

## Overview

For many decades, the development of mines, dams, freeway systems, and many other kinds of infrastructure and commercial projects that have proved generally beneficial to society as a whole have often adversely and disproportionately affected minority populations and the poor—those least able to effectively speak out against environmental or economic damage to their homes, health, and lifestyles. Executive Order 12898, signed by President Clinton in 1994, requires Federal agencies to consider environmental justice issues in decision-making on projects that have the potential to harm vulnerable or disadvantaged communities. This section examines environmental justice issues in the context of the Resolution Copper Project and Land Exchange.

## 3.15 Environmental Justice

### 3.15.1 Introduction

Environmental justice is intended to promote the fair treatment and meaningful involvement of all people—regardless of race, ethnicity, or income level—in Federal environmental decision-making. Environmental justice programs encourage active public participation and the dissemination of relevant information to inform and educate communities that may be adversely affected by a proposed project or its alternatives.

As detailed in Chapter 1, Section 1.6, Public Involvement, the public (including members of environmental justice communities identified later in this section) has been meaningfully involved in the NEPA process. Public involvement included a 120-day scoping period during which five scoping meetings were held. These meetings provided the public with an opportunity to ask questions, learn more about the proposed project, and provide comments on issues and concerns that should be addressed in the EIS and alternatives that should be evaluated. Additionally, three public alternatives development workshops were held (two in person and one online) to solicit input on criteria for the selection of locations for the tailings storage facilities. Native American communities are involved in ongoing consultation with the Forest Service (see Section 1.6.4, Tribal Consultation; and Chapter 4, Consulted Parties).

This section determines which communities in the analysis area are considered environmental justice communities, based on minority status or poverty

status, and then assesses the potential effects of each alternative on environmental justice communities.

### 3.15.2 Analysis Methodology, Assumptions, and Uncertain and Unknown Information

#### 3.15.2.1 Analysis Area

The geographic area for the analysis of potential environmental justice impacts includes communities (such as cities, towns, and Census Designated Places [CDPs]) within Gila, Graham, Maricopa, and Pinal Counties. Native American communities within this analysis area are also included (figure 3.15.2-1). Although the extent of potential project-related impacts would likely be limited to a smaller, more regional area, this four-county analysis area was determined to be appropriate in order to capture the extent of potential measurable socioeconomic effects. While the region with the potential for project-related impacts is located in Pinal and Gila Counties, Maricopa County was also included because a substantial portion of the workforce for the proposed mine would be expected to commute from the Phoenix metropolitan area, and Graham County was included because of its proximity to the project area and large Native American population.

