

Rosemont Copper Project EIS Cooperating Agency Coordination Meeting 11/19/2009 Agenda

Location: Federal Building, 300 West Congress, Tucson, Arizona, Room 4B
Facilitator: Teresa Ann Ciapusci, Cooperating Agency Liaison

AGENDA

09:30 – 09.45	Welcome	Ciapusci
09:45 – 11:15	Review: Alternative Process	SWCA
	Workshop: Alternative Creation Discussion of another alternative developed by cooperating agencies	SWCA
11:15 – 11:30	Open Discussion	Ciapusci
11:30 – 1:00	LUNCH	
1:00 – 2:00	OPTIONAL DISCUSSION – Compensatory Land Mitigation OPTIONAL WORKSHOP – Continuation of Alternative Creation	

INVITED COOPERATING AGENCIES

Tribes: Tohono O'odham Nation
Federal: Air Force, Army COE, BLM, Smithsonian Whipple Observatory
State of Arizona: AZDEQ, AZMMR, AZDWR, AZGF, AZGS, AZSMI, AZSLD, AZSP
Local: Pima County, City of Tucson, Town of Sahuarita

INVITED GUESTS

Presenters: SWCA Environmental Consultants
Consultants: Cheniae & Associates

Rosemont Copper Project EIS

Cooperating Agency Coordination Meeting 11/19/2009

Meeting Notes

<p>Welcoming Remarks</p> <p>Discussion:</p> <p>⇒ Introductions</p> <p>⇒ Provided invitation and opportunity to submit an alternative developed by the cooperating agencies for consideration in the DEIS</p> <p>Action items:</p> <p>⇒ Cooperating agency-led alternative due by end of December 2009</p>	<p>Jeanine Derby</p>
<p>Review: Alternative Process</p> <p>Discussion:</p> <p>⇒ PowerPoint Presentation: Alternative Development</p> <p>⇒ Discussed the guidelines under which a cooperating agency alternative could be generated, including but not limited to:</p> <ul style="list-style-type: none"> • Forest Service remains a neutral bystander providing only logistical support for meetings and response to technical questions, attending meetings only by invitation of the participating agencies or facilitator • Forest Service interdisciplinary team specialists attend to provide technical assistance, only by invitation of the participating agencies or facilitator • Resulting alternative must meet NEPA requirements, purpose and need, and “reasonableness” standards • SWCA initially facilitating the process as a neutral third party, but will step out of the process if the cooperating agencies choose a different facilitation process or structure 	<p>Tom Furgason (SWCA)</p>
<p>Workshop: Alternative Creation</p> <p>Discussion:</p> <p>⇒ All agencies present elected to move forward with developing a cooperating agency alternative</p> <p>⇒ Discussed a variety of concerns that could drive an alternative or alternative element from the perspective of the cooperating agencies</p> <p>Action items:</p> <p>⇒</p> <ul style="list-style-type: none"> • E-mail the cooperating agencies a list of the technical studies available to date • Post the following FEIS documents to the RosemontEIS.us website <ul style="list-style-type: none"> ○ Carlotta ○ Dos Pobres ○ Idaho Cobalt 	<p>Tom Furgason (SWCA)</p>

Rosemont Copper Project EIS

Cooperating Agency Coordination Meeting 11/19/2009

Meeting Notes

Optional Discussion:	Tom Furgason (SWCA)
Continuation of Cooperating Agency Alternative Creation	
Discussion:	
⇒	Continued discussion of concerns that could drive an alternative or alternative element from the perspective of the cooperating agencies
⇒	Proposed next meeting date of December 2, 2009 – time and location to be announced by SWCA
Optional Discussion:	Debby Kriegel and Larry Jones (USFS IDT)
Compensatory Lands	
Discussion:	
⇒	Introductions
⇒	Handout: DRAFT Criteria for Compensatory Lands for Wildlife Habitat and Recreation Handout: AZGFD map of modeled land linkages
⇒	Discussed difference between proposing compensatory lands as mitigation and a land exchange
⇒	Kriegel led discussion of parameters included in the handout Tohono O’odham Nation suggested: <ul style="list-style-type: none"> • Seeking lands that preserve cultural resources in addition to the parameters described in the handout • Involving “Archeological Conservancy” as another potential partner in the identification of potential compensatory land parcels • Considering development and/or conservation rights, as well as outright purchase of compensatory land parcels
⇒	Jones described biological mitigation and replacement parameters that could be used as criteria
⇒	General discussion of the comparison of resource-specific desirable criteria that could be used for identification of candidate compensatory lands
⇒	Arizona Game and Fish described several potential candidate parcels that could be researched further
Action items:	
⇒	Group proposed next meeting for January 11, 2009 – Kriegel will confirm date once logistics are finalized
⇒	Next steps: Kriegel will provide the cooperating agencies with a format for identifying candidate compensatory land parcels, including site description format, mapping format, and GIS requirements

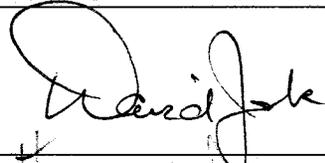
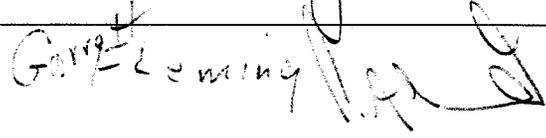
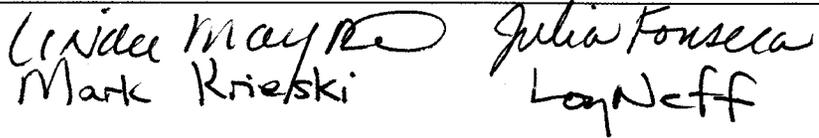
Attendance Record

Cooperating Agencies	Participant(s)
Tohono O'odham Nation	Peter J. Steere Adrian Smith
Air Force, 162d Fighter Airwing	Mark Harting
Army Corps of Engineers	
USDI BLM	Linda Hughes
Smithsonian Institution	Dan Brocius

**Rosemont Copper Project
Cooperating Agency Meeting
November 19, 2009**

Cooperating Agencies	Participant(s)
AZ Dept of Environmental Quality	<i>Dennis L. Turner</i>
AZ Dept of Mines and Mineral Resources	<i>Adam J. Steph</i>
AZ Department of Transportation	
AZ Dept of Water Resources	<i>Laura Irgine</i>
AZ Game and Fish Department	<i>John Windes</i>
AZ Geological Survey	<i>Mike Allen</i>

**Rosemont Copper Project
Cooperating Agency Meeting
November 19, 2009**

Cooperating Agencies	Participant(s)
AZ State Land Department	
AZ State Mine Inspector	
AZ State Parks	UNAVAILABLE - ADVANCE NOTICE
City of Tucson	
Pima County	
Town of Sahuarita	Orlanthia Henderson

**Rosemont Copper Project
Cooperating Agency Meeting
November 19, 2009**

Guests	Affiliation
G.L. Cheniae	
SWCA Environmental Consultants	Tom Ferguson Melissa Richard Jonathan Rigg

Brian Lindenlaub
Fermin Samarano

Westland Resources
Rosemont Copper Company

**Rosemont Copper Project
Cooperating Agency Meeting
November 19, 2009**

Attendance Record

Cooperating Agencies	Participant(s)
Tohono O’odham Nation	Peter Steere Addison Smith
Air Force, 162d Fighter Airwing	Mark Harting
Army Corps of Engineers	
USDI BLM	Linda Hughes
Smithsonian Institution	Dan Brocious
AZ Dept of Environmental Quality	Dennis L. Turner
AZ Dept of Mines and Mineral Resources	Madan Singh
AZ Department of Transportation	
AZ Dept of Water Resources	Laura Grignano
AZ Game and Fish Department	John Windes
AZ Geological Survey	M. Lee Allison
AZ State Land Department	David Jacobs
AZ State Mine Inspector	Garrett Fleming
AZ State Parks	Unavailable – Advance notice
City of Tucson	
Pima County	Linda Mayro Julia Fonseca Loy Neff Mark Krieski

