

Resolution Copper Project and Land Exchange Environmental Impact Statement

USDA Forest Service
Tonto National Forest
Arizona

October 17, 2018

Process Memorandum to File

Determination of Reasonably Foreseeable Actions Considered in Cumulative Effects Analysis

Revisions

7/26/2018 – original

9/24/2018 – includes Forest Service, BLM, and Resolution Copper comments

10/17/2018 – includes USACE, AGFD, BLM, and Pinal County comments

2/6/2019 – includes additional Forest Service and Town of Superior comments

4/29/2019 – update includes new information on BLM and ASLD grazing allotments

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 process memorandum is to document the process used by the National Environmental Policy Act (NEPA) interdisciplinary (ID) team to identify and consider reasonably foreseeable future actions (RFFAs) for inclusion in the cumulative effects analysis of the Resolution Copper Project draft environmental impact statement (DEIS).

General Overview

Before conducting cumulative effects analysis, the Tonto National Forest ID team undertook an effort to identify reasonably foreseeable actions. Past and present actions that may have had or that currently have impacts in analysis areas are not included in this memorandum because these actions are addressed as part of the current condition in each resources' affected environment section.

Three criteria are required in order for an RFFA to be included in the cumulative effects analysis:

- 1) The future action and/or impacts from the action must **spatially overlap** the corresponding direct and indirect effects analysis area for the Resolution Copper Project (or alternatives). To give a hypothetical example, impacts on air quality from the expansion of the Pinto Valley Mine (PVM) could potentially spatially overlap air quality impacts from the proposed tailings storage facility at the Near West location.
- 2) The future action and/or impacts from the action must **temporally overlap** the Resolution Copper Project (or alternatives) and/or the impacts from the Resolution Copper Project. To give a hypothetical example, impacts on vegetation from the clearing of exploratory drill sites on the Tonto National Forest could temporally overlap the vegetation clearing of the Resolution Copper Project tailings storage facility during the construction phase.
- 3) The future action must be “**reasonably foreseeable.**” According to Forest Service Handbook 1909.15 and 36 Code of Federal Regulations (CFR) 220.3, RFFAs are “those Federal or non-Federal activities not yet undertaken, for which there are existing decisions, funding, or identified proposals. Identified proposals for Forest Service actions are described in 220.4(a)(1.).” In addition, the Bureau of Land Management (BLM) NEPA Handbook H-1790-1 and 40 CFR 1508.7 state included reasonably foreseeable future actions “cannot be limited to those that are approved or funded.” To give a hypothetical non-Federal example, a future housing subdivision project near Superior would only be considered reasonably foreseeable if a proposed plan or preliminary design had been submitted to either the Town of Superior or Pinal County, depending on the location of the proposed project. If the proposed subdivision had not started the agency review or permitting process by submitting documentation, then the action would be considered speculative. To give a hypothetical Federal example, a proposed fuels reduction project (vegetation thinning) by the U.S. Forest Service (Forest Service) would be considered reasonably foreseeable if the public had been notified about the project in the Forest Schedule of Proposed Actions (SOPA), or by legal advertisement in the newspaper of record, in a mailing, or in a listing in the Federal Register.

If the Forest Service had not yet notified the public about the proposed project, then the project would be considered speculative. Speculative actions are not reasonably foreseeable and do not provide resource specialists with enough information to be able to conduct a cumulative effects analysis.

For an RFFA to be considered in the cumulative effects analysis, the effects of the action must occur in the same place and at the same time as similar effects from the Resolution Copper Project. To be considered reasonably foreseeable, the action must have started any official approval/permitting process, thus providing resource specialists with sufficient detail with which to conduct an effects analysis.

For determining **spatial overlap**, the project footprint for the proposed Resolution Copper Project and alternatives is provided in Figure 1.1-1, Resolution Copper Project vicinity map, in the DEIS. Resource-specific impact areas are identified in each resource section (e.g., air quality, noise). For determining temporal overlap, Table 1 identifies the mine phases and years for cross referencing with potential reasonably foreseeable future actions (from the Mine Life Phase Durations Process Memorandum, updated on February 26, 2018).

A variety of sources was used to identify RFFAs. These include, but are not limited to, public and cooperating agency comments; the ID team's and their consultants' knowledge and inquiries made to other agencies and sources; Internet research; and the Tonto National Forest SOPA, which was last updated for April–June 2019.

The list of RFFAs (see below) will be updated as the ID team becomes aware of new projects. Updates to this memorandum will be identified on the cover page. Some actions are listed as “Maybe” for meeting RFFA criteria at this time because it cannot be conclusively determined whether these actions would spatially or temporally overlap Resolution Mine–related actions.

