USDA Forest Service
Tonto National Forest
Arizona

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Process Memorandum to File

Addendum #1 to October 28, 2020 Process Memo "Cumulative Effects Analysis Overview and Screening by Resource"

This document is deliberative and is prepared by the third-party contractor in compliance with the National Environmental Policy Act and other laws, regulations, and policies to document ongoing process and analysis steps. This document does not take the place of any Line Officer's decision space related to this project.

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Purpose of Process Memorandum

The purpose of this addendum is to update the process memorandum dated October 28, 2020, titled "Cumulative Effects Analysis Overview and Screening by Resource." The original process memo served to outline the methods and screening results used for the analysis of cumulative effects within the Environmental Impact Statement (EIS) prepared for the Resolution Copper Project by disclosing:

- Approach for addressing past and present actions in the EIS.
- Process used to identify valid reasonably foreseeable future actions (RFFAs).
- Summary of spatial analysis areas and temporal analysis time frames, by resource area.
- Screening of RFFAs by resource, and whether the RFFA should be assessed in the EIS cumulative effects analysis.

Since publication of the Final EIS in January 2021[1], the RFFAs evaluated in the EIS required an update, as follows:

- Evaluate the status of all previous RFFAs evaluated in the EIS, primarily to determine their continued applicability for inclusion within the EIS cumulative impact analysis.
- Identify any new projects that have been introduced after October 28, 2020, and evaluate their validity as RFFAs for cumulative analysis in the republished EIS.

Status Update of RFFAs Evaluated in the January 2021 Rescinded Final EIS Cumulative Effects Analysis

Attachment 1 contains a detailed status update of the RFFAs evaluated in the January 2021 Rescinded Final EIS cumulative effects analyses. The purpose of these reviews was to determine if each identified cumulative project remained a valid RFFA for analysis within the republished EIS. As provided in Attachment 1, the following cumulative projects were removed as valid RFFAs for cumulative effects analysis within the republished EIS:

- Copper King 2019: Activities completed June 2022.
- Jasper Canyon Mineral Exploration: Activities completed June 2022.
- Red Top Exploration: Activities completed September 2020.
- South Mesa Abandoned Mines: Activities completed September 2022.
- Verde Connect: Project cancelled January 2021.

[1] The Draft EIS for the Resolution Copper Project was published in August 2019. After compiling and reviewing all public comments on the Draft EIS and undertaking necessary changes, the Forest Service published a Final EIS and draft Record of Decision for the Resolution Copper Project on January 15, 2021. On March 1, 2021, the Secretary of Agriculture instructed the Forest Service to withdraw the Notice of Availability and rescind the FEIS and DROD. The Secretary indicated that this step was taken "to provide an opportunity for the agency to conduct a thorough review based on significant input received from collaborators, partners, and the public since these documents were released."

As noted in Attachment 1, all other RFFAs evaluated in the January 2021 Rescinded FEIS remain valid for cumulative effects analysis within the republished EIS.

Review of New Cumulative Projects for Inclusion as RFFAs within the Republished EIS Cumulative Effects Analysis

Attachment 2 contains a review of five new RFFAs identified within the EIS cumulative effects areas of geographic extent that warranted a review for inclusion in the cumulative effects analyses of the republished EIS. The purpose of these reviews is to determine if any of the newly identified cumulative projects qualify as a valid RFFA for analysis within the republished EIS. As provided in Attachment 2, the following cumulative projects were included as valid RFFAs for cumulative effects analysis within the republished EIS:

- Oak Wells Wind Project
- Arizona Department of Transportation (ADOT) Pinal County North-South Corridor
- Merrill Ranch Master Planned Community Project
- LG Energy Solution Battery Production Facility Project

One additional new RFFA was reviewed but dismissed from further consideration in the republished EIS: Tonto National Forest Travel Management Plan Archaeological Inventory. As discussed further in Attachment 2, the planned archaeological surveys under this RFFA would not themselves create any adverse impacts and the proposed Resolution Copper Project would be subject to any measures or restrictions on road use within the Tonto National Forest resulting from the archaeological surveys. For those reasons, this RFFA is dismissed from further analysis; RFFA would not contribute to cumulative effects or effects are negligible/beneficial.

ATTACHMENT 1

Status Update of RFFAs Evaluated in the January 2021 Rescinded Final EIS Cumulative Effects Analysis

Table 1. Current Status of Reasonably Foreseeable Future Actions (RFFAs) Carried Forward for Cumulative Analysis in the Resolution Copper Project EIS

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
A-Diamond Allotment, Grazing Lease Renewals (Various)	• Livestock and Grazing	The A-Diamond Allotment is approximately 22,389 acres of land, administered as follows: U.S. Bureau of Land Management (BLM): 6,580 acres of land (BLM Allotment Number AZ06120) that has 301 cattle authorized for year-round use and is authorized for 696 Animal Unit Months (AUMs). Authorized use began on March 1, 2015, and continues through March 1, 2025. Arizona State Land Department (ASLD): 15,039 acres and is authorized for approximately 955 AUMs. This entire portion of the allotment is leased to G&H Land & Cattle Company (Lease 5-3391). Assumed that the ASLD would continue to renew the lease for future terms of up to 10 years. Private Lands: 770 acres; grazing on private lands is administered by the owner and public records are not available.	Status: No Change. Existing BLM-authorized grazing leases continue through March 1, 2025. Affected grazing lands also remain under lease by ASLD. Private lands used for grazing in 2020 are expected to continue. Rationale: This RFFA would renew existing grazing leases and continue grazing uses within the allotment involving the same acres and AUMs. Minor and localized impacts would be addressed via active management by way of permit renewal requirements and range allotment management plans. A reasonable assumption is that grazing would continue, and range improvements would be implemented throughout the expected life of the Resolution Copper Project (50 to 55 years). Determination: Remains a valid RFFA for cumulative effects analysis, applicable to the resource issue areas identified within the EIS (Livestock and Grazing). New References or Data Sources: None. References used within the *Cumulative Effects Analysis Overview and Screening by Resource* process memorandum (October 28, 2020) remain valid for verifying status of this RFFA project.

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Apache-Sitgreaves National Forests Public Motorized Travel Management Plan	• Soils, Vegetation, and Reclamation • Transportation and Access • Wildlife • Socioeconomics	The Apache-Sitgreaves National Forests Public Motorized Travel Management Plan establishes the system of roads, trails, and areas designated for motorized vehicle use and determines suitable locations for dispersed camping. In August 2019, the Apache-Sitgreaves National Forests released the Revised Draft EIS. The public comment period ended on October 29, 2019.	Status: No Change. A search of the Federal Register indicates the Final EIS has not been published and U.S Forest Service (USFS) decision on the Management Plan has not yet occurred. Rationale: It is reasonable to assume the Travel Management Plan would become effective during the expected life of the Resolution Copper Project (50 to 55 years). Determination: Remains a valid RFFA for cumulative effects analysis, applicable to the resource issue areas identified within the EIS (Soils, Vegetation, and Reclamation; Transportation and Access; Wildlife; and Socioeconomics). New References or Data Sources: None. References used within the *Cumulative Effects Analysis Overview and Screening by Resource* process memorandum (October 28, 2020) remain valid for verifying status of this RFFA project.

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Arizona Department of Transportation (ADOT) Vegetation Treatment	• Soils, Vegetation, and Reclamation • Transportation and Access • Wildlife	Annual treatment programs using U.S. Environmental Protection Agency (EPA)-approved herbicides to contain, control, or eradicate noxious, invasive, and native plant species that pose safety hazards or threaten native plant communities on road easements and National Forest System lands up to 200 feet beyond road easements on the Tonto National Forest.	Status: No Change. ADOT vegetation treatments continue annually, as needed, in the same capacity within the Tonto National Forest. Rationale: Reasonable to assume that ADOT will continue to conduct vegetation treatments within the Tonto National Forest during the expected life of the Resolution Copper Project (50 to 55 years). Determination: Remains a valid RFFA for cumulative effects analysis, applicable to the resource issue areas identified within the EIS (Soils, Vegetation, and Reclamation; Transportation and Access; and Wildlife). New References or Data Sources: None. References used within the *Cumulative Effects Analysis Overview and Screening by Resource* process memorandum (October 28, 2020) remain valid for verifying status of this RFFA project.

