

Memorandum

To: File

CC:

From: Chris Garrett, SWCA

Date: October 30, 2013

Re: Response to Cooperating Agency Comments on July 1, 2013 Preliminary Administrative FEIS

The Preliminary Administrative FEIS was distributed to the cooperating agencies on July 1, 2013 for review and comment. A comment period of 30 days was allowed, but was later extended to August 15, 2013 by the Forest Supervisor upon request from multiple cooperating agencies.

Verbal and written comments were received from 12 agencies, including:

- Arizona Department of Environmental Quality
- Arizona Game and Fish Department
- Arizona State Parks
- Arizona Geological Survey
- Bureau of Land Management
- Environmental Protection Agency
- National Park Service
- Pima County
- Smithsonian Astronomical Observatory
- Tohono O'odham Nation
- Town of Sahuarita
- Army Corps of Engineers

In addition, verbal comments were received from Rosemont Copper, who had the opportunity to review the version of the preliminary administrative FEIS posted for public access.

The comment letters were reviewed in full, and then parsed into individual comments for further review and response. The purpose of this memorandum is to document the process for reviewing these comments and to document the internal responses and actions taken on these comments. In total, approximately 1,090 individual comments were reviewed and responded to.

The attached spreadsheet documents the comments received and the response to each comment. Where appropriate, changes were made to the FEIS or incorporated into the draft ROD in order to address the comment. Attempts were made to obtain and review all new information brought forward.

Comments regarding Mitigation and Monitoring

The attached spreadsheet identifies responses in two colors. Green shading indicates that responses were reviewed and resolved. Note that resolution may or may not have resulted in changes to the FEIS, depending on the appropriateness of the comment.

Orange shading indicates that the comment is related in some way to mitigation or monitoring. In general, there were four types of comments in this category:

- Comments suggesting changes to, or criticism of, existing mitigation or monitoring measures included in Appendix B of the FEIS
- Comments suggesting new mitigation or monitoring measures
- Comments requesting identification and discussion of contingency plans tied to monitoring measures
- Comments requesting specific management actions tied to monitoring measures

All comments in the above 4 categories were pulled together and provided to the Coronado ID Team on August 23, 2013, as well as being discussed during an ID Team meeting on August 21, 2013. These comments were further reviewed with the Forest Supervisor, including any ID Team input received, during a management meeting on September 3, 2013. New mitigation or monitoring measures were developed and existing mitigation or monitoring measures were revised as deemed appropriate by the Forest Supervisor.

In general it was found that requested contingency plans and management actions tied to mitigation/monitoring measures were not appropriate for inclusion in the FEIS. In a number of other instances, agencies brought forward mitigation and monitoring measures that are beyond the authority of the Forest Service or other regulatory or permitting agency. In many other cases, it was determined to be premature to develop

remedial actions for an issue before it is known the cause, location and magnitude of the issue. This is particularly true for issues related to water quality or water resources. The monitoring developed and described in Appendix B is meant to identify problems if they occur and help define what might be causing the problem. However, additional characterization activities and remedial actions would be entirely site-specific, and would be carried out as required under law or regulation. Codifying the specific response in the FEIS was not determined to be necessary.

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
2	Pima County - Julia Fonseca	3	Geology	2	17-18	What are the referenced alterations to the pit design? Which pit design is the Forest analyzing in this part of the EIS?	<u>Resolution - Text has been added to the FEIS to make this clear.</u>
3	Pima County - Julia Fonseca	3	Geology			Figure nor text does not disclose which pit and waste-tailing pile is being analyzed in this part of the EIS.	<u>Resolution - Text has been added to the FEIS to make this clear.</u>
4	Pima County - Myers	3	Groundwater Quantity			The AFEIS did not consider pit lake water quality at time periods on than 200 years. Pima County had requested this in previous comments. Because pit lake geochemistry can change considerably with time, this is a significant lack of disclosure; the pit lake may have much worse water quality at earlier or later times, but the AFEIS has not provided information or discussion regarding other time periods.	<u>Resolution - The decision to use 200 years to model the pit lake water quality has been documented in a memo for the record that is now referenced in the FEIS.</u>
5	Pima County - Julia Fonseca	3	Soils	2 and FF		What are Rosemont's obligations with respect to reclamation, reclamation monitoring, and dealing with areas of erosion during temporary cessation of operations?	<u>Resolution - A discussion of temporary cessation of operation has been incorporated into Chapter 2.</u>
6	Pima County - Julia Fonseca	3	Springs	58	9_10	Says Conservation Easements but I saw restrictive covenants in the Appendix B? RCs are much less effective.	<u>Resolution - Appendix B says restrictive covenants or conservation easements. Language has been changed to match.</u>
7	Pima County - Julia Fonseca	3	Springs	Table 108	Issue 3d.3	With respect to the No Action alternative, the table says no lowering of the water table is predicted. There is a prediction that increased water demands in the Cienega groundwater basin could exceed the amount of groundwater discharged annually. See http://azconservation.org/downloads/sustainable_water_management_in_the_southwestern_united_states	<u>Resolution - This information has been incorporated where appropriate.</u>

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8	Pima County - Brian Powell	3	Springs, Riparian	55	19	The document claims that the BLM/AZGFD action of reintroducing beaver to Cienega Creek will have a beneficial impact on riparian resources. This is a very simplistic assessment and will require more attention, because although these impacts may be beneficial in some areas of upper Cienega Creek, Pima County has serious concerns that this action will negatively impact the County's Cienega Creek Natural Preserve.	<u>Resolution - This description has been modified to reflect Pima county's comment</u>
9	Pima County - Julia Fonseca	3	Surface Water Quantity	NA		EIS fails to disclose Rosemont's obligations for surface water quality maintenance during temporary cessation of operations.	<u>Resolution - A section on temporary cessation of operations has been added to Chapter 2.</u>
10	Pima County - Brian Powell	3	Bio	111	39	The EIS acknowledges that there will be direct loss of Sonoran talussnail and Santa Rita talussnail habitat (which is known to be occupied) but the EIS only suggests that individual could be crushed. An estimate of the number of individuals that would be killed would be honest. Because no mitigation efforts are proposed, will there be no attempt to minimize mortality for this species? No collection or relocation? What about impacts from loss of slope stability to the west of the pit	<u>Resolution - No change. Although the Sonoran talussnail is petitioned for listing under the ESA, neither species are federally protected. It is not feasible to estimate the numbers of individuals that may be crushed by the project.</u>
11	Pima County - Brian Powell	3	Bio	115	34	Regarding the jaguar, the FS Supplemental BA states: "Although the potential effects of roads have been discussed in the June BA and October SBA, the potential for road-mortality may have not been adequately addressed." In its determination in the EIS the FS also fails to take into account the fact that the mine, which will stretch from the ridge of the Santa Rita Mountains to the west to almost Highway 83 in east will significantly increase the potential for mortality of jaguars along Highway 83. This fact is acknowledged indirectly by way of a mitigation measure to use infrared triggered cameras as mitigation (a measure that I suggest is questionable). Nevertheless, this fact needs to be acknowledged and analyzed.	<u>Resolution - text has been added to describe in more detail the potential impacts from roads and the likelihood of these impacts.</u>
12	Pima County - Brian Powell	3	Bio	116	1	The FS, by way of reports by SWCA (cited as SWCA 2012b), claims that "the Project will entail a perimeter fence encompassing approximately 6,990 acres that will likely exclude jaguars from the mine site...the perimeter fence of the Project will exclude jaguars, but will not preclude individuals from moving around the Project. Thus, the perimeter fence will not preclude the movement of jaguars within the northern Santa Rita Mountains". (Note that this is almost the exact same language used in the company's own report (via Westland). First, the confusing statement "will exclude jaguars, but not preclude individuals from moving around the Project" is interpreted to mean that jaguars can move around project areas (e.g., transmission lines, access roads) outside of the perimeter fence. Elsewhere in the document (Chapter 2) it is claimed that the perimeter fence will be a 4-strand wire fence and so will the security fence in areas outside of the main access and guard shack areas. Therefore, the two fences will not exclude jaguars from the project site and will therefore put an individual in danger of mine-related activities, equipment, and personnel.	<u>Resolution - no change. The comment is not clear.</u>
13	Pima County - Brian Powell	3	Bio	117	5	Though most of the bats analyzed in the process eat insects, they are known to drink a lot of water from open sources. An analysis should be undertaken to determine what impact drinking pit water will have on these species. This fact has not been analyzed.	<u>Resolution - the text has been changed to include that bats that drink from the pit lake may be impacted.</u>
14	Pima County - Brian Powell	3	Bio	117	41	Analyses based on old data (e.g., Botteri's sparrow, rufous-winged sparrow, and varied bunting.... have been documented in the proposed project area, but all are listed as rare to uncommon (Davis and Callahan n.d. [1977]) should be reevaluated.	<u>Resolution - These comments were provided to the Forest Service specialists for consideration and any suggested changes incorporated into the text.</u>
15	Pima County - Brian Powell	3	Bio	121	1	Disclose full impacts to Coleman's coralroot in other areas of McCleary.	<u>Resolution - no change.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
16	AGFD	3	Biological Resources	104	41-42	COMMENT: Correction: AGFD has confirmed the presence of chytridiomycosis in the Santa Rita Mountains. RECOMMENDATION: The Department recommends adding this finding to the FEIS.	<u>Resolution - text has been added to reflect this.</u>
17	Rosemont - Melissa Notes	1	Chapter 1			Really good technical document, need a better demonstration of compliance of Federal laws (usually in Chp 1) 13175 -Tribal Consultation - Flood Plain -Migration Birds -Wetlands	<u>Resolution - address in the ROD.</u>
18	Rosemont - Melissa Notes	1	Chapter 1			Tribal Consultation -should demonstrate that it is overarching -not only to cultural sites.	<u>Resolution - Added a statement in the Tribal Consultation section in Ch 1 saying that all tribal concerns were addressed</u>
19	Rosemont - Melissa Notes	1	Chapter 1			Specify in Cultural section whether tribes or tribal governments are against project.	<u>Resolution - No change. There is no statement saying that tribe(s) are against anything in Chapter 1.</u>
20	Rosemont - Melissa Notes	1	Chapter 1			Cooperating Agency list and why they are cooperators	<u>Resolution - the section on consulting agencies in chapter 1 already says the signed MOUs are in the record. No changes needed.</u>
21	Rosemont - Kathy	3	Transportation/Access	11	6	TYPOS - appears a word is missing - similar to last item	<u>Resolution - clarified through punctuation.</u>
22	TON	3	Required Disclosures Unavoidable Adverse Effects	6	2	Impacts to Ce:wi Duag and dzil enzho should be disclosed.	<u>Resolution - No change. The discussion of impacts is contained in the Cultural Resources section in Chapter 3. The intent of this section of the Required Disclosure section is to identify if any of the impacts disclosed in Chapter 3 is avoidable.</u>
23	Pima County - Linda Mayro	3	Required Disclosures Unavoidable Adverse Effects Cultural Resources	6	2	Impacts to the traditional cultural property Ce:wi Duag and dzil enzho need to be disclosed.	<u>Resolution - No change. The discussion of impacts is contained in the Cultural Resources section in Chapter 3. The intent of this section of the Required Disclosure section is to identify if any of the impacts disclosed in Chapter 3 is avoidable.</u>
24	Rosemont - Melissa Notes	1	Chapter 1			ACOE Purpose and Need - usually the Cooperator has their own - not refer to 404. Add in ACOE in authority and need to comply with NEPA	<u>Resolution - ACOE made no comments on their P&N. No changes will be made.</u>
25	Rosemont-Patti	1	General			Good technical document, but very hard to discern whether laws and regulations have been complied with. Did not see a "compliance with laws and regs" section	<u>Resolution - address in the ROD section on Compliance with Laws and Regulations.</u>
26	Rosemont-Patti	1	General			Need to be clear that tribal consultation is overarching, not just cultural issues	<u>Resolution - modified a sentence in Tribal Consultation section in ch 1.</u>
27	Pima County - Loy Neff	1	Issue 6A: Factors for Alternative Comparison	20	15-20	This section discusses Traditional Cultural Places (TCP) at same scale as individual Historic Properties (Sites), which minimizes assessment of effect on TCPs. The discussion should account for the difference in scale of the property types and identify range of resources within a Historic Property and the broad range of resources within a TCP for which effect must be assessed.	<u>Resolution - No change to issue statement. Refer to Melissa for consideration for analysis in cultural section</u>

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28	Pima County - Linda Mayro	1	Issue 6C: Sacred Sites	20	35-39	This section does not identify Ce:wi Duag (Santa Rita Mountains) as a traditional cultural property that is sacred to the Tohono O'odham; nor does it identify dzil enzho (Beautiful Mountain) as a site sacred to the Western Apache. The Hopi, Zuni, Apache, Pascua Yaqui, and Tohono O'odham all claim the Santa Rita Mountains as a traditional cultural place. Huerfano Butte is also claimed to be a TCP by the Tohono O'odham, but not identified. By only identifying the different property types found within the TCP, the very significance of a TCP and its importance the affected tribal groups is greatly diminished. A TCP is more than the sum of its parts.	<u>Resolution - No change to issue statement. Refer to Melissa for consideration for analysis in cultural section</u>
29	Pima County - Linda Mayro	1	Issue 6C: Sacred Sites	21	1_2	This section does not identify Ce:wi Duag (Santa Rita Mountains) as a traditional cultural property that is sacred to the Tohono O'odham; nor does it identify dzil enzho (Beautiful Mountain) as a site sacred to the Western Apache. The Hopi, Zuni, Apache, Pascua Yaqui, and Tohono O'odham all claim the Santa Rita Mountains as a traditional cultural place. Huerfano Butte is also claimed to be a TCP by the Tohono O'odham, but not identified. By only identifying the different property types found within the TCP, the very significance of a TCP and its importance the affected tribal groups is greatly diminished. A TCP is more than the sum of its parts.	<u>Resolution - No change to issue statement. Refer to Melissa for consideration for analysis in cultural section</u>
30	Pima County - Sarah Walters	1	Issues	15	15	The emissions of methane (CH4) and nitrous oxide (N2O) are known to have a greater impact on climate change when compared to the impact of CO2 emissions of the same magnitude. The PA-FEIS states that the emissions of these gases would be 'much smaller than the level of CO2 emissions associated with the project.' However, 'much smaller' is not defined. Given the potency of these gases the anticipated levels of CH4 and N2O emissions should be disclosed rather than excluded. The impact of these emissions should be evaluated along with the impact of the CO2 emissions using the CO2 equivalence of the anticipated emissions of CH4 and N2O.	<u>Resolution - No change to issue statement. Note that this issue has been fully and quantitatively addressed in the air quality section.</u>
31	Pima County - Julia Fonseca	1	Public Health and Safety	1		The Forest Service has re-defined the mine life. The Forest should examine alternative operational time frames instead of re-defining the mine life from what was originally proposed in the MPO, and in the Draft EIS.	<u>Resolution - mine life was not redefined, but clarified in response to comments on the DEIS that there were differences in mine life projections in different sections and supporting documents. No change as this approach was vetted with RCC and the Forest Supervisor.</u>
32	Pima County - Julia Fonseca	1	Public Health and Safety	1		What triggers closure as opposed to temporary cessation of operations? Who decides when closure occurs?	<u>Resolution - a discussion of temporary cessation will be included in chapter 2.</u>
33	Pima County - Julia Fonseca	1	Public Health and Safety	1		Temporary closures have potential to significantly affect the human environment. Where is the effect of temporary closures analyzed?	<u>Resolution - a discussion of temporary cessation will be included in chapter 2. However, we cannot and should not, and under NEPA are not required to analyze arbitrary and speculative events that may or may not happen.</u>
34	Pima County - Julia Fonseca	1	Public Health and Safety	1		What are Rosemont's obligations during temporary cessation?	<u>Resolution - a discussion of temporary cessation will be included in chapter 2.</u>

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35	Pima County - Julia Fonseca	1	Public Health and Safety	2		Figure 1 does not show the proposed action (MPO footprint)	<u>Resolution - We made a conscious decision to show the preferred alternative instead of the proposed action in all figures. This one shows the preferred action and is consistent with all other figures in this regard.</u>
36	Pima County - Julia Fonseca	1	Public Health and Safety	3		The decision space has a significant effect on the human environment but needs no analysis? This chapter of FEIS does not disclose when decision space is discretionary e.g. validity exam	<u>Resolution - comment is not clear as Chapter 1 does not have a PH&S section; page 3 of chap 1 discusses changed from the DEIS and document structure; and a search for "validity exam" shows no occurrence in chapter 1 or PH&S in ch 3. The validity exam is an issue the Forest Service reviewed prior to release of the DEIS, and determined was not required.</u>
37	Pima County - Julia Fonseca	1	Public Health and Safety	4		Missing appendices were not reviewed by Pima County.	<u>Resolution - Noted - no resolution needed</u>
38	Pima County - Julia Fonseca	1	Public Health and Safety	10		No reclamation bond for review, nor even the components of such, however cited references include some preliminary identifications of these costs.	<u>Resolution - the description of financial assurance in Chapter 2 will be expanded; however it if FS national policy to not calculate bond amounts until after a NEPA decision has been made. The references mentioned are RCC document, as no FS calculations have been performed to date.</u>
39	Pima County - Julia Fonseca	1	Public Health and Safety	14		Scoping issues—validity exam issue raised by public is not addressed in the FEIS	<u>Resolution - No change. The validity exam is an issue the Forest Service reviewed prior to release of the DEIS, and determined was not required.</u>
40	Pima County - Neva Connolly	1	Public Health and Safety	13-14	8_10	Based on the submission of 25,000 comments on the Draft EIS, there is significant public interest in the Rosemont Mine proposal. The Admin Final EIS contains substantial changes that the public should have opportunity to review and comment upon.	<u>Resolution - The Forest Service has determined that a supplemental EIS is not necessary</u>
41	TON	1	Purpose and Need	5	33	The Purpose and Need Statement is crafted too narrowly.	<u>Resolution - the Forest Service disagrees and believes the P&N statement is accurate and appropriate.</u>
42	TON	1	Purpose and Need	9	35	The Nation questions the Forest Services' assumption here that the Project is "reasonable and legal mineral operations under the law." A smaller mine with a footprint that minimizes or eliminates impacts to cultural resources would be more reasonable in light of Executives' intent to protect Indian religious practices under Executive Orders 13007 and 11593, as well as the NHPA.	<u>No change. The Forest Supervisor considered a number of alternatives or alternative components that would have resulted in a smaller footprint, but they were dismissed from detailed consideration as they were not feasible or practicable. See chapter 2 for details.</u>

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43	TON	1	Purpose and Need	10	10	This concept does not allow the public to comment on the amount or sufficiency of the reclamation bond. As the Nation noted in its DEIS comments, the documents do not do a good job of explaining to the public the lifetime commitment that this mine will be. The active life of the mine is merely the beginning. A mine may go into and come out of care and maintenance or be partially or fully reclaimed. These issues are still not adequately addressed in the FEIS. Further, the issue of mine maintenance post-closure should be addressed.	Resolution - the description of financial assurance in Chapter 2 will be expanded; however it if FS national policy to not calculate bond amounts until after a NEPA decision has been made. The references mentioned are RCC document, as no FS calculations have been performed to date. The chapter 3 resource sections all address the temporal bounds of analysis, and describe impacts temporally. Post closure maintenance is addressed to the extent known. The FEIS clearly states that the intent of project design is to minimize the need for post-closure maintenance. Also see appendix B requirements for post-project monitoring.
44	TON	1	Purpose and Need	10	10	The public should be given reasonable expectations, including models, of how the reclaimed project site will look. Models should also be provided to show what care and maintenance might look like.	Resolution - No change. The Visual Resources section and the simulations in the appendix show this. Care and maintenance cannot be visually modeled.
45	TON	1	Purpose and Need	10	1_2	This phrase seems to imply that the Forest Service must allow development of mineral resources. It should be re-phrased.	Resolution - No change. The referenced sentence is part of the Decisions to be Made, which says "Whichever action alternative is selected, it must minimize adverse impacts while allowing development of the mineral resource." It is accurate as written, and fully supported by earlier explanations that say that the FS must select an action alternative if it meets applicable law and regulation.
46	TON	1	Purpose and Need	20	15-20	The section discusses TCPs at the same scale as individual sites, which minimizes the assessment of adverse effect on TCPs.	Resolution - No change to P&N statement. Refer to Melissa for consideration for analysis in cultural section
47	TON	1	Purpose and Need	3 ET Seq.	14	The use of the phrase "responsible official's decision space" is less than clear. If the Forest Service is going to insist that it must allow the project to move forward, the FEIS should clearly explain why the chosen alternative is "reasonable" and why a smaller footprint would be "unreasonable" and thus could not be approved by the Forest Service. It appears that the FEIS repeats what the Nation has heard previously, that its hands are tied, however there is no analysis finding why a smaller project, with fewer impacts on cultural resources or the "no action" alternative would be "unreasonable" under applicable law.	Resolution - No Change. This is a difference in viewpoint between the Forest Service and TON that cannot be resolved here. See earlier response on consideration of a smaller footprint.
48	TON	1	Purpose and Need	5_6	36-37	The FEIS relies heavily upon the General Mining Law to essentially argue that the Forest Service has no choice but to approve an action alternative which would allow the MPO to move forward. The FEIS needs to analyze whether the rights and benefits extended under the General Mining Law should apply to Rosemont Mining Corporation, a foreign-owned entity.	Resolution - No change. To our knowledge, there is nothing in federal law that allows the Forest Service to treat a foreign owned company any differently that a domestically owned company.