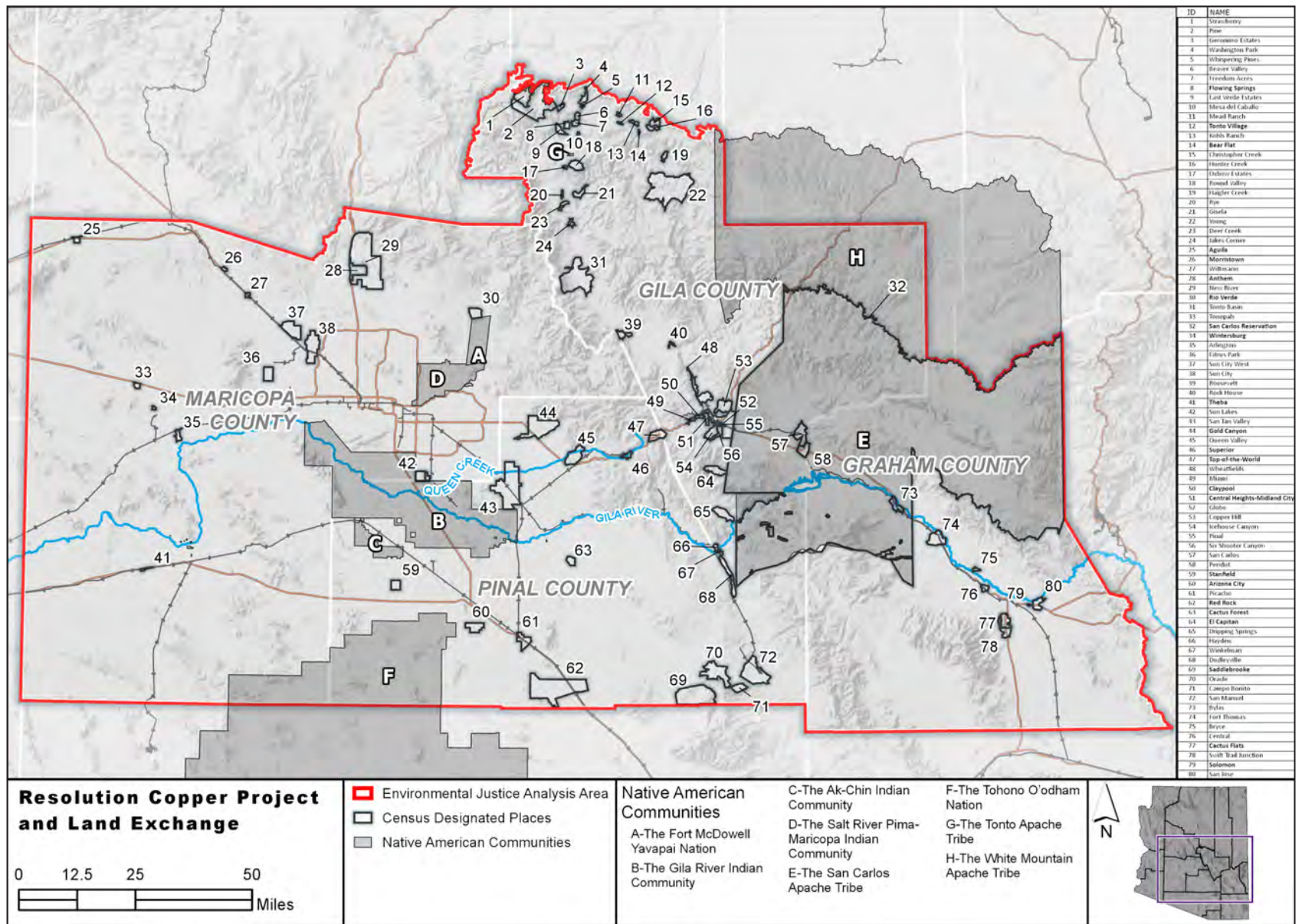


Figure 3.15.2-1. Environmental justice analysis area

### 3.15.2.2 Methodology for Determining Environmental Justice Communities

The CEQ defines a community with potential environmental justice populations as one that has a greater percentage of minority and/or low-income populations than does an identified reference community. Minority populations are those populations that have the following characteristics:

1. A readily identifiable group of people with a population that is at least 50 percent minority living in geographic proximity to the project area. The population exceeding 50 percent minority may be made up of one minority or a number of different minority groups; together, the sum is 50 percent or greater.
2. A minority population may be an identifiable group that has a meaningfully greater minority population than the adjacent geographic areas, or may also be a geographically dispersed/transient set of individuals, such as migrant workers or Native Americans (Council on Environmental Quality 1997).

In 2014, the Forest Service updated its environmental justice analysis process in “Striving for Inclusion: Addressing Environmental Justice for Forest Service NEPA” (Periman and Grinspoon 2014). In this guidance document, the Forest Service recommends using the second approach as the more inclusive of the two: identify groups that have meaningfully greater minority populations than adjacent geographic areas. A “meaningfully greater” minority population is not defined in this document; however, for the purpose of this analysis, “meaningful greater” is defined as a difference of more than 5 percent between the communities and the reference area.

This approach makes selection of the reference area an important factor. Because of the project’s large scale, the geographic area used as a reference is the state of Arizona. Within the four-county analysis area, environmental justice communities are those municipal areas and communities that are distinguished as having a minority and/or low-income population meaningfully greater than this reference area.

The 2014 guidance document also recommends identifying low-income populations with the annual statistical poverty thresholds from the U.S. Census Bureau’s annual current population reports (Series P-60) on income and poverty. The U.S. Census Bureau defines 2017 poverty-level thresholds (the year for which demographic data are available for communities within the analysis area) for individuals and a family of four as income levels below \$12,488 and \$25,094, respectively (U.S. Census Bureau 2019). The same “meaningful greater” definition of a difference of 5 percent or more between the communities and the reference area is also used for low-income environmental justice populations.

Potential adverse impacts for each resource area are evaluated for impacts that would be considered “disproportionately high or adverse.” In instances where an impact from the proposed action may appear to be identical to both the affected general population and the affected minority populations and low-income populations, there may be related factors that amplify the impact. These factors can include proximity (such as impacts limited in geographic scope to adjacent low-income or minority communities), economic (such as if the economic burden of a proposed project does not outweigh the benefit to low-income or minority communities), health or safety (such as the presence of unique exposure pathways and/or social determinants of health of minority or low-income communities), or social/cultural (such as impacts on resources or places important to cultural traditions of minority or low-income communities).

### 3.15.3 Affected Environment

#### 3.15.3.1 Relevant Laws, Regulations, Policies, and Plans

A complete listing and brief description of the legal authorities, reference documents, and agency guidance applicable to environmental justice may be reviewed in Newell (2018b).