**Rosemont Copper Project
Cooperating Agency Meeting
November 19, 2009**

Cooperating Agencies	Participant(s)
Town of Sahuarita	Orlanthia Henderson

Guests	Affiliation
SWCA Environmental Consultants	Tom Furgason Melissa Reichard Jonathan Rigg
Westland Resources	Brian Lindenlaub
Rosemont Copper Company	Fermin Samarano

11/12/2009

OPTIONAL PM Session

Name

AGENCY

CL Neva Connolly

Pima County

CL DENNIS TURNER

ADEQ

CL John Windes

AZ Game + Fish

CL JASON DOUGLAS

U.S. FISH AND WILDLIFE SERVICE

CL Addison Smith

T.O. Nation

CL Peter T. Steen

T.O. Nation

Mark Krieski

Pima County

Fermin Samarano

Rosemont Copper

Brian Linden Laub

Westland

Tom Furgason

SWCA

Melissa Richard

SWCA

Jonathan Rigg

SWCA

**Rosemont Copper Project
Cooperating Agency Meeting
Optional Afternoon Sessions
November 19, 2009**

Attendance Record

Cooperating Agencies	Participant(s)
Tohono O’odham Nation	Peter Steere Addison Smith
Air Force, 162d Fighter Airwing	
Army Corps of Engineers	
USDI BLM	
Smithsonian Institution	
US Fish and Wildlife Service	Jason Douglas
AZ Dept of Environmental Quality	Dennis Turner
AZ Dept of Mines and Mineral Resources	
AZ Department of Transportation	
AZ Dept of Water Resources	
AZ Game and Fish Department	John Windes
AZ Geological Survey	
AZ State Land Department	
AZ State Mine Inspector	
AZ State Parks	
City of Tucson	

**Rosemont Copper Project
 Cooperating Agency Meeting
 Optional Afternoon Sessions
 November 19, 2009**

Cooperating Agencies	Participant(s)
Pima County	Neva Connolly Mark Krieski
Town of Sahuarita	

Guests	Affiliation
SWCA Environmental Consultants	Tom Furgason Melissa Reichard Jonathan Rigg
Westland Resources	Brian Lindenlaub
Rosemont Copper Company	Fermin Samarano

SWCA
ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.™

Alternatives Development



“ . . .all agencies of the Federal Government shall . . .study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources”
NEPA Section 102(2)(e)

An alternative is a substitute for a lead agency's Proposed Action that accomplishes the action in another manner

The purpose of an alternative is to provide another option to the decision-maker that will accomplish the Purpose and Need of the project while minimizing potential adverse environmental impacts

CEQ guidelines require alternatives as part of an EIS (i.e., major Federal Action)

Alternative Type	Example
<p>A substitute for the proposed action that meets purpose and need with a completely different strategy</p>	<ul style="list-style-type: none"> • Open pit vs underground mining • Rosemont deposit vs other deposit • Confine project to private land – no use of NFS land
<p>Substitute for the proposed action that provides a similar strategy for meeting purpose and need but with differences in site location, size, operation, or other factors</p>	<ul style="list-style-type: none"> • Pit reconfiguration • Relocation of tailings and waste rock sites • Alternative method for transportation of materials (e.g., rail or slurry lines)

. . . agencies shall:

*(a) Rigorously explore and objectively evaluate all **reasonable alternatives**, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated*

40 CFR 1502.14

Range of Alternatives

- Subject to the rule of reason
- An agency is not required to consider every extreme possibility which might be conjectured
- A No Action Alternative must be included

“Reasonable” alternatives can include alternatives that are considered “undesirable” by the proponent or lead agency or are outside of the lead agency’s jurisdiction

Alternatives That Should Be Considered

- A “reasonable” alternative that is suggested by the public or an agency
- An alternative that addresses specific resource concerns or issues
- An alternative that provides a more comprehensive benefit in terms of meeting project purpose and need than the original Proposed Action

Alternatives That Should Not Be Considered

- Implementation is speculative
- Impacts cannot be reasonably analyzed
- **Alternative results in similar or greater harm than another alternative**
- Alternative is as defective as one already rejected by agency
- Alternative is dependent on technological advances when the agency action must achieve short-term results
- **Alternative is not consistent with the purpose of and need for the agency action**

Six Steps to Developing Alternatives

- Review public, agency, and stakeholder scoping
- Eliminate alternatives suggested during scoping that do not meet purpose and need
- Eliminate alternatives suggested during scoping that do not decrease environmental impacts
- Review remaining alternatives to determine entire range of feasible alternatives
- Pick a representative sample of the full range of “reasonable alternatives”

Keys to Effective Alternatives Development Workshops

- Understand that a positive impact on one resource, usually means a negative impact on another (no perfect answers, just informed choices!)
- Work cooperatively towards finding alternative solutions to resource conflicts
- Do not waste time on alternatives for decisions outside the scope of the project
- Do not discuss issues or details unrelated to project alternatives (stay on task)
- Put questions or issues that require additional research or coordination to be answered or resolved in a “parking lot”

CHAPTER 2 ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 PROPOSED ACTION

2.1.1 Rosemont Copper Project Location

2.2.2 Schedule

Phase 1, Construction of Facilities and Infrastructure

Phase 2, Extraction and Processing of Ore

Phase 3, Closure and Monitoring

2.1.3 Construction of Facilities and Infrastructure

2.2.3.1 Roads

Site Access

In-Plant

2.2.3.2 Onsite Administrative, Support, and Processing Facilities

2.2.3.4 Traffic During Construction Phase

2.2.4 Construction of Utilities

2.2.4.1 Water

2.2.4.2 Electricity

2.2.4.3 Non-Process Waste Management

Non-hazardous Waste

Hazardous Waste

2.2.5 Extraction of Ore from Open-Pit Mine

2.2.5.2 Transport of Ore to Processing

Proposed Action Outline

2.2.5.3 Waste Rock Onsite Storage/Disposal

2.2.6 Processing: Sulfide Ore and Oxide Ore

2.2.6.1 Sulfide Ore

2.2.6.2 Oxide Ore

2.2.6.3 Process Residuals (Tailings)

2.2.6.4 Traffic During Processing

Issues for Consideration During Alternative Development

Issues Driving Alternatives

- Heritage Resources
- Plants and Animals
- Recreation
- Riparian
- Visual
- Water

Issues Focusing Analysis

- Air
- Night Skies
- Noise & Vibration
- Reclamation Plan
- Soils
- Transportation

