Existing Landscape Productivity, Stability, and Function						
	9B-1. [DROPPED] ³¹						
3.3.4.2	9B-2. Quantitative level of disturbance leading to lost soil productivity (acres)	No loss of soil productivity expected.	The level of impact, soil, productivity responses, and revegetation success potential is described in section 3.3.4. (see DEIS tables 3.3.4-1 and 3.3.4-2). Total facility disturbance and impacts to productivity 10,033 acres.	Same as Alternative 2	Total facility disturbance and impacts to productivity is 10,861 acres.	Total facility disturbance and impacts to productivity for the east pipeline option is 17,153 acres. Total facility disturbance and impacts to productivity for the west pipeline option is 17,530 acres.	Total facility disturbance and impacts to productivity for north pipeline option is 16,116 acres. Total facility disturbance and impacts to productivity for the south pipeline option is 16,557 acres.

³⁰ The original issue factor expected to be analyzed was: “Qualitative assessment of the impact of the project to seismic activity.” This issue factor largely overlapped with issue factor 5A-2 that deals with geologic hazards. Issue factor 5A-2 has been modified to incorporate seismic activity specifically, and issue factor 9A-3 has been dropped.

³¹ The original issue factor expected to be analyzed was: “Qualitative assessment of long-term stability of tailings and other mine facilities, including expected results of reclamation.” This is duplicated by issue factors 5B-1 and 5B-2 (for tailings stability), and issue factor 9B-3 (for expected results of reclamation).

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.3.4.2	9B-3. Qualitative and quantitative assessment of the potential for revegetation of tailings and other mine facilities, using data (where available and if equivalent) from other mine site revegetation efforts conducted in central and southern Arizona	Under this alternative there would be no tailings or other significant changes to existing mine facilities.	Analysis findings show that the following revegetation efforts from reclamation a minimum of 8% of vegetation cover (including both native and non-native species) can be consistently be established within project disturbance areas. Effects would remain including the complete loss during operations of soil productivity, vegetation, and functioning ecosystems within the area of disturbance, and eventual recovery after reclamation, though not likely to the level of desired conditions or potentially over extremely long time frames.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
	9B-4. [DROPPED] ³²						

³² The original issue factor expected to be analyzed was: “Qualitative evaluation of alteration of soil productivity and soil development.” This is duplicated by issue factor 9B-2.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.7.3.4	9B-5. [REVISED] ³³ Qualitative assessment of the changes in sediment delivery to downstream streams and washes.	No impacts to sediment yield would occur.	Changes in magnitude of peak flow and amount of flow would reduce sediment transport and bedload transport. Effects are not expected to be substantial in a sediment-transport limited system.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Issue 10: Recreation Resources							
3.9.4.2	10-1. Quantitative assessment of acres that would no longer meet current forest plan Recreation Opportunity Spectrum designations	No impacts anticipated.	Under Alternative 2, based on the Recreation Opportunity Spectrum (ROS) designation of user experiences, direct removal of 5,288 acres of the semi-primitive motorized setting, and 2,215 acres within the roaded natural setting.	Same as Alternative 2	Alternative 4 would remove 5,548 acres of the semi-primitive motorized setting and 2,078 acres within the roaded natural setting.	Alternative 5 (east option) would remove 986 acres of the semi-primitive motorized setting, 1,209 acres of the semi-primitive non-motorized setting, and 1,977 acres of the roaded natural setting. Alternative 5 (west option) would remove 1,173 acres of the semi-primitive motorized setting, and 1,453 acres of the roaded natural setting.	Alternative 6 (north option) would remove 1,665 acres of the semi-primitive motorized setting, and 1,740 acres of the roaded natural setting. Alternative 6 (south option) would remove 1,617 acres of the semi-primitive motorized setting, and 2,054 acres of roaded natural setting.