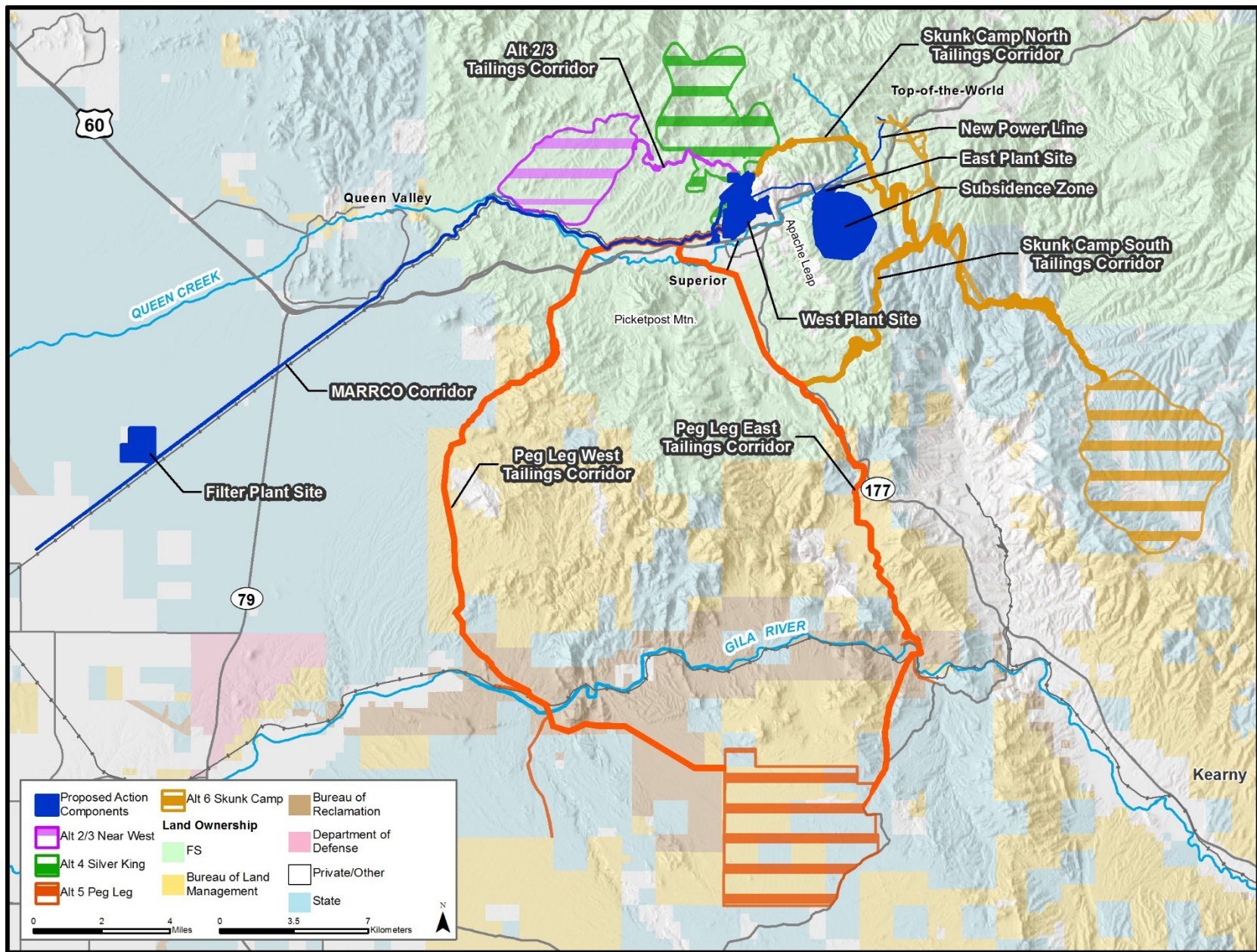


Table 1. Mine phases and years to determine temporal overlap

Mine Phase	Subphase	Description	Years
Care and maintenance/baseline	None	Now through final record of decision (ROD). Draft ROD anticipated in 2020; final ROD anticipated in 2021 following resolution of objection process.	2017–2021
Construction	None	Starts after approval of Final General Plan of Operations (GPO), after signing ROD. Some infrastructure on private land could proceed earlier. No ore production, site preparation/start dam construction.	2021–2028
Production		Start of ore production	2029–2069
	First ore	Mine Year 1	2029
	Ramp up	Mine Years 2 through 7	2030–2035
	Full production	Mine Years 8 through 31	2036–2059
	Ramp down	Mine Years 32 through 41	2060–2069
Closure	None	Cessation of ore production	2070

Town of Superior Land Exchange Parcels

Section 3003 of the Carl Levin and Howard P. ‘Buck’ McKeon National Defense Authorization Act for Fiscal Year 2015 (NDAA) directs the conveyance of approximately 2,422 acres of specified National Forest System lands to Resolution Copper Mining, LLC (Resolution Copper) if Resolution Copper offers to convey approximately 5,344 acres of private lands to the United States. Table 2 provides a brief summary of the land exchange parcels. A detailed description of the land exchanges can be found in Section 2.2.1.1, Land Exchange, of the DEIS. The complete text of Section 3003 of the NDAA is provided in appendix A of the DEIS.

Town of Superior Lands

If requested by the Town of Superior, Section 3003 additionally authorizes and directs the transfer of 545 acres of National Forest System lands to the Town of Superior. At this time, the Town of Superior has not requested the transfer.

The Forest Service–administered lands to be conveyed to the Town of Superior include a 30-acre parcel known as Fairview Cemetery and 250 acres contained in four parcels known as the Superior Airport Contiguous Parcels. In addition, the Town of Superior lands include a Federal reversionary interest to a 265-acre Superior Airport parcel. The Superior Airport parcel was originally owned by the Federal Government, then deeded to Pinal County, and subsequently conveyed to the Town of Superior with the condition that it could only be used as an airstrip. Any other use would cause the property to revert to Federal land (the reversionary interest). As part of the land exchange, the Federal reversionary interest would be removed, after which time the parcel could be used for non-airport purposes.

Table 2. Summary of land exchange parcels

Parcel Landownership	Impacts discussion	Description of Parcels to Be Exchanged
Parcels transferred from the United States to Resolution Copper	In the EIS, section 2.2.1.1	<ul style="list-style-type: none"> 2,422 acres near Superior in Pinal County, Arizona, known as the Oak Flat Federal Parcel, to become private lands (to distinguish from the Oak Flat Campground and the Oak Flat Withdrawal Areas identified in Section 3003(b) of the NDAA)
Parcels transferred from Resolution Copper to the United States, to be included in the National Forest System	In the EIS, section 2.2.1.1	<ul style="list-style-type: none"> 142 acres¹ near Superior in Pinal County, Arizona, known as the Apache Leap South End Parcel, to be administered by the Tonto National Forest 148 acres in Yavapai County, Arizona, known as the Tangle Creek Parcel, to be administered by the Tonto National Forest 147 acres in Gila County, Arizona, known as the Turkey Creek Parcel, to be administered by the Tonto National Forest 149 acres near Cave Creek in Maricopa County, Arizona, known as the Cave Creek Parcel, to be administered by the Tonto National Forest 640 acres north of Payson in Coconino County, Arizona, known as the East Clear Creek Parcel, to be administered by the Coconino National Forest
Parcels transferred from Resolution Copper to the U.S. Department of the Interior	In the EIS, section 2.2.1.1	<ul style="list-style-type: none"> 3,050 acres near Mammoth in Pinal County, Arizona, known as the Lower San Pedro River Parcel, to be administered by the BLM as part of the San Pedro Riparian National Conservation Area 940 acres south of Elgin in Santa Cruz County, Arizona, known as the Appleton Ranch Parcel, to be administered by the BLM as part of the Las Cienegas National Conservation Area 160 acres near Kearny in Gila and Pinal Counties, Arizona, known as the Dripping Springs Parcel, to be administered by the BLM
If requested by the Town of Superior, Arizona, land will be transferred from the United States to the Town of Superior		<ul style="list-style-type: none"> 30 acres associated with the Fairview Cemetery 250 acres associated with parcels contiguous to the Superior Airport 265 acres of Federal reversionary interest associated with the Superior Airport

¹ Using updated survey information provided by Resolution Copper, the Forest Service revised the Apache Leap South End Parcel from 110 acres (as presented in the NDAA) to 142 acres.