Rosemont Copper Project EIS - Comparison of Alternatives

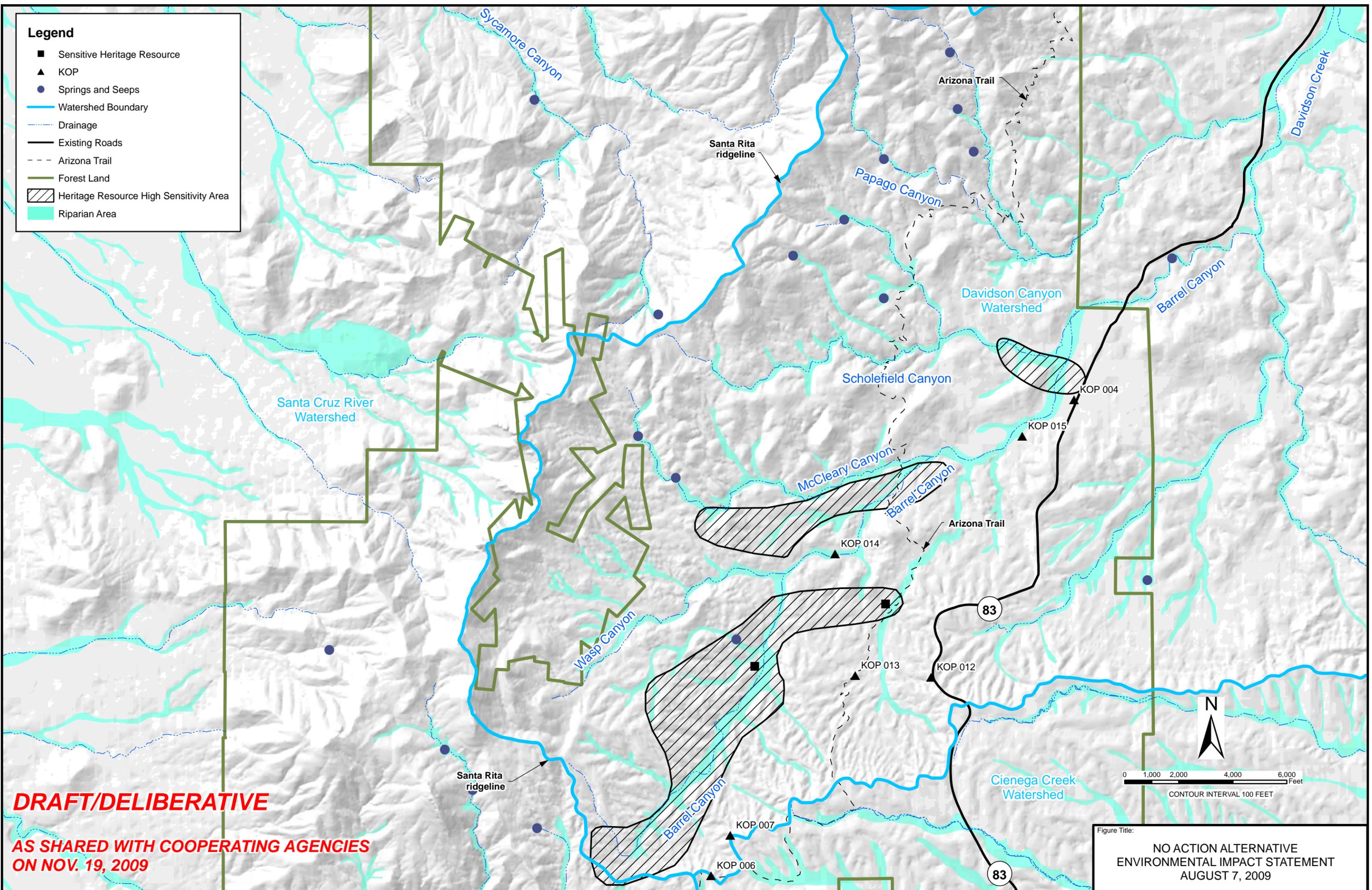
Option Element	Proposed Action	No Action	Cooperating Agency Alternative
	Barrel and McCleary	Change as related to MPO	
Total Exclusion Area (acres)	4,635	(4,635)	
Total Exclusion Area - Forest Service (acres)	3,693	(3,693)	
Total Exclusion Area - Private (acres)	942	(942)	
Total Area [1] (acres)	4,415	(4,415)	
Waste Rock Storage (tons)	719,827,000	(719,827,000)	
Waste Rock Ultimate Elevation (ft amsl)	5,450	(5,450)	
Waste Rock Area (acres)	2,000	(2,000)	
Distance Pit Center to Waste Rock Center (approx) (feet)	7,400	(7,400)	
Infrastructure Elements (cover, buttress, rockfill structures, etc.) (tons)	568,600,000	(568,600,000)	
Infrastructure Area (roads, plant site, pit)[2] (acres)	1,545	(1,545)	
Access Road - Primary (feet)	19,400	(19,400)	
Access Road - Secondary (feet)	23,200	(23,200)	
Utility Corridor (feet)	40,790	(40,790)	
Tailings Storage (tons)	543,200,000	(543,200,000)	
Tailings Storage Ultimate Elevation (ft amsl)	5,250	(5,250)	
Tailings Area (acres)	870	(870)	
Distance Pit Center to Tailings Center (approx) (feet)	8,800		
Leach Pad Process (tons)	100,000,000	(100,000,000)	
Leach Pad Ultimate Elevation – no cover (ft amsl)	5,340	(5,340)	
Leach Pad Ultimate Elevation - covered (ft amsl)	5,450	(5,450)	
Leach Pad Area (acres)	230 300 foot ultimate height	(230) None	
Estimated Haulage Distance - Waste Rock (feet)	14,475		

Rosemont Copper Project EIS - Comparison of Alternatives

Option Element	Proposed Action	No Action	Cooperating Agency Alternative
	Barrel and McCleary	Change as related to MPO	
Estimated Haulage Distance - Tailings (feet)	12,000		
Incrimental increase in haulage requirements			
Geologic Considerations			
Riparian (acres)	494	(494)	
Area included in Biological Core (acres on FS Lands)[4]	445	(445)	
Area included in Biological Core (acres on Private Land)[4]	10	(10)	
Waters of the United States (acres)	40	(40)	
Baseline Watershed Areas (Total) – est. (acres)	5,252	(5,252)	
Drainage Volume (100-yr, 24-hr Storm) – est. (ac-ft)	1,419	(1,419)	
Total diversion structures - length (feet)	23,175	(23,175)	
Unique Vegetation		0	
Springs on FS Land	CCC Dam,P-899	None	
Springs on Private Land	Rosemont		
Occupied Parcels within 3 miles of operations facility[5]	58	(58)	

Legend

- Sensitive Heritage Resource
- ▲ KOP
- Springs and Seeps
- Watershed Boundary
- - - Drainage
- Existing Roads
- - - Arizona Trail
- Forest Land
- ▨ Heritage Resource High Sensitivity Area
- Riparian Area



DRAFT/DELIBERATIVE
AS SHARED WITH COOPERATING AGENCIES
ON NOV. 19, 2009

Figure Title:
NO ACTION ALTERNATIVE
ENVIRONMENTAL IMPACT STATEMENT
AUGUST 7, 2009

D R A F T

Criteria for Compensatory Lands for Wildlife Habitat and Recreation due to Rosemont Mine:

Proximity to Rosemont and/or Santa Rita Mountains.

Proximity to Tucson residents.

Similar wildlife habitat.

Similar recreation settings.

Similar recreational uses: OHV touring, horseback riding, hiking, dispersed camping, hunting, etc.

If similar lands not available, consider other options that benefit wildlife and/or recreation: Maximize the benefit of existing protected areas by increasing their size, consider other high priority acquisitions that benefit wildlife and/or recreation, consider SDCP biological core, etc.

Provide wildlife corridors/connections between Santa Rita Mountains, Cienega Creek, and Rincon Mountains.

Size of parcel (5,000 acres +).