³³ The original issue factor expected to be analyzed was: “Quantitative assessment of the changes in sediment delivery to Queen Creek, Arnett Creek, or other key streams and washes (tons/year), compared with background sediment loading.” This factor was changed to a qualitative assessment of sediment yields, due to lack of background data on sediment concentrations or current sediment loss.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
2.2	10-2. Quantitative assessment of acres of the Tonto National Forest that would be unavailable for recreational use, for various phases of mine life and reclamation	No impacts anticipated.	All public access would be eliminated on 4,909 acres within the tailings storage facility fence line during construction, operations, and until reclamation is completed, which likely would be decades after closure. The entirety of the Oak Flat Federal Parcel would no longer be public land, though some access could remain during operations.	Same as Alternative 2	All public access would be eliminated on 5,661 acres within the tailings storage facility fence line during construction, operations, and until reclamation is completed, which likely would be decades after closure.	All public access would be eliminated on 10,782 acres within the tailings storage facility fence line during construction, operations, and until reclamation is completed, which likely would be decades after closure.	All public access would be eliminated on 10,072 acres within the tailings storage facility fence line during construction, operations, and until reclamation is completed, which likely would be decades after closure. However, these lands are currently private and Arizona State Trust lands, and would remain private lands after closure of the mine with no expectation of public access.
10-3. [DROPPED] ³⁴							
3.5.4	10-4. Quantitative assessment of miles of NFS roads lost, for various phases of mine life and reclamation	No impacts anticipated	A total of 8.0 miles of NFS roads would be lost due to the West Plant Site, East Plant Site, and filter plant and loadout facility. For the tailings facility, 21.7 miles of NFS roads would be lost and decommissioned.	Same as Alternative 2	Under Alternative 4, a total of 17.7 miles of NFS roads would be lost to the tailings storage facility.	Alternative 5 would not have loss to NFS roads but would result in the loss or decommissioning of 29 miles of BLM inventoried routes.	Alternative 6 would be located on private lands and impact 5.7 miles of Dripping Springs Road.

³⁴ The original issue factor expected to be analyzed was: “Quantitative assessment of change in visitor uses.” This is largely the same information considered by issue factor 2A-5, which looked at socioeconomic effects of changes in tourism and recreation.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.4.4	10-5. Qualitative assessment of potential for noise to reach recreation areas (i.e., audio “footprint”)	No impacts anticipated.	Under most conditions, predicted noise during construction and operation as sensitive receptors representing recreation users are below thresholds of concern.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Noise levels along Dripping Springs Road exceed thresholds of concern. No residual impacts after mitigation applied (new access road).
3.9.4; 3.11.4	10-6. Qualitative assessment of impacts on solitude in designated wilderness and other backcountry areas	No impacts anticipated.	Visitors to the Superstition Wilderness, Picketpost Mountain, and Apache Leap would have foreground and background views of the Alternative 2 facilities from trails and overlooks, and the recreation setting from certain site-specific views would change if the tailings storage facility were visible.	Same as Alternative 2	Same as Alternative 2	Visitors to the White Canyon Wilderness would have background views of the tailings storage facility east pipeline corridor from some trails and overlooks, and the recreation setting from certain site-specific views would change if the tailings storage facility east pipeline corridor were visible.	The tailings storage facility would not be visible from any designated wilderness areas, however the southern tailings pipeline corridor would be visible from trails and overlooks on Picketpost Mountain, and the northern tailings pipeline corridor would be visible from the Superstition Wilderness.
10-7. [DROPPED] ³⁵							