Table 3. RFFAs within the project area

Project	Agency(ies)	Source	Schedule	Location	Description	RFFA?	Spatial Overlap?	Temporal Overlap?
High-Speed Rail Connection between Tucson and Phoenix	Federal Railroad Administration/ Arizona Department of Transportation (ADOT), Pima, Pinal, and Maricopa Counties	Tier 1 EIS record of decision (ROD) issued on December 2016: https://www.azdot.gov/planning/transportation-studies/PassengerRail/final-tier-1-eis-and-rod	Tier 2 EIS for preferred alternative will be conducted soon, but no construction schedule has been identified, and no funding has been secured.	Two alignment options in Pinal County will be analyzed in Tier 2 EIS. Both options would cross Magma Station at the terminus of the Magma Arizona Railroad Company (MARRCO) corridor. Construction schedule of project is unknown.	The Tier 1 EIS has selected the “yellow corridor alternative” for detailed analysis in the Tier 2 EIS.	No. Detail does not exist at this time to analyze.	Yes	Undetermined. Action: watch for Tier 2 EIS and update.
North–South Corridor	Federal Highway Administration (FHWA)/ADOT, Pima, Pinal, and Maricopa Counties	ADOT lead agency: https://www.azdot.gov/planning/transportation-studies/north-south-corridor-study/overview	Tier 1 EIS scheduled to be completed in 2019. Construction unknown and funding not secured.	Multiple alignments being considered through multiple jurisdictions. Study area includes MARRCO corridor, filter plant and loadout facility, and U.S. Route (U.S.) 60/State Route (SR) 79 intersection. See Figure 35 in Alternative Selection Report (page 85). Two alternatives would be near filter plant and loadout facility, and several alternatives would cross the MARRCO corridor.	The project is currently only identifying current and future transportation needs to inform the selection of corridor alternatives. If Tier 1 EIS ROD indicates that FHWA has selected one of the corridor alternatives as the environmentally preferred alternative, the evaluation of the specific highway alignment would be conducted in a Tier 2 EIS.	No. Detail does not exist at this time to analyze.	Undetermined	Undetermined. Action: watch for Tier 2 EIS and update.
Silver King Mine	Arizona Department of Environmental Quality (ADEQ) Aquifer Protection Permit (APP)	ADEQ APP: http://azdeq.gov/sites/default/files/factsheet_silver_king_mine.pdf	Unknown	Silver King Mine is located on Tonto National Forest lands on Silver King Road (National Forest System [NFS] Road 229), Superior, Pinal County, Arizona, in Township 1 South, Range 12 East in the NW ¼ of the SE ¼ of the S ½ of Section 24.	Silver King Mine proposes reactivating the historic underground mine to recover silver ore from a standard square set drift development with open stoping mining operation. Silver King Mine would mill the ore on-site using grinding and crushing with a jawcrusher, double-deck screen, cone crusher, and ball mill. From the ball mill, the crushed and ground ore will go to the flotation facilities using a conditioning tank, flotation cells, a thickener, filter plant, dryer holding tank, and concentrating table. The tailings slurry would then be placed within the tailings impoundment.	Yes	Yes: Silver King alternative	Yes
Carlota Mine leaching and closure	ADEQ, KGHM	KGHM website: http://kgm.com/en/our-business/mining-and-enrichment/carlota	Current to 2020	North of town of Miami, adjacent to Pinto Valley Mine	Currently, the Carlota Mine runs the process of post-mine area recultivation, along with underground leaching of the remaining heaps. The model of operation assumes stable production of copper from 2020, to the moment of final closure of the Carlota Mine.	Yes, may close in 2020, but revegetation would be ongoing	Undetermined	No, provided closure happens in 2020.
Florence Copper	Florence Copper, ADEQ, U.S. Environmental Protection Agency (EPA)	Florence Copper: https://www.florencecopper.com/	Currently in testing phase	Northwest of Florence	In situ copper recovery facility near Florence. The production test facility was constructed in 2017. This includes 24 wells: four injection wells, nine recovery wells, and 11 groundwater monitoring-related wells. The test facility will test whether the full proposed full production facility will be a safe and permittable venture. Solvent Extraction and Electrowinning Plan is next phase.	Yes	Undetermined	Undetermined. Action: research operational plans made public by company.
Housing projects in Town of Florence	Town of Florence	Town of Florence: http://www.florenceaz.gov/wp-content/uploads/documents/Community%20Development/2020%20General%20Plan/Florence%202020%20General%20Plan.pdf	Unknown	North of Florence; several are near MARRCO corridor and filter plant and loadout facility.	Various large-scale master-planned communities are identified in the Florence General Plan: Merrill Ranch, Dobson Farms (near MARRCO corridor), Arizona Farms (near MARRCO corridor), Skyview Farms, Palorosa. Merrill Ranch plans a capacity of 26,000 residences. The General Plan was written soon after the housing bust and will be updated soon in accordance with Arizona law.	Yes. Overlaps with Resolution Copper water supply in East Salt River Valley.	Undetermined	Undetermined. Action: research public status of each housing development.
Population change	ADOT, Maricopa County, Pinal County, Gila County	Various, including transportation plans for Pinal and Maricopa Counties	2040	Pinal, Gila, and Maricopa Counties	By 2040, populations in Apache Junction, Queen Creek, and Florence are expected to double; populations in other towns may increase or decrease. Need to identify defensible source for this since different reports project different numbers (currently using traffic analysis reports). The U.S. Census Bureau does not appear to go into city-specific projections.	No. General population increase is not specific enough to be actionable. Increasing population trends may be included in the Affected Environment as appropriate (i.e., traffic growth). Specific growth or developments can be assessed individually for RFFA status (see item above).	Yes	Yes
State Route 24 (Pinal County Extension)	FHWA/ADOT, Pinal County	Included in project scope for North–South Corridor	See North–South Corridor above	See study area in Figure 35 in North-South Corridor Alternative Selection Report (page 85). Study area is north of filter plant and loadout facility and MARRCO corridor. Extends east to U.S. 60/SR 79 intersection.	ADOT and Pinal County are planning to extend SR 24 (currently a small segment of this highway has been built in Maricopa County) from its current terminus to somewhere along the future North–South Corridor.	No. Detail does not exist at this time to analyze. – multiple alternatives are still under analysis	Yes	Undetermined. Action: watch for additional design work from ADOT/