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Arizona Game and Fish Department (AGFD) Wildlife Water Catchment Improvement Projects	• Soils, Vegetation, and Reclamation	Each of the following catchment arrays (including water storage tanks, a large "apron" to gather and direct precipitation to the storage tanks, drinking trough, and fencing) would not disturb more than 0.5 acre. • Silver King (AGFD ID#70), NEPA analysis and decision complete, Tonto National Forest, Globe Ranger District, materials funded. Within footprint of Alternative 4 tailings storage facility; project on hold due to proposed Resolution Copper Project. • Currie Wood (AGFD ID# 69), NEPA analysis and decision complete, Tonto National Forest, Globe Ranger District, Scheduled for construction in February 2019; north of Alternatives 2/3 and four tailings storage facilities. • Gonzales Pass (AGFD ID#71), NEPA analysis and decision complete, Tonto National Forest, Mesa Ranger District, not funded yet, south of Alternatives 2/3 tailings storage facility. • Cactus Patch (AGFD ID#989), NEPA analysis and decision complete, AGFD internal compliance in process, funding has been applied for through the AGFD - HPC and pending funding decision in January 2019 HPC meeting - in vicinity of Peg Leg tailings corridor west alternative.	Status: **Updated.** The Currie Wood catchment has been built for a few years now. The AGFD put the others on hold until they know where the Resolution Mine tailings will go. Recently, AGFD leadership stated they were not going to build any new catchments but rather fix the existing ones. These catchments were approved before the AGFD moratorium was issued. However, the remaining three catchments (Silver King, Gonzales Pass, and Cactus Patch) are currently not funded. Rationale: It is reasonable to assume that, while not currently funded, these catchments may be constructed in the future, as they were approved prior to the AGFD moratorium. Recent communication with AGFD on these RFFAs did not indicate they were cancelled, merely on hold. Determination: Remains a valid RFFA for cumulative effects analysis, applicable to the resource issue areas identified within the EIS (Soils, Vegetation, and Reclamation). New References or Data Sources: As follows: • (Hull 2022)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Arizona Public Service (APS) Herbicide Use within Authorized Power Line Rights-of Way (ROWs) on National Forest System lands	• Soils, Vegetation, and Reclamation • Wildlife • Public Health & Safety: Fuels and Fire Management • Livestock and Grazing	APS proposes to utilize USFS-approved herbicides as a method of vegetation management, in addition to existing vegetation treatment methods, on existing APS transmission ROWs within five national forests: Apache-Sitgreaves, Coconino, Kaibab, Prescott, and Tonto National Forests. The USFS must decide whether to authorize use of this herbicide. If approved, use of herbicides as well as currently authorized treatments would become part of the APS Integrated Vegetation Management (IVM) approach.	Status: No Change. The USFS decision approving this action occurred in December 2019, with no objections. Rationale: It is reasonable to assume APS is currently utilizing these herbicides along ROWs proximate to the project area, as needed, and would continue to do so during the expected life of the Resolution Copper Project (50 to 55 years). Determination: Remains a valid RFFA for cumulative effects analysis, applicable to the resource issue areas identified within the EIS (Soils, Vegetation, and Reclamation; Wildlife; Public Health & Safety: Fuels and Fire Management; and Livestock and Grazing). New References or Data Sources: None. References used within the *Cumulative Effects Analysis Overview and Screening by Resource* process memorandum (October 28, 2020) remain valid for verifying status of this RFFA project.

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
ASARCO Ray Mine, including the Hayden Concentrator and Smelter, and Superfund Site	• Public Health & Safety: Tailings and Pipeline Safety	The Ray Mine operations consists of a 250,000 ton/day open-pit mine with a 30,000 ton/day concentrator, a 103 million pound/year solvent extraction-electrowinning operation, including associated maintenance, warehouse, and administrative facilities. Cathode copper produced in the solvent extraction and electrowinning operation is shipped to outside customers and to the ASARCO Amarillo Copper Refinery. Proposed activities include on-site clean up and remediation based on Superfund requirements.	Status: **Updated**. This mine is permitted to operate through 2044. ASARCO submitted draft work plans for the construction of soil covers on three separate tailings piles. The EPA has approved all three work plans. ASARCO completed the Kennecott Avenue tailings pile soil cover in January 2022. ASARCO plans to submit the two remaining work plans to Arizona Department of Environmental Quality (ADEQ) and Arizona Department of Water Resources (ADWR) sometime in the future for review and concurrence (no date provided by EPA for these plan submittals). No completion date for these final two soil covers is currently available. Rationale: It is reasonable to assume Ray Mine will continue to operate and/or be decommissioned during the expected life of the Resolution Copper Project (50 to 55 years). Additionally, it is reasonable to assume the remaining two soil covers and additional Superfund cleanup activities will occur at Ray Mine during the life of the Resolution Copper Project. Determination: Remains a valid RFFA for cumulative effects analysis within the EIS, applicable to the resource issue areas identified (Public Health & Safety: Tailings and Pipeline Safety). New References or Data Sources: As follows: • (U.S. Environmental Protection Agency 2022)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Copper King 2019†	• Noise and Vibration • Transportation and Access	Bronco Creek Exploration proposes drilling a maximum of four drill sites (of six possible locations identified). The four drill sites plus the laydown yard would measure 1.10 acres of total disturbance. Proposed activities include road improvements and laydown yard, in addition to drilling. Three potential sites are accessible by vehicle, with the other three sites only accessible by helicopter.	Status: **Updated.** USFS Schedule of Proposed Actions (SOPA) for the Tonto National Forest, SOPA Report April through June 2021, indicated drilling commenced during this time frame. The USFS has removed this project from the most recent SOPA report (April through June 2022 period). Rationale: Based on this project commencing in June 2021 and being removed from the most recent Tonto National Forest SOPA report (June 2022), it is reasonable to assume all four exploratory holes have been drilled and restored per the conditions specified in the USFS Record of Decision (ROD). Determination: Because this project is likely completed, it is no longer considered a valid RFFA for cumulative effects analysis within the EIS. As such, it is dismissed from further analysis; this RFFA would no longer contribute to cumulative temporary construction effects, which was the reasoning for including within the EIS cumulative analysis in 2020. The proposed action would not cumulatively combine with any effects of this action. New References or Data Sources: As follows: • (U.S. Forest Service 2022a)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Drake Limestone Quarry Expansion	• Geology, Minerals, and Subsidence • Soils, Vegetation, and Reclamation • Air Quality • Wildlife • Scenic Resources • Livestock and Grazing	Drake Cement proposes to expand their existing quarry operations on an additional 222.2 acres of land administered by the Prescott National Forest.	Status: **Updated.** Project was updated to include 287 acres of quarry expansion area. USFS SOPA for the Prescott National Forest, SOPA Report January through March 2021, indicated project approval occurred during this period. Rationale: Operations are estimated to continue for 35 years to meet current and projected regional needs for limestone used in the production of cement. It is reasonable to assume the expansion area is now part of the overall Drake Limestone Quarry operations, which would continue throughout the expected life of the Resolution Copper Project. Determination: While completed, the cumulative effects of this RFFA were included within the 2020 EIS due to operational effects. Therefore, it remains a valid RFFA for cumulative effects analysis, applicable to the resource issue areas identified within the EIS (Geology, Minerals, and Subsidence; Soils, Vegetation, and Reclamation; Air Quality; Wildlife; Scenic Resources; and Livestock and Grazing). New References or Data Sources: As follows: • (U.S. Forest Service 2022b)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Florence Copper In-Situ Mining Project	• Geology, Minerals, and Subsidence • Socioeconomics	The Production Test Facility (PTF) was constructed in 2017 and includes 24 wells: four injection wells, nine recovery wells, and 11 groundwater monitoring-related wells. The test facility will test whether the fully proposed, full production facility, will be a safe and permittable copper mine. Solvent Extraction and Electrowinning Plan are the next planned phases. This action includes operation of the test facility and, if proved viable, operation of the mine.	Status: **Updated**. All testing has been completed. The project proponent successfully operated the PTF for over 18 months and is now working toward final permitting of the operational facility. Rationale: Full life of mine, according to company fact sheets, will be approximately 25 years, including 2 years of core facilities construction, approximately 20 years of commercial/operational life, and 1 to 2 years of site closure and reclamation. A reasonable assumption is that the mine would operate throughout the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis, applicable to the resource issue areas identified within the EIS (Geology, Minerals, and Subsidence; and Socioeconomics). New References or Data Sources: As follows: • (Florence Copper Inc. 2022)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Jack's Project	• Geology, Minerals, and Subsidence • Soils, Vegetation, and Reclamation	Roadrunner Prospectors Club Inc., submitted a Plan of Operations for a 20-year placer mine project including 93 mining claims within the Prescott National Forest.	Status: **Updated**. A Draft EA was published for this project in April 2020. According to the latest Prescott National Forest SOPA (July through September 2022), this project is on hold. Rationale: While the project is currently on hold, it has not been officially cancelled. Therefore, it is reasonable to assume mining activities associated with this project may occur during the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis (operational effects, not construction), applicable to the resource issue areas identified within the EIS (Geology, Minerals, and Subsidence; Soils, Vegetation, and Reclamation). New References or Data Sources: As follows: • (U.S. Forest Service 2022b)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Jasper Canyon Mineral Exploration†	• Noise and Vibration • Transportation and Access	Bronco Creek Exploration proposes five exploratory drill borings (out of seven possible sites) within a 1-year period on lands managed by the Tonto National Forest. The sites are readily accessible via ground vehicles. The total area of surface disturbance is estimated at less than 1.55 acres.	Status: **Updated.** USFS SOPA for the Tonto National Forest, SOPA Report April through June 2021, indicated drilling commenced during this time frame. The USFS has removed this project from the most recent SOPA report (April through June 2022 period). Rationale: Based on this project commencing in June 2021, and being removed from the most recent Tonto National Forest SOPA report (June 2022), it is reasonable to assume all five exploratory holes have been drilled and restored per the conditions specified in the USFS ROD. Determination: Because this project is likely completed, it is no longer considered a valid RFFA for cumulative effects analysis within the EIS. As such, it is dismissed from further analysis; this RFFA would no longer contribute to cumulative temporary construction effects, which was the reasoning for including within the EIS cumulative analysis in 2020. The proposed action would not cumulatively combine with any effects of this action. New References or Data Sources: As follows: • (U.S. Forest Service 2022a)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
LEN Range Improvements	• Transportation and Access • Water: Groundwater Quantity and Groundwater-Dependent Ecosystems • Water: Surface Water Quantity • Wildlife • Cultural Resources • Livestock and Grazing	The LEN grazing allotment authorized a total of 2,956 AUMs across 25,553 acres of public land administered by the BLM Tucson Field Office. Two actions were proposed: 1. Renew the grazing permit (#6197). 2. Redrilling eight existing wells and drilling three new wells; equipping them with solar pumps, storage tanks, and water troughs; and performing maintenance of roads and access to the range improvements.	Status: **Updated**. The grazing allotment lease expired on February 28, 2022. While it's expected the grazing permit was renewed for another 10-year term, the range improvements (redrill wells and road maintenance) are on hold. Rationale: It is reasonable to assume the grazing permit was renewed for another 10-year period and will be further renewed in the future within the expected life of the Resolution Copper Project. At this time, while the range improvement activities are on hold, it is expected they would be completed at some time in the future to ensure range health. Determination: It remains a valid RFFA for cumulative effects analysis, applicable to the resource issue areas identified within the EIS (Transportation and Access; Water: Groundwater Quantity and Groundwater-Dependent Ecosystems; Water: Surface Water Quantity; Wildlife; Cultural Resources; and Livestock and Grazing). New References or Data Sources: As follows: • (Bureau of Land Management 2022a)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Mount Baldy Shooting Sports Site	• Soils, Vegetation, and Reclamation • Noise and Vibration • Wildlife • Recreation • Scenic Resources	The Mount Baldy shooting sports site is one of five recreational shooting sites currently planned within the boundaries of the BLM Phoenix District. The shooting site will provide access for recreational shooting while also ensuring public safety, stewardship of natural resources, and protection of critical telecommunications and energy infrastructure. Construction is expected to begin in 2020 and to last 6 months. The site will then be open to the public.	Status: **Updated.** In January 2020, BLM approved the construction and operation of all five recreational shooting sports sites within the Phoenix District. Construction of the Mount Baldy site began in the fall of 2020 and opened in late 2022. Rationale: Construction of the shooting was completed in 2022, with use of this recreational shooting facility occurring throughout the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis (operational effects, not construction), applicable to the resource issue areas identified within the EIS (Soils, Vegetation, and Reclamation; Noise and Vibration; Wildlife; Recreation; and Scenic Resources). New References or Data Sources: As follows: • (Bureau of Land Management 2023)
Peralta Regional Park	• Soils, Vegetation, and Reclamation • Public Health & Safety: Fuels and Fire Management • Livestock and Grazing	In October 2019, the BLM issued a lease to Pinal County for Peralta Regional Park, which is located approximately 5 miles east of Gold Canyon. County staff worked with the public to finalize design and construction plans. The park includes equestrian and non-motorized trails, picnic areas, campsites, and a stargazing node.	Status: **Updated.** Construction began March 2022, and was completed on January 12, 2023, when it was opened to the public. Rationale: It is reasonable to assume operational recreational activities occur throughout the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis (operational impacts, not construction) within the EIS, applicable to the resource issue areas identified (Soils, Vegetation, and Reclamation; Public Health & Safety: Fuels and Fire Management; and Livestock and Grazing). New References or Data Sources: As follows: • (Pinal County 2023)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Pine Creek Mining River Bend Placer Project	• Geology, Minerals, and Subsidence • Soils, Vegetation, and Reclamation • Noise and Vibration • Transportation and Access • Wildlife • Socioeconomics	Pine Creek Mining, Inc., proposes to conduct placer mining, bulk testing, and reclamation in the Hassayampa River drainage near Orofino Wash east of Wilhoit, Arizona, on mining claims within the Prescott National Forest. The estimated mine life is 15 years.	Status: **Updated.** The USFS draft decision for this project was published in August 2020. However, this project was put on hold sometime between January and April 2021. According to the latest Prescott National Forest SOPA (July through September 2022), this project remains on hold. Rationale: While the project is currently on hold, it has not been officially cancelled. Therefore, it is reasonable to assume mining activities associated with this project may occur during the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis (operational effects, not construction), applicable to the resource issue areas identified within the EIS (Geology, Minerals, and Subsidence; Soils, Vegetation, and Reclamation; Noise and Vibration; Transportation and Access; Wildlife; and Socioeconomics). New References or Data Sources: As follows: • (U.S. Forest Service 2022b)
Pinto Valley Mine Expansion	• Geology, Minerals, and Subsidence • Soils, Vegetation, and Reclamation • Noise and Vibration • Transportation and Access • Air Quality • Water: Groundwater Quantity and	The Pinto Valley Mine is an existing open-pit copper and molybdenum mine located approximately 8 miles west of Miami, Arizona, in Gila County. The project would expand mining activities onto the Tonto National Forest, extending the mine life to 2039. The proposed expansion would result in an estimated 1,011 acres of new disturbance (245 acres on Tonto National Forest land and 766 acres on private land owned by Pinto Valley Mining Corp.). The Draft EIS was released on December 13, 2019, and completion of the final EIS and issuance of a ROD is expected in 2021.	Status: **Updated.** The USFS decision approving this project was finalized on August 19, 2021. Rationale: Reasonable to assume operation of the expanded mine will occur through 2039, within the expected life of the Resolution Copper Project.