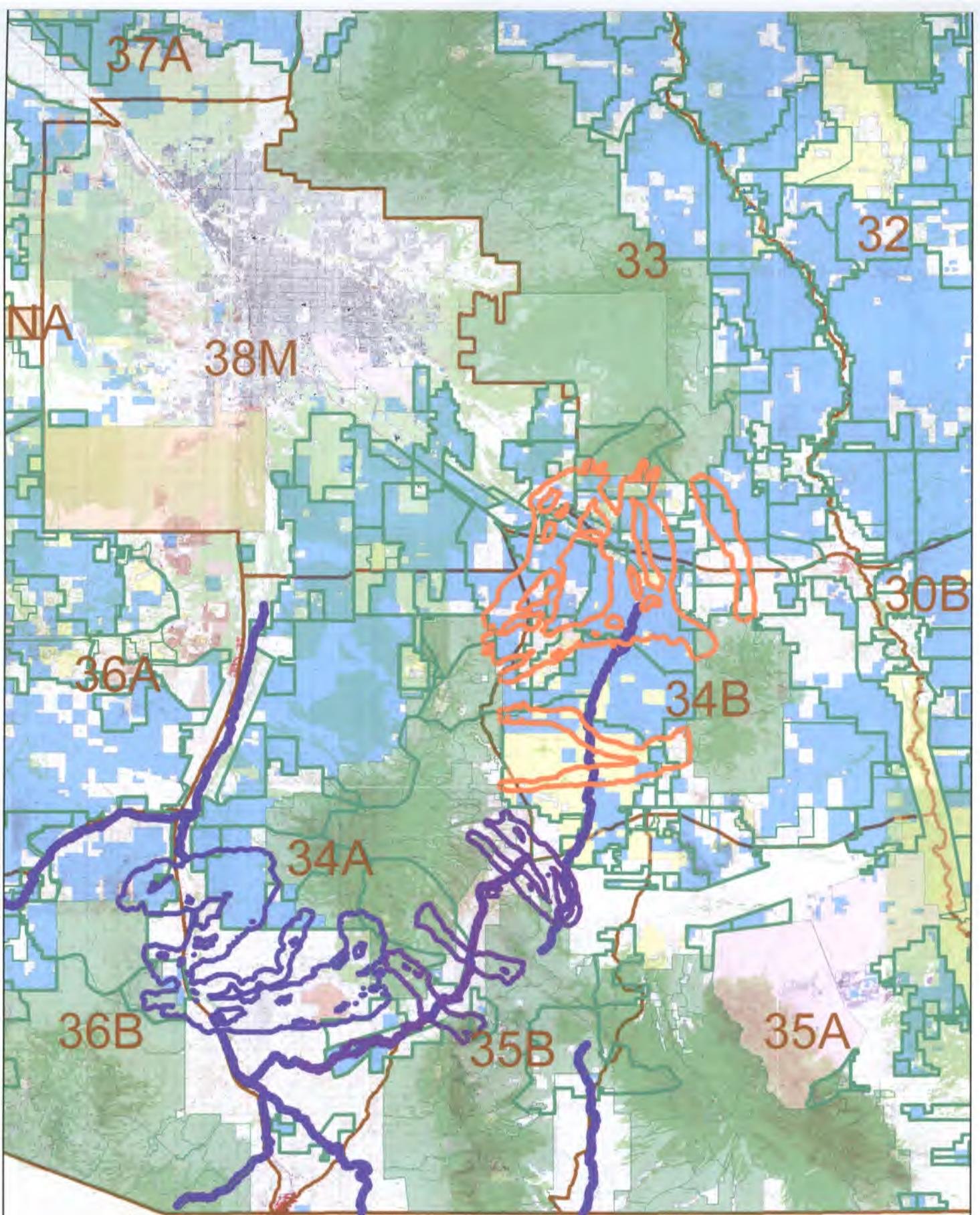
Provide "open space" (recreation, wildlife, scenery, ranching) in increasingly urban eastern Pima Co.

Availability of land for acquisition.

Options for management (USFS, TNC, etc.). *Note: probably need to be contiguous if USFS.*

Options for avoiding future impacts (e.g., ZBA or similar if USFS management).

Options for funding (Rosemont only vs matching funds from Pima Co., USFWS, AGF, TEA, etc.).



AZGF HABITAT LINKAGES

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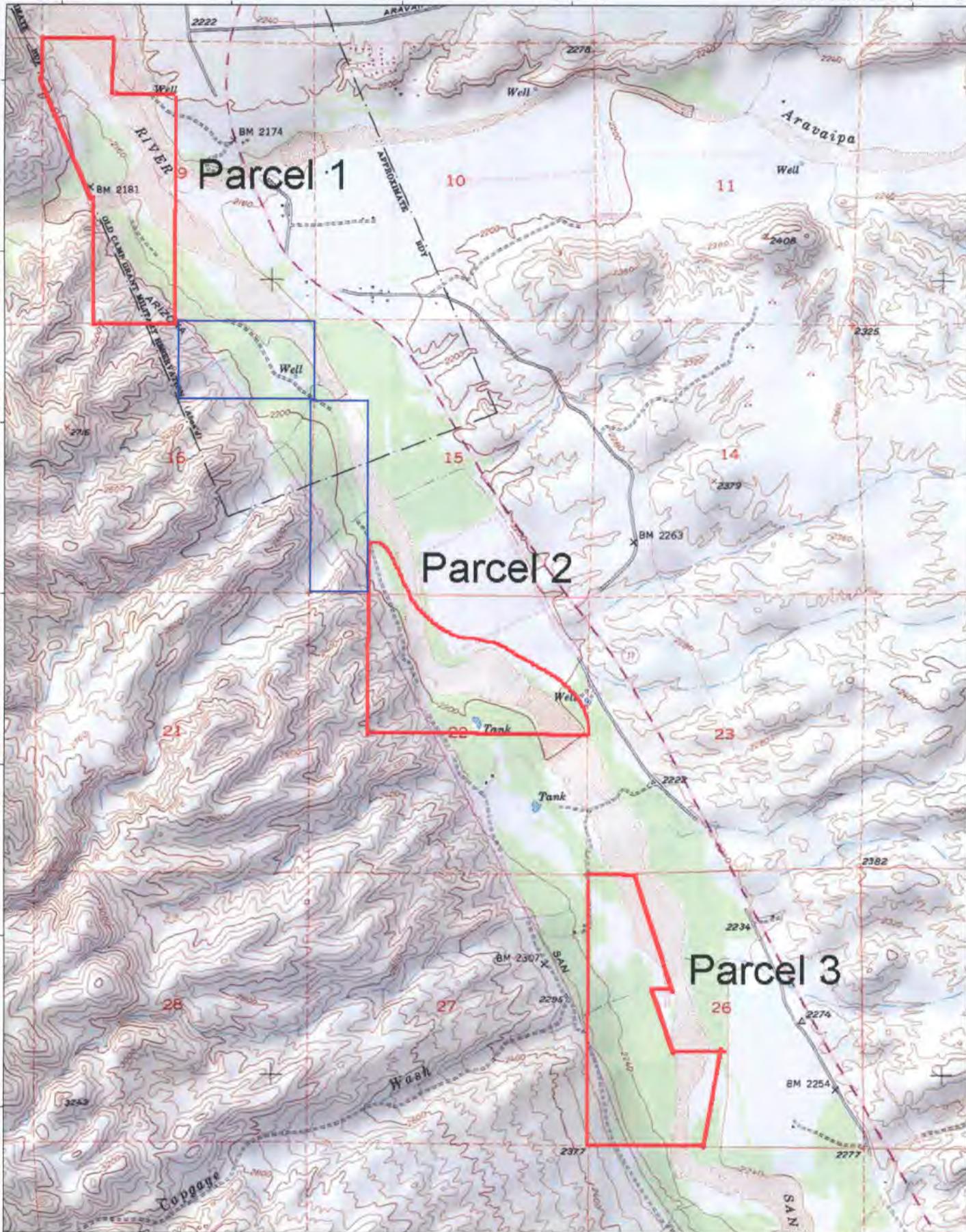
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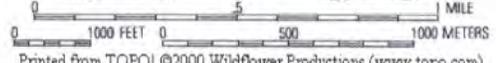
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TRIANGLE BAR PARCELS