Project	Agency(ies)	Source	Schedule	Location	Description	RFFA?	Spatial Overlap?	Temporal Overlap?
					The area of MARRCO corridor is part of Pinal County's Open Space and Trails Master Plan and identified as a multi-use trail corridor. This corridor is a critical link connecting San Tan Valley with the National Forest.			Pinal County and update.
Town of Superior Transfer Station Remediation	Town of Superior, ADEQ	ADEQ: http://www.azdeq.gov/node/3615	Phase 3 begins July 2018	101 Airport Road, Superior, Arizona 85173	Transfer station was issued a Notice of Violation in 2012 for waste containing asbestos. Superior proposed remediation plan in 2016, which ADEQ approved. Phase 1 and 2 are complete (took waste away and installed cleaner burners). Phase 3 will include decontaminating and grading the site where contaminants were removed.	Yes	Yes	Undetermined. Action: research additional cleanup plans.
Ripsey Wash Tailings Project	ASARCO, USACE, BLM, Arizona State Land Department (ASLD)	USACE DEIS: http://www.spl.usace.army.mil/Portals/17/docs/regulatory/Projects/Ray_Mine/Draft_EIS/Ray_Mine_D_EIS-508.pdf		South of Kelvin, near Peg Leg alternative	ASARCO is proposing to construct a new tailings storage facility (TSF) to support its Ray Mine operation. The tailings facility would include two starter dams, new pipelines to transport tailings and reclaimed water, a pumping booster station, a containment pond, a pipeline bridge across the Gila River, and other supporting infrastructure. A segment of the Arizona Trail would be relocated east of the TSF. A section of Florence-Kelvin Highway and a power line would be rerouted. The proposed TSF, situated within the Ripsey Wash watershed would be located on 2,627 acres of private lands and 9 acres of BLM lands.	Yes	Yes; Peg Leg alternative	Yes
Arizona Public Service (APS)– Salt River Project (SRP) Right-of-Way (ROW) Vegetation Management with Herbicides	Forest Service	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=45771	2019	Tonto National Forest lands, Gila County, Maricopa County	APS and SRP transmission ROW within NFS lands.	Yes	Undetermined	Undetermined. Action: watch for SOPA updates with implementation details and schedule.
Arizona National Scenic Trail (Arizona Trail) Comprehensive Plan	Forest Service, BLM	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=49535	2019	Tonto National Forest, BLM, ASLD, etc., Arizona Trail corridor	Plan will develop administrative and management goals, objectives, and practices for the Arizona Trail and management corridor. Planning-level document that does not implement or authorize any specific project or activity.	Yes	Yes	Yes
Arizona Trail Teacup Segment Realignment	BLM, ASLD		2019	BLM and ASLD	Realignment of approximately 5.5 miles of trail segment across BLM and ASLD.	Yes	Yes	Yes
ASARCO Mine, including the Hayden Concentrator and Smelter, and Superfund Site Ray Land Exchange and Proposed Plan Amendment Supplemental EIS	ASARCO, ADEQ, BLM	ADEQ: http://legacy.azdeq.gov/enviro/waste/sps/ASARCO_Hayden_Plan.html ; http://www.asarco.com/about-us/our-locations/ray-operations/ ; https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=122768	Currently operational until 2044	Kelvin, north of Peg Leg alternative	The Ray 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, and associated maintenance, warehouse, and administrative facilities. Cathode copper produced in the solvent extraction and electrowinning operation is shipped to outside customers and the ASARCO Amarillo Copper Refinery. A local railroad, Copper Basin Railway, transports ore from the mine to the Hayden concentrator, concentrate from the Ray concentrator to the smelter, and sulfuric acid from the smelter to the leaching facilities.	Yes	Yes (already part of Affected Environment, but focus will be on expansion operations)	Yes
Wild and Scenic River Eligibility	Forest Service	Tonto National Forest Draft Wild and Scenic Rivers Eligibility Study (1993 and 2017) Comment in the Pinto Valley Mine Scoping Report: http://www.pintovalleymineeis.us/documents/PVM_Scoping%20Report_Draft-Final_2017_0928.pdf 1993 study available here: https://www.tontoplan.org/public-involvement/wild--scenic-rivers	2017 study to be finalized with FEIS/ROD for the forest plan	Telegraph Canyon; Arnett Creek	Possible eligible segments of Telegraph and Arnett identified by Tonto National Forest in October 2017. This segment was previously identified in the 1993 Wild & Scenic River Study. Pinto Valley Mine scoping comments indicate that part of Pinto Creek has been nominated: "The PVM Project could adversely affect Pinto Creek, especially the segment north of the project site that has been nominated as a Wild and Scenic River." This nomination has not been substantiated. AGFD plans to stock Gila topminnow in Telegraph Canyon after Forest Service finishes oleander removal. No further plans to restock Arnett Creek at this time.	Yes	Undetermined	Undetermined. Action: identify potential schedule for nominations
Tonto National Forest Motorized Travel Management Plan	Forest Service	Tonto National Forest SOPA https://www.fs.usda.gov/project/?project=28967	2019	Tonto National Forest lands	Establishes system of roads, trails, and areas designated for motorized vehicle use and determines suitable locations for dispersed camping. SEIS expected soon, possibly first quarter CY 2019	Yes	Yes	Yes

