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Subject: Mitigation suggestions from public comments
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Good afternoon –

As promised, attached is the consolidated list of potential mitigation suggestions that were received in public comments.

It took us a couple of rounds to categorize these and boil them down to basics. Our intent with this list was:

- a. Capture the discrete, actionable mitigation suggestions. That being said, some of these items are still admittedly conceptual in nature. But where we included conceptual ones, we felt they were concepts that were specific enough to yield useful mitigation.
- b. Obtain what we need in order to internally complete our responses to the mitigation comments. If we get decisions on these items, I think we'll be able to answer most of the mitigation comments we received.

I'd note two additional things: 1) this list does not take into account jurisdiction or whether these would be required or voluntary mitigations, and 2) some of these are already underway (like the FMEA) but we left them on the list anyway, for completeness.

Thanks! We'll be talking tomorrow about next steps for mitigation.

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MITIGATION PROPOSALS FROM DRAFT EIS PUBLIC COMMENTS

MARCH 2, 2020

Overview

A total of 361 comments were coded as being related to mitigation. Of these, roughly 175 comments contained some suggestion for mitigation, though many of these comments were non-specific and general. The following is a summary of those mitigation proposals included in public comments that are specific enough to carry forward for consideration; the comments have been combined and condensed as much as possible into 85 individual mitigation suggestions. These fall under the following categories:

- General monitoring and reporting (3 proposals)
- Air quality – Greenhouse gases (1 proposal)
- Cultural resources – Museum (1 proposal)
- Lands (4 proposals)
- Noise (2 proposals)
- Public Health & Safety (4 proposals)
- Recreation – Campground (4 proposals)
- Recreation – Climbing (2 proposals)
- Recreation – Trails and Access (9 proposals)
- Recreation – Other (3 proposals)
- Socioeconomic – Housing (2 proposals)
- Socioeconomic – Workforce (3 proposals)
- Socioeconomic – Town of Superior; long-term funding (7 proposals)
- Socioeconomic – Rail (1 proposal)
- Transportation (2 proposals)
- Vegetation (3 proposals)
- Water Supply (3 proposals)
- Water – Compensatory; in-lieu mitigation; Queen Creek (3 proposals)
- Water – Monitoring (7 proposals)
- Water – Devil’s Canyon (1 proposal)
- Wildlife – Plans (1 proposal)
- Wildlife – Aquatics (2 proposals)
- Wildlife – Avian and Bat (8 proposals)
- Wildlife – Lighting (2 proposals)
- Wildlife – Exclusions (2 proposals)
- Wildlife – Species-specific mitigations (5 proposals)

General Monitoring and Reporting

- (M-G1). Create and maintain a public information repository, such as a community website, where all information on the investigation and related matters is readily available in a timely manner.
- (M-G2). Establish procedures for submittal of complaints relating to noise, light, loss of scenic value, and for mitigating actions to be taken in response to the complaints.
- (M-G3). Post-mining monitoring should continue until impacts are no longer occurring, plus another 15 years.

Air Quality – Greenhouse Gases

- (M-AQ1) - Develop mitigation to minimize greenhouse gas emissions or reach a net-zero carbon footprint.

Cultural Resources – Museum

- (M-C1) - Creation and maintenance of a Cultural Heritage and Mining Museum or fund, depicting the mining history and the story of Superior.
 - Specific proposal to purchase the old Harding School.
 - Specific request for funding to maintain museum.

Lands

- (M-L1). Implement mitigation through partnership with The Nature Conservancy on 7B Ranch to partially address the impacts of the tailings at Skunk Camp.
- (M-L2). Purchase and transfer to federal ownership a considerable portion of the lands suggested as "Preserve" in the Superstition Area Land Plan, an inclusive, 105-square mile study conducted by SALT in the early 2000's - with particular emphasis on adding land that would serve as a buffer between the south border of the Superstition Wilderness Area and Phoenix.
- (M-L3). Purchase a few hundred acres of private property to open up 38 square miles of public land, including the Needles Eye Wilderness area, in Gila County on Route 77.
- (M-L4). Acquire sufficient acreage within the lower San Pedro River watershed in order to achieve "no net loss" of habitat value from the proposed project. One possible location, currently owned by BHP, is the "Broken Hills Property".