Forest Service Mitigation Concepts – as of November 2009

Note to Cooperating Agencies – The following tables represent (1) permit requirements known to the Forest Service as of November 2009, and (2) concepts and ideas for potential mitigation measures associated with the proposed action (Mine Plan of Operation) and conceptual alternatives developed to date. No decisions have yet been made regarding which of these permit requirements and mitigation ideas or concepts will be utilized in the DEIS or incorporated into final decisions. These tables are provided as a starting point for further dialogue about permit requirements and mitigation. In completing the data requests for additional permit requirements and potential mitigation measures detailed in the letter of November 23, 2009, cooperating agencies are encouraged to review these tables and provide further detail or modifications to any of the listed items, note agency concerns with these items, and to provide additional items not yet listed. It is not necessary; however, to duplicate items already included in these tables.

Permits or Authorizations		
Agency	Permit or Authorization	Purpose
Federal		
COE	Individual Section 404 permit (Clean Water Act (CWA))	Allows for the dredging of material or placement of fill into waters of the US or their tributaries
EPA	Hazardous Waste Identification Number	For hazardous waste that is generated and transported off site in quantities in excess of 100 pounds.
USDOT	Hazardous Materials Transportation Permit	For the transport hazardous materials as defined by the USDOT.
USDA FS	Revised MPO (after the publication of the Final EIS and Record of Decision)	A revised MPO would be required to address issues in the Record of Decision.
USFWS	Biological Opinion	Ensures that the Coronado's approval of the revised MPO would not jeopardize the continued existence of a threatened or endangered species.
State of Arizona		
ADEQ	Aquifer Protection Permit	For discharge into groundwater.
ADEQ	Section 401 Certification	To be obtained prior to the discharge of any wastewater to waters of the United States.
ADEQ	Arizona Pollution Discharge Elimination System (AZPDES) Permit (Priority State enforcement of Section 402 of the CWA)	Describes project discharges to surface waters that would be regulated under Section 402 of the CWA.
ADEQ	Solid Waste Permit	Regulates disposal of solid waste on sight.
ADEQ	Hazardous Waste Management	Registration for all EPA Identification numbers.
ADEQ	Drinking Water Registration	Registration for all non-community non-transient drinking systems.
ADEQ	Construction Stormwater General Permit	Issued for construction activities.
ADWR	Groundwater Withdrawal Permits	Groundwater withdrawal rights.
ADWR	Well Drilling Permit	Issued anytime drilling may intercept the water table.
Arizona State Mine Inspector	Arizona Mined Land Reclamation Permit	For reclamation activities at the site.
ADA	Notice of Intent to clear native vegetation.	Required under the Arizona Native Plant

		Law.
SHPO	Section 106 of the National Environmental Policy Act	Protects archaeological and historical properties.
Local		
Pima County PCDEQ	Air Activity Permit	Covers activities leading up to mining and well development.
Pima County Development Services	Grading Permit	For lot development for well sites, grading, and fencing.
Pima County Zoning	Business License and Occupancy Permit	Zoning Code requirements for buildings.

Mitigation Common to All Action Alternatives

Air Resources	
Type	Mitigation
Dust Generation	Develop a dust management program for the East Access Road, Santa Rita Road, Forest System and all mine site roads including the haul roads including measures to control fugitive dust by use of BMP's such as water sprays, surface binders, and the enforcement of speed limits on all mine roads
Dust Generation	Control fugitive dust from the ore crushing, stockpile, and conveyor facilities by covering crushing and conveyor facilities and use of water sprays, as needed
Dust Generation	Control fugitive dust resulting from the management of tailings by covering conveyors and conveyor transfer points and compacting the tails as they are placed in the tailings facilities
Dust Generation	If dust from the tailings exceeds conditions set forth in the Air Activity Permit issued by Pima County, implement additional measures including the application of soil stabilizers or the mixing of stabilizing polymers with the tailings as approved by the Coronado and Pima County
Internal Combustion Engine Emissions	<p>Establish truck specifications to reduce emissions (Tier II diesel engines) and review equipment purchase options to select mine haul trucks that optimize operations to reduce the number of road miles</p> <p>To reduce VOC emissions, stipulate the use of only low-sulfur diesel fuel and - to reduce VOC emissions</p> <p>To reduce VOC emissions, provide all fuel storage tanks with submerged-fill equipment</p> <p>Establish a Park and Ride Program to encourage workers to carpool and reduce the number of personal vehicle miles driven to and from the Project</p> <p>To eliminate the need for on-site electrical generation using diesel-powered generators, construct electric lines as a first step in developing the mine.</p> <p>Utilize alternative methods for power generation, such as solar, for administration buildings</p>
Fugitive Chemical Mist Emissions	Use emitters, similar to drip irrigation, to apply the acid leaching solution to the heap to mitigate fugitive chemical mist emissions from the heap leach facility.
Fugitive Chemical Mist Emissions	Use secondary acid mist controls to mitigate fugitive chemical emissions from the electrowinning tankhouse

Grazing	
Type	Mitigation
Livestock and Wildlife Water Sources	Develop one sustainable water source for each leased pasture. Prior to implementation of this measure, submit a plan to the Coronado for approval that provides at a minimum, the locations, materials, description of the area to be disturbed and required maintenance; and that demonstrates that the construction and maintenance of the water sources does not adversely impact heritage, biological, or other sensitive resources.
Livestock and Wildlife Water Sources	Treat reclaimed areas with seed mixes according to mitigation for visual resources, ensuring that native grass seed mixes applied according to this plan and provide forage for cattle as reclamation proceeds

Emergency Management, Spill Control and Fire	
Type	Mitigation
Spill Control	<p>Prior to any change in transportation route or method update plans for spill prevention and control of hazardous materials in MPO supplements</p> <p>The plans should</p> <ul style="list-style-type: none"> • Describe the toxic or hazardous materials at the site, and how they are transported, stored, used and disposed of. • Describe the emergency procedures, equipment and personnel that would be used to respond to an accidental spill, both on site and during transport on National Forest System Lands • Describe spill response training of all company employees, subcontractors and their employees. <p>Document a plan that describes</p> <ul style="list-style-type: none"> • Monitoring procedures to ensure, that all storage and contained facilities meet the prescribed standards • All emergency first aid and spill response materials are available and stored in the proper place • All communications equipment is in working order • All shipping companies are complying with the terms of their USDOT use permit for hazardous waste shipments
Spill Control	<p>Prior to transporting any chemical or fuel not previously listed in the plans update plans for spill prevention and control of hazardous materials in MPO supplements</p> <p>The plans should</p> <ul style="list-style-type: none"> • Describe the toxic or hazardous materials at the site, and how they are transported, stored, used, and disposed • Describe the emergency procedures, equipment and personnel that would be used to respond to an accidental spill, both on site and during transport on National Forest System Lands • Describe spill response training of all company employees, subcontractors and their employees. <p>Document a plan that describes</p> <ul style="list-style-type: none"> • Monitoring procedures to ensure, that all storage and contained facilities meet the prescribed standards • All emergency first aid and spill response materials are available and stored in the proper place • All communications equipment is in working order • All shipping companies are complying with the terms of their USDOT use permit for hazardous waste shipments