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Tonto National Forest Plan Revision	Forest Service	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=51592	2019	Tonto National Forest lands	Revises the Land and Resource Management Plan for the Tonto National Forest. Planning-level document that does not implement or authorize any specific project or activity.	Yes. Consistency with, and an amendment to the revised forest plan will be handled explicitly in the DEIS, but not as a cumulative effect. While only establishing management direction, for some resources direction may be sufficient to analyze effects.	Yes	Yes
Apache Leap Special Management Area	Forest Service	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=51530	2018	Tonto National Forest lands	Land management plan for the Apache Leap Special Management Area. Planning-level document that does not implement or authorize any specific project or activity.	No. Not an action, but a management plan that establishes goals; these management directions are already incorporated into project effects.	Yes	Yes
Copper King Exploratory Drilling/Superior West Exploration	Forest Service	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=54119	2019	Copper King: Tonto National Forest lands immediately north of West Plant Site and near Silver King Alternative. Superior West: Several potential drill sites overlap Resolution Copper Project area. Most are south of town of Superior.	This project combines the environmental review of two mineral exploration projects, Copper King and Superior West, which has been proposed by Bronco Creek. The combined projects result in a total of 106 unique drill site locations identified, of which the proponent would be authorized to select up to 43 to be drilled over a 10-year period. Use of existing roads and helicopter to access drill sites.	Yes	Yes	Yes
Copper Springs	Forest Service	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=39477	2018	Tonto National Forest lands east of East Plant Site and south of Miami/Claypool	Copper Springs proposes exploration drilling at six sites near Globe.	Yes	Undetermined	Undetermined. Action: watch for SOPA updates with implementation details and schedule.
Hicks-Pikes Peak Allotment Grazing Authorization	Forest Service	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=52246	2019	Tonto National Forest lands north of Pinto Mine	Plan to authorize livestock grazing on the allotment north of Globe.	Yes	Undetermined	Undetermined. Action: watch for SOPA updates with implementation details and schedule.
Pinaladera Fuels Management	Forest Service	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=3775	On Hold	Tonto National Forest lands	Fuels reduction on 83,558 acres south of Globe.	Yes	Undetermined	Undetermined. Action: watch for SOPA updates with implementation details and schedule.
Sedow and Haystack Butte Allotment Range Improvements	Forest Service	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=52597	2018	Tonto National Forest lands	Authorize additional range improvements to supply additional water for livestock.	Yes	Undetermined	Undetermined. Action: watch for SOPA updates with implementation details and schedule.
Dagger, Poison Spring, Black Mesa, and A-Cross Grazing Allotment Management Plans	Forest Service	Tonto National Forest SOPA: https://www.fs.usda.gov/project/?project=49896	2018	Tonto National Forest lands	Authorize grazing on these allotments.	Yes	Undetermined	Undetermined. Action: watch for SOPA updates with implementation details and schedule.

Project	Agency(ies)	Source	Schedule	Location	Description	RFFA?	Spatial Overlap?	Temporal Overlap?
Resolution Copper Baseline Geotechnical and Hydrological Data Gathering Activities	Forest Service	Tonto National Forest files	Initial authorization was 2016, 10-year authorization period for testing and monitoring.	Tonto National Forest lands	Resolution Copper was authorized in 2016 to gather and evaluate geotechnical and hydrological data in an area proposed for a tailings storage facility.	No. A legal decision ruled that this is not a connected action to the Resolution Copper Project.	Yes	Yes
Silver Bar Mining Regional Landfill and Cottonwood Canyon Road Improvements Elder South – Carlota	Private, BLM, ASLD, ADEQ, Pinal County	https://eplanning.blm.gov/epl-front-office/eplanning/projectSummary.do?methodName=renderDefaultProjectSummary&projectId=40151 ; http://www.copperarea.com/pages/carlota-copper-begin-satellite-mining-operation/	Cottonwood Road cultural resources mitigation work occurring in 2018–2021	BLM, ASLD, and west of Miami	In 2007, Pinal County rezoned the private land to authorize development of a solid waste landfill. In 2009, the owners/developers received a master facility small satellite copper oxide deposit, known as Elder South, on Carlota’s patented claims. The mine will consist of a small open pit, one main haul road, and several support roads. There is no way to access the proposed Silver Bar Mining Regional Landfill without crossing BLM land. Approximately 6 miles of Cottonwood Canyon Road, including approximately 0.4 mile on BLM-administered land and approximately 5 miles on Arizona State Trust land, and approximately 0.6 mile of Sandman Road on BLM-administered land would be improved. On BLM-administered land, the access road would be widened to 44 feet, as needed.	Yes	Yes	Yes
LEN Range Improvements and Road Maintenance	BLM	https://eplanning.blm.gov/epl-front-office/eplanning/projectSummary.do?methodName=renderDefaultProjectSummary&projectId=60831	2017–2027	Mineral Mountains north of Florence	Re-drill 11 existing wells and equip them with solar pumps, storage tanks, and water troughs. Some may have water lines going to troughs at locations away from the storage tank. The roads on the allotment are in disrepair and are not passable in anything but high-clearance 4-wheel drive vehicles. The roads will need to be maintained to allow drilling equipment into the project sites to re-drill the existing wells.	Yes	Yes	Yes
Imerys Perlite Mine	Forest Service and private	Plan	2034	West of Superior	Mining, hauling, and processing of perlite	Yes	Yes	Yes
Pinto Valley Mine Plan of Operations	Forest Service and private	Proposed Plan	Update to 2020 for authorization; Anticipate authorization to go to 2039	West of Miami	Open-pit copper mine and associated milling	Yes	Yes	Yes
Land Exchange	Forest Service, private, Town of Superior	NDAA 2013	Speculative, approved by NDAA to be exchanged, but no plan by Town to obtain	Superior	Federal Parcel – Superior Airport Contiguous Parcels; Action is speculative – may be purchased by the Town of Superior. Was approved with NDAA Section 3003.	Not foreseeable at this time, until requested by Town of Superior	Yes	?
Land Exchange	Forest Service and Town of Superior	NDAA 2013	Speculative, approved by NDAA to be exchanged, but no plan by Town to obtain	Superior	Federal Revisionary Interest – Superior Airport; Action is speculative – may be purchased by the Town of Superior. Was approved with NDAA Section 3003.	Not foreseeable at this time, until requested by Town of Superior	Yes	
Superior to Silver King 115-kV Relocation Project	Private, SRP	https://srpnet.com/electric/transmission/projects/superiorsilverking/application.aspx	Construction should begin between 2012 and 2022. Currently in design	North of Superior on Resolution Copper private property on the West Plant Site	Relocate a segment of the existing Superior-Silver King 115-kV transmission line on private property near Superior.	Yes	Yes	Yes
Abel-Moody 230-kV construction	Private	https://srpnet.com/electric/transmission/projects/abelmoody/abelmoody.aspx http://www.pinalenergyprojects.org/projectsoverview.aspx	Currently in design or construction	Near Magma Junction, some follows MARRCO corridor	Provide additional power that will be required in the near future and increase the reliability and performance of the local high-voltage system. SRP has narrowed selected Northeast Pinal generating facility locations to either the Pinal Central or ABEL substation.	Yes	Yes	Yes
Resolution Copper Pre-Feasibility Activities Plan of Operations (#03-12-02-006).	Forest Service	Tonto National Forest files	Initial authorization was 2010; exploratory drilling continues today under the plan and authorized through 2025/2021. Groundwater testing and monitoring is authorized through 2025.	Tonto National Forest lands until land exchange completed in 2020; private thereafter; east of Superior	Resolution Copper was authorized in 2010 to gather and evaluate geological, geotechnical, and hydrologic data to support pre-feasibility studies for exploration of a deep copper ore deposit.	Yes	Yes	Yes
Resolution Copper reclamation and post-closure monitoring of historic Magma Copper activities (tailings, impacted soils, smelter facilities)	ADEQ (APP, Voluntary Remediation Program [VRP])	ADEQ		Resolution Copper private land	Under ADEQ’s APP program and VRP, Resolution Copper is excavating soils impacted from historic mining activities, removing smelter buildings, and reclaiming tailings on-site. These major reclamation earth-moving activities will continue through 2020. After that, Resolution Copper will continue post-reclamation monitoring of groundwater and revegetation.	Yes	Yes	Yes
Southwest Transmission Cooperative (SWTC) Apache-Hayden Powerline ROW Renewal and Pole Replacement	BLM	https://eplanning.blm.gov/epl-front-office/eplanning/projectSummary.do?methodName=renderDefault	Beginning 2018	BLM Tucson and Safford Field Offices	The BLM originally granted AZAR-0032556 to Arizona Electric Power Cooperative in 1963 for a 115-kV transmission line. The length of the transmission line across BLM land was originally about 20 miles. The width of the ROW is 100 feet (50 feet from centerline). On October 19, 1990, the BLM	Yes	Yes	Yes