Noise

- (M-N1). Require [construction] work be completed at night in order to reduce traffic relocations, thus reducing noise pollution.
- (M-N2). Mitigate noise and vibration impacts to residences near tailings facilities by rerouting access roads, purchase of affected properties, and establish a noise complaint phone number or similar procedure.]
- (M-N3). With two trains arriving and departing at night, this has the potential to increase nighttime noise in and around Superior. Noise control measures should be incorporated into this option so that there is minimal noise increase. [If train to Superior isn't incorporated into Preferred Alternative, this can be ignored]

Public Health & Safety

- (M-PH1). Near immediate reporting of spills or other reportable activities
- (M-PH2). Emergency Action Planning for all mine operations, not just tailings storage facilities. Note that FS-229 requires Emergency Action Plan for TSF.
- (M-PH3). Develop failure modes and effects analysis and emergency action plan for the selected tailings facilities before completion of FEIS. Note that FS-227 requires the FMEA and FS-229 requires the Emergency Action Plan for TSF.
- (M-PH5). Dispose of tailings as a hazardous waste, or put in place protective measures to prevent runoff with the predicted pH of 2.13.

Recreation – Campground

- (M-R1). Include a fund or endowment to cover the construction and maintenance of a campground.
- (M-R2). Fund the development of the Castleberry Ranch into a full-service campground with ongoing maintenance funded by the endowment.
- (M-R3). Transfer Castleberry campground management to the Town of Superior.
- (M-R5). Develop new campground near small unmaintained road with a cattle guard near westbound highway 60 mile marker 230.

Recreation – Climbing

- (M-R8). Provide new climbing areas, as well as access to areas that will not be directly affected, but access to them is.
- (M-R9). Replace access roads that are removed so that access to rock climbing in these areas is not lost.

Recreation – Trails

- (M-R17). Incorporate the RUG plan.
- (M-R18). Incorporate Superior Waters & Trails proposal.
- (M-R19). Mitigation for Forest Road 315 must include a re-route that will allow 4x4 traffic to the east of the mine site near Devil's Canyon and which links up with the 315-route south of the mine site.
- (M-R20). Develop comprehensive trails plan and ensure funding for construction and maintenance.
- (M-R23). Include mitigation to create or enhance public access to the areas south, east and west of the Oak Flat where TNF lands were exchanged with Resolution Copper through new/improved roads/routes, and provide access to Devil's Canyon, Oak Creek and/or eastern portions of Apache Leap.
- (M-R24). All efforts possible must be taken to assure that the northern pipeline design and construction does not negatively impact Devil's Canyon. Include an option to later include a parallel trail with the pipeline.
- (M-R26). Allow recreational access to the Queen Creek Canyon segment of the LOST trail (old Highway 60) including the historic Queen Creek tunnel in perpetuity.

- (M-R27). Fund the extension of the LOST Queen Creek segment south across the base of Apache Leap.
- (M-R28). Develop horse watering tanks with solar pumps along trails.

Recreation – Other

- (M-R13). The property on which the RUG trail system is located must either be bonded for full value against mineral exploration involving drilling or other disruption and mineral exploitation or the mineral rights must be signed over to the Town of Superior (i.e., Bronco Creek claims)
- (M-R14). Fund new recreation facilities including trails, campgrounds, park/pool facility, and school playgrounds.
- (M-S20). Offset the estimated \$70,000 in wildlife related tourism from the loss of Oak Flat and Skunk Camp.

Socioeconomic – Housing

- (M-S1). Develop mitigation for low income housing assistance; ensure low-income housing is available
- (M-S4). BHP to turn its Superior properties over to Superior to be incorporated into a land bank that for additional housing for local employees.

Socioeconomic – Rail

- (M-S6). Resolution Copper should commit to the reactivation of the rail system, with commercial and tourist service as a partial socioeconomic mitigation that will also benefit the project. A spur for a combination train station, welcome center, training center, and mining museum should be located parallel to Main St. near the Lone Tree Gate.

Socioeconomic – Town of Superior; Long-term Funding

- (M-S8). Require an independent third-party to establish a method for studying and documenting potential socioeconomic impacts, then provide adequate funding to mitigate these impacts. Resolution to make up any difference in costs versus revenues attributable to the Resolution project. Require both parties to agree upon an accounting and reporting structure. Mitigation relating to roads, utility infrastructure, housing, public safety, and water quality and quantity.
- (M-S10). Invest directly in the school system on a continual basis.
- (M-S11). The Superior/RCC Public Safety Contract should be a long-term agreement, based on current projected tax increases.
- (M-S13). Creation of an endowed foundation to allow the Town government and local nonprofits to maintain and increase services; further explore the concept of establishing a community fund or foundation to provide long-term support for local projects and initiatives aimed at mitigating mine-related impacts and enhancing the quality of life in the region.
- (M-S15). Bonding for potential socioeconomic impacts.
- (M-S17). Fund the Community Working Group and ongoing monitoring through the life of the mine and until reclamation is complete.