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49	Pima County - Sarah Walters	1	Purpose of and Need for Action	6	6_7	This should state "...applicable Federal, State, and local laws and regulatio	Resolution - No change. There is a great deal of controversy whether county regulations are applicable to portions of this project, with legal counsel for the proponent and the county taking different positions. It is not the responsibility of the Forest Service to determine whether county regulations apply to the proponents activities that are not located on NFS lands.
50	Pima County - Julia Fonseca	1	Scoping of Analysis			The analysis required by the National Environmental Policy Act was bifurcated by the Bureau of Reclamation's decision to treat Rosemont's Green Valley pipeline and recharge proposal as a separate action. The two should be regarded as connected actions by this later EIS because the recharge is mitigation for the impacts of the mine and would not be undertaken if Rosemont did not intend to operate mineral extraction wells. See September 8, 2008 letter from Pima County to Sandra Eto, USDOI-BOR.	Resolution - No change. There is no indication whether this will actually happen. The Tucson City Council seems to have to choose between allowing the Pecan Farmers or RCC to use their pipeline for a segment of this, and there is no telling if RCC will prevail. There is also no telling if CAP water will be available for recharge. In addition, Augusta Resources has publically stated that this has nothing to do with the Rosemont project and that they will continue to pursue construction of this regardless of the mine.
51	Rosemont-Patti	1				In Chapter 1, usually document who the cooperating agencies are and WHY they are a cooperator	Resolution - No change. This information is in the Project File.
52	Rosemont-Patti	1				Some concern over Corps P&N statement	Resolution - No change. ACOE has reviewed and provided no edits or comments.
53	Rosemont-Patti	1				Difficult to discern why the 404 permit is needed. What fill? What waters of the U.S.?	Resolution - Description added on page 11 of chapter 1.
54	EPA	2	Action Alternatives	36	15	<p>EPA notes that the heap leach facility has been removed from the Barrel (preferred) Alternative. We are pleased that the potential water quality issues associated with the closure of this facility and its planned burial under waste rock would be eliminated should this alternative be selected for implementation. However, all other action alternatives continue to include this facility. EPA notes the discussion of heap closure contained in Ch. 3, Groundwater Quality and Geochemistry, p. 20, however as closure of the heap leach facility represents a significant and important component of all action alternatives except for the Barrel Alternative, the discussion of heap closure should be provided in Chapter 2, Action Alternatives rather than, or as well as, in Chapter 3.</p> <p>EPA continues to be concerned with the potential environmental effects of this facility for those alternatives that include it. Although some additional information has been provided regarding closure and management, the AFEIS does not provide further details substantiating the claim that the biological treatment system proposed will perform as described in reducing all contaminants to below Arizona Aquifer Water Quality Standards. Further, post closure management of the heap facility would likely be necessary to adequately maintain semi-passive water treatment components, and the closure design</p>	Resolution - Text has been changed to reflect more regarding the heap leach closure.

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55	D. Turner	2	Alternative 2 – Proposed Action, Stormwater Controls	42	####	ADEQ understands that the forest supervisor has identified Alternative 4 (Barrel) as the Preferred Alternative. However, if the Proposed Action is chosen instead, ADEQ strongly recommends that the Barrel Alternative drainage characteristics be adopted in the Record of Decision (ROD); <i>i.e.</i> , no storage of stormwater on the top or benches of the waste rock/tailings landform. The central drain is problematic after post-closure. ADEQ remains concerned about the drain's ability over time to allow the passage of unimpacted stormwater. Long-term maintenance may be very difficult to impossible to keep it free-flowing. As noted in the FEIS, there may also be potential for co-mingling of tailings seepage with stormwater.	Resolution - This issue is fully disclosed in the text, and this is a statement of opinion or fact. No action needed.
56	ADEQ- D. Turner	2	Alternative 3 – Phased Tailings	49	27-32	If the Phased Tailings alternative is chosen, ADEQ strongly recommends that the Barrel Alternative drainage characteristics be adopted in the ROD; <i>i.e.</i> , no storage of stormwater on the top or benches of the waste rock/tailings landform. See also comments to Alternative 2, especially in the context of flow-through drain maintenance.	Resolution - This issue is fully disclosed in the text, and this is a statement of opinion or fact. No action needed.
57	J. Emde	2	Alternative 3 – Phased Tailings, Stormwater Controls	49	16-17	The last half of this sentence, "precipitation recharge cannot lead to an environmental impact without constituting a violation of Rosemont Copper's aquifer protection permit," is not accurate. Actually, it is possible that precipitation recharge could adversely impact the aquifer without automatically leading to an aquifer protection permit violation. Instead, the sentence should be rewritten, "... regulated by ADEQ; therefore, however, precipitation recharge could lead to an environmental impact without actually causing a violation of Rosemont Copper's aquifer protection permit. Such an impact, under the aquifer protection permit, could require Rosemont to implement a remedial action plan in order to prevent a permit violation."	Resolution - Text has been changed.
58	ADEQ- D. Turner	2	Alternative 5 – Barrel Trail Alternative	61	5-13	If the Barrel Trail alternative is chosen, ADEQ strongly recommends that the ROD not allow any stormwater to be stored on the top or benches of the waste rock/tailings landform. See also comments to Alternative 2, especially in the context of flow-through drain maintenance.	Resolution - This issue is fully disclosed in the text, and this is a statement of opinion or fact. No action needed.
59	ADEQ- D. Turner	2	Alternative 6 – Scholefield-McCleary Alternative	61-66		If the Scholefield-McCleary alternative is chosen, ADEQ strongly recommends that the Barrel Alternative drainage characteristics be adopted in the ROD; <i>i.e.</i> , no storage of stormwater on the top or benches of the waste rock/tailings landform.	Resolution - This issue is fully disclosed in the text, and this is a statement of opinion or fact. No action needed.
60	TON	2	Alternatives	4	18	Perhaps a footnote could be added that better explains how/which archaeological sites were avoided.	Resolution - Clarified a bit in the text.
61	AGFD	2	Alternatives	21	3-7	The text states: "[p]rotection of water quality following mine closure would be achieved by . . .capture of possible impacted mine site groundwater by localized groundwater flowing into the pit". COMMENT: the majority of the entrained seepage from the dry stack tailings facility (DSTF) will not be captured by the mine pit, but will flow downgradient following groundwater pathways into the Barrel Canyon drainage for the predicted drain-down period of 500 years. Dry Stack Tailings Storage Facility Final Design Report Section 6.0 (AMEC 2009). Figure 6-2 of the Regional Groundwater Flow Model, Rosemont Copper Project (Tetra Tech, 2010b) shows the groundwater flow in the area of the DSTF is eastward along Barrel Canyon into the Davidson Canyon drainage. This small scale effect may be local, with contaminated groundwater migrating along the creek in the ribbon of alluvial sediments along the creek, or may be more regional in nature. If this occurs, the impacted groundwater may discharge to surface water or migrate downgradient along Davidson Canyon. Figure 6-2 of the Regional Groundwater Flow Model, Rosemont Copper Project (Tetra Tech, 2010b) shows the groundwater flow in the area of the DSTF is eastward along Davidson Canyon.	Resolution - A discussion of the risk for tailings seepage daylighting downstream in Barrel Canyon has been added to the GW Quality section

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62	AGFD	2	Alternatives	21	23-25	<p>The text states: "The top of the tailings facility would be relatively impervious. That is, all precipitation would remain on the top of the tailings facility to evaporate".</p> <p>The Technical Memorandum, Liquefaction and Stability Analyses-Rosemont Dry Tailings Facility (Tetra Tech, June 12, 2007) states "[l]imited higher moisture zones within the tailings mass created by meteoric water may potentially occur" which "could form discrete liquefaction-susceptible layers in the tailings mass".</p> <p>The Memorandum then determined that that both the upstream and downstream embankments of the DSTF can tolerate five-foot thick liquefied layers of tailings at the top of each lift stage.</p> <p>COMMENT: According to the Technical Report, Design and Evaluation of Tailings Dams (EPA Office of Solid Waste, August 1994), there are a number of common failure modes besides liquefaction to which tailings embankments may be susceptible, including slope failure from rotational slide, overtopping, foundation failure, erosion, and piping. It is not clear from the FEIS text whether these other factors have been evaluated.</p>	<u>Resolution - Discussion of liquifaction risk is now included in the Soils section.</u>
63	AGFD	2	Alternatives	5-6		<p>The Department commends Rosemont Copper Company and the Forest Supervisor for the joint decision to remove the heap leach process and heap leach facilities from the Forest Service-preferred Barrel Alternative. The Department had submitted several DEIS comments expressing concerns over impacts to surface and groundwater quality and wildlife of uncontrolled long-term acidic heap leachate generation from the minesite. This decision will result in a more environmentally protective mining operation.</p>	<u>Resolution - Statement of opinion or fact. No actionable comment. No changes needed.</u>
64	Pima County - Sarah Walters	2	Alternatives Considered in Detail	2	40	<p>This should state '...Federal, State, and local agencies'</p>	<u>Resolution - Text revised.</u>
65	Pima County - Sarah Walters	2	Alternatives Impact Summary	91	24	<p>Table 11: The units associated with the numbers in this table are unclear. In Chapter 2, in the 'General Overview of Mining Operations: Other Area Roads' section (page 24, line 4), there is a mention of acreages, but the Table itself also has feet, and miles within certain 'disturbance element' descriptions. This Table should be modified to clearly state what is being presented.</p>	<u>Resolution - Text revised.</u>
66	Pima County - Sarah Walters	2	Alternatives Impact Summary	93	NA	<p>Table 12: Exceedances of the PM10 NAAQS at the perimeter fence for the Barrel Trail and Scholefield - McCleary Alternatives is unacceptable as the cost associated with a PM10 Nonattainment Designation for Pima County would be significant for the health and welfare of Pima County residents, businesses within Pima County, and the effects of transport of air pollution to other areas within the State of Arizona.</p> <p>Please see comment below regarding Nonattainment Designation.</p>	<u>Resolution - Impacts are properly disclosed in the FEIS. Statement of fact or opinion. No changes needed.</u>

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67	Pima County - Sarah Walters	2	Alternatives Impact Summary	94	NA	Table 12: the potential for future exceedance of the Ozone NAAQS due to the associated increase in NOx with All Alternatives is unacceptable as the cost associated with an Ozone Nonattainment Designation for Pima County would be significant for the health and welfare of Pima County residents, businesses within Pima County, and the effects of transport of air pollution to other areas within the State of Arizona. Please see comment below regarding Nonattainment Designation.	Resolution - Impacts are properly disclosed in the FEIS. Statement of fact or opinion. No changes needed.
68	Pima County - Sarah Walters	2	Alternatives Impact Summary	94	NA	The potential for degradation of air quality related values in the Saguaro National Park East, Saguaro National Park West, and Galiuro Wilderness Class I airsheds needs further consideration, and further analysis.	Resolution - This comment lacks the level of specificity necessary to address it in any fashion. That said, the AQRV analysis has been updated as per NPS comments.
69	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	2		The EIS should make clear what pit design the Forest is relying upon for each alternative. This page only says the forest supervisor is relying on a quotation by Rosemont that pertains to pit depth. By email of Mindy Vogel, July 29, 2013, I was told "It is not correct to state that "one pit is common to all alternatives". To answer this properly you really need to break the question down into what characteristics of the mine pit factor into the analysis. These are the characteristics I come up with: pit footprint, pit volume (i.e., amount of waste rock), and pit depth. Pit footprint – Yes, it is true that the footprint varies slightly between alternatives. You'll recall the briefing paper specifically about this issue. The differences are not significant (in our opinion), and the fact that there ARE slight differences just highlights the fact that slight variations can also be expected to occur when operations start. That's important to note, because we want to reflect in our NEPA disclosure what is likely to occur in reality. So we chose a strategy to avoid undercounting impacts. We chose to consistently use the largest of the footprints (which was the original MPO footprint) for all acreage calculations and on all figures. Pit volume/volume of waste rock – This differs between alternatives primarily because of slope changes	Resolution - text added to Chapter 2.
70	Pima County - Neva Connolly	2	Alternatives, including the Posposed Action	3	37-42	The Barrel Alternative was refined and major elements removed from the proposed design, in part due to public comment received on the Draft EIS. The public should have the opportunity to review and comment upon these significant revisions.	Resolution - This is a request for a supplemental EIS. The Forest is aware of this desire and has made a decision on this issue.
71	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	11		Can you provide an illustration like Figure 3 showing the processing for stockpiling and creation and emplacement of the "growth media"?	Resolution - This is a request for a figure or document change. The request does not rise to the level of necessity, as the locations are fully described in the text and no specific issues with those locations have been raised. No changes needed.
72	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	15		Why not minimize impacts to soils and air and other resources by NOT constructing a parallel service road the length of Santa Rita Road? Instead use stub outs to individual poles or booster stations. I realize that this area has to be disrupted for pipeline construction, but if it is only disturbed once, then the effects will be minimized. The service road is authorized but not required by the ACC order.	Resolution - This potential mitigation measure was fully vetted and reviewed by the Forest Supervisor, and the issue has been documented in the project record. It was not determined to reduce resource impacts.
73	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	15		I believe there is also a proposed fence that is not disclosed in this drawing or the text that would parallel the entire route across the Santa Rita Experimental Range.	Resolution - revisions made to text
74	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	17		These figures are hard to read. Font size should be larger, and the overlap of the water line and transmission line appears to vary in the way it is depicted inconsistently over the length. What does that mean? For the road upgrade, the scale of the map is too small to be able to easily tell the differences.	Resolution - No change. Suggestions cannot be adequately addressed in maps that are at the scale of those in the FEIS.

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75	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	17		Santa Rita South substation—Is it part of the project? The EIS should state whether this is an existing substation or proposed, and explain the difference between the substation and the proposed El Toro switchyard. Figure should show the new switchyard, which is part of this project.	<u>Resolution - All text and figures have been reviewed and match accordingly.</u>
76	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	22	15	Who would do this evaluation? Who would decide? Who would remove it?	<u>Resolution - Have added clarification about compliance point dam role</u>
77	Pima County - J. Crowe	2	Alternatives, including the Posposed Action	30	11	Pima County Department of Transportation has roadway right of way permitting authority and should be added to the list of agencies. This includes permits for the water supply pipeline that crosses or enters Santa Rita road way right of way.	<u>Resolution - Added</u>
78	Pima County - J. Crowe	2	Alternatives, including the Posposed Action	30	11	Pima County Department of Transportation has the authority to require a permit to move oversize or overweight vehicles on highways under its jurisdiction and should be added to the table. This applies to Kolb Road and Valencia Road in the vicinity of the Port of Tucson where the FEIS has stated railroad traffic to or from the Rosemont project will be transshipped to truck, among others. There is a formal application and fee for these permits (ref. Pima County Code Chapter 10.36).	<u>Resolution - Added</u>
79	Pima County - J. Crowe	2	Alternatives, including the Posposed Action	30	11	Pima County Department of Transportation has the authority to require a permit for any construction within roadway right-of-way under the authority of Pima County and should be added to the table. This applies to Santa Rita Road, the identified secondary access to the Rosemont project. Construction includes the activities of utilities (ref. Pima County Code Chapter 10.44)	<u>Resolution - Added</u>

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80	Pima County - J. Crowe	2	Alternatives, including the Posposed Action	30	11	Pima County Department of Development Services also has permitting authorization concerning Scenic Routes (ref. Pima County Code Section 18.77.040. and should be added to the table	<u>Resolution - No change. A review of the references provided indicated that the Santa Rita road is designated as a scenic route by the County, and the referenced regulations contains building height regulations and sign requirements along scenic routes. Permit requirements are not specified and it is questionable whether Pima County has authority to enforce these on State lands. This in no way changes the requirement that RCC must comply with applicable local laws and regulations - it is their responsibility to figure out what those are.</u>
81	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	73		Since several different pit configurations have been proposed by Rosemont over the course of the project, it is difficult to understand what is meant by line 9. Did the Forest analyze a reduce pit size? If so, please cite a reference document.	<u>Resolution - Added reference to Appendix A</u>
82	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	78		The length of mine operations affects many resources and issues. A reduced mine operational period with the same operational intensity should have been examined. Also a longer operational time period with the same operational intensity should have been examined.	<u>Resolution - No change. Issues raised in scoping comments and comments on the DEIS are adequately addressed by the discussion in Chapter 2 of the FEIS.</u>
83	Pima County - Chavez	2	Alternatives, including the Posposed Action	94	Table 12 Groundwater Quantity	Rosemont proposes to recharging 120,000 acre-feet of CAP water over the life of the mine and has recharged 42,593.02 acre-feet to date. The impacts of acquiring an additional 77,406.98 acre-feet CAP water should be evaluated in the context of the decreased availability of CAP water supplies to the TAMA region.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>In this case, CAP recharge is voluntary and is not guaranteed to occur. The FEIS analyzes impacts as if the recharge did not occur.</u> <u>Further, the limitations of the voluntary CAP recharge are fully disclosed in the GW Quantity section.</u>
84	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	22-23		The text says there are 15 miles of new construction and 3 miles of reconstruction or upgrade. The more detailed GIS files that Mindy Vogel transmitted from SWCA show that the utility maintenance road and pipeline would follow the exact centerline of the existing road over the crest of the Santa Ritas. Can you provide details of the areas of disturbance across the crest? Is there a re-alignment of the road near the crest, or the existing bed simply getting widened? The word "upgrade" is not really communicating what is happening precisely. It could mean many things.	<u>Resolution- This detail is not available. All disturbance that is being analyzed by the Forest has been disclosed and provided to Pima County.</u>

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85	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	33-34		This is very helpful information about administrative process, but I suggest also providing public access to the monitoring and compliance information received by the Forest via posting to a website. This NEPA process has shown that there is an enormous public interest in the details of the mine, and that there are numerous people in the community with expertise to understand technical information. The community should not have to rely on an increasingly congested Freedom of Information Act process to obtain the monitoring and compliance data that would be required by law from the applicant.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
86	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action	NA		Identify methods and machinery to be used in transforming the rock into soils for reclamation and mixing in other "growth media". What kind of volumes will be processed with this machinery? What materials or additives will be used in producing the soil, if any?	<u>Resolution - It has been clarified in text that no mechanical processing will be used.</u>
87	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action			EIS fails to disclose any construction at the Port of Tucson that would be required as a consequence of the Rosemont mine. If none is needed, then stipulate that.	<u>Resolution - This is not a proposed action for which detailed analysis can be applied.</u>
88	Pima County - Julia Fonseca	2	Alternatives, including the Posposed Action			Please clarify whether any exchange or acquisition of federal land by Rosemont is considered part of this NEPA evaluation.	<u>Resolution - No change needed. This is already in the FEIS in Alternatives Considered but Dismissed.</u>
89	Pima County - Loy Neff	2	Alternatives: removal of Heap Leach Facility from Barrel Alternative	4	18	The sentence on Line 18 includes the following segment, "...certain archaeological sites (particularly the 'Ballcourt Site') were to be avoided." The reference to certain sites is ambiguous and should include specific information about the sites, or if they are discussed in more detail elsewhere in the document, indicate in this section that the specific sites are listed elsewhere and give reference.	<u>Resolution - made minor changes in text.</u>
90	TON	2	Ancillary Facilities and Activities	17	Figure 5	Lacks detail of alignment and does not show Santa Rita Road.	<u>Resolution - No change. Other than the GIS files used to create these figures, which will be made available when complete, there isn't any additional detail that could be provided.</u>