Project	Agency(ies)	Source	Schedule	Location	Description	RFFA?	Spatial Overlap?	Temporal Overlap?
		ProjectSummary&projectId=109550			amended the grant to include the right to maintain 39 acres of previously constructed access roads. The access roads are all 20 feet wide (10 feet from centerline). SWTC filed a renewal application on March 10, 2015. The power line is administratively divided into two distinct segments: Segment 1 (0.6 mile, Safford Field Office): Apache-Winchester, 115-/230-kV double circuit transmission line on single-pole steel structures. The 2003 amendment to the ROW allowed SWTC to add the 230-kV line and a fiber-optic ground wire to the poles. Segment 2 (8.9 miles, Tucson Field Office): Winchester-Hayden, 115-kV single-circuit transmission line on two-pole wood and some steel structures, built in 1963. In the renewal, SWTC would like to gain the right to add a fiber-optic ground wire to this segment as well. SWTC would also like the freedom to replace any existing wood two-poles with single pole steel structures as needed. The proposed action is to renew the ROW for the entire transmission line and all previously designated access roads.			
Omya	Forest Service	Plan	40-year plan to cover two phases. Phase 1 is up in 2023.	North of Oak Flat	Limestone quarry in interim shutdown; maintenance of NFS Road 2458; persistent water in pit	Yes	Yes	Yes
Silver King Mine Plan	Forest Service	Proposed Plan	Forest Service waiting for response to our comments		Plan to mine at Silver King Mine	Yes, plan in completeness review process	Yes	Yes
Silver King Mine	Forest Service	Proposed Corrective Action Plan	Currently under Forest Service review		Corrective Action Plan for environmental mitigation	Yes, in review	Yes	Yes
Special Use Permits	Forest Service	Lands Point of Contact			Existing recreation and outfitter guides Existing utility permits	Yes	Yes	Yes
Van Dyke Project	Private	http://www.copperfoxmetals.com/s/Vandyke.asp	Testing phase	Globe-Miami district		No, mining plan not submitted. Test holes already in place, trying to determine if economically feasible	Yes	Yes
Pavement Preservation	ADOT	https://www.azdot.gov/docs/default-source/planning/five-year-program-fy2019-2023.pdf?sfvrsn=10	2019		Superior to Gila County Line	Yes	Yes	Yes
Water Fall Canyon Bridge	ADOT	https://www.azdot.gov/docs/default-source/planning/five-year-program-fy2019-2023.pdf?sfvrsn=10	2023	Queen Creek Canyon	Bridge replacement and rehabilitation	Yes	Yes	Yes
Pinto Creek Bridge	ADOT	https://azdot.gov/projects/southeast/us-60-pinto-creek-bridge-replacement-project	2020	Pinto Creek/U.S. 60	Bridge replacement	Yes	Yes	Yes
MARRCO Waterline	Private	Baseline Hydrological Final Environmental Assessment (EA)	Ongoing use through Resolution Copper production years (approximately 2027)	Superior to Magma Junction	Resolution Copper has constructed a water pipeline within the MARRCO ROW to transport water collected from the No. 9 Shaft and treated at an existing water treatment facility on Resolution Copper's property to an irrigation canal operated by New Magma Irrigation and Drainage District near Florence, Arizona.	No. This is part of the affected environment.	Yes	Ongoing
ADOT Vegetation Treatment	ADOT	Baseline Hydrological Final EA	Ongoing; based on request by either Forest Service or ADOT to treat areas along the highway	U.S. 60, up to 200 feet beyond road easement	ADOT plans to conduct annual treatment programs using 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 NFS lands up to 200 feet beyond road easement on the Tonto National Forest.	Yes, ongoing	Yes	Yes
Rangeland Improvements	Forest Service	Baseline Hydrological Final EA	Cleared to proceed	Millsite Allotment west of Superior	Three livestock water developments on the Millsite grazing allotment. The Environmental Quality Incentives Program-funded developments consist of pumping water from two existing windmills and a private well to three new water storage tanks and then conveying the water to two new troughs. Improvements have not yet been completed but can proceed.	Yes	Yes	?
Grazing Allotments	Forest Service, ASLD, BLM	Baseline Hydrological Final EA	Ongoing	Project area	Ongoing use of grazing allotments	No – already analyzed in AE	Yes	Yes