³⁵ The original issue factor expected to be analyzed was: “Quantitative assessment of hunter days lost.” This is largely the same information considered by issue factor 2A-5, which looked at socioeconomic effects of changes in tourism and recreation.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.9.4	10-8. Quantitative assessment of miles of Arizona National Scenic Trail, NFS trails, or other known trails requiring relocation, and qualitative assessment of user trail experience	No impacts anticipated.	0.07 miles of the tailings pipeline corridor would intersect the Arizona Trail. NFS Road 982 would also be intersected by the tailings pipeline corridor. Resolution Copper will construct an “overpass” for the tailings corridors that would span the Arizona Trail.	Same as Alternative 2.	Would require 3.05 miles of the Arizona Trail to be closed and relocated to an area that would be safe for public use. The new construction would require a different trailway approach and exit in addition to the 3.05-mile direct loss of Arizona Trail.	The Arizona Trail would be intersected by 0.18 mile of the proposed tailings storage facility east pipeline option, in the Passage 16 segment. Resolution Copper would construct an “overpass” for the tailings corridors that would span the Arizona Trail.	Impacts from south pipeline option are similar to Alternative 2.
3.9.5	10-9. Qualitative assessment of increased pressure on other areas, including roads and trails/trailheads, from displacement and relocation of recreational use as a result of mine facilities	No impacts anticipated.	It is likely that increased use would occur on other nearby lands that provide similar experiences, depending upon the recreational user type. A minor to moderate increase in user activity would be expected to occur in recreational use areas similar to those displaced by the project elsewhere in the Globe Ranger District, as well as on other Federal, State, and County lands.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
Issue 11: Impacts to Scenic Resources							
3.11.4	11-1. [REVISED] ³⁶ Acres of Tonto National Forest land that would no longer meet current forest plan Visual Quality Objective designations.	No impacts anticipated.	Analysis finds that within the project footprint the following acreage totals have designations that would not allow for the proposed project activities: 393 acres of Retention, and 5,184 acres of Partial Retention.	Same as Alternative 2	Under Alternative 4, analysis finds that within the project footprint the following acreage totals have designations that would not allow for the proposed project activities: 371 acres of Retention, and 4,663 acres of Partial Retention.	Under Alternative 5, analysis finds that within the project footprint the following acreage totals have designations that would not allow for the proposed project activities: 691 (east) or 530 (west) acres of Retention, and 1,905 (east) or 1,824 (west) acres of Partial Retention.	Under Alternative 6, analysis finds that within the project footprint the following acreage totals have designations that would not allow for the proposed project activities: 676 (north) or 771 (south) acres of Retention, and 2,043 (north) or 2,225 (south) acres of Partial Retention.
3.11.4	11-2. [REVISED] ³⁷ Anticipated changes in landscape character from key analysis viewpoints, for various phases of mine life and reclamation.	No impacts anticipated.	The analysis of anticipated changes in landscape character from key analysis viewpoints for Alternative 2 is too extensive to summarize here and is presented in tables 3.11.4-1, 3.11.4-3, 3.11.4-4, and 3.11.4-5.	Same as Alternative 2	Analysis of anticipated changes in landscape character for Alternative 4 is presented in tables 3.11.4-6 and 3.11.4-7.	Analysis of anticipated changes in landscape character for Alternative 5 is presented in tables 3.11.4-8 and 3.11.4-9.	Analysis of anticipated changes in landscape character for Alternative 6 is presented in table 3.11.4-10.

³⁶ The original issue factor expected to be analyzed was: “Quantitative assessment of acres that would no longer meet current forest plan Scenic Integrity Objective designations.” This was changed to align with terminology currently in use on the Tonto National Forest.

³⁷ The original issue factor expected to be analyzed was: “Qualitative assessment/degree of change in landscape character from key analysis viewpoints, for various phases of mine life and reclamation.” This factor was updated to better reflect the analysis presented.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.11.4	11-3. [REVISED] ³⁸ Miles of project area visibility along major thoroughfares in the area (i.e., U.S. 60, State Route [SR] 79 and SR 177).	No impacts anticipated.	The Alternative 2 facilities would be visible along 21.2 miles of U.S. 60 and 2.5 miles of SR 177.	Same as Alternative 2	Alternative 4 facilities would be visible along 18.3 miles of U.S. 60 and 3.6 miles of SR 177.	Alternative 5 facilities would be visible along 1.5 miles of U.S. 60 and 1.5 miles of SR 177.	The Alternative 6 tailings facilities would not be visible from either U.S. 60 or SR 177.
	11-4. [DROPPED] ³⁹						
3.11.4	11-5. [REVISED] ⁴⁰ Potential for increase in sky brightness resulting from the mine facility and mine-related vehicle lighting.	No impacts anticipated.	Lighting at the East Plant Site, West Plant Site, and tailings facility would be visible and noticeable at night from the town of Superior, U.S. 60, Boyce Thompson Arboretum, the Arizona Trail, and the surrounding national forest landscape.	Same as Alternative 2	Same as Alternative 2	The visibility of lighting at the East Plant Site and West Plant Site would be unchanged from Alternative 2. Lighting at the Alternative 5 tailings location may be visible to nighttime recreationists in the area, Arizona Trail users, and persons traveling on the Florence-Kelvin Highway.	The visibility of lighting at the East Plant Site and West Plant Site would be unchanged from Alternative 2. However, there would be fewer observers of the night sky in the area of the tailings because of the remote location of the facility.
Issue 12: Impacts to Transportation/ Access							
3.5.4	12-1. Quantitative assessment of change in type and pattern of traffic by road and vehicle type	Traffic volumes will continue to increase at an average 2% annual growth rate over the next 10 to 20 years, resulting in increased traffic levels on all roads in the area.	64 trips expected during the peak hour in peak construction and 46 trips expected during the peak hour at normal operations.	Same as Alternative 2	88 trips expected during the peak hour in peak construction and 58 trips expected during the peak hour at normal operations.	Same as Alternative 2	Same as Alternative 2