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91	Pima County - Loy Neff	2	Ancillary Facilities and Activities: Utility Lines (Electrical and Water Supply): Power Supply and Water Supply	16:18	20-26; Figure 5	The description of the TEP transmission line includes the statement that the power line , "...would generally parallel the existing South Santa Rita Road..." There is no additional discussion of Santa Rita Road. Figure 5 lacks details of the alignment, and Santa Rita Road is not shown. The discussion needs to include information about Santa Rita Road, including that it is a County maintained right of way subject to County permitting and compliance requirements. Any use of Santa Rita Road related to construction, use, repair & maintenance of the transmission line and associated water line in the designated utility corridor, including the 14-foot-wide unpaved maintenance road, or access to these components of the utility corridor from Santa Rita Road, will require a Pima County DOT Right of Way Use Permit. In addition to other requirements, this permit is subject to County cultural resources requirements. Table 3 includes this permit, but it lacks correct identification as a Pima County DOT permit. Figure 5 should depict Santa Rita Road and if the utility corridor or segments of the power or water line cross Santa Rita Road, these locations should be shown on the larger map, with detail insets depicting and clearly labeling each crossing.	Resolution - Text revised. Note that additional detail is not able to be discerned at this scale.
92	Pima County - S. Anderson	2	Arizona National Scenic Trail	26	2_44	The trail is as described elsewhere; this chapter is more detailed, and it reads well. The standard quoted for the trail, and the trailheads as described, are sufficient. I think the Arizona National Scenic Trail should be away from the mine as much as possible. The 7.3-mile re-route (on the west side of Hwy 83) is an option, but not a very good option in any case; the mine's noise and questionable views make it a marginal solution. A better option would be to go with the 12.8 mile/13.0 mile relocation (east of Hwy 83) regardless of the alternative.	Resolution - No actionable comment. No changes needed.
93	TON	2	Arizona National Scenic Trail	26-27	1_44	No discussion on effects on cultural sites.	Resolution - This is fully described in the Cultural Resources section. No changes needed.
94	Pima County - Loy Neff	2	Arizona National Scenic Trail	26 27	1_44 (p27) Figure 7	In the description of reroutes there is no discussion of potential effects on Historic Properties and avoidance, minimization and mitigation actions. Figure 7 does not provide sufficient detail to assess the trail alignment. Discussion should clarify the potential for impacts on Historic Properties and possible mitigation. Figure 7 should indicate relationship between the trail and Historic Properties affected. Detail insets should be included to show this, or specific reference to such detailed maps elsewhere, such as in HPTP.	Resolution - Text revised. Note that specific locations of cultural sites is sensitive information and it would not be appropriate to disclose that in an FEIS as suggested. Analysis of the potential impact to these sites, however, has been conducted and included in the FEIS.
95	Pima County - Neva Connolly	2	Barrel Alternative	56 & 57	N/A	Figure 18 depicts the primary crusher, conveyor, and several other facility components to the right of the mine pit. Figure 19 shows the crusher, conveyor and other components hovering over the pit. The scale or layout on Figure 19 needs to be adjusted.	Resolution - This figure was obtained "as is" and cannot be modified. However, the locations are correct as shown. Note that the mine pit boundary is not what is shown on this figure
96	Rosemont-Patti	2	Chapter 2		15-16	Financial assurance section is slim. Compare to Green's Creek.	Resolution - additional information added
97	Rosemont-Kathy	2	Chapter 2	33		Page 33, Chapter 2 – Air permit is described incorrectly	Resolution - Bullet point deleted
98	Town of Sahuarita	2	Chapter 2	95	N/A	The Town understands that the Freeport McMoRan modeling for the mitigation order includes pumping from the Rosemont Wells. Text in this section should be updated to reflect the groundwater modeling validation and updates being completed by Freeport McMoRan	Resolution - The modeling conducted by FMI was investigated and was not found to be available for use.
99	USEPA	2	Chapter 2			Heap leach closure details need to be in Chapter 2, are only in GWQL right now	Resolution - Text has been changed to reflect more regarding the heap leach closure.

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100	USEPA	2	Chapter 2			Upset over lack of comments in database	Resolution - Special section has been added to RTC Summary responding to EPA comments.
101	Pima County	2	Chapter 2			For other alternatives, need to discuss how flow-through drains would remain unclear and functional	Resolution - Added text describing peer review and remaining concerns.
102	Pima County	2	Chapter 2			EIS does not disclose success criteria for reclamation	Resolution - Draft success criteria have been added to the Soils section. This does not belong in Chapter 2. Michele has reviewed and approved changes
103	Pima County	2	Chapter 2			No discussion of suspended operations	Resolution - section has been added to chapter 2
104	Pima County	2	Chapter 2			Mitigation measures lack sufficient detail	Resolution - Statement of fact or opinion, no actionable comment. It appears this comment was made before Appendix B was reviewed by the commenter.
105	Pima County	2	Chapter 2			Partial backfilling should be considered as a mitigation measure	Resolution - No changes. Comment not factually correct. This alternative was fully investigated
106	Rosemont - Melissa Notes	2	Chapter 2			Financial Assurance -EPA won't find sufficient greens creek example App B	Resolution- additional information added
107	Pima County - Sarah Walters	2	Detailed Description of Alternatives: Action Alternatives	37	22	Table 4: potential particulate matter emissions from the soil salvage stockpiles should be disclosed. Also, the EIS should specify whether the air quality emissions from soil salvage, transport, and stockpiling were identified and evaluated in the air quality modeling	Resolution - Language has been added to Air methodology to describe this.
108	TON	2	General Comment			The No Action alternative is not given proper consideration. The FEIS focuses almost exclusively on the action alternatives.	Resolution - This is a statement of opinion or fact. Disagreement with basic premise; current approach appropriate and reasonable.
109	Pima County - Sarah Walters	2	General Overview of Mining Operations: Other Area Roads	24	4	This sentence refers to Table 11; however, Table 11 does not define what is meant by 'disturbance elements' there are no units or means of determining the potential fugitive dust emissions from the various 'disturbance elements' listed in the table. The table should contain the units of measure of the values that are presented in the Table. If each number in the Table is the acreage associated with that 'disturbance element' then the Table should specify that. Also, any disturbance element outside of the proposed mine site (i.e. outside the area covered by the ADEQ Class II Air Quality Permit) will require compliance with Pima County Code Title 17, including, but not limited to: any required Fugitive Dust Activity Permit(s) (PCC 17.12), and compliance with Visible Emission Standards (17.16). Also, the potential fugitive dust emissions from regular maintenance, development, and regular use of all the disturbance elements should be disclosed.	Resolution - The PC air permit has been added to both Chapter 3 and Chapter 2.
110	Pima County - Sarah Walters	2	General Overview of Mining Operations: Stormwater	21	8	Stormwater control system – Diversion channels, any perimeter ditches, and peripheral detention basins, as well as the on-surface evaporation ponds should be included as potential sources of particulate matter and as such the potential particulate matter emissions from these areas should be disclosed.	Resolution - Have added disclosure to Air section regarding what sources were not considered in emissions calculations

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111	Pima County - Sarah Walters	2	General Overview of Mining Operations: Utility Maintenance Road	22	35	Grading operations conducted for regular maintenance of the Utility Maintenance Road should be included as a source of fugitive dust emissions and as such the potential particulate matter emissions from these areas should be disclosed.	<u>Resolution - Have added disclosure to Air section regarding what sources were not considered in emissions calculations</u>
112	Pima County - Sarah Walters	2	General Overview of Mining Operations: Utility Maintenance Road	23	4	Grading operations conducted for regular maintenance of the gravel road to Lopez Pass would also need to be included as a source of fugitive dust emissions and as such the potential particulate matter emissions from these areas should be disclosed	<u>Resolution - Have added disclosure to Air section regarding what sources were not considered in emissions calculations</u>
113	Pima County - Sarah Walters	2	Introduction	1	7	This should state '...Federal, State, and local laws and regulations.'	<u>Resolution - No change due to the context of the sentence referenced.</u>
114	Pima County - Sarah Walters	2	Introduction	1	14	"project area" - Linear water and electricity utility corridors, new roads, and modification of existing roads (including improvements to SR 83 required by AZ Department of Transportation) that are not within the perimeter area covered by the AZ Department of Environmental Quality (ADEQ) issued Class II Air Quality Permit will require compliance with Pima County Code Title 17, including, but not limited to: any required Fugitive Dust Activity Permit(s) (PCC 17.12), and compliance with Visible Emission Standards (17.16).	<u>Resolution - This permit has been added to Chapter 2 and 3</u>
115	Pima County - Yves Khawam	2	Lighting	12	28-...	Lighting plans are discussed out of context of legal requirements to meet 2012 Pima County Outdoor Lighting Code for which no plans have to date met scope requisite for analysis.	<u>Resolution - Addressed through updated wording in Dark Skies in Chapter 3.</u>
116	Pima County - Yves Khawam	2	Lighting	13	23	Lighting plans cannot be proposed or considered that do not meet the 2012 Pima County Outdoor Lighting Code.	<u>Resolution - Addressed through updated wording in Dark Skies in Chapter 3.</u>
117	Pima County	2	Mitigation			Impacts of sale of mineral fractions not analyzed	<u>Resolution - No change. This is addressed in the Land section.</u>
118	Pima County	2	Mitigation			Mitigation plan fails to meet conservation requirements of Sonoran Desert Conservation Plan	<u>Resolution - This is clearly disclosed in the Required Disclosure section. Terry will be adding the calculated acreage from Pima County.</u>

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119	Pima County	2	Mitigation			\$2 million Cienega Creek fund is inadequate	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
120	Pima County	2	Mitigation			Forbidding pumping of well along Cienega Creek should be a mitigation measure	Resolution - This is already part of the mitigation included in Appendix B.
121	TON	2	Mitigation and Monitoring	66	11_18	Discussion of mitigation and monitoring for different effects inconsistent, sometimes omitting cultural resources.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
122	TON	2	Mitigation and Monitoring	68	14-28	Tribes not included in Task Force.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
123	Pima County - Loy Neff	2	Mitigation and Monitoring	66	11_18	General comment: The document combines mitigation and monitoring discussions for all types of effects, including environmental and cultural, which is unclear and does not make distinctions to allow a clear separation of the different categories of effects. The initial discussion appears to omit consideration of cultural resources and focuses on environmental effects. Cultural resources mitigation measures should be listed. The discussion switches between environmental and cultural resources, or omits cultural resources, resulting in confusion and an overall lack of clarity. The discussion needs to be restructured to distinguish between the two categories of mitigation and monitoring, with a section on cultural resources and an environmental section. The Monitoring section includes cultural resources, but the distinctions between environmental and cultural categories of effect, and consequent mitigation and monitoring need to be clarified. On P. 68, lines 14-20, cultural resources are included in the discussion of the MOA, but the previous section remains confusing and needs to be clarified.	Resolution - These suggestions are on organization of the mitigation/monitoring section. These were reviewed but no changes to be made.

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124	Pima County - Sarah Walters	2	Mitigation and Monitoring – Evaluation and Reporting	68	29	Along with the monitoring results the following should also be included in the quarterly and annual report in order to relay to the Forest Service any contributions from the mine (including pre-mining activities) to air pollution within Pima County: permit deviations, excess emissions, deficiencies, and/or enforcement actions associated with the ADEQ Class II Air Quality Permit; deficiencies, and/or enforcement actions associated with the PDEQ Fugitive Dust Activity Permit(s); and deficiencies, and/or enforcement actions related to PCC Title 17 including, but not limited to Visible Emission Standards. This would be especially significant for events related to non-compliance with requirements set forth in the Mitigation and Monitoring Plan.	<u>Resolution - The PC air permit has been added to both Chapter 3 and Chapter 2.</u>
125	Pima County - Loy Neff	2	Mitigation and Monitoring: Evaluation and Reporting	68	14-28	Tribes are not included in the “Task Force” identified to assist in monitoring. Correct this to identify the Tribes with responsibility to assist with monitoring programs. Make distinction between environmental, cultural, and other monitoring programs.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
126	Rosemont - Kathy	2	Permits			Rosemont position is that O.L.C is not required. Rosemont position is that Floodplain regs aren’t required except for pipeline	<u>Resolution - Addressed through updated wording in Dark Skies in Chapter 3.</u>
127	Pima County - Chavez	2	Permits and Authorizations	31	Table 3	ARS45-2711 should be included as an applicable state requirement. This statute requires the ADWR director to conduct a hydrologic analysis of well impacts from nonexempt wells that may impact the Tohono O’Odham Nation. If the projected withdrawal from the initial five-year period of withdrawal will cause a water level decline of ten feet or more at any point on the exterior boundaries of the reservation, the application shall be denied. The estimated drawdown attributable to pumping will be up to 70 feet impacting an area of 3 to 4 miles from the pumping center This drawdown will reach into the San Xavier District and the impacts to the Tohono O’Odham Settlement Agreement should be addressed	<u>Resolution - Comment not factually correct. This requirement was already analyzed in GW Quantity. The comment mistates the pumping impacts contained in the FEIS. No actionable comment.</u>
128	Pima County - Chavez	2	Permits and Authorizations	31	Table 3	Table 3 does not list the need for a water recovery permit from ADWR. A recovery permit is required if Rosemont will be recovering stored CAP water from the Sahuarita well fields. The 2007 MOP (page 43) states that Rosemont has the option of modifying the ME permits wells to allow them to operate as recovery wells. If Rosemont is not planning to recover its stored water this should be made explicit in the FEIS and Rosemont should disclose what it plans to do with its long term storage credits. Selling or trading them to others who will recover them elsewhere in the TAMA will be a connected action and the impacts should be considered.	<u>Resolution - This has been added to Chapter 2 and Chapter 3.</u>
129	Pima County - Chavez	2	Permits and Authorizations	81	7	The FEIS notes 22 alternatives were evaluated, but the Review of Alternative Water Sources-Revised; SRK Consulting (Stone, 2011) reviewed 19.	<u>Resolution - No change. There are 22 items listed that were considered by the IDT.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
130	Pima County - Sarah Walters	2	Permits and Authorizations	30	10	Table 3 – ADEQ does not have jurisdiction for ‘Air Activity Permit’ outside the footprint of the mine site; Pima County Department of Environmental Quality would have jurisdiction over Fugitive Dust Activity Permits for activities such as earth moving, trenching, road building, blasting, etc. for any areas outside the actual boundary of the planned mine site. Any peripheral roads (such as the Utility Maintenance Road and similar off-site roads), trenching, etc. will require compliance with Pima County Code Title 17, including, but not limited to: any required Fugitive Dust Activity Permit(s) (PCC 17.12), and compliance with Visible Emission Standards (17.16). This would need to be added to Table 3, on Page 32 under Pima County and add Pima County Department of Environmental Quality - Air Quality Fugitive Dust Activity Permit(s).	<u>Resolution - This permit has been added to Chapter 2 and 3</u>
131	Pima County - Loy Neff	2	Permits and Authorizations ;	30-32	Table 3	Table 3, Pima County Section: This section lists the Pima County right of way permit incorrectly. Identify as, Pima County DOT Right of Way Use Permit. Also note that the permit is subject to Pima County cultural resources requirements and that other ground disturbances on County lands are subject to County cultural resources requirements.	<u>Resolution - changes made to text</u>
132	Pima County - Neva Connolly	2	Postclosure Monitoring	69	12_13	The life of the mine phasing for the action alternatives include a final reclamation and closure phase (3 years). Will the postclosure monitoring be included in the final reclamation phase? As yet, the postclosure monitoring period has not been determined...will it be less than or equal to the 3 years in the final phase, or will the final reclamation phase be extended to allow for over 3 years of postclosure monitoring? It is likely there will be a need for more than 3 years of postclosure monitoring.	<u>Resolution - No change. Text reviewed and determined to need no change.</u>
133	TON	2	Reclamation and Closure	28		Closure must consider impacts to cultural sites.	<u>Resolution - No change. This has to do with bonding covering stablization of cultural sites, which the Forest has agreed would be included. However the text referenced has to do with the reclamation and cloure plan. This issue is addressed in the ROD.</u>
134	Pima County - Loy Neff	2	Reclamation and Closure	28	13-31	The discussion needs to include a general statement that any new ground disturbance from closure must consider and mitigate effects on Historic Properties.	<u>Resolution - No change. The cited location is a description of the contents of the reclamation and closure plan. Discussion of impacts is contained in Chapter 3. In addition, disturbance during reclamation and closure is anticipated to be limited to area that were previously disturbed. If any new areas of disturbance are necessary, they are not currently known and would have to be addressed through environmental compliance at that time.</u>
135	Pima County - Neva Connolly	2	Reclamation Bond	70-71	N/A	It is unclear whether the bonding for the revegetation and contouring will be placed in the Forest Service bond, State Mining bond, or CWA bond.	<u>Resolution - The Financial Assurance section has been expanded.</u>

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136	Pima County - Sarah Walters	2	Reclamation and Closure	28	1	Any demolition of mine buildings and other structures would need to comply with Federal Asbestos National Emissions Standards for Hazardous Air Pollutant (NESHAP) requirements.	Resolution - This does not belong in Chapter 2. It belongs in Air. NESHAP is already included in the list of authorities.
137	Pima County - RWRD - Staff	2	Removal of Heap Leach Facility from Barrel Alternative	4	31-34	The Forest Service response to both partial and complete waste rock pit backfill is: "Because of the extended environmental impacts, financial implications, and safety issues the responsible official has determined that complete (or partial) waste rock pit backfill is not technically feasible." 1) The Forest Service created the Barrel Alternative because it is an approach that shifts the footprint of mine waste facilities in a way that certain land use areas are not affected. The EIS states, "The forest supervisor has chosen the Barrel Alternative to be the preferred alternative." Factors influencing the decision include preservation of resource values in McCleary Canyon, including recreation, riparian areas, and wildlife species habitat and movement corridors, as well as avoidance of waters of the United States and cultural sites in McCleary Canyon and other areas. Backfill of the pit is an approach that has a profoundly different reduction in the surface footprint of mine waste facilities. 2) Backfill of the pit is an approach that has a profoundly reduced visual impact and offers opportunity for recovering much of the natural landform after temporary waste rock storage is eliminated from the surface at closure. 3) Backfill of the pit is technically practicable and may be economically feasible, since it has been practiced at other mine sites. This closure	Resolution - Statement of fact or opinion. No action needed. Disagreement with basic premise; current approach appropriate and reasonable.
138	Pima County - RWRD - Staff	2	Removal of Heap Leach Facility from Barrel Alternative	4	31-34	4) Identifying the option of partial pit backfill as a mitigation measure should not preclude using full and/or partial backfill to formulate a reasonable alternative. The NEPA process is not so limiting that it excludes sound technical approaches from being used in whatever manner offers a full range of alternatives and the best options for mitigation. 5) The Forest Service contends that backfilling the pit and allowing groundwater to flow through pit material would increase the risk of detrimental impacts to groundwater chemistry from potential contaminants in pit lake water. However, if the pit is filled, there will never be a pit lake configuration to accumulate contaminated water. Also, literature on pit backfilling notes that one major advantage of filling a mine pit is that oxidation of surrounding wall rock is kept to a minimum, thereby reducing metal mobility in the environment, including groundwater. Recommendation: Clearly, extended environmental impacts are more probable with a pit lake compared to filled pit lake. Therefore the Forest Service should consider other backfill options in more detail, explore alternatives such as paste backfill, evaluate engineering options to reduce the safety risk, and weigh environmental risks and all impacts required in the EIS process against the cost considerations.	Resolution - Statement of fact or opinion. No action needed. Disagreement with basic premise; current approach appropriate and reasonable.
139	Pima County - Neva Connolly	2	Removal of Heap Leach Facility from Barrel Alternative	5	28	"copper's" at the beginning of the line should be capitalized.	Resolution - Changed.
140	Pima County - Neva Connolly	2	Solid, Hazardous Waste	13	33-34	Please include the landfill location on the Alternative maps.	Resolution - This is not necessary for the analysis, and is premature except for the fact it will be on private land. No change needed.