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
	Groundwater-Dependent Ecosystems • Water: Groundwater and Surface Water Quality • Water: Surface Water Quantity • Wildlife • Recreation • Public Health & Safety: Tailings and Pipeline Safety • Public Health & Safety: Hazardous Materials • Cultural Resources • Socioeconomics • Tribal Values and Concerns • Environmental Justice		Determination: It remains a valid RFFA for cumulative effects analysis (operational effects), applicable to the resource issue areas identified within the EIS (Geology, Minerals, and Subsidence; Soils, Vegetation, and Reclamation; Noise and Vibration; Transportation and Access; Air Quality; Water: Groundwater Quantity and Groundwater-Dependent Ecosystems; Water: Groundwater and Surface Water Quality; Water: Surface Water Quantity; Wildlife; Recreation; Public Health & Safety: Tailings and Pipeline Safety; Public Health & Safety: Hazardous Materials; Cultural Resources; Socioeconomics; Tribal Values and Concerns; and Environmental Justice). New References or Data Sources: As follows: • (U.S. Forest Service 2022a)
Ray Land Exchange and Proposed Plan Amendment	• Geology, Minerals, and Subsidence • Soils, Vegetation, and Reclamation • Noise and Vibration • Transportation and Access • Air Quality • Water: Groundwater Quantity and	Originally proposed in 1994 to the BLM by the mining firm ASARCO LLC, this involves a land exchange between the two parties that would include BLM conveying approximately 10,976 acres of public lands and federally owned mineral estate located near ASARCO's Ray Mine Complex in east-central Arizona. In exchange for these federal lands, ASARCO would convey approximately 7,304 acres of private lands to the BLM, primarily in northwestern Arizona, that possess resource qualities considered to be of significant value to the public.	Status: **Updated**. The BLM signed the ROD approving the proposed land exchange between the BLM and ASARCO on October 24, 2019. Three Resource Management Plan (RMP) amendments facilitating the exchange have also been approved. These went unchallenged and are complete. Rationale: The land exchange is complete and it is reasonable to assume activities associated with Ray Mine use of the 10,976 acres will occur within the expected life of the Resolution Copper Project.