Emergency Management, Spill Control and Fire	
Type	Mitigation
Spill Control	As required by federal law for storage of petroleum products at the Project, prepare a Spill Prevention Control and Countermeasures Plan (SPCC) that addresses design standards for storage facilities, and response strategies in the event of a spill
Spill Control	As required by the Forest Service for transport of hazardous materials on Forest Roads and management and storage of hazardous materials at the Project site, prepare a Spill Response Plan that includes terms requiring all suppliers of such material to submit spill response plans which describe the procedures, equipment and personnel which would be used in case of a spill during transport. Ensure requirements for transport of hazardous or petroleum materials on Forest roads include: <ul style="list-style-type: none"> • Use of single unit haul (4,500 gallon maximum, no tractor-trailer) vehicles not tandem trailers for transport of fuel • Locations of spill response materials • Provisions for radio contact with the mine site and the Pima County Sheriff • Advance plans for diversion of streams which could be affected by spills of hazardous materials • Notification procedures in the event of a spill.
Spill Control	Require all suppliers of hazardous materials or petroleum products to comply with the Rosemont Copper Company's approved Transportation and Spill Response Plans insofar as it affects any part of their operation
Spill Control	Require all vehicles hauling hazardous materials and petroleum products carry first aid and containment equipment along with a copy of the most recent spill response plan.
Spill Control	Require all vehicle drivers complete spill response, and safety training, at least once annually prior to transporting hazardous materials and petroleum products.
Spill Control	Require all suppliers of toxic or hazardous materials provide evidence of spill response training, plans, and spill cleanup materials that would be used in transporting materials to the mine.
Spill Control	Request certification that all trucks used to transport materials to the mine site meet or exceed USDOT standards for use material being transported. and provide this information to the Coronado prior to shipping hazardous materials or fuels
Spill Control	Require notification to the Coronado prior to changing types of transport vehicles, materials, or material containers for hazardous materials.
	Require annual inspection and review of <ul style="list-style-type: none"> • All storage and containment facilities to ensure they are maintained to standard and adequate to contain spills • Emergency first aid and spill response materials to see that they are current and stored in the proper place • Radio communications equipment to see that it is in working order • Transport companies to ensure that they are complying with the terms of their road use permit for shipments on Forest roads and on the mine site Document the results of the annual review, certifying to the Coronado and other appropriate agencies that all Plan requirements are being met.
Fire Protection	Comply with all rules and regulations pertaining to fire protection and health and safety of project employees.

Emergency Management, Spill Control and Fire	
Type	Mitigation
Fire Protection	Comply with Coronado requirement that operators on Forest System lands comply with procedures for protecting against starting wildfire and providing assistance in the suppression of wildfires.
Fire Protection	Comply with Mine Safety and Health Administration (MSHA) mandatory requirements for on-site fire protection
Fire Protection	Install water supply hookups on the mine site compatible with the equipment of the local wildland structural fire control agencies. Provide the locations of these hookups and any other potential sources of water, such as stock tanks, to the Coronado and update as necessary.
Emergency Management	Comply with MSHA provisions for ensuring worker safety.
Emergency Management	Develop and implement a training program that complies with MSHA standards to include annual first aid and hazardous materials training for all employees.
Emergency Management	Maintain trained personnel and equipment to respond to fires and/or medical emergencies at the mine site.
Emergency Management	Provide emergency medical technicians and land based emergency transport service from the mine to Tucson.
Emergency Management	Designate a helicopter landing facility at the mine property and maintain a standing agreement for “Life Flight” services to allow rapid transport in the case of extreme emergencies.

Heritage Resources	
Type	Mitigation
Heritage	Comply with Section 106 of the National Historic Preservation Act and associated regulations requirements for management of heritage and cultural resources on federal lands or federally funded, licensed, or permitted projects.
Heritage	Wherever possible and feasible, avoid important cultural sites.
Heritage	Continue to conduct consultation between the Coronado and all interested Native American tribes regarding Traditional Cultural Properties.
Heritage	Provide access to tribal members for the collection of traditional plant materials
Heritage	Develop a Programmatic Agreement to identify procedures for compliance with National Historic Preservation Act and other laws that includes <ul style="list-style-type: none"> • An historic properties management plan • Treatment and monitoring of historic properties • Treatment of all human remains, sacred objects, and objects of cultural patrimony discovered as a result of the implementation • Established measures for compliance with the Native American Graves Protection and Repatriation Act
Heritage	Fund a grant from Rosemont Copper Company for the development of interpretive kiosks for cultural/historical sites along the Los Colinas segment of the Arizona Trail.
Heritage	Ensure any surface disturbing activities in the vicinity of any identified cultural resource are monitored by an archaeologist.
Heritage	Cease operations near archaeological remains found or discovered during construction or mining operations

Land Use	
Type	Mitigation
Land Use	Protect or reference benchmarks, section and corner monuments prior to disturbance.
Land Use	Submit a plan that describes plans to protect or reference benchmark, section or corner monuments prior to disturbing them

Night Skies	
Type	Mitigation
Night Skies	Create a management position to develop and implement a lighting program that complies with the Pima County Outdoor Lighting Code (Ordinance 2006-91)
Night Skies	Submitted a plan for monitoring, auditing, and reporting light emissions to the Coronado for approval
Night Skies	Use shielded or hooded lights, directional lighting, or low-pressure sodium lighting in areas that will not compromise worker safety
Night Skies	Minimize decorative lighting

Noise and Vibration	
Type	Mitigation
Noise	Restrict blasting to daylight hours
Noise	Enforcing speed limits on the East Access Road
Noise	Use attenuated backup alarms on the East Access Road
Noise	Prohibit the use of un-muffled engine brakes (such as Jake Brakes®) on the East Access Road
Noise	Comply with MSHA requirements for worker health and safety, including requiring noise protection for workers in high noise areas.
Noise	Comply with all health and safety requirements pertaining to noise generation
Vibration	Use computer-based blasting technologies that phase the blasting sequences to minimize vibration
Noise and Vibration	Prepare a Noise and Vibration Monitoring Plan to be approved by the Coronado. Annually submit noise and vibration monitoring results to the Coronado for review.

Public Health and Safety	
Type	Mitigation
Safety	Prohibit public entry into the mining area
	Sign and fence the active mining area to minimize the potential for the public to accidentally enter any portion of the mine operational area

Recreation	
Type	Mitigation
Recreation Access	Maintain access around the operations so that access from the eastern portions of the Santa Rita Mountains would not be cut off from the western, including maintaining access across Gunsight Pass
Recreation Access	Construct a perimeter road would around the mining operations that would link existing roads.
Recreation Access	Continue to work within the Arizona Game and Fish Cooperative Land Owner Program (CLOP) which would help ensure public access to private lands not affected by mine-related operations

Recreation	
Type	Mitigation
Open Space	Place private lands on the west side of the Santa Rita Mountains in the Game and Fish Cooperative Land Owner Program (where safety considerations permit).
Arizona Trail	In coordination with the Coronado and the Arizona Trail Association, fund realignment and relocation of a portion of the Las Colinas segment of the Arizona Trail
Arizona Trail	Provide a water station for horses at the Los Colinas segment of the Arizona Trail
Arizona Trail	Fund interpretive signage along a portion of the Arizona Trail
Arizona Trail	Complete an additional segment of the Arizona Trail up to “Sentinel Peak,” including an observation point

Riparian	
Type	Mitigation
Riparian	Provide fenced exclosures for highest value riparian habitat on private lands
Riparian	Exclude selected areas from livestock grazing that would have the potential for priority high quality riparian use during reclamation and post-mining.
Riparian	Fence off a portion of livestock water areas for priority wildlife areas.
Riparian	Identify and exclude a portion of the stock ponds in leopard frog habitat that would provide protection for frog habitat within the pond area.