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141	Pima County - RWRD - Staff	2	Stormwater Controls	42	4_22	If the Barrel Alternative is not selected it is a major impediment that there is not enough information about the construction of the Central Drain and flow-through drains supposed to convey stormwater under the tailings impoundment. It is unclear how tailing material will be kept out of this engineered drainage way. It is also unclear how it will remain unclogged during operation and in the post-closure period. The EIS should contain an explanation of how this drainage system is to remain clear and functioning as intended. Examples of mining facilities that have used this technology should be cited in the EIS so that it is clear that the technology is demonstrated. Simply put, implementation of the proposed Flow-Through Drain System at the proposed Rosemont Copper Mine is ultimately a Fatal Flaw. The design function of this earthen-material system will cease in the future – it is only a question of when, not if. The EIS should acknowledge that this may adversely impact streams and the ecosystem downstream of the mine site, in Barrel Canyon, Davidson Canyon and likely Cienega Creek. These comments were included in the January 18, 2012 comments to the Forest Service but not adequately addressed in the preliminary FEIS.	Resolution - Added text describing peer review and remaining concerns.
142	TON	2	Utility Maintenance Road	23	21-22	Additional explanation requested regarding “crossing” of Santa Rita Road.	Resolution - No change. This information is not currently known, and would be included in any ROW permit applications submitted by RCC to the county.
143	Pima County - Loy Neff	2	Utility Maintenance Road	23	21-22	This section refers to crossing Santa Rita Road; the water line, which “...travels under Santa Rita Road,” and indicates that the utility maintenance road will intersect Santa Rita Road, which raises the question of access and/or use of Santa Rita Road during construction, use, repair & maintenance. The section should explicitly describe the crossing(s) of Santa Rita Road and whether or not access or use of the road is necessary. Also, there is a reference to Figure 5, which has already been commented on – does not provide sufficient detail to identify specific relationship between utility corridor and County road.	Resolution - No change. This information is not currently known, and would be included in any ROW permit applications submitted by RCC to the county.
144	Pima County - Chavez	2	Water	18	28	Rosemont has a Mineral Extraction permit from ADWR for the right to extract and use up to 6,000 acre-feet per year of groundwater, but the groundwater models and the estimated impacts are based on use of 5,400 acre-feet per year for the first eight years and 6,000 acre-feet after. The groundwater models and impacts should be re-evaluated and re-calculated based on the use of 6,000 acre-feet, including re-calculation of the drawdown and impact area. The groundwater models are based on a 20-year mine life, but the mine life, as cited in Chapter 1, page 1, line 23 is 24.5 to 30 years. The groundwater impacts should be recalculated.	Resolution - Disagreement with analysis technique, but change is not appropriate. The possibility of pumping to occur past 20 years is quantitatively analyzed in the GW Quantity section already. Regarding the amount of water used, it has to be based on the most realistic and reasonable pumping that is included in the MPO, not on the permit condition that may or may not be reached.

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145	Pima County - Chavez	2	Water	82	12	<p>The FEIS discusses why effluent and brackish water were deemed infeasible, but there is insufficient discussion on why the other alternatives were not feasible or were impractical. The FEIS does not address the feasibility of CAP direct delivery or recharge and recovery at the proposed CWS CAP delivery system (Project Renews)The SRK report found direct delivery of CAP water to be not feasible for the following reasons:</p> <ul style="list-style-type: none"> • Direct delivery requires construction of a treatment plant and delivery system. But no mention is made that ASARCO is successfully using CAP water. • SRK notes that a pipeline would cross private, state and CNF lands and cannot be buried along its entire length because of bedrock near the surface. <p>However, Augusta is funding a CAP pipeline from the CAP terminus to the CWC recharge site. Rosemont is building a pipeline from the Sahuarita well fields to the mine site, demonstrating that construction of water delivery infrastructure is feasible</p> <ul style="list-style-type: none"> • SRK notes limitations to the future use of direct CAP delivery due to drought, declining flows in the Colorado River, limited availability of excess CAP water, short-term planned CAP system outages and possible system failures. Yet, Rosemont is proposing to offset its groundwater pumping by recharging CAP water and has applied to ADWR for non-Indian agricultural priority CAP waterthat is being reallocated • SRK notes that direct delivery would require a cistern or reservoir for aboveground water storage and 	Resolution - additional wording added.
146	Pima County - Neva Connolly	2	Water Control-Stormwater	21	18	<p>"...exposed to precipitation only during operations." should read, "...during the 24.5 to 30 year life of the mine."</p>	Resolution - text changed
147	Pima County Tom Myers: Hydrologic Consultant	2		4		<p>Quote from Myers Review on the DEIS: The DEIS treated partial or complete backfilling of the pit as an alternative considered but eliminated from future study (DEIS, p 84-85). They eliminated backfill because they indicate that "maintaining a hydrologic sink" would capture any contaminants, which is "an acceptable and desirable condition ... should pit water become contaminated" (DEIS, p 85). The FS argues that backfill would eliminate the hydraulic sink and increase "the risk of detrimental impacts to groundwater chemistry from potential contaminants in pit lake water" (Id.). Elsewhere in the DEIS, the FS indicates that seepage through the waste rock would be relatively clean. With backfill, any potentially acid generating (PAG) rock could be segregated and placed above the water level; alternatively, PAG rock could be placed very deeply so that it is submerged deeply so that oxidation, if it occurs, ends quickly. If seepage through the backfilled waste rock could be a problem, then it can also be a problem dumped on the ground surface. Additionally, the DEIS fails to analyze the advantage of backfilling the pit, and that is vastly decreased drawdown in the watershed and not creating a lake that essentially isolates almost 96,000 af of water (DEIS, p 291) in a dry desert region that is running low on water supplies. Other</p>	Resolution - No change. The Forest has previously considered these comments, reviewed the possibility of vcarious aspects of pit backfill extensively, and decided to eliminate it from detailed study. The rationale provided in Chapter 2 and the Project Record are sufficient.
148	Rosemont-Kathy	2				Sahuarita License Agreement	Resolution - This has been incorporated into Appendix B.

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149	Pima County - Julia Fonseca	2				This EIS proposes far higher amounts of land disturbance than does the previous DEIS. Table 7 of the DEIS documented over 3000 acres of impacts, and Table 8 of the same DEIS mentioned over 4000 acres of impacts for the Barrel Alternative. Now for the same alternative, we are told that impacts may be over 5000 acres. Why are the total acreages so much higher?	Resolution - This comment is not correct. One needs to pay attention to what is being described. DEIS Table 7 adds up to 4,162 but does not include the utility corridor. DEIS Table 8 is resource-specific, and each resource has a different analysis area. FEIS Table shows 4,228, and then adds on primary access road (226) and utility corridor (889). These are not all that different. FEIS is just clearer about what is and isn't included than the DEIS. No changes needed.
150	Pima County - Brian Powell	3	Bio (also seeps, springs, and riparian)	35	9	The level of detail with regards to the impact of the proposed mine on wildlife and plants is insufficient and based on generalities. (In this section—and with regards to impact on wildlife—the EIS addressed vegetation and information about impacts on species as “needs in terms of vegetation types.”) Vegetation type change is certainly a possibility in some places, but in others it will be a loss of vigor over the short term and potential loss of species and vegetation structure. These changes were not analyzed as part of the EIS.	Resolution - modified description of GIS habitat analysis in Affected Environment and Environmental Consequences sections in Biological Resources section in ch 3.
151	Pima County - Eric Betterton	3	AERMOD Modeling of Compliance with NAAQS at the Perimeter fence for the Action Alternatives	41	3	Rosemont is required to model future pollutant levels and then add the future pollutant estimates to the existing pollutant levels, i.e. in addition to the current “background” levels found in the immediate area. Instead, Rosemont selects the lowest possible pollutant level, and then adds this “background” level to predicted Rosemont emissions. This mistake is made PM and for NOx, thus calling into question all the air quality model results. Comments on the Draft EIS previously submitted to PDEQ by Eric Betterton in January 2012 that are relevant to this PA-EIS are included and reference the PAFEIS Chapter, Page Number, and Line Number, ‘Eric Betterton Comments of Draft EIS – 12-01-12’ PDF attached.	Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.

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152	Pima County - Eric Betterton	3	AERMOD Modeling of Compliance with NAAQS at the Perimeter fence for the Action Alternatives	41	3	<p>Rosemont monitored PM10 at the proposed mine site for three years in order to establish the background level. EPA requires that the average of the highest 24-hour values recorded during each of three years is to be used as the 24-hour maximum PM10 background level.</p> <p>However, Rosemont ignored its highest observed PM10 value declaring it to be an anomalously high outlier. Justification for ignoring its own data is erroneous. Rosemont's own statistical analysis (a linear regression with a R2 value of unity) shows that the high value is not an outlier. It is clearly a valid member of the normal population distribution of natural PM10 observations. The high value may not be ignored simply because it will occur only infrequently, any more than one ignore the risk of a flood simply because it will occur once every hundred years. To reiterate, the high value is a naturally occurring value that is expected to occur again and that must be included when calculating the 3-year average background PM10.</p> <p>The National Ambient Air Quality Standard (NAAQS) maximum 24-hour PM10 of 150 µg/m3 will be exceeded when the correct average PM10 is added to Rosemont's predicted PM10 emissions (which are erroneously low anyway, see above).</p> <p>The EPA provides no guidance for selecting outliers. Indeed, their guidance makes it clear that a high background should be used to provide for a worst case analysis. Rosemont may not simply ignore inconvenient observations.</p> <p>Comments on the Draft EIS previously submitted to PDEQ by Eric Betterton in January 2012 that are relevant to this PA-EIS are included and reference the PAFEIS Chapter, Page Number, and Line Number, 'Eric Betterton Comments of Draft EIS – 12-01-12' PDF attached.</p>	<p><u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u></p> <p><u>Note that changes in approach have been made regarding the background PM10 concentrations.</u></p>
153	Pima County - Eric Betterton	3	AERMOD Modeling of Compliance with NAAQS at the Perimeter fence for the Action Alternatives	41	21	<p>The statistical analysis to "prove" that the highest measured PM10 value (71.3 µg/m3) is an "outlier" is fundamentally flawed. Rosemont suggests that the reading might have been impacted by a regional dust storm, in which case they should have analyzed the frequency of regional dust storms, not the frequency of high readings at their lone PM10 monitor in order to determine the probability of a recurrence. Indeed, the National Weather Service has stated that the frequency of dust storms in Tucson and Phoenix has increased substantially over the past few years, and so the "high" PM10 value is likely to be repeated or even exceeded in future.</p> <p>When the Forest Service includes the high value in their analysis they predict that the 24-h PM10 exceeds (Proposed Action) or nearly exceeds (Barrel Alternative) the NAAQS of 150 µg/m3. Nevertheless, they arbitrarily dismiss this troubling result and instead accept a lower modeled value. In other words, they failed to err on the side of caution.</p> <p>Please see attached PDF titled '13-07-22 Eric Betterton Comments on ADEQ Permit Application and Mining Plan Revision Final Draft July 19 2013'</p>	<p><u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u></p> <p><u>Note that changes in approach have been made regarding the background PM10 concentrations.</u></p>

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154	Pima County - Eric Betterton	3	AERMOD Modeling of Compliance with NAAQS at the Perimeter fence for the Action Alternatives	41	40	The EPA default value of the crucial NO ₂ /NO _x ratio is 0.5. Instead of using this value the Forest Service used a ratio of just 0.05, one tenth the recommended value, to demonstrate NAAQS compliance in the AERMOD model. When they use a ratio of 0.1, which is still only one fifth the recommended value, their own model shows that both the Proposed Action and the Barrel Alternative will exceed the NAAQS. The Forest Service again accepted the lowest predicted value and failed to err on the side of caution. Please see attached PDF titled '13-07-22 Eric Betterton Comments on ADEQ Permit Application and Mining Plan Revision Final Draft July 19 2013'	<u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u>
155	Pima County - Eric Betterton	3	AERMOD Modeling of Compliance with NAAQS at the Perimeter fence for the Action Alternatives	46	28	Not only is Pima County likely to violate the NO ₂ NAAQS but also the ozone NAAQS. This is because NO ₂ is a necessary ingredient for ozone formation, and has a significant and complex effect on ambient ozone levels. Recognizing this, the Forest Service should have called for the use of a photochemical model to estimate the effects of Rosemont's activities on ambient ozone. The Forest Service claims that such modeling "is not typically performed..." but given the potential impacts of increased NO ₂ a conservative approach to protecting air quality dictates the use of a photochemical model, especially since more than a million people live in the air shed. Please see attached PDF titled '13-07-22 Eric Betterton Comments on ADEQ Permit Application and Mining Plan Revision Final Draft July 19 2013'	<u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u>
156	Pima County - Yves Khawam	3	Affected Environment	20	11_1 3	Impacts to dark skies are listed as "...being mitigated to the extent possible, given the mine's need to operate 24 hours a day and safety requirements. Thus this conflict cannot be rectified." Mitigating to the extent possible requires full compliance with the 2012 Pima County Outdoor Lighting Code which is again absent from this section. If safety requirements cannot be reconciled with outdoor lighting code compliance, then the mine should not operate 24 hours a day. 24 hours/day operation is a desire on the part of the mine and not a "need".	<u>Resolution - No change in this location. This comment does not reference a correct section in the EIS. "Affected Environment" is a heading in every resource section in Chapter 3. The most likely section is Dark Skies, which was searched for the quoted term with no positive results. However, wording will be added to Chapter 2 and Dark Skies noting the difference in positions between RCC and Pima County regarding whether the outdoor lighting code applies or whether state law exempts the project.</u>
157	Pima County - Yves Khawam	3	Affected Environment	63	19	Implementation of an outdoor lighting plan needs to capture that it requires compliance to the 2012 Pima County Outdoor Lighting Code.	<u>Resolution - No change in this location. See above</u>
158	Pima County - Yves Khawam	3	Affected Environment	75I	1	Implementation of an outdoor lighting plan needs to capture that it requires compliance to the 2012 Pima County Outdoor Lighting Code.	<u>Resolution - No change in this location. See above</u>

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159	TON	3	Cultural Resources, Affected Environment and Environmental Consequences	13	35	Change “nevertheless” to “despite opposition to the project, tribes...”	Resolution - text changes made
160	Rosemont - Melissa Notes	3	Air	33		Air permit issued	Resolution - Bullet point deleted
161	USEPA	3	Air			<p>Visibility and nitrogen deposition thresholds exceeded. Need to explore additional mitigation. Jim indicated we were out of mitigation opportunities. Suggestions from EPA:</p> <ul style="list-style-type: none"> - Increase number of Tier IV engines - Nitrogen offsets 	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
162	USEPA	3	Air			Stated that PSD Class II increment is applicable on any project for minor or major source. When pressed, indicated not strictly required by regulation, but should not be exceeded. Similar to visibility/deposition thresholds	Resolution - Comment preliminary and was superceded by written comments.
163	EPA	3	Air Quality	3	20	<p>The AFEIS states that the revised modeling submitted to ADEQ in July 2012 demonstrates compliance with the NAAQS. This is accurate for the purposes of ADEQ’s regulatory permit process. However, the NAAQS modeling analysis for ADEQ’s permit process is not that same as the NAAQS modeling for the EIS. The EIS NAAQS modeling accounts for many more emission sources than what ADEQ regulates under its Class II Synthetic Minor Permit for the Rosemont Project. For instance, tailpipe emissions (e.g., a major contributor of NO2 emissions) are not regulated as part of ADEQ’s permit.</p> <p>The current language here regarding NAAQS compliance could be misinterpreted as indicating that the project meets the NAAQS. As stated regarding Chapter 3, page 45 (see below comments, where the impacts of specific alternatives are discussed, the NAAQS are predicted to be exceeded under some alternatives, at least at the fence line (Barrel Trail and Scholefield).</p> <p>This language should be revised to accurately describe that the ADEQ NAAQS analysis represents only a portion of the NAAQS analysis that the EIS addresses.</p>	Resolution - This has been clarified in the text.

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164	EPA	3	Air Quality	4	30	The AFEIS states that compliance with NAAQS is assessed at the perimeter fence line for each alternative. The results of the NAAQS analysis are further discussed on Chapter 3, page 45 for each of the alternatives, and are summarized on page 43, Table 45. For those alternatives that are below the NAAQS at the fence line, it is unclear whether the NAAQS is predicted to be exceeded inside the fence line, in areas that are publicly accessible. Language should be added here indicating that the "perimeter fence line" is an actual physical fence line that would prevent public access to contiguous property.	<u>Resolution - This has been clarified in the text.</u>
165	EPA	3	Air Quality	9	5	Meteorological hourly data used is from April 2006 through May 2009. This represents only 3-years of meteorological data, although on page 14 of the December, 2012 AERMOD modeling report, it states that modeling was conducted using March 2007 through February 2010 data, at the direction of the Forest Service. Still, only 3 years were used. Typically, for air quality modeling under 40 CFR Part 51, Appendix W, 5 years of meteorological data are preferred, if available.(See Appendix W, Section 8.3.1.2). The EIS should explain why the modeling performed in this case deviates from using the standard 5 years of meteorological data.	<u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u>
166	EPA	3	Air Quality	9	35	A 2004 EPA guidance document is referenced. This document was revised and an addendum issued in 2012. Upon review of the reference material, we note that the 2012 guidance document was, in fact, used for the modeling. Please correct the document citation to indicate that the 2012 EPA guidance was used.	<u>Resolution - Rosemont/JBR is the only one who can say what they used. EPA 2004 was what was referenced in the air modeling reports, and therefore is correct to leave in the text here.</u>
167	EPA	3	Air Quality	16		EPA finalized a partial disapproval of the Arizona Regional Haze Plan on July 15, 2013. This plan addresses visibility protection within the State of Arizona and does not meet the requirements of the Clean Air Act or Regional Haze Rule. EPA will be preparing a Federal Regional Haze Plan to address the deficiencies identified in the state plan. The Rosemont Copper Project would cause visibility impairment and contribute to visibility impairment at several Class I areas, and more mitigation will be needed. Rosemont will have to be evaluated in light of EPA's actions, and ADEQ will have to address any visibility impairment in future Regional Haze Plans. Table row "Regional Haze Rule, 40 CFR 51" states that, "The Coronado must analyze the impact on visibility by the Rosemont Copper Project to applicable Class I areas." There are predicted visibility impact exceedances, as described in our comment below. For any scenario chosen, the project should at least minimize and/or mitigate its potential to contribute or cause visibility impairment. Possible approaches to minimizing or mitigating visibility impairment may include further conversion of the haul truck fleet and diesel generators to more Tier 4 engines, and further enhancement of controls of fugitive (including fugitive dust), non-fugitive, and tailpipe emissions. The project should implement fugitive dust control at least as stringent as required in Maricopa County rule 310, including strict limits on visible dust emissions that leave the property.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>Note that all potential air offsets were explicitly reviewed and investigated for their potential</u>
168	EPA	3	Air Quality	27	40-42	The AFEIS states that, "Allowable prevention of significant deterioration increments currently exist for three criteria pollutants: SO2, NO2, and PM10. The emission of pollutants by the mine cannot exceed these increments at Class I and Class II areas." The criteria pollutant PM2.5 also has allowable prevention of significant deterioration increments. As commented elsewhere, PSD Class II increment values are exceeded under certain scenarios. Please include PM2.5 in the list of criteria pollutants for which deterioration increments exist. For any scenario chosen, the project should demonstrate that emission reductions and mitigation measures have been taken and shown by modeling to result in predicted values less than the increments.	<u>Resolution - Language regarding PSD has been revised in section based on input from Forest air specialist.</u>