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
	Groundwater-Dependent Ecosystems • Water: Groundwater and Surface Water Quality • Water: Surface Water Quantity • Wildlife • Recreation • Public Health & Safety: Tailings and Pipeline Safety • Public Health & Safety: Fuels and Fire Management • Public Health & Safety: Hazardous Materials • Scenic Resources • Cultural Resources • Socioeconomics • Tribal Values and Concerns • Environmental Justice • Livestock and Grazing	A Final EIS was completed in June 1999, and a ROD was signed in May 2000. However, these were challenged by a consortium of environmental groups, first by appeal through the Interior Board of Land Appeals and then by litigation. This legal action ultimately moved up to the Ninth Circuit Court of Appeals, which, in 2010, ruled that there was a fundamental flaw in the EIS analysis and remanded the EIS back to the BLM to correct the document. A Supplemental Final EIS was published in March 2019.	Determination: It remains a valid RFFA for cumulative effects analysis, applicable to the resource issue areas identified within the EIS (Geology, Minerals, and Subsidence; Soils, Vegetation, and Reclamation; Noise and Vibration; Transportation and Access; Air Quality; Water: Groundwater Quantity and Groundwater-Dependent Ecosystems; Water: Groundwater and Surface Water Quality; Water: Surface Water Quantity; Wildlife; Recreation; Public Health & Safety: Tailings and Pipeline Safety; Public Health & Safety: Fuels and Fire Management; Public Health & Safety: Hazardous Materials; Scenic Resources, Cultural Resources; Socioeconomics; Tribal Values and Concerns; Environmental Justice; and Livestock and Grazing). New References or Data Sources: As follows: • (Bureau of Land Management 2022b)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Red Top Exploration†	• Noise and Vibration • Transportation and Access	Bronco Creek Exploration would actively drill a maximum of 10 exploratory sites out of 22 potential drilling locations on lands managed by the Tonto National Forest. Test results from the first several drill sites would be used to determine which of the remaining sites would be drilled. All drilling-related activities, including any reclamation deemed necessary, would be completed within a 1-year period. The Tonto National Forest issued a decision approving the project through a categorical exclusion in May 2016. The exploratory drilling would begin in the next few years and continue over a 1-year period.	Status: **Updated.** USFS SOPA reports for the Tonto National Forest between July and September 2020 indicate drilling commenced prior to this time frame. Rationale: Based on drilling commencing September 2020 and expected to be completed within 1 year, it is reasonable to assume all 10 exploratory holes have been drilled and restored per the conditions specified in the USFS decision. Determination: Because this project is likely completed, it is no longer considered a valid RFFA for cumulative effects analysis within the EIS. As such, it is dismissed from further analysis; this RFFA would no longer contribute to cumulative temporary construction effects, which was the reasoning for including within the EIS cumulative analysis in 2020. The proposed action would not cumulatively combine with any effects of this action. New References or Data Sources: As follows: • (U.S. Forest Service 2022a)
Ripsey Wash Tailings Project	• Geology, Minerals, and Subsidence • Soils, Vegetation, and Reclamation • Transportation and Access • Air Quality • Water: Groundwater Quantity and Groundwater-Dependent Ecosystems	ASARCO LLC is proposing to construct a new tailings storage facility to support its Ray Mine operations. The proposed tailings storage facility, situated within the Ripsey Wash watershed just south of the Gila River approximately 5 miles west-northwest of Kearny, Arizona, would be located on 2,627 acres of private lands and 9 acres of BLM-administered lands. There are no meaningful cumulative effects of the Ripsey Wash tailings storage facility in combination with the proposed Resolution Copper Project, except if Alternative 5, the Peg Leg tailings storage facility location, is selected as the agency-preferred alternative. In that case, the proximity of the Ripsey	Status: No Change. This project was approved in 2019 and is assumed operational. Rationale: Reasonable to assume activities associated with Ray Mine Tailings Project will occur within the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis (only if Alternative 5, the Peg Leg tailings storage facility location, is selected as the agency-preferred alternative), applicable to the resource issue areas identified within the EIS (Geology, Minerals, and Subsidence; Soils, Vegetation, and Reclamation; Noise and Vibration;

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
	• Water: Groundwater and Surface Water Quality • Water: Surface Water Quantity • Wildlife • Recreation • Public Health & Safety: Tailings and Pipeline Safety • Public Health & Safety: Hazardous Materials • Scenic Resources • Cultural Resources • Tribal Values and Concerns • Environmental Justice • Livestock and Grazing	Wash tailings storage facility and the Peg Leg tailings storage facility would have multiple cumulative effects on area resources, as indicated under the resource sections identified.	Transportation and Access; Air Quality; Water: Groundwater Quantity and Groundwater-Dependent Ecosystems; Water: Groundwater and Surface Water Quality; Water: Surface Water Quantity; Wildlife; Recreation; Public Health & Safety: Tailings and Pipeline Safety; Public Health & Safety: Hazardous Materials; Scenic Resources, Cultural Resources; Tribal Values and Concerns; Environmental Justice; and Livestock and Grazing). New References or Data Sources: None. References used within the *Cumulative Effects Analysis Overview and Screening by Resource* process memorandum (October 28, 2020) remain valid for verifying status of this RFFA project.

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Silver Bar Mining Regional Landfill and Cottonwood Canyon Road	• Soils, Vegetation, and Reclamation • Noise and Vibration • Transportation and Access • Water: Surface Water Quantity • Wildlife • Recreation • Scenic Resources • Cultural Resources • Tribal Values and Concerns	Proposed new municipal solid waste landfill on private property surrounded by BLM land. The proposed action includes improving a portion of the existing Cottonwood Canyon Road and a portion of the existing Sandman Road to accommodate two-way heavy truck traffic to and from the proposed landfill. Both access roads are located on BLM land with a portion of Cottonwood Canyon Road also on land owned by ASLD. In 2007, Pinal County rezoned the private land to authorize development of the landfill. In 2009, the owners/developers received a Master Facility Plan Approval from ADEQ. A BLM Environmental Assessment for this proposed action was completed in April 2017, and a Finding of No Significant Impact (FONSI) for this action was issued on May 5, 2017.	Status: No Change. This landfill has been operational since October 27, 2019. Rationale: This landfill is expected to remain operational (until capacity has been reached) within the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis within the EIS, applicable to the resource issue areas identified (Soils, Vegetation, and Reclamation; Noise and Vibration; Transportation and Access; Water: Surface Water Quantity; Wildlife; Recreation; Scenic Resources, Cultural Resources; and Tribal Values and Concerns). New References or Data Sources: None. References used within the *Cumulative Effects Analysis Overview and Screening by Resource* process memorandum (October 28, 2020) remain valid for verifying status of this RFFA project.

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
South Mesa Abandoned Mines†	• Noise and Vibration • Wildlife	Proposal to close a variety of abandoned mining features (shafts and adits). The closures are in the vicinity of the southern edge of the Superstition Wilderness, approximately 17 miles east of Apache Junction (in Pinal County, Arizona), and in the vicinity of the western edge of the Superstition Wilderness, approximately 7 miles north of Apache Junction (in Maricopa County, Arizona), all within the Tonto National Forest. A scoping document outlining the project purpose and need as well as descriptions of the various mine feature closure options that would be employed at each location was published in September 2020. It was envisioned that closure work would begin in November 2020, and be completed prior to November 2021.	Status: **Updated.** A review of the USFS SOPA reports for the Tonto National Forest between July 2020 through September 2022 indicate this project was completed during this time frame. Rationale: Based on this project being removed from all Tonto National Forest SOPA reports after November 2021, it is reasonable to assume all abandonment and restoration activities have been completed per the conditions specified in the USFS decision. Determination: Because this project is completed, it is no longer considered a valid RFFA for cumulative effects analysis within the EIS. It was previously analyzed due to temporary effects during construction. As such, it is dismissed from further analysis; this RFFA would not contribute to cumulative effects, which was the reasoning for including within the EIS cumulative analysis in 2020. The proposed action would not cumulatively combine with any effects of this action. New References or Data Sources: As follows: • (U.S. Forest Service 2022a)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Southline Transmission Project	• Soils, Vegetation, and Reclamation • Wildlife • Scenic Resources • Cultural Resources • Tribal Values and Concerns	Proposed transmission line consisting of two sections: • Approximately 240 miles of new, 345-kilovolt (kV) double-circuit transmission lines between the existing substations at Afton (New Mexico) and Apache (Arizona); and • A series of upgrades to approximately 120 miles of existing transmission lines (from single-circuit 115-kV to double-circuit 230-kV) between the Apache (Arizona) and Saguaro (Arizona) substations. Construction expected to begin in 2021.	Status: **Updated**. Pre-construction resource surveys commenced in June 2022. However, the project website does not indicate when construction is expected to begin. It is expected that construction would commence sometime in 2023. As the project consists of two sections, it is possible only one section is completed at a time. Rationale: It is reasonable to assume that construction and operational effects associated with the Southline Transmission Project will occur within the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis within the EIS, applicable to the resource issue areas identified (Soils, Vegetation, and Reclamation; Wildlife; Scenic Resources, Cultural Resources; and Tribal Values and Concerns). New References or Data Sources: None. References used within the *Cumulative Effects Analysis Overview and Screening by Resource* process memorandum (October 28, 2020) remain valid for verifying status of this RFFA project.