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Superior Soil Study Area	ADEQ (VRP)	ADEQ files	Possibly 2019 through 2020, pending review and approval by ADEQ.	Private land in the vicinity of Superior, Arizona	Under ADEQ's Voluntary Remediation program (VRP) BHP may be sampling and monitoring soils in the vicinity of / and surrounding the Town of Superior to test for impacts from the historic mining activities during operation of the Magma Mine.	Yes	Yes	?
Kalamazoo Superior Pit	BLM	BLM	Ongoing	Township 3 South, Range 13 East, Section 6, Lots 3 and 4	Mineral material sale. Decorative rock quarry. Quarrying and reclamation is expected to continue. This quarry is located in direct alignment with the proposed Peg Leg east pipeline route.	Yes	Yes; Peg Leg eastern pipeline route	Ongoing
Desert Sunset Red Hills Quarry	BLM	BLM	Ongoing	Township 4 South, Range 11 East, Section 33 and 35	Mineral material sale. Decorative rock quarry. Quarrying and reclamation expected to continue. This quarry is located along the proposed Peg Leg western pipeline route.	Yes	Yes; Peg Leg western pipeline route	Ongoing
Pinal County Whitlow Pit	BLM	BLM	Ongoing	Township 5 South, Range 15 East, Section 5	Mineral material free use permit. Mining and reclamation expected to continue. This quarry is located along the proposed Peg Leg west pipeline access route.	Yes	Yes; Peg Leg eastern pipeline route	Ongoing
Government Spring Pipeline Project	AGFD Commission and private	AGFD	Unknown	Existing water storage tank at Government Spring (NAD 12S E0505352 N3678558) to the existing south side water storage tank and water-trough on Forest Road 248 (NAD 12S E05088 I I N3679103)	Landowner Relations Program Cooperative Stewardship Agreement for Habitat Improvement between AGFD Commission and Government Spring Ranch, LLC. Pipeline will start at the existing water storage tank at Government Spring (NAD 12S E0505352 N3678558) then be installed aboveground for remaining distance to the existing south side water storage tank and water trough on Forest Road 248 (NAD 12S E05088 I I N3679103). The existing pipeline will be disconnected from the south side water storage tank and water trough. The new pipeline will extend 12,000 feet from an existing 3,000-gallon storage tank adjacent to a well that is 1,100 feet higher in elevation and will connect to an existing 3,000-gallon water storage tank and wildlife-friendly drinker. This tank and drinker were previously filled from a spring that is no longer producing water. This new pipeline will provide much needed reliable water for wildlife.	Yes	?	Unknown
AGFD proposed/planned wildlife water developments	AGFD, Forest Service	AGFD	Various; February 2019, one on hold, unknown/pending funding	GMU 24B in vicinity of tailings storage facility Alternative 2 or 3 Near West, Alternative 4 Silver King, and Alternative 5 Peg Leg	All projects have been scoped through the TNF, two have additional clearances to complete, four have materials funded and one is fully funded. Currie Wood (AGFD ID# 69), NEPA complete, Tonto National Forest, Globe Ranger District, Scheduled for construction in February 2019; north of TSF Alts 2/3 and 4 Silver King (AGFD ID#70), NEPA complete, Tonto National Forest, Globe Ranger District, Materials funded. Within footprint of TSF Alt 4; project on hold due to proposed RCM project. Gonzales Pass (AGFD ID#71), NEPA complete, Tonto National Forest, Mesa Ranger District, not funded yet, south of TSF Alt 2/3. Cactus Patch (AGFD ID#989), NEPA complete, AGFD internal compliance in process, funding has been applied for through the AGFD - HPC and pending funding decision at Jan. 2019 HPC meeting - in vicinity of Peg Leg tailings corridor west alternative	Yes	Yes; north of Alternatives 2, 3, and 4, within Alternative 4 footprint, south of Alternative 2 and 3, and Peg Leg west pipeline option	Maybe, pending funding
Bighorn Sheep Capture	AGFD	AGFD	November 2019	37B Mineral Mountains, Region 5, Maybe GMU 24B	Proposed bighorn sheep capture from 37B Mineral Mountains and relocation to Region 5 is planned for November 2019. Capture from GMU 24B sheep populations in Superstition Mountains may also be included.	Yes	Maybe; GMU 24B	Maybe
Transportation Projects	ADOT	AGFD	Unknown	Florence Junction, Globe, Oracle, Superior, Winkelman, Kearney, Gila River	Potential upcoming transportation projects include: <ul style="list-style-type: none"> US 60 between Florence Junction and Globe SR 79 between Florence Junction and Oracle SR 177 between Superior and Winkelman/Kearney SR 77 between Globe and Winkelman/Kearney Any transportation or rail development along the Gila River between Winkelman/Kearney and the Magma Junction area southwest of Florence 	Yes, if plan exists or part of ADOT 5-year plan	Yes	Maybe
Superstition Vistas	Pinal County Community Development, ASLD	Pinal County, ASLD	Development of Pinal County Comprehensive plan began 2008	Southwest of Highway 79 and U.S. 60 intersection	175,000 acres of State Trust Land located east and southeast of Gilbert, Apache Junction, and Queen Creek. Pinal County and ASLD are developing a Pinal County Comprehensive Plan for a community within Superstition Vistas.	Yes, foreseeable but no details to mention quantitative impacts.	Yes; Peg Leg	Yes