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169	EPA	3	Air Quality	39	29	This line refers to the CALPUFF modeling report, "Rosemont Copper Company Revised CALPUFF Modeling Report to Assess Impacts in Class I Areas" (JBR Environmental Consultants Inc., 2013c), which addresses Class I increments, NAAQS, visibility and deposition. Not mentioned here is the modeling protocol document that precedes the modeling report, "Rosemont Copper Company, CALPUFF Modeling Protocol to Assess Impacts in Class I Areas" (JBR Environmental Consultants Inc., 2012e). On page 2 of the second cover letter of this protocol document, it states that a revision to the CALPUFF model's regulatory option was made. It is unclear whether Rosemont deviated from the EPA modeling guidelines. Please identify what modifications, if any, were made to the default regulatory version of the CALPUFF modeling system code (including CALPOST, CALMET, etc.), so we may understand whether such modifications would be acceptable and/or representative of the intended objective of the modeling analysis used for the project.	Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.
170	EPA	3	Air Quality	42	37	PSD Class II increment values are exceeded under certain scenarios (page 43, Table 45 summarizes modeling results). It appears that the PM2.5 increment is predicted to be exceeded for all alternatives for the 24-hour averaging time. PM2.5 increments for the annual average period are predicted to be exceeded for the Barrel Trail and Scholefield alternatives. Also the Scholefield alternative shows that the NO2 annual increment is predicted to be exceeded. For any scenario chosen, the project should demonstrate that emission reductions and mitigation measures have been taken and shown by modeling to result in predicted values less than the increments. In light of the data indicating that PM2.5 increments for the 24-hour averaging time will be exceeded under all alternatives, additional mitigation measures should be discussed for reducing emissions of this criteria pollutant.	Resolution - Language regarding PSD has been revised in section based on input from Forest air specialist.
171	EPA	3	Air Quality	43		Table 45 summarizes the air quality modeled impact. There are exceedances of the NAAQS and PSD class II increments for several scenarios. No change suggested for table entries. However, as previously commented, for any scenario chosen, the project should demonstrate that emission reductions and mitigation measures have been taken and shown by modeling to result in predicted values less than the applicable NAAQS or PSD Class II increments.	Resolution - Language regarding PSD has been revised in section based on input from Forest air specialist.
172	EPA	3	Air Quality	43		Table 45 - NO2 Background Concentration value of 24.5 ug/m3: This value, even though it is the highest concentration at the monitoring site, may be inappropriately low. It is based on two years of data and is the lowest concentration in the State of Arizona. The EIS should explain why the selected value is an appropriate choice.	Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.
173	EPA	3	Air Quality	45	4,10, 17,28	These scenarios result in predicted exceedances of the NAAQS, the PSD Class II Increments, or a combination of the two, at the perimeter fence line. For any scenario chosen, the project should not be approved until mitigation measures have been established and shown by modeling to result in predicted values less than the applicable NAAQS or PSD Class II increments.	Resolution - Language regarding PSD has been revised in section based on input from Forest air specialist.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
174	EPA	3	Air Quality	54	30	<p>It is stated that all of the action alternatives could contribute to noticeable visibility impairment at each of the Class I areas analyzed. Reference is made to EPA's criteria (40 CFR 51) that a delta deciview level of 0.50 or more is considered to contribute to visibility impairment and that a delta deciview level of 1.0 or more is considered to cause visibility impairment.</p> <p>Based on our review of the available visibility modeling information, the applicant has made more recent operational changes to reduce emissions. These mitigation efforts are presented in Chapter 3 on pages 64-67. We have confirmed that these changes are included in the latest modeling. Despite these changes to reduce emissions, visibility impairment is still being predicted. It is unclear what further opportunities for emission reductions have or have not been pursued.</p> <p>Possible approaches to minimizing or mitigating visibility impairment may include further enhancement of controls of fugitive, non-fugitive, and tailpipe emissions (including fugitive dust) and further conversion of the large haulage truck fleet and the diesel generators to Tier 4 engines.</p> <p>Another alternative that could be explored for practicability is the use of a hybrid electric haul truck system. Hybrid electric haulage trucks have been used at the Barrick Goldstrike facility and other mine sites internationally. While such a system may or may not be feasible for this project due to phasing and other design limitations, it should be noted that, in addition to reduced emissions, hybrid haul trucks exhibit large power and speed improvements relative to diesel-only engines, increasing the turn-around time and, in turn, increasing productivity of the mining operations. Other cited benefits include reduced</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>Note that all potential air offsets were explicitly reviewed and investigated for their potential</u></p>
175	EPA	3	Air Quality	57	12	<p>The deposition analysis threshold (DAT) results are discussed. The AFEIS states that the Project's maximum annual average deposition for nitrogen exceeds the DAT in three Class I areas. There are no mitigation measures proposed for this impact.</p> <p>Recent analysis of nitrogen deposition suggests that desert ecosystems may be among those particularly susceptible to ecological impacts from this source of pollution. Further, Saguaro National Park may be approaching or in excess of the "critical load" amount of nitrogen deposited, above which harmful changes in the ecosystem are anticipated. These impacts may include the promotion of non-native (invasive) species, a reduction in biodiversity, and an increase in fire risk. (John Notar, National Park Service, Personal Communication, July 18, 2013). The USFS and Rosemont should pursue options for reducing this significant project-related impact. The EIS should be revised to include a discussion of potential mitigation measures and their anticipated effectiveness. One option for investigation by Coronado and Rosemont may be the purchase of nitrogen offsets. Major nitrogen emitters exist in the region that could be retrofitted to reduce emissions equivalent to Rosemont's contribution. For any scenario chosen, the project should demonstrate that emission reductions and mitigation measures</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>Note that all potential air offsets were explicitly reviewed and investigated for their potential</u></p>
176	Pima County - Eric Betterton	3	Air Quality and Climate Change	1	1	<p>Comments specific to the Rosemont Air Quality Permit are also in the attached PDF document titled '13-07-22 Eric Betterton Comments on ADEQ Permit Application and Mining Plan Revision Final Draft July 19 2013'.</p>	<p><u>Resolution - All air comments submitted by Pima County were reviewed. There was no attachment from Betterton, but all comments by Betterton within the matrix were reviewed and responded to. The attachment was obtained later and reviewed by the Forest air specialist, and any changes warranted were made to the FEIS.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
177	Pima County - Ursula Kramer	3	Air Quality and Climate Change	1	1	<p>When an area is designated nonattainment, the agency which oversees the area must submit a state implementation plan (SIP) to the U.S. EPA. Through the SIP, an air quality agency will design an approach to reducing the pollutant levels in the air and, if appropriate, any emissions of precursor pollutants. Precursors are those pollutants which can form another pollutant in the atmosphere. For example, Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NOx) are precursor pollutants for ozone. This provides for a comprehensive approach to reducing criteria air pollutants taken by the Clean Air Act which covers many different sources and a variety of clean-up methods.</p> <p>These air pollution control programs could include the nonattainment New Source Review permit program and Federal General Conformity and Transportation Conformity programs. SIPs can affect sources such as power plants, manufacturing, automotive repair and detailing as well as other pollution sources. Working with the EPA, a state or local authority will also implement programs to further reduce emissions of pollutant precursors from sources such as means of transportation (cars, buses, trucks, etc.), fuels, and consumer/commercial products and activities.</p> <p>After the area is designated as nonattainment, the area must meet the federally mandated deadlines established by the 1990 Amendment to the Clean Air Act for compliance with the National Ambient Air Quality Standards. In the interim, it must be demonstrated to the EPA that reasonable further progress toward improving the air quality is being made in the nonattainment area.</p> <p>...continued on next row...</p>	<u>Resolution - Statement of opinion or fact. No actionable comment. No changes needed.</u>
178	Pima County - Ursula Kramer	3	Air Quality and Climate Change	1	1	Continued...Economic development would not be impacted directly by a nonattainment designation, but there could be indirect, costly consequences due to the designation. Sources could be required to install pollution control equipment, take limits on their production, or otherwise find reductions in emissions by "offsetting" in order to expand. New facilities wanting to locate in a nonattainment area will most likely be required to install pollution controls or take stringent operational limits. Additional requirements may be needed for different vehicle fuels and consumer/commercial products. Any of these requirements would likely be more expensive than the current status. Such costs will be borne by the various affected industries and ultimately by the area residents who rely on such products	<u>Resolution - Statement of opinion or fact. No actionable comment. No changes needed.</u>
179	Pima County - Sarah Walters	3	Air Quality Analysis Methodology: Point and Fugitive Emissions Associated with Active Mining	8	36	This section should also disclose the character of the tailings. The EIS should disclose that the tailings will be a non-plastic sandy silt, with an average of 63 percent No. 200; these characteristics dispose the material to wind transport.	<u>Resolution - This detail has been added to the air section</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
180	Pima County - Sarah Walters	3	Air Quality Analysis Methodology: Point and Fugitive Emissions Associated with Active Mining	8	36	<p>Particulate matter emissions from the Tailings Storage areas have been grossly underestimated. If the correct Tailings Storage emissions factor were to be used in the AERMOD projections then the modeled particulate matter levels would be greater than predicted.</p> <p>Comments on the Draft EIS previously submitted to PDEQ by Eric Betterton in January 2012 that are relevant to this PA-EIS are included and reference the PAFEIS Chapter, Page Number, and Line Number, 'Eric Betterton Comments of Draft EIS – 12-01-12' PDF attached.</p>	<u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u>
181	Pima County - Eric Betterton	3	Air Quality Analysis Methodology: Point and Fugitive Emissions Associated with Active Mining	9	3	<p>When estimating the dust arising from wind erosion of the tailings impoundments the Forest Service relies on an assumed threshold friction velocity of 0.43 m/s. This is two-and- a-half times higher than the threshold actually measured for mine tailings at Hayden, Arizona, of 0.17 m/s (Evaluation of Aerosol Production Potential of Type Surfaces in Arizona, W. G. Nickling and J. A. Gillies, 1986). By using such a high threshold, the Forest Service has severely underestimated the ability of the wind to cause erosion. They have set the bar unreasonably high and again, they have failed to take a conservative approach.</p> <p>The Forest Service claims that perimeter buttresses of waste rock will "break up the air flow". They ignore the possibility that the buttresses will instead induce strong turbulent eddies and thereby actually promote wind erosion.</p> <p>Please see attached PDF titled '13-07-22 Eric Betterton Comments on ADEQ Permit Application and Mining Plan Revision Final Draft July 19 2013'</p>	<u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u>
182	Pima County - Eric Betterton	3	Air Quality Analysis Methodology: Point and Fugitive Emissions Associated with Active Mining	9	4	<p>The highest wind speed recorded over the three year period is listed as 10.7 m/s, to represent the effective observed wind speed. This value is twice as high as the threshold wind speed reported by Nickling and Gillies (1987) for Hayden mine tailings (5.11 m/s).</p> <p>Comments on the Draft EIS previously submitted to PDEQ by Eric Betterton in January 2012 that are relevant to this PA-EIS are included and reference the PAFEIS Chapter, Page Number, and Line Number, 'Eric Betterton Comments of Draft EIS – 12-01-12' PDF attached.</p>	<u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u>
183	Pima County - Sarah Walters	3	Air Quality Analysis Methodology: Point and Fugitive Emissions Associated with Active Mining	9	5	<p>The wind speed should also be presented in 'miles per hour'.</p>	<u>Resolution - This has been revised in text</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
184	Pima County - Sarah Walters	3	Air Quality Analysis Methodology: Tailpipe Emissions	7	14	At such a time that Rosemont reaches employment of at least 100 full time equivalent employees Rosemont will be considered a 'Major Employer' and compliance with the Travel Reduction Program (TRP) requirements set forth in PCC 17.40.070.	Resolution - added a paragraph to Chapter 3 Transportation, Laws and Regulations.
185	Pima County - Sarah Walters	3	Air Quality Analysis Methodology: Tailpipe Emissions	7	36	This section describes the Global Warming Potential for CO2 versus N2O, and states that the 2 percent of global warming potential is insignificant, however, there are conversion factors to convert the global warming potential of gases to a CO2 equivalent and this should be disclosed, and accounted for, as stated in previous comments. To reiterate: The emissions of methane (CH4) and nitrous oxide (N2O) are known to have a greater impact on climate change when compared to the impact of CO2. The PA-FEIS states that the emissions of these gases would be 'much smaller'. Given the potency of these gases the anticipated levels of these emissions should be specified rather than excluded for disclosure. The impact of these emissions should be evaluated along with the impact of the CO2 emissions using the CO2 equivalence of the anticipated emissions of CH4 and N2O.	Resolution - Disagreement with analysis technique, but change is not appropriate. The greater impact from CH4 and N2O are already acknowledged in the FEIS and the effects are quantitatively analyzed, as is requested in the comment.
186	Pima County - Julia Fonseca	3	ALL	NA	NA	EIS should analyze or disclose what effects temporary cessation or interim shutdowns would have in terms of the Forest permit to operate and identified impacts.	Resolution - Have added a section to Chapter 2
187	Pima County - Sarah Walters	3	Analysis Methodology, Assumptions, Uncertain and Unknown Information	6	1	A detailed description of how the potential emissions from the surface disturbance from these activities were addressed in the air quality modeling should be included. On Page 6, Lines 34 – 43 and Page 7, Lines 1-3 the 'Fugitive dust emissions associated with mine development' are discussed, however, it is not discussed how the per acre-month is calculated, nor does this section discuss how the use of separate emission factors (one emissions factor for 25% of the time, and a separate emission factor for 75% of the time) was determined. Were the 'disturbance elements' in Table 11 (Chapter 2, Page 91 Line 24) included in this?	Resolution - Clarification text was added both here and to the actual analysis. It should be noted that this is not a modeling analysis, but a simple calculation. All of the pertinent details are included in the paragraph.
188	Pima County - Brian Powell	3	Bio	2	38	The FS continues to use terminology like "have the potential" to "permanently impact vegetation, soils", etc. It is incumbent upon the FS, as part of the NEPA process, to fully disclose the impacts of the range of alternatives being considered. There is simple no doubt that the action alternatives will severely and permanently impact the vegetation and soils of the Rosemont site. The FS should be honest about this fact.	Resolution - No change - this is a statement of opinion. The discussion of impacts is contained in the Biological Resources section in Chapter 3.
189	Pima County - Brian Powell	3	Bio	4	30	Acknowledge Pima County's holdings and land management role within the analysis area.	Resolution - text has been added to include acres of land owned by Pima County in the Biological Resources section in ch 3.
190	Pima County - Brian Powell	3	Bio	6	8	Wetlands administered by the BLM are acknowledged, but Pima County, which owns and manages the Cienega Creek Natural Preserve, are not acknowledge	Resolution - text has been added to include Pima County's land ownership and management of Cienega Creek Natural Preserve in the Biological Resources section in ch 3.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
191	Pima County - Brian Powell	3	Bio	10	1	The species of interest for Pima County are no longer referred to as PVS, which are a broader suite of species than are being proposed for coverage under the forthcoming MSCP (known as Covered Species). If PVS are to be used, should include, for the Rosemont area, the Arizona shrew.	<u>Resolution - terminology in text in Biological Resources section of chapter 3 has been changed from priority vulnerable species to covered species when referring to species being proposed for coverage under Pima County's forthcoming MSCP.</u>
192	Pima County - Brian Powell	3	Bio	10	1	Relying on species that are "known to occur" in the project or analysis areas, yet not seeking more comprehensive and more current data (i.e., not relying to such an extent on work that was done in the 1970s) is unfortunate. More current and comprehensive surveys, at least in the project area, should be undertaken.	<u>Resolution - No change. The discussion of impacts to species that have habitat in the analysis area, but no known occurrences, is contained in the supporting resource reports (i.e., Biologists' Report, BA, BE, MIS, and MBA).</u>
193	Pima County - Brian Powell	3	bio	10	1	It is improbable that the Arizona ridge-nosed rattlesnake does not occur in the analysis area, if not the project area. If they occur in Gardner Canyon (and they are well known to do so), then they have a very good likelihood of occurring in the analysis area.	<u>Resolution - No change. The discussion of impacts to species that have habitat in the analysis area, but no known occurrences, is contained in the supporting resource reports (i.e., Biologists' Report, BA, BE, MIS, and MBA).</u>
194	Pima County - Brian Powell	3	Bio	10	NA	The peregrine falcon is not considered in this analysis, but they are a species of concern for the AZGFD and they almost certainly occur in the project area	<u>Resolution - No change. The discussion of impacts to species that have habitat in the analysis area, but no known occurrences, is contained in the supporting resource reports (i.e., Biologists' Report, BA, BE, MIS, and MBA).</u>
195	Pima County - Brian Powell	3	Bio	10	NA	Sonoran desert tortoise is a PVS	<u>Resolution - it has been noted that this species is a covered species in this table.</u>
196	Pima County - Brian Powell	3	Bio	10	NA	Priority vulnerable species and MSCP Covered Species that occur in the Project and/analysis area, but which were not considered for impact; Birds: Bell's vireo likely occurs in the project area; Reptiles: the desert box turtle, which likely inhabits the project area; Mammals: Merriam's mouse is likely along Davidson and Cienega Creek (analysis area), southern yellow bat is likely in the analysis area, and California leaf-nosed bat has been confirmed in the analysis area (Cienega Creek Natural Preserve) and is likely in the project area. Clearly more work is needed to summarize the known distribution of these species and analyze the mine's impact upon them.	<u>Resolution - The MSCP covered species that have habitat in the analysis area are now evaluated in the Biologists' Report.</u>
197	Pima County - Brian Powell	3	Bio	14	NA	The document states that "Impacts to hydriparian habitat along Cienega Creek Natural Preserve and Davidson Canyon are possible but not anticipated." We disagree and believe the impacts to surface water and groundwater continue to be minimized.	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
198	Pima County - Brian Powell	3	Bio	15	Issue 5E.2	"Individuals may be impacted, but loss of population viability is not likely." This is not true for at least the Coleman's coralroot, which has approximately 40% of all known individuals occurring within the project area. This shows that the FS is not taking an objective view of mine impacts.	<u>Resolution - This comment was provided to the Forest specialist for consideration and any changes warranted were incorporated into the FEIS.</u>
199	Pima County - Brian Powell	3	Bio	17	20-22	The statement "Note that the term 'population' may have different connotations, but birds, in particular, are long-range migrants, so most often a population is considered a range-wide entity, rather than being composed of subpopulations, as is often true with smaller and less-mobile organisms". This statement is not supported in the scientific literature. Just a few sentences later (page 18, line 6) there is a cited need to manage and monitor populations of indicator species, some of which are birds.	<u>Resolution - the text has been changed to describe the term population that is used by the Forest Service.</u>
200	Pima County - Brian Powell	3	Bio	19	7	Update date of Pima County MSCP to 2012	<u>Resolution - changed</u>
201	Pima County - Brian Powell	3	Bio	19	14	The permit area is much more broad than stated. Please review MSCP and report correct permit area, because it includes lands that will be impacted by the mine.	<u>Resolution - the text regarding the permit area has been updated.</u>
202	Pima County - Brian Powell	3	Bio	19	12_1 3	Not all of the private sector would be covered under the MSCP. For example, mining is not covered. A correct terminology would be "some, specific activities of the private sector".	<u>Resolution - this sentence has been revised to include this terminology.</u>
203	Pima County - Brian Powell	3	Bio	29	42	The FS is poised to allow the permanent destruction of approximately 5,000 acres of land; it follows that the Service should be alarmed to write that "the latest botanical surveys by McLaughlin and Van Asdall (n.d. [1977])". Surely we can do better than to rely on old data such as this. In fact, later in the document, such as for giant sedge and for nearly all of the plant species analyzed, the Service notes the inadequacy of this earlier effort by way of the fact that later efforts consistently found these species.	<u>Resolution - this sentence has been revised.</u>
204	Pima County - Brian Powell	3	Bio	35	1	Analysis for individual species (based on the number of acres) should be broken out separately by the 'analysis' and 'project' areas.	<u>Resolution - No change. Habitat for individual species in the analysis area is presented in the Affected Environment section and impacts to habitat for individual species is presented in the Environmental Consequences section.</u>
205	Pima County - Brian Powell	3	Bio	36	26	No quantitative analysis of Pima Pineapple cactus was conducted. Certainly there have been surveys for this species in the pipeline and powerline corridors, but that should not preclude a large view of disturbance that will result from some of the connected actions.	<u>Resolution - No change. A more detailed discussion of impacts to threatened and endangered species and habitat is contained in the BA.</u>
206	Pima County - Brian Powell	3	Bio	45	27	The level of detail for the Chiricahua leopard frog is excellent and certainly benefits from the fact that this species has a recovery plan. However, it underscores how little information is known for most of the other species that are analyzed and for which assumptions of available habitat are made. <u>For many of these species, where does data come from that would enable modeling of habitat and what are the results of those modeling exercises?</u> I can find no such information in any of the documentation from the FS. Reviewing these data is critical to understanding the validity of the models.	<u>Resolution - modified description of GIS habitat analysis in Affected Environment and Environmental Consequences sections in Biological Resources section in ch 3.</u>
207	Pima County - Brian Powell	3	Bio	49	2	For a species that is widespread in the analysis area ("all areas at elevations ranging from 2,350 to 4,800 feet above mean sea level and within all riparian habitats"), 963 acres is not a correct figure.	<u>Resolution - this was an error and the estimate acres of possible habitat for this species has been revised.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
208	Pima County - Brian Powell	3	Bio	49	26	For the Sonoran desert tortoise: "The most suitable habitat for this species, however, is largely to the west and north of the project area in Sonoran deserts scrub." The area around Cienega Creek and Davidson Canyon are most certainly "suitable" habitat and Pima County has recoded many individuals in this area. This should be reanalyzed.	<u>Resolution - it has been noted that habitat for this species also occurs around Cienega Creek and Davidson Canyon.</u>
209	Pima County - Brian Powell	3	Bio	60	20	It should be noted that annual monitoring has taken place for native fishes, including in 2011 and 2012. Arizona Game and Fish conducts those surveys, including at one site on Cienega Creek, downstream of the confluence with Davidson Canyon	<u>Resolution - This monitoring information has been requested and upon receipt will be reviewed to determine its relevancy and usefulness in project monitoring and incorporated into the EIS, as appropriate.</u>
210	Pima County - Brian Powell	3	Bio	91	10	"100 additional species are growing in the revegetation plots" This is likely because the revegetation plots are small and are geographically close native plant communities. Natural seed dispersal from native species to the massive tailings piles is less assured. There are good models to test this potential and these should be employed before results from a small test plot can be extrapolated to the massive tailings piles being proposed.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
211	Pima County - Brian Powell	3	Bio	96	16-17	The line: "While the extent and degree of these impacts would depend on local climatic conditions and other factors that are difficult to quantify, mitigation measures to identify and control nonnative and invasive species are expected to be effective." This needs a citation and needs to have much greater clarification. Effective at what? Establishment of new species? Complete elimination?	<u>Resolution - Text clarified</u>