- (M-S18). Extend (as relevant) and negotiate new agreements with the Town of Superior to fund specific needs and projects based on mine development and operation impacts.

Socioeconomics – Workforce

- (M-S21). Creation/expansion of an apprenticeship program.
- (M-S22). Develop a workforce training program.
- (M-S23). Establish numeric or percentage targets for local hiring and for using local suppliers and services.

Transportation

- (M-T3). Develop traffic mitigation to prevent drop in LOS to "inadequate" levels, monitor traffic at affected intersections during construction, and contribute to road repair and maintenance.
 - Specific suggestion of SR177/US60 intersection
 - Specific suggestion of Skyline Road; this includes mitigation of effects caused by access to state land (there's a gate now to prevent access, that would be lost)
 - Specific inclusion of both Town of Superior and Town of Miami
 - Specific suggestion of mitigating impact on school bus/student safety
 - Specific suggestion to put this in the form of a traffic management plan
 - Specific suggestion to analyze passing lanes on SR77
 - Specific suggestion to upgrade Dripping Springs Wash Road
- (M-T5). Study the increased traffic, street maintenance, and public safety costs to the Town of Superior.

Vegetation

- (M-V3). Comprehensive revegetation plans should be required for the subsidence crater, the tailings slurry pipeline corridor, and the tailings facility as part of scenic resources mitigation. Such plans are noted as FS-226 for Soils and Vegetation for the tailings facility and should be referenced here and expanded to include the pipeline corridor and subsidence area, and to incorporate construction revegetation as well as end-of-mine revegetation.
- (M-V1). Develop a vegetation plan that includes monitoring to avoid invasive species in disturbance areas.
- (M-V2). Plant native shrubbery and trees west of Apache Leap and east of Picket Post Mountain that would be equivalent to the loss of natural habitat in the Oak Flat region.

Water Supply

- (M-WS3). Contract out the delivery of water to Top-of-the-World to a utility, such as Arizona Water, and have the water delivery system to Top-of-the-World in place before any mining activity is allowed to begin that could impact our GDE. Install fire hydrants along with water delivery system in Top-of-the-World.
- (M-WS2). Include mitigation requiring replacement of affected residential wells, with Resolution Copper funding assurance. Develop mitigation to monitor drinking water wells and provide contingency for alternative water sources.

- (M-WS4). Develop monitoring and mitigation measures that protect the resources of the Arboretum including RCM's provision for a secondary water source for the Arboretum to ensure preservation of well water levels and water quality in the event of emergencies.

Water – Compensatory; In-Lieu Mitigation; Queen Creek

- (M-W2). Implement of the strategies developed in the 1999 Restoration and Management Plan for Queen Creek and subsequent action plans developed by the Town of Superior.
- (M-W3). Review opportunities for in lieu compensation for impacted WOUS. Develop water resource mitigation that considers the relative ecological value of impacted waters, with habitat replacement occurring in closer proximity to impacted areas.
- (M-W16). Include mitigation requiring water levels be maintained at current levels, and replacement of water lost in fractured Queen Creek bed by pumping water into Queen Creek above Magma Bridge.

Water – Monitoring

- (M-W5). Develop mitigation specifying that any water quality impacts trigger mine operation shutdown.
- (M-W20). Water quality monitoring should remain in place until impacts are no longer measured - plus 15 additional years.
- (M-W6). Make water quality monitoring data publicly available on a website.
- (M-W21). Ensure that sampling is completed when streams are flowing.
- (M-W7). Commit to continuing the Community Monitoring Program through development, operation and closure of the mine, and for some reasonable period of time thereafter. Expand the program as necessary to include members from affected communities, and water sampling from areas potentially affected by the Skunk Camp tailings site - if selected.
- (M-W8). Include mitigation and bonding to monitor tailings and water for "decades" after mine closure; include mitigation and bonding to monitor water loss or reductions post-closure.
- (M-W10). Monitor water quality every mile between the Project area [Skunk Camp] and the Gila River.