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
SunZia Southwest Transmission Project	• Soils, Vegetation, and Reclamation • Wildlife • Scenic Resources • Cultural Resources • Tribal Values and Concerns	A 520-mile, new 500-kV transmission line through central New Mexico and southern Arizona. Construction expected to begin in 2022.	Status: **Updated**. In May 2022, BLM issued a Draft EIS, with the public comment period ending August 1, 2022. No timeline is currently available for completion of the Final EIS and ROD. According to the project applicant, if approved, the proponents aim to start construction in mid-2023, with a commercial operating date in 2025. Rationale: It is reasonable to assume that construction and operational effects associated with the SunZia Transmission Project will occur within the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis within the EIS, applicable to the resource issue areas identified (Soils, Vegetation, and Reclamation; Wildlife; Scenic Resources, Cultural Resources; and Tribal Values and Concerns) New References or Data Sources: As follows: • (Global Transmission Report 2022)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Superior to Silver King 115-kV Relocation Project	• Soils, Vegetation, and Reclamation • Cultural Resources	Relocate a 1-mile segment of the existing Superior-Silver King 115-kV transmission line approximately 0.25 mile to the northwest on private property near Superior. The project received Arizona Corporation Commission (ACC) Certificate of Environmental Compatibility (CEC) and approval to proceed in October 2012. Relocation of the 115-kV line is necessary to accommodate the Resolution Copper Project. The relocation is expected require 4 months of construction.	Status: **Updated**. On February 6, 2018, the ACC found it was in the public interest to extend the term of the CEC by 10 years, from October 16, 2017, to October 16, 2027. Rationale: It is reasonable to assume this project would still be necessary to accommodate the Resolution Copper Project. As it is only necessary prior to operation of the Resolution Copper Project, it is reasonable to assume construction activities could overlap. Determination: It remains a valid RFFA for cumulative effects analysis within the EIS, applicable to the resource issue areas identified (Soils, Vegetation, and Reclamation; and Cultural Resources). New References or Data Sources: As follows: • (Salt River Project 2022)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Superior West Exploration	• Noise and Vibration • Transportation and Access	Exploratory drilling at locations immediately west and south of the town of Superior, Arizona, on lands managed by the Tonto National Forest. Includes a total of 79 potential drilling locations; of these, a maximum of 25 sites would ultimately be drilled over a 10-year period, with decision-making on specific additional sites for drilling determined by analysis of core, cuttings, and other results from sites previously drilled. Total project disturbance is anticipated to be less than 6.33 acres.	Status: **Updated**. A review of the USFS SOPA reports for the Tonto National Forest between July 2020 through September 2022 did not show this project as active during this time frame. It appears the project was approved in 2018. Unable to determine if these exploratory drilling holes have been completed. Rationale: As the exploratory drilling could occur intermittently over a 10-year period, it is reasonable to assume temporary construction activities will occur within the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis (from temporary construction impacts) within the EIS, applicable to the resource issue areas identified (Noise and Vibration; and Transportation and Access). New References or Data Sources: As follows: • (U.S. Forest Service 2022a)
Tonto National Forest Travel Management Plan	• Soils, Vegetation, and Reclamation • Transportation and Access • Wildlife • Socioeconomics	The Tonto National Forest Travel Management Plan establishes the system of roads, trails, and areas designated for motorized vehicle use and determines suitable locations for dispersed camping. In August 2019, the Tonto National Forest released the Revised Draft EIS. The public comment period ended on October 29, 2019.	Status: **Updated**. The Travel Management Plan was approved on October 5, 2021. Rationale: It is reasonable to assume the approved travel management activities will occur throughout the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis within the EIS, applicable to the resource issue areas identified (Soils, Vegetation, and Reclamation; Transportation and Access; Wildlife; and Socioeconomics). New References or Data Sources: As follows: • (U.S. Forest Service 2022c)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Verde Connect†	• Soils, Vegetation, and Reclamation • Noise and Vibration • Transportation and Access • Air Quality • Wildlife • Recreation • Scenic Resources • Cultural Resources • Socioeconomics • Tribal Values and Concerns • Livestock and Grazing	The Federal Highway Administration (funding) with Yavapai County (project proponent) is proposing to build a new two-lane road between State Route (SR) 260 and Cornville Road with in Yavapai County, Arizona. Most of the land within the study area is under the jurisdiction of the Red Rock Ranger District of Coconino National Forest, with the area between SR 260 and the Verde River under the jurisdiction of the Verde Ranger District of Prescott National Forest and the ASLD. Yavapai County is scheduled to complete final design in 2021 and construct Phase I of the project starting in 2021, with planned completion by August 2025.	Status: **Updated**. This project was permanently cancelled by Yavapai County on January 6, 2021, due to funding. All contractor bids to construct were twice the available funding. At this time, no information was found showing additional funding was being sought. Yavapai County has indicated it will look for other means to reduce traffic in the area. Rationale: Based on this project being permanently cancelled by Yavapai County in January 2021 due to cost, it is reasonable to assume this project is not feasible and would not contribute cumulatively with the Resolution Copper Project. Determination: Because this project has been permanently cancelled by Yavapai County, it is no longer considered a valid RFFA for cumulative effects analysis within the EIS. As such, it is dismissed from further analysis; this RFFA would not contribute to cumulative effects, which was the reasoning for including within the EIS cumulative analysis in 2020. The proposed action would not cumulatively combine with any effects of this action. New References or Data Sources: As follows: • (Federal Infrastructure Permitting Dashboard 2022)

RFFA Project Analyzed in EIS*	EIS Resource Categories that Evaluated Cumulative Effects of RFFA Project*	October 2020 Status	August 2022 Status
Wild and Scenic River Eligibility Study	• Recreation	In October 2017, as part of the Tonto National Forest Land and Resource Management Plan revision process, segments of Arnett Creek and Telegraph Canyon were evaluated for their eligibility for inclusion in the National Wild and Scenic Rivers System. The Forest Plan Record of Decision is anticipated in the next 3 years and would be in effect for 10–15 years from the date of signature.	Status: **Updated**. The Record of Decision was published in March 2022 and the Federal Register notice to object to this decision was published July 8, 2022, which started the 60-day objection period. Rationale: It is reasonable to assume the Forest Plan will be approved and the segments of Arnett Creek and Telegraph Canyon will be part of the National Wild and Scenic Rivers System within the expected life of the Resolution Copper Project. Determination: It remains a valid RFFA for cumulative effects analysis within the EIS, applicable to the resource issue areas identified (Recreation). New References or Data Sources: As follows: • (U.S. Forest Service 2022d)

Notes:

* RFFAs analyzed within the EIS and the affected resource areas were obtained from Cumulative Effects Analysis Overview and Screening by Resource process memorandum (October 28, 2020), Table 1 (Summary of RFFAs analyzed for cumulative effects in chapter 4 of EIS, by EIS resource category).

† Indicates projects that, based on updated review, are no longer considered a valid RFFA for cumulative effects analysis within the EIS.

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ATTACHMENT 2

Review of New Cumulative Projects for Inclusion as RFFAs within the Republished EIS Cumulative Effects Analysis

Oak Wells Wind Project

Overview of RFFA

Oak Wells Wind LLC has been evaluating a roughly 44,000-acre "area of interest" in Pinal County about 30 miles north of Tucson. The developer has conducted tests on wind velocities and initial studies on local bird populations and has met with state and federal wildlife officials. While currently in the exploration phase, the developer is proposing a 300-megawatt (MW) wind farm with up to 83 wind turbines. While no buyer for the wind power has been arranged, the developer noted that Arizona Public Service (APS) plans to acquire 600 to 800 MW of renewable energy from the Oak Wells area over the next 2 years to meet a goal of supplying 100% renewable energy to its customers by 2050.

The project has already drawn opposition from local ranchers, who say the wind farm would harm rangeland as well as the environment and native wildlife. At this time, it is unknown if the project site would contain lands administered by the federal government. No formal application has been filed and the applicant's preliminary testing work has been completed on private lands used for agricultural purposes.

Rationale for Resource Analysis—Temporal Overlap with Resolution Copper Project

The feasibility and timing of this project is currently unknown. However, a reasonable assumption is that the project is feasible with the overall life of a typical wind generation facility being 50 years. Therefore, this project could be constructed and operate during the expected life of the Resolution Copper Project (50 to 55 years).

Rationale for Resource Analysis—Spatial Overlap with Resolution Copper Project

This RFFA would be approximately 10 miles south of Alternative 5 (Peg Leg tailings corridor west alternative) and therefore falls within the spatial rationale presented within Chapter 4 of the Final EIS (FEIS) (Table 4.3-1, Cumulative effects spatial analysis areas for cumulative effects, and preferred and proxy impact metrics).

Rationale for Analysis as Cumulative Effect in EIS, by Resource

Resource Category Results of RFFA Screening

Resource Category	Results of RFFA Screening
Geology, Minerals, and Subsidence	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The RFFA boundary does not overlap with Alternative 5 and the RFFA is subject to mitigating all valid, existing right of mining claimants present in the RFFA boundary. Furthermore, the RFFA wind turbines would be subject to geotechnical building code and engineering requirements.
Soils, Vegetation, and Reclamation	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Construction within the RFFA boundary may increase the potential for introduction and/or spread of noxious weeds and invasive plants. Furthermore, sensitive plant species have the potential to occur within the RFFA project limits.