³⁸ The original issue factor expected to be analyzed was: “Quantitative assessment of miles of U.S. 60, State Route (SR) 79 or SR 177 with direct line-of-sight views of the project area.” The factor was revised for added clarity.

³⁹ The original issue factor expected to be analyzed was: “Quantitative assessment of miles of project area visibility along concern level 1 and 2 roads and trails.” This factor was eliminated because the Tonto National Forest does not use the term “concern level” roads or trails in its planning and Forest management efforts.

⁴⁰ The original issue factor expected to be analyzed was: “Qualitative assessment of increase in sky brightness resulting from mine facility and vehicle lighting.” The factor was revised for added clarity.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.5.4	12-2. Quantitative assessment of the change in level of service on potential highway routes and local roads	With increasing traffic, due to normal background growth and development of the area, the intersections in the project area are generally expected to operate within an acceptable LOS in years 2022 and 2027. The Combs Road/Schnepf Road intersection is expected to operate with a side street LOS E/F by year 2022 through 2027.	Project-related traffic would contribute to decreased LOS at many intersections; unacceptable LOS (E/F) caused by project-related traffic occurs at Silver King Mine Road/U.S. 60 (construction and operations), Main Street/U.S. 60 (construction and operations), SR177/U.S. 60 (construction), and Magma Mine Road/U.S. 60 (operations).	Same as Alternative 2	Similar to Alternative 2	Similar to Alternative 2	Similar to Alternative 2
	12-3. [DROPPED] ⁴¹						
Issue 13: Impacts Caused by Mine-Related Noise and Vibration							
	13-1. [DROPPED] ⁴²						
3.4.4	13-2. Qualitative assessment of the ability of alternatives to meet rural landscape expectations	No impacts anticipated.	Under most conditions, predicted noise and vibration during construction and operation at sensitive receptors are below thresholds of concern; rural character would not change due to noise.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Noise levels along Dripping Springs Road exceed thresholds of concern. No residual impacts after mitigations applied (new access road), therefore rural character would not change due to noise.

⁴¹ The original issue factor expected to be analyzed was: “Quantitative assessment of roads decommissioned by the mine and roads lost to motorized access.” This is duplicated by issue factor 10-4.

⁴² The original issue factor expected to be analyzed was: “Qualitative assessment of the potential for noise to reach recreation areas.” This is duplicated by issue factor 10-5.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
3.4.4	13-3. Quantitative assessment of noise levels (A-weighted decibels (dBA)) and geographic area impacted from mine operations, blasting, and traffic and qualitative assessment of effects of noise at nearby residences and sensitive receptors	No impacts anticipated.	Noise impacts were modeled for 15 sensitive receptors representing residential, recreation, and conservation land uses. Under most conditions, predicted noise and vibrations during construction and operation, for both blasting and non-blasting activities, at sensitive receptors are below thresholds of concern.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Noise levels along Dripping Springs Road exceed thresholds of concern. No residual impacts after mitigation applied (new access road).
	13-4. [DROPPED] ⁴³						
3.4.5.1	13-5. Qualitative assessment of effects of vibrations from blasting and mine operations at nearby residences and sensitive receptors	No impacts anticipated.	The vibration analysis indicates that within given levels of explosive loading, neither blasting nor non-blasting vibrations exceed selected thresholds based on structural damage.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Issue 14: Impacts to Land Ownership and Boundary Management							
	14-1. [DROPPED] ⁴⁴						

⁴³ The original issue factor expected to be analyzed was: “Quantitative assessment of acres of habitat impacted from noise, vibrations, and light, at frequencies pertinent to species of concern.” This was duplicated by issue factor 7B-4.