#### 3.15.3.2 Existing Conditions and Ongoing Trends

##### **Minority Populations**

Using the methodology described in section 3.15.2, we identified 29 locations where the minority (nonwhite) population is more than 5 percent greater than the reference community (table 3.15.3-1) in addition to the following eight Native American lands and associated communities:

1. White Mountain Apache Tribe (which includes the Carrizo, Cedar Creek, and Canyon Day CDPs)
2. Fort McDowell Yavapai Nation
3. Gila River Indian Community (which includes the Maricopa Colony, St. Johns, Komatke, Gila Crossing, Santa Cruz, Sacate Village, Goodyear Village, Casa Blanca, Wet Camp Village, Sweet Water Village, Stotonic Village, Lower Santan Village, Upper Santan Village, Sacaton, Sacaton Flats, and Blackwater CDPs)
4. Ak-Chin Indian Community (which includes the Ak-Chin Village CDP)
5. Salt River Pima-Maricopa Indian Community
6. San Carlos Apache Tribe (which includes the East Globe, San Carlos, Peridot, and Bylas CDPs),

#### Primary Legal Authorities Relevant to the Environmental Justice Effects Analysis

- Executive Order 12898, “Environmental Justice in Minority Populations and Low-Income Populations” (1994)
- Forest Service Guide “Striving for Inclusion: Addressing Environmental Justice for Forest Service NEPA” (2014)
- U.S. Census 5-Year American Community Survey for the State of Arizona (2013–2017)

7. Tohono O’odham Nation (which includes the Chuichu, Vaiva Vo, Tat Momoli, Kohatk, and Kaka CDPs, as well as the satellite village of Florence Village)
8. Tonto Apache Tribe

These locations meet the minority criteria for identification as an environmental justice community. Table 3.15.3-1 summarizes relevant census data regarding minority (nonwhite) populations for the analysis area.

##### **Populations Living Below Poverty Level**

Using the methodology described in section 3.15.2, there are 35 locations within the analysis area where the populations of individuals and/or families living below poverty level exceed the reference community by greater than 5 percent (see table 3.15.3-1). Therefore, these locations meet the poverty criteria for identification as an environmental justice community. Table 3.15.3-1 summarizes relevant data for the percentage of individuals living below poverty level and percentage of families living below poverty level in the analysis area.

Table 3.15.3-1. Percent minority population and percent population living below poverty level

Geographic Area	County	Minority Population Percentage*	Percentage of Individuals Living Below Poverty Level	Percentage of Families Living Below Poverty Level
<b>State of Arizona</b>		<b>44.4</b>	<b>17.0</b>	<b>12.3</b>
Aquila CDP	Maricopa	95.9	58.5	42.2
Arizona City CDP	Pinal	49.7	–	–
Avondale CDP	Maricopa	67.2	–	–
Bryce CDP	Graham	–	37.7	–
Cactus Flats CDP	Graham	–	34.2	26.5
Casa Blanca CDP	Pinal	91.2	60.1	44.4
City of Casa Grande	Maricopa	55.0	–	–
City of Coolidge	Pinal	57.9	24.2	19.3
Dudleyville CDP	Pinal	73.4	29.9	19.5
East Verde Estates CDP	Gila	–	26.3	17.6
City of El Mirage	Maricopa	59.9	–	–
City of Eloy	Pinal	77.5	32.5	17.2
Town of Florence	Pinal	52.3	–	–
Flowing Springs CDP	Gila	54.5	27.3	–
Freedom Acres CDP	Gila	–	37.2	19.6
Town of Gila Bend	Maricopa	74.5	37.8	33.0
Gisela CDP	Gila	–	37.5	36.4
City of Glendale	Maricopa	51.4	–	–
City of Globe	Gila	–	–	17.8
Town of Guadalupe	Maricopa	95.1	32.7	31.4
Haigler Creek CDP	Gila	–	37.9	–
Town of Hayden	Gila	88.4	29.8	23.9
Icehouse Tavern CDP	Gila	–	25.4	–
Town of Kearny	Pinal	57.3	21.7	–
Town of Mammoth	Pinal	75.9	23.8	–
Town of Miami	Gila	66.0	28.6	24.1
Morristown CDP	Maricopa	–	25.3	–
Oxbow Estates CDP	Gila	–	–	29.2
City of Phoenix	Maricopa	56.7	20.9	–
Picacho CDP	Pinal	69.6	24.1	21.2
Town of Pima	Graham	–	24.5	28.3

*continued*

Table 3.15.3-1. Percent minority population and percent population living below poverty level (cont'd)

Geographic Area	County	Minority Population Percentage*	Percentage of Individuals Living Below Poverty Level	Percentage of Families Living Below Poverty Level
Pinal CDP	Gila	–	30.8	20.0
Round Valley CDP	Gila	–	50.8	–
City of Safford	Graham	49.7	–	–
San Jose CDP	Graham	78.5	–	–
San Manuel CDP	Pinal	56.9	23.7	17.5
Six Shooter Canyon CDP	Gila	–	–	19.0
Soloman CDP	Graham	79.2	–	–
Stanfield CDP	Pinal	89.9	–	29.3
Town of Star Valley	Gila	–	24.7	–
Town of Superior	Pinal	69.6	–	–
Swift Trail Junction CDP	Graham	53.9	–	–
City of Tolleson	Maricopa	91.2	23.3	20.0
Whispering Pines CDP	Gila	–	29.2	50.0
Town of Winkelman	Pinal	82.4	–	–
Wittman CDP	Maricopa	–	–	24.8
Town of Youngtown	Maricopa	–	22.7	16.8

Source: U.S. Census Bureau, 2013–2017 American Community Survey 5-Year Estimates (U.S. Census Bureau 2018)

Note: Dash indicates the community did not exceed the State of Arizona reference level by 5 percent or more.