Socioeconomic	
Type	Mitigation
Community Endowment	<p>Develop a community endowment program</p> <ul style="list-style-type: none"> • Fund an initial \$25 million permanent endowment • Fund an additional \$500,000 annual contribution during the life of mining operations <p>The Endowment would be managed by an independent Board of Trustees, which would provide annual reports to the Coronado documenting the administration of the endowment.</p>
Research	Support research into sustainable mineral development technologies as detailed in a proposal to the Coronado that identifies funding and detail objectives and which establishes reporting requirements.

Soils	
Type	Mitigation
Soils	Recover soil material and materials suitable for growth media from areas of project disturbance where practicable as identified in the Reclamation Plan.
Soils	Conduct reviews of soil erosion and productivity following all surface disturbing activities and large storm events. As appropriate, use the results of this monitoring to update the plans for erosion, surface water control, and reclamation.
Growth Media	Provide for incorporation of additional growth media if required based on site-specific analysis and study results.
Growth Media	To the maximum extent practicable, incorporate organic material produced during grubbing into the growth media.

Soils	
Type	Mitigation
Financial Assurance of Reclamation	Annually review the MPO including the Reclamation Plan and financial assurance on an annual basis, and as appropriate, modify or supplement to address soil issues.

Transportation	
Type	Mitigation
Access	Ensure access road design meets Coronado specifications (USDOT, 2003) for road width, grade, alignment, surfacing, drainage, quality control and signing and any exceptions to these standards meet with Coronado approval.
Access	Ensure Coronado pre-approves all location or design changes for access and haul roads
Access	Develop plans to control public access to mine areas such as fencing and posting to prohibit unauthorized entry to hazardous areas, and that provide for administrative traffic, as well as access for Forest visitors, contractors or operators
Access	For all access roads, guarantee administrative and contractor use of the mine access road during the active life of the mine including construction, reclamation and long-term monitoring
Access	Coordinate all use of approved and alternative access routes within the Coronado during the construction period
Road Construction	Comply with Forest Plan requirements for road construction and natural resource protection
Road Construction	Submit designs for road construction and improvements to the Coronado for review and approval prior to initiating construction
Employee Transport	Develop Park and Ride Program (PARP)
Transport	Develop a written policy for compliance with all Forest traffic rules and require that all contractors comply with State and Forest rules for oversize and overweight loads
Scheduling	Alter trucking schedules to avoid times when school busses are operating on State Route 83.
Signage	Maintaining all signs, fencing and other features of the mine safety and security program
Safety	Prohibit use of all secondary trailers (pups)
Safety	Include training requirements for all drivers including a requirement that all new drivers transporting fuel, chemicals or concentrate make their first trip to the site accompanied by a company representative in the transportation and/or spill control plan
Safety	Provide pilot car accompaniment for all fuel, chemical supply and concentrate trucks, all tractor trailer units and any single unit vehicles more than 45 feet in length
Safety	annually to review the MPO, including the transportation plan and modify or supplement as necessary to address transportation and safety issues
Safety	Develop a testing and inspection schedule as outlined in Coronado guidelines (USDOT, 2003), acceptable to the Forest for all construction and reconstruction of mine access and haul road
Safety	Providing “as-built” certification of all items by a licensed professional engineer
Safety	Ensure the Forest Administrator reviews the Project construction during construction to ensure compliance with approved Plans.
Safety	Forward certification, results of tests and inspections, to the Forest for review and approval.

Transportation	
Type	Mitigation
Safety	Annually inspect all access and haul roads for the purpose of certifying that all design features are functioning as designed, and/or to identify any needed improvements or changes
State Route 83	Design for two (2) truck turnouts along SR83
State Route 83	Design for up to five school bus turnouts along SR83
State Route 83	Establishing Park and Ride areas
State Route 83	Provide ADOT with design alternatives for the intersection of State Route 83 and the East Access Road that, at a minimum, include acceleration/deceleration lanes and divided highway pass-through lanes

Water Resources	
Type	Mitigation
East Side Groundwater Resources	Develop a water resources monitoring program to provide enhanced water monitoring to detect, document, and quantify effects of mining. The modified monitoring plan would support a performance-based approach to compliance assessment, where groundwater quality data from select operational monitoring wells to be located down-gradient of the mines would be evaluated for compliance. If performance criteria exceed pre-established targets (e.g. if the calculated groundwater load were to result in exceedance of a surface water compliance target), a response action would be required by the mine to reduce the groundwater load to acceptable levels.
East Side Surface Water Resources	Provide a Stormwater Pollution Prevention Plan (SWPPP) that includes: <ul style="list-style-type: none"> • Permanent water control structures that would exist beyond the life of mine • Culverts on streams designed to handle flow from the 100-year storm event (TBD). • Road sediment control BMPs designed for the 25 year, 24-hour precipitation event (TBD). • Utilizes best management practices for project sediment control. • Sediment control monitoring.

Sediment	
Type	Mitigation
Runoff	Divert runoff from undisturbed areas around all surface disturbances through ditches or berms. Design diversions that would exist beyond life of mine would to safely pass flows from the 100-year, 24-hour storm event
Non-Point Sediment	Non-point source sediment control measures would consist of practices such as: <ul style="list-style-type: none"> • Disturbing the smallest area practical • Concurrent reclamation when feasible • Intercepting and treating runoff from disturbed areas in accordance with best management practices and the Storm Water Pollution Prevent Plan (SWPPP) to prevent sediment from leaving the site • Diversion of all runoff from undisturbed areas around areas of disturbance.
Non-Point Sediment	Prohibit commencement of surface disturbing activities until provisions for erosion and sediment control have been reviewed and are in place.
Non-Point Sediment	Use berms and ditches to control runoff from road surfaces.
Non-Point Sediment	Ensure ditches include settling basins, hay bales or silt fences to control sediment

Sediment	
Type	Mitigation
Runoff	Place sediment control devices such as stormwater dispersion terraces, silt fences, gabion sediment traps, or straw bale barriers as needed to minimize road runoff on the undisturbed areas between and downhill of roads.
Revegetation	To minimize the sediment transport from these disturbed areas, seed road cuts and fills with a quick growing cover consisting of native species approved by the Coronado and adapted to site conditions as soon as practicable after construction
Revegetation	Use hydroseeding for road revegetation on steeper or more erodible cuts or fills as appropriate
Sediment Control	Inspect all diversions and sediment control or treatment measures and certify that the facility was constructed as planned, prior to use
Sediment Control	Inspect and maintain sediment control measures after severe storm events, document the results, and make submit them annually for review by the Coronado
Sediment Control	As necessary, supplement the MPO with site-specific plans for erosion and sediment control facilities and practices in areas that are proposed for disturbance
Sediment Control	Review the site-specific plans for erosion and sediment control facilities and practices prior to construction to ensure that they meet the intent of the approved MPO and the Coronado Preferred Alternative.
Sediment Control	Approve the design and location of sediment control structures prior to installation
Sediment Control	Annually, review and approve the effectiveness of ongoing erosion and sediment control measures prior to the next year's operation.