Water – Devil's Canyon

- (M-W18). Mitigate the impacts of reduced runoff reaching Devil's Canyon to ensure no water loss; mitigate the impacts of reduced runoff reaching Devil's Canyon by bringing water to the canyon to preserve flow.

Wildlife – Plans

- (M-WL23). Develop Wildlife Management Plan in coordination with AGFD, USFWS and USFS biologists.
 - Concentrate on BMPs and site designs to minimize light pollution; traffic controls to reduce speed, and reduce dust; staff training to avoid wildlife collisions/mortality; and traffic management to reduce conflicts with local outdoor recreation.
 - Follow AGFD and FWS guidance for mitigation of impacts on wildlife.

- Include measures in the Wildlife Plan and in App J of the DEIS to limit the spread of non-native, invasive plant species through landscaping with drought-tolerant species that are native to Arizona.
- Include measures in the Wildlife Plan and in App J of the DEIS to minimize the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects and pathogens.
- Include in the Wildlife Plan and App J of the DEIS: Artificial night lighting, which may be intensified by the collection mirrors, may attract insects and the species that prey on them (e.g. bats). It could also impair the ability of nocturnal animals to navigate, and may negatively affect reptile populations. It is recommended to use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.
- Include in the Wildlife Plan and in App J of the DEIS. "If trenching will occur, trenching and backfilling crews should be close together to minimize the amount of open trenches at any given time. Avoid leaving trenches open overnight. Where trenches cannot be backfilled immediately, escape ramps should be constructed at least every 90 meters. Escape ramps can be short lateral trenches or wooden planks sloping to the surface. The slope should be less than 45 degrees (1:1). Trenches that have been left open overnight should be inspected and animals removed prior to backfilling."

Wildlife – Avian and Bat

- (M-WL1). Include criteria for electrocution and bird strike prevention to Appendix J CA-185.
- (M-WL3). To mitigate impacts to migratory and breeding birds, initiate construction outside breeding periods for species that use Saguaros (SGCN: elf owl, Gila woodpecker, gilded flicker, white-winged dove).
- (M-WL36). Develop an Avian and Bat Protection Plan in coordination with AGFD.
- (M-WL4). Mitigate impacts to avian species by using existing transmission lines and access routes for construction, and installing and maintaining power line facilities in a way that will reduce raptor collisions and electrocution.
- (M-WL5). Construction should be initiated outside of the breeding season for most bats.
- (M-WL37). Buffers around bat hibernacula based on wind direction patterns, adjacent land use, and surrounding vegetation should be maintained.
- (M-WL7). Conduct pre-closure [bat] surveys multiple years and visits/year to document species presence/absence and develop appropriate closure methods in coordination with AGFD, BCI and USFS biologists.
- (M-WL38). Implement wildlife exclusion measures pre-closure to minimize wildlife entrapment and mortality during closure; consider seasonal timing of closure on any sites with potential maternity roosts.

Wildlife – Aquatics

- (M-WL2). Develop an "Aquatic Species and Habitat Biomonitoring and Response Strategy" (physical and chemical parameters) for incorporation into the EIS.

- (M-WL35). Add language specific to preventing loss of riparian habitat for power lines and the pipeline to Appendix J CA-187.

Wildlife – Lighting

- (M-WL11). Use all possible methods to minimize light impacts, including downward-pointing lighting; reduce lighting around complex.
- (M-WL14). Lighting should be reduced in flyways to prevent potential impacts to foraging behavior.

Wildlife – Exclosures

- (M-WL25). Include escape ramps, hazing, and monitoring of site for any mortality along with exclusion fencing for any ponds.
- (M-WL28). Develop an effective bird hazing protocol to prevent avian exposure to acidified and metalliferous waters.

Wildlife – Species-specific mitigations

- (M-WL30). Capture and relocate endangered animals.
- (M-WL31). Include mitigation stating that handling and transportation of Sonoran Desert tortoise and Gila monster will only be conducted by a trained biological monitor.
- (M-WL32). Work with AGFD to develop and implement kit fox mitigation plan.
- (M-WL33). Include mitigation to address impacts to burrowing owls, following AGFD guidance.
- (M-WL34). Ensure that Reptile and Sonoran Desert Tortoise Plan measures are taken, it should be made clear that even though it may be a voluntary agreement, due to the Forest requirements, it will be assured.