\* Nonwhite population is calculated by subtracting values in the field “Only one race – white alone” from the field “total population.” Nonwhite in this analysis thus refers to all individuals who self-identify either as Hispanic, including Hispanic whites, or as a race other than white alone.

### 3.15.4 Environmental Consequences of Implementation of the Proposed Mine Plan and Alternatives

#### 3.15.4.1 Alternative 1 – No Action Alternative

Under the no action alternative, adverse impacts on environmental justice populations other than Native American communities would not occur, as the current land use would remain unchanged and opportunities for disproportionate adverse impacts would not exist.

#### 3.15.4.2 Impacts Common to all Action Alternatives

Not all of the communities that meet the criteria (described in section 3.15.2) for an environmental justice population within the four-county analysis area would potentially experience measurable impacts from the alternatives analyzed in this section; therefore, the communities for which impacts are analyzed are listed here. The remaining populations are either outside the potential geographic extent of potential impacts or would experience beneficial socioeconomic effects (see section 3.13 for a more detailed discussion of potential impacts on socioeconomics).

The proposed project has the potential to disproportionately impact the eight identified Native American communities and the following five communities:

1. town of Hayden
2. town of Miami
3. city of Globe
4. town of Superior
5. town of Winkelman

#### ***Effects of the Land Exchange***

The land exchange would have effects on some environmental justice communities.

The Oak Flat Federal Parcel would leave Forest Service jurisdiction and no longer be open to public use to those communities in the vicinity. The offered lands that would enter either Forest Service or BLM jurisdiction would be beneficial to nearby communities of each parcel.

Native American communities would be disproportionately affected by the land exchange because Oak Flat would be conveyed to private property and would no longer be subject to the NHPA (see section 3.12). Loss of the culturally important area of Oak Flat would be a substantial threat to the perpetuation of cultural traditions of the Apache and Yavapai tribes. The land exchange would have a disproportionately adverse effect on Native American communities as a result of the effects on tribal values and concerns and cultural resources.

#### ***Effects of Forest Plan Amendment***

The Tonto National Forest Land and Resource Management Plan (1985b) provides guidance for management of lands and activities within the Tonto National Forest. It accomplishes this by establishing a mission, goals, objectives, and standards and guidelines. Missions, goals, and objectives are applicable on a forest-wide basis. Standards and guidelines are either applicable on a forest-wide basis or by specific management area.

A review of all components of the 1985 forest plan was conducted to identify the need for amendment due to the effects of the project, including both the land exchange and the proposed mine plan (Shin 2019). No standards and guidelines were identified as applicable to environmental justice. For additional details on specific rationale, see Shin (2019).

### ***Summary of Applicant-Committed Environmental Protection Measures***

A number of environmental protection measures are incorporated into the design of the project that would act to reduce potential impacts on environmental justice communities. These are non-discretionary measures, and their effects are accounted for in the analysis of environmental consequences. Because they cover a variety of resources (see list in next section), these measures are not repeated here.

### ***Potential Effects on Environmental Justice Communities by Resource***

Under all action alternatives, impacts on environmental justice communities from the East Plant Site and West Plant Site, subsidence area, and from auxiliary facilities for the East Plant Site and West Plant Site (such as transmission lines, pipelines, and roads) would be similar because the locations of these facilities across all action alternatives would not change impacts on environmental justice communities. However, impacts on environmental justice communities from the proposed tailings storage facilities and auxiliary facilities would vary under each of the action alternatives and therefore are discussed separately later in this section.

For detailed differences between alternatives by resource, see the respective resource analyses in the “Environmental Consequences” parts of each resource section. For many resources (e.g., geology, wildlife, and soils and vegetation), potential adverse impacts resulting from the action alternatives would be generally limited to the project area. Because there are no communities located within the project area, there would not be disproportionately high or adverse direct impacts on environmental justice communities as a result of disturbance. Resources that may be subject to adverse impacts as a result of the action alternatives and that may have subsequent disproportionately high or adverse impacts on environmental justice communities are

- scenic resources,
- socioeconomics,
- public health and safety,
- recreation,
- transportation and access,
- noise and vibration,
- land ownership and access,
- water resources,
- air quality,
- tribal values and concerns, and
- cultural resources.

During analysis, we considered these resources and whether the action alternatives would result in a disproportionate impact on environmental justice communities; the rationale is included in table 3.15.4-1.