Resource Category	Results of RFFA Screening
Noise and Vibration	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Noise and vibration impacts may increase slightly due to wind turbine operation as well as ground-disturbing activities during construction.
Transportation and Access	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Temporary traffic generated during construction could increase the overall annual daily traffic on roads shared with Alternative 5 trips. Greater safety risk may occur on shared roads due to the oversize vehicle trips associated with delivering wind turbine components.
Air Quality	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The overall impacts to air quality during construction would be minor. Dust would be managed through reasonably available control technologies and best management practices (BMPs), and construction activities would be temporary. Construction activities would temporarily increase emissions; however, these emissions are not likely to result in violations of ambient air quality standards and/or hazardous pollutant thresholds. During operations, turbines and maintenance activities would have a negligible impact on local air quality. Mitigation would be used to manage fugitive dust, as needed. Net impacts to air quality would be negligible.
Water: Groundwater Quantity and Groundwater-Dependent Ecosystems	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. Wind farm operation is not expected to use or affect groundwater. In the event an on-site well was developed for dust suppression during construction, such a well would require permitting and likely development and approval of a groundwater monitoring plan (GWMP). As part of the GWMP, groundwater monitoring would be performed and is designed to identify environmental impacts associated with any on-site well(s) prior to use.
Water: Groundwater and Surface Water Quality	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. Potential surface and groundwater impacts during construction would be minimized and mitigated through a Stormwater Pollution Prevention Plan (SWPPP) and BMPs. Impacts are predicted to be minor and temporary. Wind farm developments typically do not require alterations to on-site drainage patterns that could alter the movement of water and lessen the amount of silt, debris, and sand that typically is washed off-site.
Water: Surface Water Quantity	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Cursory desktop reviews of the potential RFFA boundary identify ephemeral wash passing through the site that could be impacted by construction of wind turbines and/or access roads within the site.
Wildlife	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Endangered and candidate species may occur within the RFFA boundary. Wildlife would be directly impacted by the RFFA due to ground disturbance and/or vegetation removal during construction as well as temporary increases in noise associated with construction activities. Operation of the RFFA could result in direct impacts to migratory birds from wind turbine strikes.
Recreation	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Cursory desktop reviews did not identify any designated recreational areas within the potential RFFA boundary. However, unauthorized trails or other recreational use on public lands within the RFFA boundary area could occur.

Resource Category	Results of RFFA Screening
Public Health & Safety: Tailings Safety	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. There are no tailings involved with a wind farm development project.
Public Health & Safety: Fuels and Fire Management	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Cursory desktop reviews of the potential RFFA boundary identify desert scrub and other potential fuels. Wind turbine failure can result in fire hazards. A site health and safety plan would likely be prepared for possible emergency situations, including those involving fire. While the potential for wildfire spread outside the RFFA boundary is unlikely, this topic does warrant cumulative analysis.
Public Health & Safety: Hazardous Materials	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The proposed project would have no impact on the generation of hazardous materials as the RFFA would adhere to all municipal solid waste regulations and standards pertaining to hazardous materials use and storage during construction. It is possible there may be spills of fuel, lubricants, etc., during construction and operation that would require clean-up and proper disposal. However, such spills would be small and BMPs would ensure disposal of any contaminated materials is conducted consistent with applicable regulations.
Scenic Resources	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The proposed wind farm would have an impact on the overall characteristics of the landscape and would be visible from surrounding roads and key observation points.
Cultural Resources	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The RFFA will involve ground-disturbing activities that may have direct and indirect impacts through increases in human activity which could result in additional surface disturbance where cultural resources exist as well as a potential increase in looting and artifact theft in an area that was previously low use. These indirect impacts would be both short and long term.
Socioeconomics	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The project would generate temporary population influx to the rural area during construction. This could result in temporary changes to the socioeconomic conditions. However, the associated socioeconomic impacts of this development would be considered relatively minor on a larger scale.
Tribal Values and Concerns	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The RFFA boundary could affect the protection and preservation of tribal cultural and sacred sites as well as access to those sites.
Environmental Justice	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The project is not expected to have any disproportionate impacts on environmental justice communities.
Livestock and Grazing	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Grazing areas, allotments, and permits could be altered by the RFFA.

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ADOT Pinal County North-South Corridor

Overview of RFFA

The North-South Corridor spans 55 miles between U.S. 60 in Apache Junction (northern terminus) and Interstate 10 in Eloy (southern terminus), passing through the city of Coolidge, town of Florence, and portions of unincorporated Pinal County along the way. The study also incorporates the proposed extension of State Route 24 from Ironwood Drive to the North-South Corridor. A Tier 1 study was completed and examined constructing a new freeway within the corridor.

The Tier 1 North-South Corridor Study Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) was completed in August 2021 (ADOT 2022a). The Tier 1 FEIS and ROD selected a 1,500-foot-wide corridor that serves as the basis the Tier 2 EIS and Design Concept Report (DCR) process, which will further define a potential freeway route within the 1,500-foot-wide corridor.

On January 5, 2023, ADOT issued a request for qualifications (RFQ) for the North-South Corridor Tier 2 Study (ADOT 2022b). The forthcoming Tier 2 DCR and EIS will identify an approximate 400-foot right-of-way (ROW) alignment within the identified 1,500-foot-wide corridor identified under the Tier 1 study. Of the 55-mile-long segment identified under Tier 1, a 33-mile southern section (Arizona Farms Road to Interstate 10) has been identified as the project limits for a Tier 2 DCR and EIS study process.

Rationale for Resource Analysis—Temporal Overlap with Resolution Copper Project

The timing of this project is currently unknown but assumed feasible, as ADOT has recently initiated the Tier 2 study. If constructed, a reasonable assumption is that the project could be constructed and operate during the expected life of the Resolution Copper Project (50 to 55 years).

Rationale for Resource Analysis—Spatial Overlap with Resolution Copper Project

This RFFA (Tier 2 segment northern terminus) would be approximately 5 miles west-southwest of project areas shared by all action alternatives (2–6). Therefore, this RFFA falls within the spatial rationale presented within Chapter 4 of the FEIS (Table 4.3-1, Cumulative effects spatial analysis areas for cumulative effects, and preferred and proxy impact metrics).

Rationale for Analysis as Cumulative Effect in EIS, by Resource

Resource Category Results of RFFA Screening

Resource Category	Results of RFFA Screening
Geology, Minerals, and Subsidence	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The RFFA potential ROW is subject to mitigating all valid, existing right of mining claimants present in the RFFA boundary. Furthermore, the proposed freeway would be subject to geotechnical building code and engineering requirements.

Resource Category	Results of RFFA Screening
Soils, Vegetation, and Reclamation	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Construction of a new freeway within the RFFA corridor may increase the potential for introduction and/or spread of noxious weeds and invasive plants. In addition, new traffic and activities could increase potential for the introduction of weed seed. Development of the RFFA corridor would result in the clearing of vegetation, which may affect sensitive species that have the potential to occur within the project limits.
Noise and Vibration	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Noise and vibration impacts would increase due to introducing new traffic volumes as well as ground-disturbing activities.
Transportation and Access	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Traffic generated by a new freeway within the RFFA corridor would significantly increase the overall annual daily traffic on surrounding and connecting roads. Greater safety risk may occur on connecting roads due to the increase in traffic volumes. Surrounding roads are likely to be impacted by temporary closures and disruption of access during construction of the project.
Air Quality	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The overall impacts to air quality during construction would be limited to fugitive dust, which would be managed through reasonably available control technologies and BMPs, and construction activities would be temporary. Construction activities would temporarily increase emissions; however, these emissions are not likely to result in violations of ambient air quality standards and/or hazardous pollutant thresholds. During operations, a substantial introduction of new traffic volumes from the RFFA could have an impact on local air quality.
Water: Groundwater Quantity and Groundwater-Dependent Ecosystems	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. Freeway operation is not expected to use or affect groundwater. In the event an on-site well was developed for dust suppression during construction, such a well would require permitting and likely development and approval of a GWMP. As part of the GWMP, groundwater monitoring would be performed and is designed to identify environmental impacts associated with any on-site well(s) prior to use.
Water: Groundwater and Surface Water Quality	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. During construction, water quality impacts that have the potential to occur would be minimized and mitigated through the project-specific SWPPP and BMPs. Impacts are predicted to be minor and temporary. Development of a new freeway, while linear, would create a substantial amount of new impermeable surface, which would alter drainage patterns and likely result in oils, fuels, and other vehicle debris in the roadway to be washed onto adjacent permeable surfaces during storm events.
Water: Surface Water Quantity	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Development of a new freeway, while linear, would create a substantial amount of new impermeable surface, which would alter drainage patterns of the area. Based on cursory desktop review, the RFFA corridor would pass over several unnamed ephemeral washes and require changes to stormwater flows and drainage patterns.

Resource Category	Results of RFFA Screening
Wildlife	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Endangered and candidate species may occur within the RFFA corridor. Wildlife would be directly impacted by the RFFA due to ground disturbance and/or vegetation removal during construction as well as temporary increases in noise associated with construction activities. Vehicle traffic could result in direct impacts to wildlife from vehicle strikes.
Recreation	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. This project would alter the circulation pattern of the area and could make the area more accessible for use by recreational visitors. Cursory desktop reviews of the potential RFFA corridor show it could impact authorized and unauthorized recreational uses on public lands.
Public Health & Safety: Tailings Safety	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. There are no tailings involved in this ROW and freeway development.
Public Health & Safety: Fuels and Fire Management	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The freeway shoulder would likely be maintained consistent with ADOT practices, which would include vegetation and fuel management within the ROW.
Public Health & Safety: Hazardous Materials	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. It is possible there may be spills of fuel, lubricants, and/or antifreeze during construction that would require clean-up and proper disposal. In addition, operation of the freeway would likely introduce trips involving the transport of hazardous materials, which would increase the likelihood of a spill from a motor vehicle accident.
Scenic Resources	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The introduction of a new freeway would have an impact on the overall characteristics of the landscape, particularly from the change in surface texture and color within the ROW, as well from the introduction of vehicle use.
Cultural Resources	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The RFFA will involve ground-disturbing activities that may have direct and indirect impacts through increases in human activity which could result in additional surface disturbance where cultural resources exist, as well as a potential increase in looting and artifact theft in an area that was previously low use. These indirect impacts would be both short and long term.
Socioeconomics	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The project would introduce a major new freeway through a mostly rural area. The introduction of this new transportation facility would likely alter land development around major exits and would introduce a constant transient population to rural areas along the RFFA corridor.
Tribal Values and Concerns	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The RFFA corridor could affect the protection and preservation of tribal cultural and sacred sites as well as access to those sites.
Environmental Justice	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The project could have disproportionate impacts on environmental justice communities.