212	Pima County - Brian Powell	3	Bio	97	13	The EIS states that "population viability relates to the distribution of a species on lands managed by the Coronado—not rangewide." I am not aware of population viability being used in this manner. Usually population viability is determined through population viability analysis. Regardless, the use of distribution as a tool for viability determination is a flawed approach for those species for which we do not know the full (or even partial) distribution. This is the case for many of the species, especially plants.	<u>Resolution - No change. The CNF biologists considers this definition to be appropriate in this document for the purposes of this analysis.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
213	Pima County - Brian Powell	3	Bio	97	18-19	<p>"A quantitative analysis using GIS was conducted to estimate the acreage of possible habitat for special status species within the analysis area and the expected direct impacts to possible habitat for these species." This is a positive addition to the EIS, but where is there greater detail about the GIS process? When Pima County did a GIS exercise for the Sonoran Desert Conservation Plan, it was an iterative and open process, with professional input and a document that could be viewed and critiqued by others. A similar approach should be taken here; otherwise it is just a leap of faith that that the FS team did things right. Based on the information presented, it also appears that these models are very coarse grained, as evidenced by the inclusion of "habitat types" as opposed to more specific resources. This is now common practice for site-specific impacts as opposed to landscape-level analyses, which the approach by the FS for the Pecos mine is more suited.</p>	<p><u>Resolution - modified description of GIS habitat analysis in Affected Environment and Environmental Consequences sections in Biological Resources section in ch 3. A memo to file (with supporting data) has also been prepared.</u></p>
214	Pima County - Brian Powell	3	Bio	100	14-15	<p>With regards to the needle-spined cactus, the EIS states that "Individuals of this species may occur near the reroute of the Arizona National Scenic Trail, but the trail is linear, requires a narrow corridor for construction, and allows for some flexibility in trail placement, so impacts to sensitive plants would be avoided to the extent practicable". This cactus can occur at quite high densities and therefore will be very difficult to avoid. Additional mitigation measures are needed.</p>	<p><u>Resolution - Please note that the discussion of MSCP covered species that have habitat in the analysis area is contained in the Biologists' Report.</u></p>
215	Pima County - Brian Powell	3	Bio	101	27	<p>In chapter 2 of the document, the term "project area" is defined as the "area that is composed of the open pit, waste rock facility, tailings facility, heap leach facility, plant site and ancillary facilities, fenced area around the mine (perimeter fence), mine primary access road, and utility maintenance road." However, with regards to the Coleman's coral root, the document states that "there are individuals growing in McCleary Canyon in the analysis area outside the project area that could experience indirect impacts." This is incorrect: the largest known population of the Coleman's coral root—representing approximately 40% of known individuals— is inside of the project area boundary.</p>	<p><u>Resolution - no change. This is the impacts common to all section. Not all action alternatives will impact this population; the impacts of each action alternative on this population is analyzed separately.</u></p>
216	Pima County - Brian Powell	3	Bio	101	27	<p>The mitigation and monitoring plan claims that the plant site will be relocated so that there are not impacts on the plant, but this fact is unclear from the maps (chapter 2) and the County has not been provided GIS maps to verify this. However, assuming that the analysis is correct, the processing facilities will be extremely close to numerous known individuals in McCleary canyon. Here, the species' host plant (presumed to be oak, in symbiosis with a fungus, but so much is still unknown) could be seriously impacted by plant operations, including fugitive dust and a higher likelihood for fire due to proximity to the plant. None of these impacts were given serious consideration. Instead, the FS declared that "because of the recent discovery of new populations, it has been determined that there would not be a loss of population viability across the Coronado National Forest." It seems impossible to conclude that impacting approximately 40% of the known individuals of a species would not constitute loss of population viability. If there is one species that will be impacted by this proposed mine and that deserves special attention, it is certainly the Coleman's coral root and sadly, such consideration was not afforded</p>	<p><u>Resolution - No change. The Forest biologist reviewed this and determined that the analysis was appropriate as it is currently written.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
217	Pima County - Brian Powell	3	Bio	101	27	By the Forest's own definition of population viability ("the distribution of a species on lands managed by the Coronado—not rangewide" [italics added]), it seems unlikely that this species would not be determined to lose population viability. And if population viability is invoked, then a population viability analysis should be undertaken to determine factors such as minimum viable population.	<u>Resolution - No change. The CNF biologists considers this definition to be appropriate in this document for the purposes of this analysis.</u>
218	Pima County - Brian Powell	3	Bio	101	27	In each and every plant write-up in this section says "such as increased potential for competition from nonnative plant species." Clearly this standard language does not take into account the actual life history of this species, because what exactly is the species in "competition" for? The fungus upon which it relies? Again, this language is clearly shoved into the account with little thought as to its meaning. Such facts offer little comfort, particularly for a species that could be driven toward the need to list under the ESA as a result of the mine.	<u>Resolution - No change. The CNF biologists considers this definition to be appropriate in this document for the purposes of this analysis.</u>
219	Pima County - Brian Powell	3	Bio	101	3_4	Over and over again for plant species such as the Huachuca golden aster, the Service indicates: "Direct impacts (i.e., crushing, clearing, trampling, etc.) to this species are not anticipated because there are no documented occurrence records for this species within the project area or the footprints of the connected actions." How can such a determination be made when no surveys have been undertaken to find the species? The FS needs to be honest when it does not know the extent or severity of impacts before making any such claim of effect.	<u>Resolution - No change. The CNF biologists reviewed this and determined the existing description to be adequate for the purposes of this analysis.</u>
220	Pima County - Brian Powell	3	Bio	105	9	The analysis does not consider the impacts on the lowland leopard frog in the analysis area, which includes an important population in Cienega Creek below the confluence with Davidson Canyon. This is neither recognized nor seriously analyzed.	<u>Resolution - The EIS notes that the species has been detected in Davidson Canyon and Cienega Creek (Affected Environment) and does consider the impacts on this species (these known locations has been reiterated in the EIS) in the Environmental Consequences section.</u>
221	Pima County - Brian Powell	3	Bio	106	36	The impacts of mine-generated noise on birds are not taken into account as it relates to singing and hearing territorial calls. This can be a significant impact in some areas and for some species.	<u>Resolution - no change. The potential impacts of mine-generated noise on animals is discussed under the heading Noise and Vibration in the Environmental Consequences section.</u>
222	Pima County - Brian Powell	3	Bio	107	1	No determination of population viability for the rufous-winged sparrow is made.	<u>Resolution - The MSCP covered species that have habitat in the analysis area are now evaluated in the Biologists' Report.</u>
223	Pima County - Brian Powell	3	Bio	107	13	Northern grey hawk occurs at Cienega Creek, but that is not acknowledged, nor is the analysis area	<u>Resolution - No change. It is noted in the Affected Environmental that this species occurs at Cienega Creek.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
224	Pima County - Brian Powell	3	Bio	108	15	The Cienega Creek Preserve is an important site for the yellow-billed cuckoo, but impacts are not honestly stated. The document makes a point of stressing that the level of uncertainty over the impacts on Cienega Creek is high, but uncertainty calls for more information and a greater dose of caution.	<u>Resolutino - text has been modified to reflect analysis of wider range of impacts to Cienega Creek and western billed cuckoo.</u>
225	Pima County - Brian Powell	3	Bio	111	8	The EIS acknowledges that "groundwater drawdown is modeled to occur" (on Cienega Creek), but this is absent from evaluation of other aquatic and riparian obligate species except Gila topminnow	<u>Resolution. This statement was already made for: Huachuca water umbel, southwestern willow flycatcher, and longfin dace in Cienega Creek and Empire Gulch; and giant spotted whiptail, northern Mexican gartersnake, and Gila chub in Cienega Creek. Similar language was added to: Arizona giant sedge, Chiricahua leopard frog, lowland leopard frog, northern gray hawk, common black-hawk, northern beardless tyrannulet, western yellow-billed cuckoo, broad-billed hummingbird, varied bunting, Abert's towhee, & sensitive bat species.</u>
226	Pima County - Brian Powell	3	Bio	111	24	Cienega Creek is one of the most important areas for the Gila topminnow and it is a creek system that has declined precipitously in the last few years. The determination of no effect on population viability is, at best, questionable.	<u>Resolution - no change. It appears this comment is actually referring to longfin dace. However, the conclusion of impacts to both species was reviewed by the Forest specialists and determined to be appropriate.</u>
227	Pima County - Brian Powell	3	Bio	116	1	Based on the presence of a male jaguar near to (and possibly in) the project area, the FS classifies camera traps as a mitigation measure for this species. Aside from the idea that collecting information is important, in what meaningful way is taking photographs mitigation for the destruction of habitat? How would photographs lead to on-the-ground conservation action?	<u>Resolution - No change. This item is clearly labeled as monitoring in Appendix B, not mitigation.</u>
228	Pima County - Brian Powell	3	Bio	116	1	Pima County also has concerns that the impact of the Sycamore Connector Road has not been analyzed as to its effect on the revised Critical Habitat designation. This road will further impact critical habitat, yet without proper analysis.	<u>Resolution - text has been added to describe in more detail the potential impacts from roads and the likelihood of these impacts. Further, the impacts that are included in the calculations in the table that includes direct impacts to jaguar proposed critical habitat are described in more detail.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
229	Pima County - Brian Powell	3	Bio	116	1	Whether or not the proposed project impacts critical habitat for the jaguar is clearly up to the FWS, but how can the destruction of almost 4,000 acres of critical habitat for the jaguar be determined to “not destroy...critical habitat”?	<u>Resolution - no change. This is what the USFWS stated in the biological opinion.</u>
230	Pima County - Brian Powell	3	Bio	NA	NA	No diagram of the Project area is provided in this section.	<u>Resolution - no change. No, it is not included in this section; however, the reader is referred to chapter 1, figure 1 and chapter 2 figures 9, 13, 17, 21, and 23.</u>
231	EPA	3	Biological Resources	13-15	Table 116	Issue 5B.1: For the proposed action, the column, “Acres by type of terrestrial and aquatic habitat lost, altered, or indirectly impacted,” refers the reader to Table 123 for detailed information regarding these impacts; however, tables 121-123 (pp. 90-91, 97) document direct impacts (acres lost) to vegetation types and special status species and contain no information on indirect impacts. Table 105 in Chapter 3 of the Seeps, Springs and Riparian Areas resource section presents quantitative estimates of project effects to riparian areas, but does not include estimates for jurisdictional waters of the United States, including wetlands. The EIS should include the quantitative estimates of indirect impacts from the proposed action, shown in Table 108 of the Seeps, Springs and Riparian area resource section, in the Biological Resources section.	<u>Resolution - text was added to table 116 referring reader to table 108 (in "Seeps, Springs, and Riparian Areas" resource section).</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
232	AGFD	3	Biological Resources	8	22	<p>The text states: "Any species or groups listed as management indicator species (MIS) by the Forest Service . . . deemed to potentially occur in areas to be impacted by the proposed project were carried through for detailed evaluation within the management indicator species report"</p> <p>COMMENT: The MIS report does not describe a "detailed evaluation" and does not adequately evaluate the effects to MIS species and, therefore, cannot be relied on as a document informing the FEIS. This 33 page document devotes a single page to each species. Population impacts seem to be evaluated based on percent of habitat affected. Yet, a significance threshold for percent habitat impacted is not given in the report. Thus, the report finds that no species will suffer population impacts whether 1% or 10% of its habitat is affected. Minimal impact is not the same as any impact.</p> <p>Moreover, impacts to MIS species which are not found on any other sensitive species list utilized for the purposes of the EIS were not evaluated on any other criteria. Species of primary importance to the Department such as Gould's Turkey were not considered in the FEIS or the MIS report. The MIS report cites a single (Forest Service) document dating from 1986 in stating that "there are no data" on turkey habitat. This is incorrect and should be corrected in the FEIS.</p> <p>RECOMMENDATION: The Department recommends that impacts to MIS species along with species of importance to the Department (SGCN and SERI) are fully evaluated in the FEIS without relying solely on</p>	Resolution - No change. The Coronado biologists have reviewed and approved the MIS report.
233	Rosemont - Kathy	3	Biological Resources	9	5	<p>TYPOS - Most of this would be considered an irretrievable commitment.....it is expected that many species would use the area again..... - appears a word is missing</p>	Resolution - No change. No missing words.
234	AGFD	3	Biological Resources	9	5	<p>COMMENT: The survey for bats within the project area relied on "sampling" an area for bat presence and extrapolating to the rest of the project footprint. This is survey methodology may result in impacts not being adequately described or mitigated. A roost serving thousands of bats may not show up on a small sample area. Should that one roost be missed, those bats will be impacted. Important maternity sites that will be impacted may not have been identified and mitigation has not been considered.</p> <p>RECOMMENDATION: The Department recommends the FEIS require a comprehensive survey of the project area to identify potential impacts to all species of bats which may be found in the area.</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>Note that additional bat surveys have been added to Appendix B.</p>
235	AGFD	3	Biological Resources	9	39	<p>The text states: "game species known to occur within the project area are discussed in the biologists' report (SWCA Environmental Consultants 2011b)."</p> <p>COMMENT: This sentence implies that a detailed report on game species occurring in the project area and impacts to those species may be found in the "biologists' report". In fact there is a single paragraph dedicated to game species in this report and it cites a single web page about hunting on the Department's website as its source.</p> <p>RECOMMENDATION: The Department recommends that impacts to Species of Economic and Recreational Importance (SERI) be analyzed and mitigation be identified. We have offered to assist the Forest with this task.</p>	Resolution - text has been added regarding state regulations regarding wildlife, and SGCN are evaluated in the biologists' report.
236	AGFD	3	Biological Resources	15	Table 116	<p>COMMENT: Some species are sensitive to the constant presence of human activity and will avoid the area. This impact is not included in the table.</p>	Resolution - no change because this is covered in issue 5F.2.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
237	EPA	3	Biological Resources	16		<p>The AFEIS does not include a discussion of the federal Clean Water Act (CWA) or Department of Army regulations as influencing or guiding the analysis of biological resources. In particular, there is no reference to the 404(b)(1) Guidelines and restrictions on discharge, most notably 40CFR 230.10(b)(3): adverse effects on endangered species; and (c): significant degradation of waters of the United States; and 40CFR 230.11(g) and (h) determination of cumulative and indirect/secondary effects on aquatic ecosystems. There is no discussion of impacts to jurisdictional waters of the United States impacted by the project. This section should be revised to include a discussion of applicable portions of the CWA and 404(b)(1) Guidelines, and Department of Army regulations. It should also provide assessment of impacts to jurisdictional waters of the United States.</p>	<p>Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.</p>
238	AGFD	3	Biological Resources	19	1-4	<p>COMMENT: The FEIS inappropriately dismisses the State's role in management and regulation of wildlife, describing regulations as if they merely shadow federal law: "there are other State regulations that are similar to Federal regulations, such as those addressing take of migratory birds (i.e. ARS §17-236); however, requirements of Federal laws are emphasized in this document because this is a Federal action." In the United States and Canada, state, provincial and tribal fish and wildlife agencies are responsible for managing most fish and wildlife on public and private lands and water within their geographic jurisdictions. Federal agencies, in cooperation with state and tribal agencies, are responsible for managing only migratory fish and wildlife and federally listed threatened and endangered species, and for regulating wildlife trade.</p> <p>In Arizona, ARS §17-102 codifies state ownership of wildlife: "Wildlife as state property; exceptions. Wildlife, both resident and migratory, native or introduced, found in this state, except fish and bullfrogs impounded in private ponds or tanks or wildlife and birds reared or held in captivity under permit or license from the commission, are property of the state . . ."</p> <p>RECOMMENDATION: The FEIS should accurately describe the State's primary authority to manage and regulate take of wildlife regardless of land status. The FEIS should describe impacts to state trust species,</p>	<p>Resolution - text has been added regarding state regulations regarding wildlife.</p>
239	EPA	3	Biological Resources	20		<p>The AFEIS indicates that wetlands are associated with only two springs. The AFEIS does not discuss the extensive riverine and palustrine wetland systems within and adjacent to Empire Gulch, Gardner Canyon and Cienega Creek that will or may be indirectly impacted by the proposed action. Many of these wetlands are likely to be jurisdictional waters of the United States, but the reach and extent of federally regulated wetlands have not been delineated; therefore, the extent of indirect impacts to these waters has yet to be determined. These waters should be delineated or the EIS should note that an unknown number of acres of wetlands and jurisdictional waters exist in Empire Gulch, Gardner Canyon, and Cienega Creek and, because the reach and extent of these waters has not been delineated, the extent of indirect impacts to them is unknown.</p>	<p>Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.</p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
240		3	Biological Resources	27	33-35	The discussion of hydroriparian vegetation types does not acknowledge that portions of this vegetation type include jurisdictional wetlands regulated under the federal CWA. The reach and extent of these federally regulated wetlands have not been delineated; therefore, the extent of indirect impacts to these waters has yet to be determined. Riverine and palustrine wetlands that occur in several areas adjacent to Cienega Creek have not been identified in lines 33-35 of this section. These unidentified wetlands may be jurisdictional waters of the United States and may be impacted indirectly by the proposed action. As previously recommended the EIS should acknowledge that extensive waters of the United States, including wetlands, occur in the analysis area and that the reach and extent of these waters has not been delineated and potential indirect impacts from the proposed action on those waters has not been quantified.	Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.
241	AGFD	3	Biological Resources	35	1	COMMENT: In citing references for Special Status Species, the FEIS fails to consider the State Wildlife Action Plan. Executive Order 13443 requires the Forest to “ensure that agency plans and actions consider programs and recommendations of comprehensive planning efforts such as State Wildlife Action Plans, the North American Waterfowl Management Plan, and other range-wide management plans for big game and upland game birds”. The FEIS contains no reference to EO 13443 and neglects to consider the SWAP or adequately describe impacts or mitigation for impacts to many species listed within the State Wildlife Action Plan such as Species of Greatest Conservation Need and Species of Economic and Recreational Importance. RECOMMENDATION: The Department recommends the FEIS recognize Executive Order 13443 and describe impacts to species listed in the SWAP.	Resolution - text has been added regarding state regulations regarding wildlife, and SGCN and SERI are evaluated in the biologists' report.
242	AGFD	3	Biological Resources	65	29	The text states: “There is evidence to suggest that all the ocelots photographed in the Huachuca Mountains were the same individual”. COMMENT: This sentence is wrong or out of date. The Department has positively confirmed that there are at least two different ocelot individuals in the Huachucas. RECOMMENDATION: The Department suggests updating the text.	Resolution - text has been modified.
243	EPA	3	Biological Resources	68		Refer to previous comments and recommendations regarding climate change.	Resolution - No change warranted.
244	AGFD	3	Biological Resources	71	29	COMMENT: The Forest should note that no information on actual use of modeled corridors between the Catalinas and Whetstones currently exists.	Resolution - no change. This comment is unclear. The sentence to which the commenter is referring addresses the Santa Rita and Whetstone Mountains, not the Santa Catalina and Whetstone Mountains.
245	EPA	3	Biological Resources	78		This section should be revised to include a discussion of the indirect effects of the proposed action on jurisdictional waters of the United States (40 CFR 230.11(h)), including wetlands in the project analysis area (as opposed to the project area).	Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
246	AGFD	3	Biological Resources	79	7	<p>COMMENT: The FEIS fails to adequately address or analyze the interaction of multiple impacts on species. While individually, each analyzed impact may not have a significant effect on any species, adding all of them together may reduce the suitability of the area for occupation by certain species; especially those that are rare, secretive and do not tolerate human activity, rely on high ecosystem integrity, or are dependent on large blocks of fragmented habitat. For instance, this section addresses impacts from dust, noise, vibration, and artificial lighting. These impacts could collectively be called "disturbance", but there is not an adequate analysis of the effects of multiple mine-related "disturbances" that may cause an animal to avoid the area, what impact that avoidance may have on the population as a whole, and what impact that population impact may have on the species. This is not beyond the scope of the FEIS and per CEQ guidance on the topic should be addressed. The CEQ guidance states that "evidence is increasing that the most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time." (Appendix F, CEQ Guidance, Cumulative Effects)</p> <p>RECOMMENDATION: The Department recommends a description of the impacts and interaction of</p>	<p>Resolution - no change. This characterization is not completely true - see Impacts Common to All Action Alternatives section, page 78.</p>
247	EPA	3	Biological Resources	86	35-40	<p>The AFEIS concludes that no change in riparian habitat along Cienega Creek and Gardner Canyon is expected to occur as a result of the proposed mine. As we have commented previously regarding the Groundwater Quantity resource section of Chapter 3, conclusions of little or no predicted hydrologic changes or expected effects on riparian vegetation are based on speculative models characterized by a high degree of uncertainty. We do not concur that there are adequate data to conclude that there likely will be no indirect effects on riparian vegetation nor that there will be no subsequent effects to aquatic wildlife habitat (40 CFR 230.10 (c) and 230.11 (h)).</p> <p>Tables 60-64 of the Groundwater Quantity resource section report for Cienega Creek (2 sites) and for the Gardner/Cienega confluence report the following ranges of modeled groundwater drawdown based on sensitivity analyses: 1) end of active mining (<0.1feet); 2) 20 years after active mine closure (<0.1feet); 3) 50 years after closure (< 0.1-0.15 feet); 150 years after closure (<0.1-0.35 feet); and 1000 years after closure (<0.1-0.8 feet). If the output of the groundwater modeling and the sensitivity analyses are accepted, these data indicate that potentially significant levels of groundwater drawdown are a possibility in the near- and long-term along Cienega Creek. Conclusions regarding impacts are not supportable because the modeling is not accurate enough to predict impacts < 5 feet. The discussion does not acknowledge that even small fluctuations in the groundwater table can result significant changes to surface flows. Furthermore, the contribution of flow from Empire Gulch to Upper Cienega</p>	<p>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</p>
248	EPA	3	Biological Resources	87	12_1 3	<p>The AFEIS estimates that 122 acres mapped as hydrioparian habitat along Empire Gulch could be affected by groundwater drawdown from the proposed action. The amount of CWA jurisdictional wetlands that could be affected has not been documented. Please refer to previous recommendations on reach and extent of CWA jurisdictional wetlands.</p>	<p>Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.</p>