As indicated in table 3.15.4-1, we anticipate that the proposed East Plant Site, West Plant Site, area of subsidence, and auxiliary facilities would have disproportionately high and adverse impacts on environmental justice communities for scenic resources and dark skies. Impacts on these resources would be largely experienced by the town of Superior. 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. The town of Superior would experience disproportionately high and adverse impacts under all alternatives primarily because the West Plant Site and associated facilities would be located directly north of and adjacent to the town.



Table 3.15.4-1. Identified resources and determination of adverse impact on environmental justice communities

Resource or Resource Use	Is There an Adverse Impact on an Environmental Justice Community?	Is the Impact Disproportionately High and Adverse?
Geology, Minerals, and Subsidence	No	<b>No.</b> As potential impacts on geological and/or mineral resources are anticipated to be limited beyond the geographic scope of the project area, and environmental justice communities are not located within the project area, it is unlikely that direct or indirect impacts on these resources would affect these communities. In addition, the geological and/or mineral resources located within the project area are also present in areas outside of the area that may be disturbed. Therefore, because the impacts on geological or mineral resources would be limited in geographic scope and would not result in the total loss of these resources across the region, these impacts are not anticipated to result in adverse impacts on environmental justice communities. Subsidence effects would be limited to Resolution Copper private land.
Scenic Resources	Yes	<b>Yes.</b> Residents of the town of Superior would experience adverse changes to visual quality of the area as a result of the West Plant Site and auxiliary facilities. As the town of Superior would be the only community that would experience adverse impacts on scenic resources as a result of the West Plant Site and auxiliary facilities and has been identified as an environmental justice community, impacts on scenic resources would be disproportionately adverse.
Scenic Resources: Dark Skies	Yes	<b>Yes.</b> The town of Superior would experience an increase in sky brightness between 40 and 160 percent as a result of the West Plant Site and auxiliary facilities. As the town of Superior would be the only community that would experience adverse impacts on dark skies from increased levels of light pollution as a result of the West Plant Site and auxiliary facilities, and has been identified as an environmental justice community, these impacts would be disproportionately adverse.
Socioeconomics	Yes	<b>No.</b> All environmental justice communities would experience socioeconomic impacts (see section 3.13), such as an increase in tax revenues and direct and indirect employment opportunities resulting in beneficial multiplier effects for the majority of the identified communities. Increases in direct and indirect revenues from the proposed project could result in net beneficial economic impacts across the analysis area. The proposed project could result in an increase in direct and indirect employment opportunities for members of environmental justice communities, thus having a beneficial multiplier effect on environmental justice communities. Adverse impacts on property values would be largely limited to residences near the proposed tailings storage facilities, of which only the town of Superior has been identified as an environmental justice community; however, it is anticipated that adverse impacts on property values from proposed tailings storage facilities would be offset by upward pressure on property values related to increased housing demand from the mine workforce, and from the applicant-committed measures specific to the town of Superior that are described in section 3.13.
Public Health and Safety: Fire and Fuels Management	Yes	<b>No.</b> The town of Superior is identified as a Wildland Urban Interface community at high risk from wildfire and would experience an increase in risk of wildfire; however, these impacts would not be limited to environmental justice communities.
Public Health and Safety: Hazardous Materials	Yes	<b>No.</b> The risk for catastrophic release of hazardous materials is highest during transportation, and these materials would be transported by truck along U.S. 60, which is partially located within the town of Superior; however, other communities within which U.S. 60 is also partially located and through which hazardous materials may be transported have not been identified as environmental justice communities. Therefore, these impacts would not be limited to environmental justice communities.

*continued*

Table 3.15.4-1. Identified resources and determination of adverse impact on environmental justice communities (cont'd)

Resource or Resource Use	Is There an Adverse Impact on an Environmental Justice Community?	Is the Impact Disproportionately High and Adverse?
Recreation	Yes	<b>No.</b> Impacts on recreation would not be limited to environmental justice communities.
Transportation and Access	Yes	<b>No.</b> The town of Superior would experience an increase in level of service to inadequate rankings of E or F at five intersections; however, these impacts would affect both residents of the town of Superior as well as visitors and would not be limited to members of environmental justice communities.
Noise and Vibration	Yes	<b>No.</b> Noise and vibration from construction-related activities (underground blasting and construction equipment at surface level) at the West Plant Site and underground conveyance tunnel would result in short-term and intermittent increases in noise and vibration levels that may exceed applicable thresholds for some individual residences in the town of Superior; however, because of the short-term and infrequent nature of construction activities, the effects are not anticipated to be adverse.  During operations, the long-term increase in noise and vibration from the proposed project at the West Plant Site, in conjunction with existing background noise and vibration, is expected to result in increased levels of noise and vibration within the town of Superior; however, because these levels would not exceed applicable thresholds, the proposed action would therefore not disproportionately impact environmental justice communities.
Soils and Vegetation	No	<b>No.</b> As potential impacts on soils and vegetation resources are anticipated to be limited beyond the geographic scope of the project area and environmental justice communities are not located within the project area, it is unlikely that direct or indirect impacts on these resources would affect these communities. In addition, the soils and vegetation resources located within the project area are also present in areas outside the area that may be disturbed. Therefore, because the impacts on these resources would be limited in geographic scope and would not result in the total loss of these resources across the region, these impacts are not anticipated to result in adverse impacts on environmental justice communities. Loss of access to resource-gathering areas is discussed in "Tribal Values and Concerns" within this table.
Land Use: Land Ownership and Access	Yes	<b>No.</b> Loss of access to public lands would not be limited to environmental justice communities.
Land Use: Livestock and Grazing	No	<b>No.</b> As potential impacts on livestock and grazing are anticipated to be limited beyond the geographic scope of the project area and livestock grazing has not been identified as a critical economic or cultural critical land use within the project area for environmental justice communities, it is unlikely that changes to livestock grazing would result in impacts on these communities.
Water Quantity: Groundwater	No	<b>No.</b> Additional drawdown due to block-caving is anticipated for water supply wells in and around the town of Superior, except for those completed solely in alluvium or shallow fracture systems. Impacts could include loss of well capacity, the need to deepen wells, the need to modify pump equipment, or increased pumping costs. However, Resolution Copper has identified an applicant-committed environmental protection measure that would replace water supplies lost.