Resource Category	Results of RFFA Screening
Livestock and Grazing	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Grazing areas, allotments, and permits could be altered by the RFAA.

Literature Cited

Arizona Department of Transportation. 2023a. North-South Corridor Study: Proposed New Transportation Route in Pinal County. Tier 1 EIS. Available at: https://azdot.gov/planning/transportation-studies/north-south-corridor-study/north-south-corridor-study-proposed-new. Accessed February 10, 2023.

—. 2023b. North-South Corridor Study: Proposed New Transportation Route in Pinal County. Tier 2 Overview. Available at: https://azdot.gov/planning/transportation-studies/north-south-corridor-study-proposed-new-transportation-route-pinal. Accessed February 10, 2023.

Merrill Ranch Master Planned Community Project

Overview of RFFA

A developer (El Dorado Holdings) has purchased two parcels in Florence, Arizona, totaling 4,150 acres. The company intends to develop a master-planned community with 12,000 homes and industrial, commercial, and retail components. El Dorado Holdings representatives said the Florence area's growth as an employment region and the site's relative proximity to Phoenix-Mesa-Gateway Airport in Mesa contributed to its appeal. The planned route for the North-South Corridor highway also runs through the property.

Representatives say the company is only now beginning the meetings and approvals process with the necessary regulatory and oversight bodies (Arizona Builders Exchange [AZBEX] 2023). Representatives say construction timelines will depend on the overall state of the economy, and El Dorado Holdings is predicting 3 to 4 years before development begins (AZBEX 2023).

Rationale for Resource Analysis—Temporal Overlap with Resolution Copper Project

The timing of this project is currently unknown but the project is assumed feasible as the developer has invested $82.7 million in acquiring the land. Like other typical master-planned communities, it is assumed buildout would occur in phases as land is subdivided, utilities are installed, homes are pre-purchased, and then homes are built. Development of this RFFA is likely to occur within the operational time frame of the proposed Resolution Copper Project.

Rationale for Resource Analysis—Spatial Overlap with Resolution Copper Project

This RFFA would be approximately 6 miles west-southwest of project areas shared by all action alternatives (2–6). Therefore, this RFFA falls within the spatial rationale presented within Chapter 4 of the FEIS (Table 4.3-1, Cumulative effects spatial analysis areas for cumulative effects, and preferred and proxy impact metrics).

Rationale for Analysis as Cumulative Effect in EIS, by Resource

Resource Category Results of RFFA Screening

Resource Category	Results of RFFA Screening
Geology, Minerals, and Subsidence	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The RFFA potential ROW is subject to mitigating all valid, existing right of mining claimants present in the RFFA boundary. Furthermore, homes and supporting infrastructure developed under this RFFA would be subject to geotechnical building code and engineering requirements.

Resource Category	Results of RFFA Screening
Soils, Vegetation, and Reclamation	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Construction of new roads to serve the development may increase the potential for introduction and/or spread of noxious weeds and invasive plants. In addition, new traffic and activities in the area could increase potential for the introduction of weed seed. Development of the RFFA would result in the clearing of vegetation, which may affect sensitive species that have the potential to occur within the project limits.
Noise and Vibration	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Noise and vibration impacts would increase due to introducing new traffic volumes as well as ground-disturbing activities.
Transportation and Access	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Traffic generated by the proposed development would significantly increase the overall annual daily traffic on surrounding and connecting roads. Greater safety risk may occur on connecting roads due to the increase in traffic volumes.
Air Quality	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The overall impacts to air quality during construction would be limited to fugitive dust, which would be managed through reasonably available control technologies and BMPs, and construction activities would be temporary. Construction activities would temporarily increase emissions; however, these emissions are not likely to result in violations of ambient air quality standards and/or hazardous pollutant thresholds. During operations, a substantial introduction of new traffic volumes from the RFFA could have an impact on local air quality.
Water: Groundwater Quantity and Groundwater-Dependent Ecosystems	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. While the development would be required to show 100-year water security, the development of this amount of residential use could utilize and impact groundwater.
Water: Groundwater and Surface Water Quality	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. During construction, water quality impacts that have the potential to occur would be minimized and mitigated through the project-specific SWPPP and BMPs. Impacts are predicted to be minor and temporary. Development of the internal roads, the structures and driveways/parking, and infrastructure serving the development would create a substantial amount of new impermeable surface, which would alter drainage patterns and likely result in oils, fuels, and other vehicle debris in the roadway to be washed onto adjacent permeable surfaces during storm events.
Water: Surface Water Quantity	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Development of the internal roads, the structures and driveways/parking, and infrastructure serving the development would alter drainage patterns of the area. Based on cursory desktop review, the project area includes several unnamed ephemeral washes and would require changes to stormwater flows and drainage patterns.
Wildlife	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Endangered and candidate species may occur within the RFFA area. Wildlife would be directly impacted by the RFFA due to ground disturbance and/or vegetation removal during construction as well as temporary increases in noise associated with construction activities. Vehicle traffic could result in direct impacts to wildlife from vehicle strikes (given the relatively rural conditions of the area).

Resource Category	Results of RFFA Screening
Recreation	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. This project would introduce a substantial increase to population in the area, which could increase the demand and need for recreation facilities.
Public Health & Safety: Tailings Safety	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. There are no tailings involved in development of a master-planned community.
Public Health & Safety: Fuels and Fire Management	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The development would include assurances of fire suppression water and service by local fire protection. The planned community would not require vegetation management beyond typical landscape planning.
Public Health & Safety: Hazardous Materials	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. It is possible there may be spills of fuel, lubricants, and/or antifreeze during construction that would require clean-up and proper disposal. In addition, development of the internal roads, the structures and driveways/parking, and infrastructure serving the development could introduce trips involving the transport of hazardous materials, which would increase the likelihood of a spill from a motor vehicle accident.
Scenic Resources	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The introduction of this planned community would have an impact on the overall characteristics of the undeveloped landscape, particularly from the change in surface features and urbanization within the area, as well from the introduction of increased vehicle use in the region.
Cultural Resources	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The RFFA will involve ground-disturbing activities that may have direct and indirect impacts through increases in human activity which could result in additional surface disturbance where cultural resources exist as well as a potential increase in looting and artifact theft in an area that was previously low use. These indirect impacts would be both short and long term.
Socioeconomics	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The project would introduce a major new development within a mostly rural area. The introduction of this planned community would likely alter land development of the regional area and introduce a substantial new permanent population to a rural area.
Tribal Values and Concerns	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The RFFA corridor could affect the protection and preservation of tribal cultural and sacred sites as well as access to those sites.
Environmental Justice	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The project could have disproportionate impacts on environmental justice communities.
Livestock and Grazing	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Grazing areas, allotments, and permits could be altered by the RFAA.

Literature Cited

Arizona Builder's Exchange. 2023. AZBEX Newsletter, Volume 13, Issue 91. Available at: https://azbex.com/magazine/subscribe/. Accessed January 10, 2023.

LG Energy Solution Battery Production Facility project

Overview of RFFA

LG Energy Solution (LGES) purchased a 650-acre site at Germann Road and Ironwood Drive in the town of Queen Creek from an Arizona State Land Department auction. A development agreement between LGES, the Town of Queen Creek, and Pinal County was executed in March 2022, whereupon LGES planned to build a $2.8 billion cylindrical battery manufacturing facility. Preliminary design includes a 1.4–million square foot advanced manufacturing building. Under the agreement, the Town of Queen Creek would provide infrastructure improvements and Pinal County would work to develop a job training facility for the company. The company said its initial investment would be $1.4 billion and that it hoped to begin construction by summer 2022, with initial production targeted for sometime in 2024 (Arizona Builders Exchange [AZBEX] 2023).

In June 2022, LGES confirmed the project had been put on hold, saying through a consultant group "given the unprecedented economic condition and investment circumstances in the US, LG Energy Solution is currently reviewing various investment options, but no decision has been made."

In December 2023, representatives of LGES general contractor (Yates Construction) stated the project was still on hold but that movement was expected "in the coming months" (AZBEX 2023). To date, no representatives from LGES, the Town of Queen Creek, or Pinal County have stated when a decision to move forward could be expected.