Reclamation	
Type	Mitigation
Financial Assurance	Require a bond or other financial assurance sufficient to cover the actual cost of reclamation.
Facilities Reclamation	Remove ore processing and other ancillary facilities, including foundations, and return the areas to as near the original contour as practicable, including replacing topsoil and revegetating
Land Reclamation	Require reclamation activities to maintain water quality and establish native vegetation
Land Reclamation	Submit cross sections and topographic maps, which display post-mining topography for all reclaimed areas. Ensure slopes on these areas are three to one or less, unless it can be demonstrated to the satisfaction of the Coronado that a steeper slope can be reclaimed to the same standard and stocking criteria.
Land Reclamation	Edges of topographic disturbances would be blended with adjacent undisturbed land and would have no sharp topographic breaks.
Land Reclamation	Restore soil storage sites to pre-mine topography upon removal of stockpiles.
Land Reclamation	Re-contour and revegetate all roads, including haul roads that are not needed for long-term access needs to the extent practicable.
Land Reclamation	Reclaim roads as soon as the lack of need for future use is identified
Land Reclamation	Revegetate with native species to minimize the amount of time to return to near natural conditions and to minimize the spread of non-native species.
Land Reclamation	Salvage growth media from disturbed areas sufficient to cover all disturbed areas with 1 foot of cover.

Reclamation	
Type	Mitigation
Land Reclamation	Place soil stockpiles in locations that are stable, isolated from surface and subsurface water, gently sloping and well drained.
Land Reclamation	Ensure stockpiles are convex in shape and have no more than three to one slopes.
Land Reclamation	Immediately revegetated stockpiles to prevent erosion.
Land Reclamation	Use sediment control structures to ensure that no soil material is lost
Land Reclamation	Identify appropriate reference sites in the Project vicinity to determine native species occurrence and cover and use this information to develop a long-term site reclamation plan. Based on the reference site data, appropriate native seed mixes and/or plant lists would be reviewed and approved by the Forest Service prior to any site revegetation.
Land Reclamation	For short-term site reclamation, such as seeding topsoil stockpiles, utilize native species or short-lived non-native species, such as annual grasses or forbs. Prohibit use of persistent non-native species for reclamation.
Land Reclamation	Use the following reclamation criteria to minimize impacts to the environment: <ul style="list-style-type: none"> • Select vegetative species based on the following priorities: <ul style="list-style-type: none"> ○ Native species capable of being self-sustaining on the selected site ○ Erosion control and stability ○ No non-native plants. • Use sediment and erosion control measures to prevent erosion to the extent possible on reclaimed surfaces, and to retain sediment onsite if erosion does occur. • Maintain all sediment control measures until the reclamation effort has met established standards and bonds have been released. • Isolate all toxic or hazardous substances from the surface environment
Noxious Weed Control	Submit a weed control plan to the Forest Service for review and approval that includes specifics on reducing noxious weed introduction and weed control in the Project area.
Noxious Weed Control	Ensure noxious weed control activities at the site are ongoing to prevent the establishment of noxious weed populations.
Reclamation	Annually submit a summary of reclamation activities including monitoring that includes maps and photos that provide an accurate accounting of disturbed and reclaimed acreage; plans that project the following seasons disturbance and reclamation work; and details on vegetation removal and treatment, soil salvage, storage and revegetation, and annual reclamation requirements.
Reclamation	Conduct an annual Forest Administrator inspection of site reclamation
Reclamation	Record species composition and canopy cover of seeded/planted and “volunteer species.” If seeded/planted species have not become established following the first year, undertake supplemental seedings and plantings. Remove any noxious weeds that invade revegetated areas by mechanical or other approved methods specified in the weed control plan. Conduct additional annual monitoring for a minimum of 3 years or until successful revegetation is confirmed by Forest Service. Prepare and submit a report assessing the status of the revegetation program to the Coronado and other appropriate agencies. Modify or supplement the MPO as necessary to address reclamation issues.

Visual Resources	
Type	Mitigation
Land	Complete a comprehensive plan to mitigate visual impacts that incorporates information gained during on-sight studies conducted independently to determine the effectiveness of a variety of growth media and plant pallets. The Plan would, at a minimum incorporate the “ <i>Diverse Habitat Mosaic Reclamation Approach</i> ” that includes a variety of surface treatments, varying slope lengths and angles with less prescriptive water management techniques.
Land	Reestablishing drainage areas that integrate talus slopes, rocky outcrops, trees, and riparian characteristics. In addition to the predominant grasslands with forbs and shrubs plant communities, re-establish other existing plant communities at selected locations on site, including but not limited to agave, a variety of trees, ocotillo, and shrubs. Plant and seed to mimic the existing mosaic of vegetation and to provide diversity to the visual landscape. Work variations of the drainage versus upland areas into the design such that the prescriptive ridge and drainage considerations would be augmented by other treatments to provide a more variable landform
Land	Ensure all plantings, seed mixes, and their suppliers are approved by the Coronado prior to planting..
Land	Paint, stain, or vegetate portions of the pit wall and road cuts visible from Key Observation Points (KOPs). Ensure all paints or stains are approved by the Coronado prior to use.
Facilities	Paint all buildings and other major project features with non-reflective, earth-tone paints, approved by the Forest Service.

Wildlife and Vegetation	
Type	Mitigation
Listed Species	Follow the conservation measures developed in consultation with the USFWS under Section 7 of the Endangered Species Act to address impacts to federally listed threatened and endangered species, or those proposed for listing as documented in the Biological Opinion from the USFWS
Wildlife Habitat	Address long-term restoration wildlife habitats and existing vegetation types in the Reclamation Plan
Wildlife Habitat	Provide for measures designed to produce high value wildlife habitat in reclamation efforts. These measures would include reseeding with mixtures of native plants of value to wildlife; and creation of diverse habitats for game and non-game animals. Use native species to ensure achievement of self-sustaining vegetation following reclamation. Establish vegetation reference areas adjacent to the Project to quantify reclamation goals for vegetative cover. Conduct surface vegetation clearing in compliance with Forest Service guidelines and practices and only after receiving Coronado approval.
Weed Control	Institute a weed control plan that conforms to Coronado and State of Arizona guidelines.

Wildlife and Vegetation	
Type	Mitigation
Wildlife	Educate employees about: <ul style="list-style-type: none"> • Avoidance of inadvertent or purposeful harassment of wildlife • Recognition and protection of state and federal threatened and endangered species and Forest Service sensitive species in the Project area • Reporting of any threatened, endangered, or sensitive plant or animal species to the Forest Service or Arizona Game and Fish Department
Power Poles	To prevent accidental electrocution of raptors, follow the guidelines in <i>Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996</i> (APLIC, 1996) when constructing new power poles
Vehicle/Wildlife Collisions	Report vehicle/wildlife collisions on mine and Forest roads
Water Sources	Upgrade the Rosemont Ranch livestock water system with goal of one sustainable wildlife water source in each of the individual pastures under lease to Rosemont
Fencing	Provide fenced livestock enclosures for highest value riparian habitat on Rosemont Ranch private lands.
Fencing	Identify and protect with fencing, that portion of the stock ponds in leopard frog habitat that would provide protection for frog habitat within the pond area.
Bat Habitat	Upgrade protection of selected bat habitat on Rosemont Ranch private lands
Offsite Measures	Implement specified areas of offsite mitigation to meet permit conditions or stipulations of US ACOE, US DOI FWS, BLM, and other cooperating agencies such as the AGFD.

Other Mitigation	
Type	Mitigation
Annual Review	Conduct an annual review with the Coronado to determine if activities are in accordance with the approved Plan and if any changes to the MPO or financial assurance are needed
Annual Report	Provide an annual report summarizing mining, reclamation, and monitoring activities and projecting proposed activities for the coming year.
Permit Changes	Provide notice to the Coronado and make appropriate modifications to the MPO if there are significant changes to project permits (such as NPDES, 404 or Air Quality).
Testing	Throughout the life of the mine, test waste rock and tailings materials to evaluate potential for acid generation and metals leaching