*continued*

Table 3.15.4-1. Identified resources and determination of adverse impact on environmental justice communities (cont'd)

Resource or Resource Use	Is There an Adverse Impact on an Environmental Justice Community?	Is the Impact Disproportionately High and Adverse?
Water Quantity: Surface Water	Yes	<b>No.</b> Impacts on surface water quantity would not be limited to environmental justice communities.
Water Quality: Groundwater	Yes	<b>No.</b> Potential impacts on groundwater quality would not be limited to environmental justice communities.
Water Quality: Surface Water	Yes	<b>No.</b> Potential impacts on surface water quality would not be limited to environmental justice communities.
Air Quality	Yes	<b>No.</b> The effects on air quality as a result of emissions from the proposed project, in conjunction with nearby source emissions, are expected to result in predicted concentrations in Class I and II areas that are in compliance with the NAAQS limits and would therefore not disproportionately impact environmental justice communities.
Tribal Values and Concerns	Yes	<b>Yes.</b> Disturbance to and loss of access to sacred sites, traditional cultural properties, and traditional resource collecting areas within the proposed mine area would adversely impact members of the consulting tribes. No tribe supports the desecration or destruction of ancestral sites. As this impact would be limited to Native American communities and the permanent loss of these resources is not able to be mitigated, impacts would be disproportionately high and adverse.
Cultural Resources	Yes	<b>Yes.</b> Disturbance to historic properties within the proposed mine area would adversely impact cultural resources and members of the consulting tribes (see Section 3.14, Tribal Values and Concerns).
Wildlife	No	<b>No.</b> As potential impacts on wildlife resources are anticipated to be limited beyond the geographic scope of the project area and environmental justice communities are not located within the project area and wildlife has not been identified as a critical economic or cultural critical land use (e.g., hunting) within the project area for environmental justice communities, it is unlikely that changes to wildlife or wildlife habitats would result in impacts on these communities.

The tribal values and concerns resource section (see section 3.14) indicates that during consultation with Native American tribes, the tribes requested that tribal monitors resurvey a number of geographic areas to identify traditional cultural properties of importance to the four cultural groups with ties to the region (Puebloan, O'odham, Apache, and Yavapai). Traditional cultural properties can include springs and seeps, plant and mineral resource collecting areas, landscapes and landmarks, caches of regalia and human remains, and sites that may not have been recognized by non-Native archaeologists. Representatives of the Yavapai and Apache tribes have identified a number of areas that may be directly or indirectly affected by all alternatives as sacred landscapes and/or TCPs. Additionally, all of the consulting tribes consider all springs and seeps sacred, and all of the tribes strongly object to the development of a mine and placement of tailings in any culturally sensitive area. Although the physical boundaries of the reservations of the consulting tribes are not within the project area boundaries, disturbance of the sites would result in a disproportionate impact on the tribes, given their historical connection to the land. Additionally, the potential impacts on archaeological and cultural sites (see section 3.12) are directly related to the tribes' concerns and the potential impacts on cultural identity and religious practices. Given the known presence of ancestral villages, human remains, sacred sites, and traditional resource-collecting areas that have the potential to be permanently affected, it is unlikely that compliance and/or mitigation would substantially relieve the disproportionality of the impacts on the consulting tribes.

Impacts on scenic quality and dark skies (see section 3.11) as a result of the development of the West Plant Site and auxiliary facilities would be disproportionately high and adverse for residents of the town of Superior, as it would be located directly adjacent to developed areas of the town. Views from residences and community areas within 2 miles of the West Plant Site could be impacted by a strong change in landscape form, line, color, and texture and the dominance of new landscape features in the view. In addition, the magnitude of the increase in sky brightness that would occur as a result of the West Plant Site and auxiliary facilities would be disproportionately experienced by adjacent residences. Given the proximity of residences to the West Plant Site, it is unlikely

that compliance and/or mitigation would substantially relieve the disproportionality of the impacts on the affected community members.