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249	AGFD	3	Biological Resources	95	27	<p>COMMENT: Stating that roads have a positive impact on birds is misleading. Fragmentation of habitat may increase species diversity as species reliant upon fragmentation would benefit. However, those opportunistic species are typically not the species of concern.</p> <p>RECOMMENDATION: The Department recommends removing this statement and adding a discussion of the impacts to bird species that might be negatively affected by increased fragmentation.</p>	<p><u>Resolution - no change. The CNF disagrees with AGFD's recommendation that only potential negative impacts to birds from roads be disclosed.</u></p>
250	AGFD	3	Biological Resources	95	42-45	<p>The text states: "Any special status animals present in the project area or in the path of the connected actions could be lost (i.e. crushed, trampled, etc.) or otherwise harmed (i.e., forced to relocate, cut off from other individuals, foraging success decreased, etc.) as a result of project activities. Additionally, an increase in vehicle and construction equipment traffic into and within the analysis area would occur during the premining phase, and increased travel associated with day-to-day operations and maintenance activities would occur through closure and could result in direct (animals could be injured or lost) and indirect impacts to special status species.</p> <p>COMMENT: This paragraph describes the potential for direct and indirect take of Federal special status species but fails to account for loss of state trust species even though such take is identified as an adverse impact.</p> <p>RECOMMENDATION: The Department recommends that the FEIS address how RCC will avoid, minimize and mitigate taking wildlife protected under Arizona Revised Statutes Title 17.</p>	<p><u>Resolution - text has been added regarding state regulations regarding wildlife, and SGCN and SERI are evaluated in the biologists' report.</u></p>
251	AGFD	3	Biological Resources	98	Table 123	<p>COMMENT: Jaguars are missing from the list of mammals affected. RECOMMENDATION: The Department recommends adding jaguars to the list of mammals affected.</p>	<p><u>Resolution - no change. Note at bottom of table states that it does not include threatened and endangered species considered under ESA. Rather, Table 124 quantifies direct impacts to jaguar proposed critical habitat.</u></p>
252	AGFD	3	Biological Resources	133	23-39	<p>COMMENT: The sever and transfer of portions of water rights "to appropriate entities" for in-stream flow rights on Upper Cienega Creek assumes a land interest by the "appropriate entity" and transfer of those water rights to that entity. RECOMMENDATION: The FEIS should not rely on this mitigation, given the uncertainties over its implementation.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
253	AGFD	3	Biological Resources	133	23-39	<p>COMMENT: The public will lose access to almost 7000 acres, or roughly 11 square miles, of their national forest lands for up to 30 years.</p> <p>The Arizona Game and Fish Department has asked that this recreational opportunity be replaced at 100% level in-kind, in-time since the beginning of our coordination on the project. The FEIS does not identify any mitigation for loss of these 11 square miles of recreational opportunities. The Department has provided numerous suggestions for how Rosemont Copper might fund purchase of access to currently inaccessible lands. Additionally, some of the mitigation identified might also be applied to mitigation for access.</p> <p>RECOMMENDATION: The FEIS should describe how loss of public access resulting from the project may be mitigated.</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
255	AGFD	3	Biological Resources	133	40-45	<p>The text states: "Rosemont Copper has committed to enhancing or replacing up to 30 water sources to offset potential impacts to surface waters, and the performance and success of these waters would be monitored as well."</p> <p>COMMENT: This mitigation is vague and effectiveness cannot be determined. No funding amount has been identified. Seeps and springs will be replaced by "constructed waters". The Forest has stated that it is concerned that too many waters may be constructed within the Rosemont Allotments. The entire Coronado Forest should be considered for replacement waters, not just the Rosemont Allotments. The FEIS should require the constructed waters to replace or enhance waters in kind for what is directly or indirectly impacted. For instance, a spring providing habitat for aquatic species and creating a riparian area with obligate associated vegetation should not be replaced with a rainwater catchment that provides only drinking water. There are opportunities forest-wide to restore and enhance springs that have been severely degraded.</p> <p>Mitigation Measure FS-BR-05 states that Rosemont is to establish a long-term management and maintenance fund to maintain the constructed water features. No other details, such as the amount of funding or the period of time the waters are to be funded for management, is described. If the Forest commits to mitigation measures, it has a duty to ensure the measure can be implemented and will be</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
257	AGFD	3	Biological Resources	134	33-36	<p>COMMENT: Unless the water ponds in the project area become an attractive nuisance, it is unclear how this measure benefits CLF to any great degree.</p> <p>RECOMMENDATION: The Department recommends clarifying this statement.</p>	<p>Resolution - No change. This mitigation benefits a number of species by keeping them out of potentially contaminated water.</p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
258	AGFD	3	Biological Resources	135	13-27	<p>COMMENT: The wording of this measure for the construction and maintenance of water features includes the modifiers “as needed” and “if needed.” As written, this measure does not meet CEQ guidelines for mitigation effectiveness, especially since the Department asserts that the mitigation measure is needed.</p> <p>As primary lead for implementing CLF recovery efforts, the Department asserts that all 30 waters are needed. There should be no question that new and enhanced waters are needed for many species of wildlife and especially for the Chiricahua leopard frog. The FEIS appears to be limiting the placement of new and enhanced waters to the Rosemont grazing allotments. The Rosemont allotments have no biological relevance to the needs of wildlife. The Chiricahua leopard frog’s range was historically throughout most of the Coronado National Forest and the Department is aware of more than 30 locations that require additional waters or enhanced waters for this species alone.</p> <p>RECOMMENDATION: The Department recommends that the FEIS should require the development and long-term maintenance of all 30 water features and requests involvement in determining what sites will be constructed, enhanced, managed, etc. and how the funding for such work will be calculated.</p> <p>The Department suggests the FEIS describe: How much money will go into the long-term management fund and who will manage those funds; what types of projects are planned or anticipated, and how</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
259	AGFD	3	Biological Resources	136	37-47	<p>COMMENT: The Department has not had an opportunity to review and comment on the Rosemont preliminary invasive species management plan and as such cannot comment on whether or not it can be supported and executed in a manner to have its intended effect.</p> <p>RECOMMENDATION: As primary implementers of CLF recovery and management efforts, and having statutory authority over invasive wildlife management and sportfish management, the Department recommends that the Forest allow the Department to provide necessary input before determining the effectiveness of this mitigation measure requiring Department authorizations.</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
260	AGFD	3	Biological Resources	137	6	<p>COMMENT: For the one roost the Forest knows about for LLNB, the FEIS requires work outside the roosting season and closure of the site to exclude LLNB, but the possibility of maternity roosting of state trust bat species, which may also be using that roost, is not discussed or analyzed. Due to different seasonal use of the roost by different species, this could result in the take of state trust species.</p> <p>RECOMMENDATION: The Department recommends that the FEIS identify use by all bat species and that all bat species be considered when identifying impacts and mitigation, not just federally listed species.</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>Note that additional bat surveys have been added to Appendix B.</u></p>
261	AGFD	3	Biological Resources	137	17	<p>COMMENT: There are no measures to compensate for the loss of yellow-billed cuckoo or other nesting bird habitat. ARS § 17-236 prohibits the take or injury of any bird, the harassment of any bird upon its nest, or removal of nests or eggs except as may occur in normal horticultural and agricultural practices and except as authorized by Commission order.</p> <p>RECOMMENDATION: The Department recommends that RCC develop an avian conservation plan in consultation with the Arizona Game and Fish Department to be authorized by the Arizona Game and Fish</p>	<p>Resolution - text has been added regarding state regulations regarding wildlife, and SGCN and SERI are evaluated in the biologists' report.</p>