⁴⁴ The original issue factor expected to be analyzed was “Quantitative assessment of acres of public lands no longer accessible, for various phases of the mine life and reclamation.” This is duplicated by issue factor 10-2.

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
1.4.2; Appendix B	14-2. Quantitative assessment of lands that will be conveyed to public ownership through the land exchange (i.e., approximately 5,344 acres in all parcel groups)	No exchange of lands would occur.	1,224 acres of land will be conveyed to the National Forest Service and 4,150 acres of land will be conveyed to the BLM.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
3.16.4.2	14-3. Quantitative assessment of changes to acreage of grazing allotments, loss of animal unit months (AUMs), and qualitative assessment of impact from loss of grazing-related facilities (waters, stock tanks, roads, fences)	No impacts anticipated.	Under Alternative 2, affected grazing allotments would experience a reduction of 8,572 acres and 666 AUMs over six allotments and 17 grazing-related facilities would also be lost.	Same as Alternative 2	Under Alternative 4 there would be a reduction in 9,399 acres and 737 AUMs over six allotments, and 17 grazing-related facilities would be lost.	Under Alternative 5, for the east pipeline corridor: There would be a reduction in 15,672 acres and 1,378 AUMs over 10 allotments, and six grazing-related facilities would be lost. For the west pipeline corridor: There would be a reduction in 16,186 acres and 2,380 AUMs over 12 allotments, and six grazing-related facilities would be lost.	Under Alternative 6, for the north pipeline corridor: There would be a reduction of 14,747 acres and 2,674 AUMs over nine allotments, and 13 grazing-related facilities would be lost. For the south pipeline corridor: There would be a reduction in 15,209 acres and 2,745 AUMs over nine allotments, and 13 grazing-related facilities would be lost.
	14-4. Qualitative assessment of changes in fencing, boundary markers, and survey markers	No impacts anticipated.	It is anticipated that implementation of any action alternative would damage, destroy, or obliterate corner monuments and landownership boundaries (e.g., through ground-clearing activities or burial beneath tailings).	It is anticipated that implementation of any action alternative would damage, destroy, or obliterate corner monuments and landownership boundaries (e.g., through ground-clearing activities or burial beneath tailings).	It is anticipated that implementation of any action alternative would damage, destroy, or obliterate corner monuments and landownership boundaries (e.g., through ground-clearing activities or burial beneath tailings).	It is anticipated that implementation of any action alternative would damage, destroy, or obliterate corner monuments and landownership boundaries (e.g., through ground-clearing activities or burial beneath tailings).	It is anticipated that implementation of any action alternative would damage, destroy, or obliterate corner monuments and landownership boundaries (e.g., through ground-clearing activities or burial beneath tailings).

DEIS Section	Issue Category	Alternative 1 – No Action	Alternative 2 – Near West Proposed Action	Alternative 3 – Near West – Ultrathickened	Alternative 4 – Silver King	Alternative 5 – Peg Leg	Alternative 6 – Skunk Camp
	14-5. [DROPPED] ⁴⁵						
3.2.4	14-6. Qualitative assessment of impact to mining claims	Non-Resolution Copper unpatented load or placer mining claims are located under the tailings storage facility and pipeline corridor.	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

⁴⁵ The original issue factor expected to be analyzed was: “Qualitative assessment of impacts to regional land conservation efforts.” This factor cannot be assessed until a full mitigation package is available that includes additional lands that may be brought forth in response to Clean Water Act Section 404 permitting of Endangered Species Act Section 7 consultation. At this time, regional conservation land efforts do not appear to be impacted in any specific way.