Impacts on potential environmental justice communities that could result from the proposed tailings storage facilities are discussed by alternative in the following text. Impacts on resources that would not be disproportionately high and adverse are not discussed.

### 3.15.4.3 Alternatives 2 and 3 – Near West

Effects from the tailings storage facility and auxiliary facilities under Alternatives 2 and 3 that are anticipated to have disproportionately high and adverse impacts on environmental justice communities include cultural resources and tribal values and concerns. For these resources, impacts would be similar to those described in Section 3.15.4.3, Impacts Common to All Action Alternatives.

The proposed location of the Alternatives 2 and 3 tailings storage facilities contains culturally important areas (see section 3.14), as well as a number of archaeological sites that would be adversely impacted by either alternative (see section 3.12). In addition, these alternatives are located in proximity to an identified sacred site, and the presence of the tailings storage facility would constitute an adverse visual effect on the landscape (see sections 3.11 and 3.14). This alternative would result in disproportionately high and adverse impacts on cultural resources and tribal values and concerns.

### 3.15.4.4 Alternative 4 – Silver King

Effects from the tailings storage facility and auxiliary facilities under Alternative 4 that are anticipated to have disproportionately high and adverse impacts on environmental justice communities include scenic resources, cultural resources, and tribal values and concerns. Impacts would be similar to those described earlier in Section 3.15.4.3, Impacts Common to All Action Alternatives, for cultural resources and tribal values and concerns.

The location of this proposed tailings storage facility contains culturally important areas (see section 3.14), as well as a number of archaeological sites that would be adversely impacted (see section 3.12). Even though this alternative is located east of Alternatives 2 and 3, it would still be visible on the landscape (see sections 3.11 and 3.14). This alternative would result in disproportionately high adverse impacts on cultural resources and tribal values and concerns.

Impacts on scenic quality (see section 3.11) as a result of the development of the proposed tailings storage facility and auxiliary facilities would be disproportionately high and adverse for residents of the town of Superior, as it would be located directly adjacent to the community. Prior to reclamation activities, as the embankment grows, the facility would become increasingly visible from the town of Superior. Views from residences and community areas could be impacted by a moderate to strong change in landscape form, line, color, and texture and the dominance of new landscape features in the view. Given the level of scenic change for residents of the town of Superior that would result from this alternative, it is unlikely that compliance and/or mitigation would substantially relieve the disproportionality of the impacts on the affected community members.

#### 3.15.4.5 Alternative 5 – Peg Leg

Effects from the tailings storage facility and auxiliary facilities under Alternative 5 that are anticipated to have disproportionately high and adverse impacts on environmental justice communities include cultural resources and tribal values and concerns. Impacts would be similar to those described in Section 3.15.4.3, Impacts Common to All Action Alternatives.

The location of this proposed tailings storage facility contains culturally important areas (see section 3.14), as well as a number of archaeological sites that would be adversely impacted by either of the proposed tailings pipeline routes (see section 3.12). This alternative would result in disproportionately high adverse impacts on cultural resources and tribal values and concerns.

#### 3.15.4.6 Alternative 6 – Skunk Camp

Effects from the tailings storage facility and auxiliary facilities under Alternative 6 that are anticipated to have disproportionately high and adverse impacts on environmental justice communities include cultural resources and tribal values and concerns; impacts would be similar to those described in Section 3.15.4.3, Impacts Common to All Action Alternatives.

The location of this proposed tailings storage facility contains culturally important areas (see section 3.14), as well as a number of archaeological sites that would be adversely impacted by either of the proposed tailings pipeline routes (see section 3.12). In addition, the proposed pipeline corridors associated with this alternative would both be located in proximity to identified sacred sites, and the presence of the pipeline corridors would constitute an adverse visual effect on the landscape (see section 3.14). It can also be anticipated that this alternative would result in disproportionately high and adverse impacts on cultural resources and tribal values and concerns.

#### 3.15.4.7 Cumulative Effects

The Tonto National Forest identified the following list of reasonably foreseeable future actions as likely to occur in conjunction with development of the Resolution Copper Mine. These reasonably foreseeable future actions are expected to contribute to cumulative changes to low-income and/or minority populations protected by Title VI of the Civil Rights Act and environmental justice conditions in the towns of Superior and Florence and other nearby communities, particularly those in northern Pinal County, southwestern Gila County, and eastern Maricopa County. As noted in section 3.1, past and present actions are assessed as part of the affected environment; this section analyzes the effects of any reasonably foreseeable future actions, to be considered cumulatively along with the affected environment and Resolution Copper Project effects.

Many of the RFFAs can also be anticipated to result in disproportionately high and adverse impacts on Native American

communities due to cumulative impacts on cultural resources and tribal values and concerns, as development, mining, and disturbance of the natural landscape cumulatively impact the cultural heritage of these communities.