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					Although the precise time frame for sale and development of these lands will be dependent upon market conditions, it is probable much of the development will occur contemporaneous with the Resolution Copper Project.			
Pinal County Joint Land Use Study	Arizona National Guard, Pinal County, and Arizona National Guard	Pinal County	Public Workshops currently underway	Central North-South corridor of Pinal County	The Pinal County Joint Land Study is a planning effort to assess compatibility concerns in the regions surrounding four Arizona National Guard installations in Pinal County – Florence Military Reservation, Rittenhouse Training Site, Silverbell Army Heliport, and Picacho Peak Stagefield.	Yes	Yes; Peg Leg	Maybe
CAP Trail Plan	Pinal County Open Space and Trails	Pinal County	Master Plan completed November 2015, trail construction underway	Central Arizona Project Aqueduct	Recreational trail planned to be constructed alongside the Central Arizona Project Aqueduct.	Yes	Yes; Peg Leg	Yes
Resolution Copper Request for CAP Allocation	U.S. Bureau of Reclamation	Resolution Copper	Unknown	Central Arizona Project Aqueduct	Resolution Copper has requested, and ADWR has recommended, receipt of a CAP allocation. This proposal is pending NEPA review.	No. Allocation has not been approved at this time, and ability to do so is unclear given drought contingency planning.	Yes	Yes
Peg Leg Hydrological, Geologic and Geotechnical Investigations	BLM	Resolution Copper	November 2018 through mid to late 2019	12 miles east of Florence and south of Cochran, Pinal County, Arizona	Resolution Copper plans to do exploratory (hydrologic, geologic, and geotechnical) drilling at drill pads approx. 80' x 120' wide for a total of 11 drill sites as well as two test trenches 20' x 30'. These activities would require the use of existing access roads and 0.23 miles of TARs (TARs would be 12 feet wide). Once drilling is complete, solids and desiccated drillings muds in the mid pits would be excavated and removed from the site.	No. Would be analyzed as part of the EIS	Yes, Peg Leg	Yes
Skunk Camp Hydrological, Geologic and Geotechnical Investigations	ASLD, private, BLM	Resolution Copper	First half 2019, ongoing, periodic data collection from monitoring wells to follow.	Skunk Camp project location	Resolution Copper plans to do exploratory (hydrologic, geologic, and geotechnical) drilling at drill pads (various sizes: 50' x 50', 80' x 120', and 20' x 30') for a total of 17 drill sites.	No. Would be analyzed as part of the EIS	Yes, Skunk Camp	Yes
Unpermitted discharge of recycled water into Queen Creek	ADEQ	ADEQ	January 2019 until discharge is stopped	Queen Creek in San Tan Valley area	ADEQ has issued a Water Quality Advisory for the unpermitted discharge of recycled water into Queen Creek in the San Tan Valley area. ADEQ is making this recommendation because a discharge of recycled water occurred from the Pecan Water Reclamation Plant. This issue could be ongoing due to population growth.	Yes	Yes	Yes
A-Diamond Allotment, Grazing Lease Renewals	BLM, ASLD, private	BLM	Ongoing	Approx. 1.2 miles south of SR 177 and 11.5 miles east of the Town of Superior	Grazing lease authorizations for approximately 22,389 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Battle Axe Allotment, Grazing Lease Renewals	BLM, ASLD, Forest Service, private	BLM	Ongoing	Approx. 7 miles south of US 60 and the Town of Superior	Grazing lease authorizations for approximately 20,275 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Devil's Canyon Allotment, Grazing Lease Renewals	Forest Service, ASLD, private	Forest Service, ASLD	Ongoing	Approx. 2.5 miles east of the Town of Superior and 12.5 miles west of the City of Globe	Grazing lease authorizations for approximately 26,605 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Ellsworth Desert Allotment, Grazing Lease Renewals	BLM, ASLD, private	BLM	Ongoing	Adjacent to the Florence Military Reservation and 3.3 miles east of San Tan Valley	Grazing lease authorizations for approximately 29,546 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Government Springs (Lyons Fork) Allotment, Grazing Lease Renewals	BLM, ASLD, Forest Service, private	ASLD, BLM, Forest Service, U.S. Fish and Wildlife Service	Ongoing	Approx. 3 miles south of US 60 and about 5.5 miles east of the Town of Superior	Grazing lease authorizations for approximately 8,370 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Helmwheel (Box-O) Allotment, Grazing Lease Renewals	BLM, ASLD, private	BLM, ASLD	Ongoing	Approx. 2.3 miles northeast of SR 79 and 8.3 miles southeast of the Town of Florence	Grazing lease authorizations for approximately 52,037 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes

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Horsetrack Allotment, Grazing Lease Renewals	BLM, ASLD, private	BLM, ASLD	Ongoing	Approx. 4 miles northeast of the Town of Florence and 11 miles southwest the Town of Superior	Grazing lease authorizations for approximately 28,187 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Myers Allotment, Grazing Lease Renewals	BLM, private	BLM	Ongoing	Approx. 1 mile southeast of the Florence Military Reservation and 4.9 miles northeast of the Town of Florence	Grazing lease authorizations for approximately 6,052 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Nichols Ranch Allotment, Grazing Lease Renewals	ASLD, private	ASLD	Ongoing	Approx. 4 miles north of the Florence Military Reservation and 10.5 miles west of the Town of Superior	Grazing lease authorizations for approximately 13,859 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Ruiz Allotment, Grazing Lease Renewals	BLM, ASLD, private	BLM, ASLD	Ongoing	Adjacent to US 60 and approx. 9 miles east of the Town of Superior	Grazing lease authorizations for approximately 13,843 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Slash S Allotment, Grazing Lease Renewals	ASLD, private	ASLD	Ongoing	Approx. 10 miles southeast of US 60 and the Town of Superior	Grazing lease authorizations for approximately 18,398 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Superior Allotment, Grazing Lease Renewals	Forest Service, BLM, private	BLM	Ongoing	Adjacent to US 60 and the Town of Superior	Grazing lease authorizations for approximately 58,671 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Teacup Allotment, Grazing Lease Renewals	BLM, ASLD, private	BLM, ASLD	Ongoing	Approx. 12.5 miles from US 60 and the Town of Superior	Grazing lease authorizations for approximately 41,316 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Whitlow Allotment, Grazing Lease Renewals	BLM, ASLD, private	BLM, ASLD	Ongoing	Approx. 15 miles southwest of US 60 and the Town of Superior	Grazing lease authorizations for approximately 23,276 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes
Victory Cross Allotment, Grazing Lease Renewals	BLM, ASLD, private	BLM, ASLD	Ongoing	Approx. 14 miles southeast of US 60 and the Town of Superior	Grazing lease authorizations for approximately 8,974 acres.	Yes	Yes, potential pipeline and/or power line crossing	Yes