Rationale for Resource Analysis—Temporal Overlap with Resolution Copper Project

The timing of this project is currently unknown but the project is assumed feasible as the applicant has purchased the land from Arizona State Land Department. Development of this RFFA could occur within the operational time frame of the proposed Resolution Copper Project.

Rationale for Resource Analysis—Spatial Overlap with Resolution Copper Project

This RFFA would be approximately 10 miles west of project areas shared by all action alternatives (2–6). Therefore, this RFFA falls within the spatial rationale presented within Chapter 4 of the FEIS (Table 4.3-1, Cumulative effects spatial analysis areas for cumulative effects, and preferred and proxy impact metrics).

Rationale for Analysis as Cumulative Effect in EIS, by Resource

Resource Category Results of RFFA Screening

Resource Category	Results of RFFA Screening
Geology, Minerals, and Subsidence	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The RFFA is subject to mitigating all valid, existing right of mining claimants present in the RFFA boundary. Furthermore, the new production facility associated with this RFFA would be subject to geotechnical building code and engineering requirements.

Resource Category	Results of RFFA Screening
Soils, Vegetation, and Reclamation	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Construction of a new 1.4-million square foot facility and associated temporary (construction) and permanent (operational) traffic could increase potential for the introduction of weed seed. Development of the site would result in the clearing of vegetation, which may affect sensitive species that have the potential to occur within the project limits.
Noise and Vibration	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Noise and vibration impacts would increase due to introducing new traffic volumes as well as ground-disturbing activities.
Transportation and Access	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Traffic generated during construction and operation of the RFFA could significantly increase the overall annual daily traffic on surrounding and connecting roads. Greater safety risk may occur on connecting roads due to the increase in traffic volumes.
Air Quality	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The overall impacts to air quality during construction would be limited to fugitive dust, which would be managed through reasonably available control technologies and BMPs, and construction activities would be temporary. Construction activities would temporarily increase emissions; however, these emissions are not likely to result in violation of ambient air quality standards and/or hazardous pollutant thresholds. During operations, the battery production facility could result in toxic air contaminants or other atmospherics as part of the production process that require permitting. Additionally, a substantial introduction of new traffic volumes could have an impact on local air quality.
Water: Groundwater Quantity and Groundwater-Dependent Ecosystems	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. Operation is not expected to directly use or affect substantial quantities of groundwater.
Water: Groundwater and Surface Water Quality	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. During construction, water quality impacts that have the potential to occur would be minimized and mitigated through the project-specific SWPPP and BMPs. Impacts are predicted to be minor and temporary. Development of the new production facility and associated parking would create a substantial amount of new impermeable surface, which would alter drainage patterns and likely result in oils, fuels, and other vehicle debris in the roadway to be washed onto adjacent permeable surfaces during storm events.
Water: Surface Water Quantity	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Development of the new production facility and associated parking would create a substantial amount of new impermeable surface, which would alter drainage patterns of the area. Based on cursory desktop review, the RFFA site may contain several unnamed ephemeral washes and require changes to stormwater flows and drainage patterns.

Resource Category	Results of RFFA Screening
Wildlife	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. Endangered and candidate species may occur within the site. Wildlife would be directly impacted by ground disturbance and/or vegetation removal during construction as well as temporary increases in noise associated with construction activities. Vehicle traffic could result in direct impacts to wildlife from vehicle strikes (given the relatively rural conditions of the area).
Recreation	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. The project is not expected to result in direct population growth from new employment opportunities at a level that could substantially increase demands on recreation facilities. Based on cursory desktop review, the site does not contain any authorized or unauthorized recreational trails or uses.
Public Health & Safety: Tailings Safety	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. There are no tailings involved in this proposed development.
Public Health & Safety: Fuels and Fire Management	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. While the production facility would introduce a use capable of fire ignition, the project would include vegetation and fuel management within the site.
Public Health & Safety: Hazardous Materials	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. It is possible there may be spills of fuel, lubricants, and/or antifreeze during construction that would require clean-up and proper disposal. In addition, operation of the battery facility would include the transport and use of hazardous materials, which would increase the likelihood of a spill from facility operation or a motor vehicle accident.
Scenic Resources	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The introduction of a 1.4-million square foot production facility would have an impact on the overall characteristics of the landscape, particularly from industrialization of an undeveloped site, as well from the introduction of vehicle use.
Cultural Resources	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The RFFA will involve ground-disturbing activities that may have direct and indirect impacts through increases in human activity which could result in additional surface disturbance where cultural resources exist. These indirect impacts would be both short and long term.
Socioeconomics	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The project would introduce a major new industrial facility within a mostly rural area. The introduction of this new facility could alter land development of the area and could alter the existing economic and socioeconomic base (both beneficially and negatively).
Tribal Values and Concerns	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The RFFA corridor could affect the protection and preservation of tribal cultural and sacred sites as well as access to those sites.
Environmental Justice	Continue analysis; RFFA contributes to cumulative effects and sufficient information exists to analyze. The project could have disproportionate impacts on environmental justice communities.

Resource Category	Results of RFFA Screening
Livestock and Grazing	Dismiss from further analysis; RFFA would not contribute to cumulative effects or effects are negligible. Cursory online research indicates the site contains no grazing areas, allotments, or existing grazing permits.

Literature Cited

Arizona Builders Exchange (AZBEX). 2023. AZBEX Newsletter, Volume 13, Issue 91. Available at: https://azbex.com/magazine/subscribe/. Accessed January 10, 2023.

Tonto National Forest Travel Management Plan Archaeological Inventory

Overview of RFFA

Tonto National Forest officials signed the Final Record of Decision (ROD) for an updated Travel Management Plan (TMP) on October 5, 2021. Release of the ROD was the culmination of a Forest-wide 10-year planning process. Following several years of public input and analyzing comments and objections, the approved TMP identifies how motorized vehicle use will be managed on the 2.9 million-acre Tonto National Forest, which includes a total of 4,215 miles of motorized routes consisting of both roads and motorized trails. Of this total, 1,544 miles are designated as roads and 2,671 miles are designated as motorized trails open to the public and eight off-highway vehicle (OHV) areas where travel off designated system roads and motorized trails is permitted, along with three permit zones (Tonto National Forest 2023).

Many of the over 4,200 miles of roads open to the public include high archaeological and historical site density, with historic and ongoing use of these roads inevitably impacting a variety of cultural resources. In compliance with Travel Management regulations at 36 Code of Federal Regulations 212.5(a) and (b), travel routes were initially developed prior to any archaeological survey of unauthorized routes. As part of this RFFA, archaeological surveys will be conducted based on the latest TMP. These surveys will allow for identification and application of rules and protocols which serve to implement cultural resources minimization criteria and regulations of the TMP to reduce or avoid impacts prior to designation and inclusion of the TMP in the Tonto National Forest Motor Vehicle Use Map (MVUM) (the MVUM is an enforcement tool to ensure individuals are on the correct route).

Rationale for Resource Analysis—Temporal Overlap with Resolution Copper Project

Outreach with the Tonto National Forest identifies these surveys as “in progress” with no defined completion date. The surveys represent a large effort expected to last several years, and are weather dependent. At this time, it is expected that surveys would be completed prior to any construction or operational work associated with the Resolution Copper Project.

Rationale for Resource Analysis—Spatial Overlap with Resolution Copper Project

This RFFA could potentially include surveys on roads within the entire Tonto National Forest, which all action alternatives (2 through 6) would utilize. Therefore, this RFFA falls within the spatial rationale presented within Chapter 4 of the FEIS (Table 4.3-1, Cumulative effects spatial analysis areas for cumulative effects, and preferred and proxy impact metrics).

Rationale for Analysis as Cumulative Effect in EIS

The proposed Resolution Copper Project would likely use roads within the Tonto National Forest. Therefore, any sensitive resources found during the planned archaeological surveys could overlap with activities of the Resolution Copper Project. However, these surveys are intended to identify cultural resources to avoid or lessen potential impacts. Should surveys be conducted during the construction or operation of the Resolution Copper Project, the presence of an inventory does not imply any impacts that could combine with Resolution Copper Project impacts. The Final EIS proposes mitigation

activities that include new trails/roads (Final EIS Appendix J, Measure FS-RC-03), and those could conceivably overlap with archaeological resources identified in the TMP inventory. However, potential conflicts of proposed Mitigation Measure FS-RC-03 would require completion of the Forest Service archaeological surveys. Additionally, the Tonto National Forest TMP is a valid RFFA retained for cumulative effects analysis within the republished EIS (please refer to Attachment 1 of this Process Memo Addendum).

Regardless, the planned archaeological surveys would not themselves create any adverse impacts and the proposed Resolution Copper Project would be subject to any measures or restrictions on road use within the Tonto National Forest resulting from the archaeological surveys. For those reasons, this RFFA is dismissed from further analysis; RFFA would not contribute to cumulative effects or effects are negligible/beneficial.

Literature Cited

Tonto National Forest. 2023. Travel Management. Available at: https://www.fs.usda.gov/detail/tonto/landmanagement/planning/?cid=fsbdev3_018761. Accessed February 13, 2023.