- Pinto Valley Mine Expansion.* The Pinto Valley Mine is an existing open-pit copper and molybdenum mine located approximately 8 miles west of Miami, Arizona, in Gila County. Pinto Valley Mining Corporation is proposing to expand mining activities onto the Tonto National Forest and extend the life of the mine to 2039. EIS impact analysis is pending. Proposed expansion and continuation of operations at the Pinto Valley Mine may negatively and disproportionately affect environmental justice communities by decreasing available housing and/or driving up costs of affordable housing associated with a relatively sudden influx of workers. Activity at the Pinto Valley Mine, in combination with other mining in the Globe-Miami-Superior-Kearny-Hayden area, may contribute to this well-documented phenomenon.
- Ray Land Exchange and Proposed Plan Amendment.* ASARCO is also seeking to complete a land exchange with the BLM by which the mining company would gain title to approximately 10,976 acres of public lands and federally owned mineral estate located near ASARCO's Ray Mine in exchange for transferring to the BLM approximately 7,304 acres of private lands, primarily in northwestern Arizona. It is known that at some point ASARCO wishes to develop a mining operation in the "Copper Butte" area west of the Ray Mine. Under the proposed land exchange, Executive Order 12898 would no longer apply to the selected lands, and the offered lands would comply with Executive Order 12898. Development of these lands could have the potential to disproportionately affect low-income and/or minority populations by increasing pressures on local infrastructure such as roads, schools, medical services, and the availability and affordability of housing in the towns
- of Superior, Hayden, and Winkelman. Large-scale mining projects such as the Resolution Copper Mine and the mining developments described here may also alter rural settings and lifestyles experienced by protected populations.
- Ripsey Wash Tailings Project.* Mining company ASARCO is planning to construct a new tailings storage facility to support its Ray Mine operations. As approved, the proposed tailings storage facility project would occupy 2,627 acres of private lands and 9 acres of BLM lands and be situated within the Ripsey Wash watershed just south of the Gila River approximately 5 miles west-northwest of Kearny, Arizona, and would contain up to 750 million tons of material (tailings and embankment material). The tailings facility would include two starter dams, new pipelines to transport tailings and reclaimed water, a pumping booster station, a containment pond, a pipeline bridge across the Gila River, and other supporting infrastructure. ASARCO estimates a construction period of 3 years and approximately 50 years of expansion of the footprint of the tailings storage facility as slurry tailings are added to the facility, followed by a 7- to 10-year period for reclamation and final closure. A segment of the Arizona Trail would be relocated east of the tailings storage facility. Development of these lands could have the potential to disproportionately affect low-income and/or minority populations by increasing pressures on local infrastructure such as roads, schools, medical services, and the availability and affordability of housing in the towns of Superior, Hayden, and Winkelman. Large-scale mining projects such as the Resolution Copper Mine and the mining developments described here may also alter rural settings and lifestyles experienced by protected populations.

These projects could potentially contribute to effects on low-income or minority populations through the projected life of the Resolution Copper Mine (50–55 years).

#### 3.15.4.8 Mitigation Effectiveness

The Forest Service is in the process of developing a robust mitigation plan to avoid, minimize, rectify, reduce, or compensate for resource impacts that have been identified during the process of preparing this EIS. Appendix J contains descriptions of mitigation concepts being considered and known to be effective, as of publication of the DEIS. Appendix J also contains descriptions of monitoring that would be needed to identify potential impacts and mitigation effectiveness. As noted in chapter 2 (section 2.3), the full suite of mitigation would be contained in the FEIS, required by the ROD, and ultimately included in the final GPO approved by the Forest Service. Public comment on the DEIS, and in particular appendix J, will inform the final suite of mitigations.

At this time, no mitigation measures have been identified that would be solely pertinent to environmental justice, though a number of measures have been identified for other resources. Applicant-committed environmental protection measures have already been detailed elsewhere in this section, will be a requirement for the project, and have already been incorporated into the analysis of impacts.

#### ***Unavoidable Adverse Impacts***

The change in scenery and dark skies for the town of Superior cannot be avoided or fully mitigated. Similarly, the disproportionately high and adverse impacts on cultural resources and tribal values and concerns cannot be avoided or fully mitigated.

#### 3.15.4.9 Other Required Disclosures

##### ***Short-Term Uses and Long-Term Productivity***

Environmental justice impacts are expected only for the town of Superior, and tribes with cultural, social, or religious ties to the project area would be affected permanently from direct, permanent impacts on these sites and values. The loss of these values would be long term.

#### ***Irreversible and Irretrievable Commitment of Resources***

There would be irretrievable socioeconomic impacts under all action alternatives because existing land uses, including recreation opportunities, would be precluded within the project area during the life of the project. All action alternatives would potentially cause irreversible impacts on the affected area with regard to changes in the local landscape, infrastructure and tax base funding, community values, and quality of life for residents of the town of Superior.