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262	AGFD	3	Biological Resources	137	1-5	<p>COMMENT: The FEIS does not define "immediate vicinity of the project area." This measure might not have any benefit for CLF. There are sites within the vicinity (e.g., Greaterville area) that currently support CLF.</p> <p>RECOMMENDATION: The Department recommends the Forest clarify which sites may require removal and relocation of CLF. Additionally, the Department recommends that the FEIS specify that the Forest will coordinate with FWS and the Department on any movement of frogs.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
263	AGFD	3	Biological Resources	137	27-43	<p>COMMENT: The Cienega Creek Watershed Conservation Fund is grossly underfunded for the various purposes described in the FEIS.</p> <p>RECOMMENDATION: The Department recommends the FEIS clearly identify commitments of the Fund to benefit wildlife and its habitat, and design those commitments to achieve environmentally preferred outcomes rather than suggest a laundry list of possibilities for the Fund in the FEIS. These commitments should be carefully specified in terms of measureable performance standards or expected results, so as to establish clear performance expectations. The FEIS should estimate costs, and costs should match funding described for implementation of the measure. The Forest should specify the timeframe for the actions committed for the fund.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
264	AGFD	3	Biological Resources	138	17-32	COMMENT: The Forest will conduct predisturbance surveys for Forest Service Sensitive Species surveys for only 11 species. The FEIS did not consider the species listed in the State Wildlife Action Plan. RECOMMENDATION: The FEIS should describe impacts to State trust species and identify mitigation for those impacts.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
265	AGFD	3	Biological Resources	139	13-16	COMMENT: The value of annual monitoring for Chiricahua leopard frog will depend on who leads this effort, where it is focused, when monitoring occurs, etc. RECOMMENDATION: The Department recommends that the FEIS identify the AGFD as the logical choice for this effort and identify funding for this effort.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
266	AGFD	3	Biological Resources	####	45, 1-25	COMMENT: The FEIS does not impose any funding commitment upon Rosemont to implement Conservation measures called for at Sonoita Creek Ranch (SCR), or to fund the maintenance of SCR in perpetuity for connectivity for federally-listed species. The FEIS states that “costs associated with initiating an ILF project at Sonoita Creek Ranch would be included in the costs calculated by the ILF sponsor while determining the cost per mitigation credit. This mitigation would partially compensate for impacts to wildlife habitat and habitat connectivity, including jaguar, ocelot, Mexican spotted owl, lesser long-nosed bat, Gila chub, Gila topminnow, Chiricahua leopard frog, western yellow-billed cuckoo, and Huachuca water umbel.” Conservation and management of federally-listed species cannot be funded through funding of ILF mitigation credits for losses to Waters of the United States. Stating that ILF mitigation requirements will “partially” compensate for impacts to wildlife and habitat is contrary to ACOE ILF regulations. RECOMMENDATION: The FEIS should clearly state how Rosemont will fund ESA conservation measures and how those measures will mitigate for impacts to wildlife and habitat.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
267	AGFD	3	Biological Resources	111-112	39-44; 1-12	<p>COMMENT: The FEIS describes impacts to two talussnail species but does not describe mitigation measures for those impacts. Impacts from the mine are expected to result in direct and indirect take of tallussnails and this should be clearly stated in the FEIS.</p> <p>RECOMMENDATION: The Department recommends that the FEIS should require Rosemont to develop and finalize a Conservation Agreement with annual monitoring of a subset of talus habitats/snail populations in the vicinity of the mine. This could be done in the context of a larger wildlife conservation plan for state species. Another component of the mitigation plan should preserve habitats in the proximity of the mine and any that can feasibly be saved within the mine's footprint.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
268	TON	3	Biological Resources	115-116	34-2	<p>The Draft Biological Opinion relied upon by the FEIS did not include analysis based on revisions to critical habitat designation for jaguar (July 1, 2013). The current revisions should be analyzed in the FEIS.</p>	<p><u>Resolution - the FEIS has been updated to include analysis based on revisions to proposed critical habitat for jaguar.</u></p>
269	TON	3	Biological Resources	115-166	34-2	<p>Although the Biological Opinion maintains that the proposed action "... is not likely to jeopardize the continued existence of the jaguar." This determination is based on jaguar population numbers "range-wide" from southern US to South America, however, as noted in the opinion, there is still a lack of information on jaguar movement and population within the U.S. that allow "Only one jaguar ... to be incidentally taken under the proposed action" (USFWS draft BO page. 129) would put the one known jaguar in the US at unreasonable risk. The FEIS should clearly indicate to the public that this one and only jaguar may be lost if an action alternative is selected.</p>	<p><u>Resolution - Statement of fact or opinion. No action needed. This is the USFWS's call, not CNF's, and this is the call they made.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
270	AGFD	3	Biological Resources	117-118	11-42; 1-7	<p>COMMENT: The FEIS lacks all reference to any wildlife conservation or mitigation measures for non-migratory bird species even though all bird species are protected under state law.</p> <p>This section addresses migratory birds and the Migratory Bird Treaty Act while failing to address State law prohibiting take and harassment of birds or nests.</p> <p>ARS §17-236 prohibits the take or injury of any bird, the harassment of any bird upon its nest, or removal of nests or eggs except as may occur in normal horticultural and agricultural practices and except as authorized by Commission order.</p> <p>ARS §17-236 is not a state law for the purpose of shadowing federal law; it has greater breadth than federal law and applies to all species, not just migratory species.</p> <p>The Department recommends that RCC coordinates with the Department to develop an Avian Protection Plan which may be part of a larger Wildlife Conservation Plan mitigating for state trust species.</p> <p>RECOMMENDATION: The Department made similar comments to the DEIS. Impacts to and mitigation for State trust avian species have not been described in the FEIS.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>Regarding state statutes, text has been added to make clear that Rosemont is responsible for ensuring that they remain in compliance with these statutes.</u></p>
271	EPA	3	Biological Resources		Table 116	<p>Issue 5B2: For the proposed action, qualitative assessment of impacts on aquatic habitats and surface water that supports wildlife and plants such as stock tanks, seeps and springs are discussed. As previously cited, relatively small changes in groundwater levels can and often do result in significant reductions in associated surface water. Because the surface waters in question here contain very little water during the driest times of year, the EPA believes that impacts to Empire Gulch could include not only transition from perennial to intermittent stream flow, but transition from intermittent to ephemeral flow or complete drying of all or portions of stream reaches.</p> <p>In addition, the basis for the finding that impacts to hydriparian habitat along Cienega Creek and Davidson Canyon, while possible, are “not anticipated” is not clear. As noted elsewhere throughout the resource sections of the AFEIS, the groundwater models are unable to accurately predict small changes to groundwater levels (<5 ft.) over long periods, or the potential effects of water table drawdown on these waters and riparian areas. Given such uncertainty and the information provided in the AFEIS, it is reasonable to anticipate that the proposed action could cause changes to groundwater levels that would adversely affect stream surface flows, springs and seeps associated with Cienega Creek, Gardner Canyon and Davidson Canyon. Issue 5B2 should be revised to accurately reflect the potential for impacts from the proposed action to Cienega Creek, Gardner Canyon, and Davidson Canyon.</p>	<p><u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
272	AGFD	3	Biological Resources	135-136	45-47, 1-25	<p>COMMENT: Without a well-designed, well-funded, and efficiently executed plan to eliminate bullfrogs and other nonnatives from the Sonoita Creek watershed this measure likely would not benefit CLF or other aquatic organisms.</p> <p>RECOMMENDATION: The Department recommends developing a plan eliminate nonnatives from the Sonoita Creek Watershed and identify the funding to implement that plan.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
273	AGFD	3	Biological Resources	137, 116	6, 31-43	<p>COMMENT: The project has the potential to take species of bats protected under state law but only addresses species protected under federal law.</p> <p>The FEIS does not identify how the proponent will avoid take of state jurisdiction species of bats. The FEIS prescribes mitigation and monitoring for lesser long-nosed bats but does not describe impacts nor recommend mitigation or monitoring for the other species of bat which may occur at the mine site and/or be impacted by the project, including arizona myotis; cave myotis; greater western mastiff bat; Mexican free-tailed bat; pale townsend's big-eared bat; spotted bat; western red bat; western yellow bat and Yuma myotis.</p> <p>If the proponent becomes aware of roosts occupied by bats on the project site they must develop a plan to protect those roosts from disturbance and if any roosts must be destroyed the Department requests the proponent compensate the Department for those roosts to provide for no net loss of bat habitat. The Department has suggested to Rosemont, the Forest, and to the U.S. Fish and Wildlife Service that protection of the Montezuma mine near the Department's Coalmine Property would provide some mitigation for loss of roost habitat for lesser long-nosed bats. This option has not been considered in the FEIS.</p> <p>RECOMMENDATION: The Department suggests that the FEIS identify the Montezuma mine as potential off-site mitigation for loss of roost habitat.</p> <p>The FEIS must describe potential impacts to state trust species and identify potential mitigation for those</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
274	AGFD	3	Biological Resources	137-138	44-47 1-16	<p>COMMENT: This measure to modify allotment management plans could also benefit CLF, if pastures with existing or new CLF populations are included and allowed to rest from grazing.</p> <p>RECOMMENDATION: The Department suggests adding benefits to CLF to the FEIS.</p>	<p><u>Resolution - No change. Options for managing allotments will be addressed when the allotment management plans are updated.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
275	AGFD	3	Biological Resources	137-138	44-47, 1-16	<p>COMMENT: The Department commends the Forest for finding ways to improve grazing management, however the Department believes the Forest should be managing grazing in the best way possible for the health of the range and wildlife habitat without respect to the impacts of the mine. Inclusion of the measure in the FEIS could have the effect of calling into question the effects of grazing throughout the range of the bat.</p> <p>RECOMMENDATION: If the Forest believes the current grazing regime is detrimental to the lesser long-nosed bat population, the Forest should consider those impacts regardless of the Rosemont Mine's impact on the bat. This consideration should not be a mitigation measure for the purposes of the mine and should not be limited to the Rosemont allotments. If the Forest does not believe the current grazing</p>	<p>Resolution - Statement of fact or opinion. No action needed. The re-do of the allotment management plans was not brought forward by the FS, it is a RCC conservation measure that was negotiated with FWS. We clearly state that it may or may not happen and do not take credit for it mitigating effects. We say it has the potential to mitigate effects, depending upon how it is implemented.</p>
276	AGFD	3	Biological Resources	29, 30	25-28, 37, 42-45	<p>The text states: "identification of the remaining, fairly intact, intermountain corridors has received much attention" and on line 35-36 "numerous intermountain wildlife movement corridors have been identified as important to the conservation of species and their populations." Line 37 states "When these corridors or linkages were developed, it was assumed that mountain [linkages] . . . would remain intact." Lines 42 through 45 conclude that "Not shown in figure 76 are the intramountain corridors mentioned above (e.g. mountain spine, drainages, and "stepping stone" surface waters and other specialized habitat features); this is why there are no corridors shown in the Santa Rita Mountains themselves."</p> <p>COMMENT: This text describing wildlife movement corridors is well written and supported by the latest science. However, there are no mitigation measures identified that address impacts to these corridors as a result of the mine and mine-related traffic, other than the installation of corrugated metal pipes under the mine's primary access road.</p> <p>RECOMMENDATION: An FEIS must contain a discussion of mitigation measures that would improve the project. 40 C.F.R. 1502.16. The "hard look" standard of NEPA dictates an analysis of the project's impacts on connectivity; alternatives and mitigation to offset those impacts. Neighbors of Cuddy</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</p>
277	AGFD	3	Biological Resources	30; 33; 53	5,6 Table 118	<p>COMMENT: Loss of riparian habitat impact on SGCN birds is not adequately described and inadequate mitigation is offered. The FEIS does not adequately evaluate the impacts to migratory and non-migratory birds from the direct loss of established native riparian woodlands in the project area or those potentially lost due to mine-related groundwater drawdown in Empire Gulch, Davidson Canyon and possibly Cienega Creek. Mitigation of these impacts is likewise not adequately addressed, particularly for species not on federal lists. This habitat, consisting of cottonwood, willow and mesquite is not only important to many breeding birds, including Species of Greatest Conservation Need (SGCN) in southern Arizona, but to 250+ migratory species that pass through and/or winter annually in this habitat. Although the limitations and inadequacies of modeling groundwater drawdown are described, the document does not adequately address a scenario where the best modeling nonetheless inaccurately predicts events in the real world, greater drawdown occurs, and riparian habitat is affected. If monitoring detects greater drawdown than predicted, no mitigation measures are described that will effectively ameliorate that potentiality.</p> <p>Larger and more continuous riparian habitat is of far greater value to a larger suite of species than are several smaller patches of habitat. The FEIS does not adequately describe the degradation of the greater riparian ecosystem due to impacts to parts of it.</p> <p>The FEIS does not adequately address cumulative effects of potential groundwater drawdown combined</p>	<p>Resolution - text has been added regarding state regulations regarding wildlife, and SGCN are evaluated in the biologists' report.</p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
278	EPA	3	Biological Resources	40-41		The Huachuca water umbel is an obligate hydrophyte (i.e. almost exclusively found in wetlands). The habitat descriptions in the AFEIS for this hydrophyte and several other sensitive aquatic/wetlands species do not specifically identify or use the term wetlands in the description. For greater clarity, language to this effect should be added.	<u>Resolution - No change. The IDT biologist researched the literature and failed to find any references that refer to this species as hydrophyte. For this species, the EIS identifies it as a semi- to fully-aquatic species and that it occurs in marshy wetlands.</u>
279	EPA	3	Biological Resources	86-88	16-20	The AFEIS states, "Further, natural variability with these riparian systems has been documented and indicates that several feet of fluctuation in groundwater levels regularly occur, generally with no ill effects. For these reasons, while modeling has been used to qualitatively suggest what might occur, only changes in groundwater level more than 5 feet are considered to have certainty for predicting changes to riparian areas". The statement that there are no ill effects from observed natural variability in groundwater levels is speculative in the absence of detailed monitoring data of the possible effects of fluctuations on shallow groundwater levels, stream flows at various locations, and the flora and fauna that rely upon these water sources. For example, has a correlation between fluctuating groundwater levels and the timing of decreases in stream flow and stream drying, or changes in the water table in the soil profile been documented? Wet/dry mapping by the Pima Association of Governments has documented that the percentage of Cienega Creek that flows in the Preserve above and below the confluence of Davidson Canyon has steadily decreased since monitoring began in 1984; with only 13 percent of the Cienega Creek supporting flowing or standing water in June 2011 (see AFEIS, Chapter 3, Surface Water Quantity, Surface Water Trends, p. 21). Secondary effects of ground water drawdown from the proposed mine would cause additive adverse impact to Cienega Creek resulting in further reduction in the length of wetted channel. A similar trend over this period of decreasing wetted channel	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
280	EPA	3	Biological Resources	88 89	25- 33(88) 1_14(89)	The AFEIS acknowledges that indirect/secondary impacts could occur to sensitive plant and animal species in Empire Gulch due to groundwater drawdown from the proposed action (40 CFR 230.11(h) and 40 CFR 230.41(b)). The EIS should acknowledge that indirect impacts could also occur to sensitive plants and animals along Cienega Creek and Gardner Canyon from groundwater drawdown from the proposed action (see comments regarding page 86, lines 35-40, above).	<u>Resolution - added reference to Cienega Creek in this paragraph.</u>
281	AGFD	3	Biological Resources	89- 90	15- 44, 1- 11	The text describes how the water quality in the mine pit lake could exceed standards for cadmium, lead, copper, mercury, selenium, ammonia and zinc at levels toxic to invertebrates and birds. The FEIS section on Groundwater Quality notes that the pit lake may also be acidic. The FEIS does not describe any mitigation measures for the mine pit lake. CEQ requires a discussion of mitigation measures, even if the mitigation is beyond the authority of the federal agency to implement. An analog site is the Berkeley Pit, an acidic and metalliferous pit lake that formed at former open pit copper mine in Butte, Montana. RECOMMENDATION: The FEIS should further note that birds may perish in the mine pit lake due to exposure to these constituents in violation of the Migratory Bird Treaty Act. The FEIS should discuss the potential treatment options of the Rosemont Mine pit lake following closure of mine to reduce or eliminate adverse impacts to wildlife.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>With respect to the pit lake specifically, an additional monitoring measure was incorporated to track modeled changes in pit lake water quality over time.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
282	EPA	3	Biological Resources		Table 116	Issue 5B3: It is also possible that indirect effects from groundwater drawdown will not only result in changes in the function of riparian areas for wildlife, but in the complete loss of some functions. This Issue should be revised to reflect the potential for the complete loss of some functions.	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
283	EPA	3	Biological Resources		Table 116	Issue 5C1: Analysis of disturbance that could create conditions conducive for invasive species should not be limited only to the 5,589 acres of the project area that is disturbed. As noted elsewhere in Table 116, indirect impacts from groundwater drawdown could potentially result in the transition of hydriparian to mesoriparian or xeroriparian habitat. Such a transition would provide an opportunity for the invasion and spread of native mesquite and non-native tamarisk into riparian areas. Issue 5C1 should be revised to reflect the fact that many additional acres could be impacted by invasive species in riparian areas within the analysis area due to the indirect effects of groundwater drawdown.	<u>Resolved - text in table 116 has been modified to reflect potential for invasion and spread of non-native species into riparian areas impacted by groundwater drawdown.</u>
284	EPA	3	Biological Resources		Table 116	Issue 5E.1: For the proposed action, "Acres of habitat disturbed for each special status species, including impacts to designated and proposed critical habitat", is limited to within the 5,589 acre area of direct impacts. However, according to the AFEIS, the U.S. Fish and Wildlife Service's biological opinion concludes that, because of the indirect effects of groundwater drawdown, the proposed action is likely to adversely affect designated critical habitat for the federally-listed endangered Gila chub and threatened Chiricahua leopard frog, and likely to adversely affect the federally-listed endangered Gila topminnow (AFEIS, pp. 105 am 111). Table 116 does not include a quantitative estimate of acres of critical habitat that is indirectly disturbed or lost from the proposed action, even though critical habitat for these species has been quantified. To the extent that reliable estimates of habitat loss resulting from groundwater drawdown can be estimated, this table should be revised to reflect those additional acres of critical and non-critical habitat indirectly impacted. Where data accuracy limits the ability to estimate this quantitatively, this limitation should be disclosed and the table should report only direct impacts.	<u>Resolution - text was added to table 116 referring reader to species' narratives in Environmental Consequences section for discussions of impacts to designated or proposed critical habitat.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
285	AGFD	3	Biological Resources Seeps, Springs, Riparian	110-111; 33	10-44	COMMENT: In Seeps, Springs, and Riparian areas, page 33, lines 16 through 20, “all three groundwater flow models predict changes in groundwater levels in the vicinity of the Upper Empire Gulch Springs” and line 33 “these model results suggest that several feet of drawdown could potentially occur in Empire Gulch in the long term” and on page 34, lines 28-31 “small changes in groundwater level or flow, even if dwarfed by the natural background variability, have an additive effect that could impact riparian vegetation or aquatic species. . . This possibility was disclosed in the DEIS and remains valid.” RECOMMENDATION: The Department recommends that the FEIS should describe the long-term impacts to aquatic and riparian species in Upper Empire Gulch Springs due to potential drawdown.	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
286	TON	3	Biological Resources			This section does not address the cultural significance of the jaguar and other plants and animals to the Nation and other tribes.	<u>Resolution - added to the text in the Cultural Resource section</u>
287	AGFD	3	Biological Resources	31	Table 118	COMMENT: Although referenced in the text, this Table does not recognize intramountain wildlife movement. These islands of habitat are corridors for the many species that prefer the mountains over grasslands or deserts and move north and south. They are especially important for species whose primary, or core habitat is in Mexico, but for which southeast Arizona’s sky islands nevertheless contribute to the overall habitat for the species while it remains connected to the core habitat. RECOMMENDATION: The Department recommends updating the table to include intramountain wildlife movement.	<u>Resolution - added a sentence about intra-mountain corridors in the text preceding the table (page 30).</u>
288	AGFD	3	Biological Resources	136	26-30	COMMENT: The FEIS describes a concern regarding the loss of habitat connectivity between the Santa Rita and Whetstone Mountains due to Rosemont Mine-related traffic. The mine will place 455 mine trucks a week on State Route 83. This increase in traffic, coupled with employee traffic, will occur 24 hours a day, 7 days a week and will impede wildlife access. The FEIS requires RCC to fund a camera study to make a recommendation for a suitable crossing structure but does not recommend measures that will remediate the loss of connectivity such as crossing structures. The FEIS does not require RCC to address any adaptive needs that may be identified as a result of information obtained through these camera studies. RECOMMENDATION: As there is limited data on the movement patterns of species in the vicinity of the Rosemont Copper project, the Department recommends a comprehensive study tracking the movement of wildlife species such as mountain lions, deer and javelina using satellite transmitter-collared animals. The cost of such a project is approximately \$285,000. A camera study would be less effective, but a well-designed camera-only study would cost approximately \$175,000. A full discussion of mitigation measures that could be used to address findings from such a study should be included in the FEIS.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
289	Pima County - Julia Fonseca	3	Biology	130	on	The analysis presented for reasonably foreseeable actions is inconsistent with information from other permit applications. For over a decade, Pima County and Pima County Regional Flood Control District have worked with other agencies and individuals on an incidental take permit to cover activities relating to urban growth that is under the jurisdiction of the Pima County Board of Supervisors (and Flood Control District Board of Directors). The incidental take permit will cover impacts to 44 species in the permit area, which includes the area around the northern Santa Rita Mountains. The Rosemont EIS should include the issuance of this permit as a reasonably foreseeable action. Of particular interest for cumulative effects analysis may be the impacts to species habitat that are projected for future urban development and the projected impacted to special elements. See Table 4.5 of the November 2012 Environmental Impact Statement (see habitat loss by alternative). In this case the No Action Alternative would have the same effect as Alternative C. See Table 4.3 for projected impacts to special elements	Resolution - no change. A take statement does not necessarily result in impacts. It is up to USFWS to look at multiple take statements when they issue biological opinions.
290	Pima County - Linda Mayro	3	Biological Resources	4	24-29	This section correctly states that adverse impacts cannot be completely mitigated and is inconsistent with statement in Chapter 2 that "impacts will be short-term."	Resolution - No change. A search of Chapter 2 failed to find the phrase quoted.
291	Pima County - Julia Fonseca	3	Biology	130	on	The analysis presented for cumulative effects is inconsistent with information from other regional plans and permit applications. For over a decade, Pima County and Pima County Regional Flood Control District have worked with other agencies and individuals on the Sonoran Desert Conservation Plan under the National Environmental Policy Act. The SDCP was an interagency planning effort in which the U. S. Fish and Wildlife Service, U. S. Forest Service, U. S. Bureau of Land Management and U. S. Environmental Protection Agency participated. That effort documented past loss of species habitats in the region, including many of the species analyzed in the Rosemont EIS. Of particular interest for cumulative effects analysis may be the impacts to species habitats and special elements that have been contributed by past urban development. See Table 4.5 of the November 2012 Environmental Impact Statement (see existing built environment) and Table 4.3 of same for existing built environment in the permit area, which includes the area outside, but adjacent to the Coronado National Forest and Santa Rita Experimental Range.	Resolution - No change. The ID Team reviewed both the EIS and the Multi-Species Conservation Plan. The tables referenced in the comment provide acreage figures for a variety of species for the County's analysis area (presumably the county); however the analysis conducted for the Rosemont FEIS did the same for the ROsemont analysis area, which is substantially different than the area that constitutes Pima County. The MSCP appendix contains a multi-page list of future projects; however the list lacks the level of detail needed to address them from a cumulative impact standpoint, such as when they are planned to occur; whether they are foreseeable or in the early planning stages; and any details about actual actions or activities.
292	Pima County	3	Biology			Impacts to coral-root not accurate	Resolution - text has been modified to better explain impacts and effects determination.
293	Pima County - Julia Fonseca	3	Biology	NA	NA	The EIS does not disclose that the project fails to meet the Sonoran Desert Conservation Plan's guidelines for mitigation of impacts to the Maeveen Marie Behan Conservation Lands System (CLS). The guidelines are not compulsory for the unregulated mining industry, but they are part of the County's land use plan and this was discussed in the biological mitigation group by the cooperators and the Forest Service staff. I estimate that at least 8700 acres of mitigation land in the CLS would be needed to offset disturbance for the Barrel Alternative under the CLS guidelines. Rosemont is offering around 3300 acres of land within the CLS as mitigation lands, well below the target of 8700 acres in the CLS. Even with the possible acquisition of Sonoita Creek Ranch outside the CLS, the acreage is still 4200 acres below the SDCP mitigation guidelines.	Resolution - Statement added to Required Disclosures
294	Pima County	3	Biology			Outdated biology surveys used	Resolution - No change. All surveys used were reviewed for appropriateness and relevance.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
295	Pima County	3	Biology			State-listed species not included	<u>Resolution - text has been added regarding state regulations regarding wildlife, and SGCN and SERI are evaluated in the biologists' report.</u>
296	Pima County	3	Biology			EIS doesn't take into account SR83 mortality on jaguars	<u>Resolution - text has been added to describe in more detail the potential impacts from roads and the likelihood of these impacts.</u>
297	Pima County - Brian Powell	Appx B	FS-BR-2	25	NA	As part of the avoidance of Coleman's coralroot plants, it is imperative that the host trees be monitored for vigor and condition; if they die, so too will the orchids. Specify what contingencies would be put in place if the plants are impacted. (Note: what constitutes "impact" needs to be defined).	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This measure specifically was added to Appendix B in response to this comment.</u>
298	Pima County - Eric Betterton	3	CALPUFF, AERMOD, and VISCREEN Modeling for Projected Impacts to Air Quality Related Values at Class I Areas	50	15	A crude, EPA-approved model called VISCREEN was used to estimate the effects of mine emissions on visibility at Saguaro National Park East, which is within the 30-mile range of this model. The "Level 1" calculation provides a quick and dirty look at the worst case scenario. If possible visibility impairment is indicated then a "Level 2" screening is conducted under more realistic conditions. The Forest Service predicts that the mine will indeed adversely impact visibility at SNPE (Table 49, page 53). According to the EPA Workbook for Plume Visual Impact Screening and Analysis (Revised), a more detailed "Level 3" study should then be conducted using a model such as PLUVUE II. The Forest Service did not do this, and thus failed to take the conservative approach to protecting visibility. In order to model the effects of the Rosemont mine alternatives on visibility at more distant Class I areas (including Saguaro National Park West, the Galiuro Wilderness, Chiricahua National Monument, and the Chiricahua Wilderness), the Forest Service appropriately switched from VISCREEN to CALPUFF. The EPA classifies the effects of pollutants on visibility in two ways: those that "contribute", and those that "cause" impairment. According to the Forest Service "all action alternatives could contribute to noticeable impairment at each of the Class I areas analyzed" (emphasis added), and the Proposed Action, and the Barrel Alternative could "cause" impairment at Saguaro National Park West, and at the Galiuro Wilderness. (Table 50, page 55). Any "maximum dv impact" greater than 0.5 "contributes" and any "maximum dv impact" greater than 1.0 "causes" visibility impairment. It is remarkable that the "Proposed Action" would even be noticeable in the Superstition Wilderness Area some 150 miles away. Yet the Forest Service simply states what the modeled impacts might be without further comment. It does not discuss the effects on human welfare or on the tourism industry. Please see attached PDF titled '13-07-22 Eric Betterton Comments on ADEQ Permit Application and Mining Plan Revision Final Draft July 19 2013'	<u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
299	Pima County - Sarah Walters	3	Changes from the Draft Environmental Impact Statement	1	31	Lines 31 – 41 describe that the restart options in the CALPUFF modeling had not been set to the preferred settings. The results of the sensitivity analysis are not fully presented and an increase in the modeled criteria pollutant concentrations as well as deposition and visibility impacts should be thoroughly discussed and not simply ignored. The 'slight increase' is not defined and warrants statistical analysis, discussion, and thorough explanation. If the 'slight increase' causes exceedance of the NAAQS, or exceedance of NAAQS threshold values for criteria pollutants, a full re-run of all CALPUFF modeling affected by this oversight is warranted.	<u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u>
300	Pima County - Sarah Walters	3	Changes from the Draft Environmental Impact Statement	2	7	The EPA has not acted on the Exceptional/Natural Events and thus the data have yet to be excluded as such. This warrants including these values in the modeling, at least as a consideration for the effects of natural events on the emissions from the Rosemont project.	<u>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</u>
301	Pima County - Sarah Walters	3	Changes from the Draft Environmental Impact Statement	2	13	Any mitigation and Monitoring measures added to reduce modeled emissions such that the NAAQS or thresholds were reached need to be addressed in the ADEQ Class II Air Quality Permit in order to ensure that those measures are required, not optional. Exceedances of the NAAQS, or air quality thresholds, could have significant impacts on the health and welfare of Pima County residents, businesses within Pima County, and the effects of transport of air pollution to other areas within the State of Arizona. Please see comment below regarding the cost of Nonattainment Designation.	<u>Resolution - Statement of fact or opinion. These mitigation/monitoring measures are already included in Appendix B. No action needed.</u>
302	Pima County - Sarah Walters	3	Changes from the Draft Environmental Impact Statement	3	15	If PDEQ understands correctly the Tier IV engines in six of the haul trucks would only be implemented in year 10 of operations. This should be clearly discussed, including the reasoning behind waiting until year 10 of operations before requiring the switch to this emissions control. Is the switch required by the ADEQ Class II Air Quality Permit, if so why, or is it due to modeled exceedances of the NAAQS in that year if the operational changes are not implemented at the proposed mine?	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>With respect to air, specifically, the Forest Supervisor directed that all possible mitigation measures be investigated, including the one referenced in the comment.</u>
303	Pima County - Sarah Walters	3	Climate Change Methodology	11	14	To reiterate: The emissions of methane (CH4) and nitrous oxide (N2O) are known to have a greater impact on climate change when compared to the impact of CO2. The PA-FEIS states that the emissions of these gases would be 'much smaller'. Given the potency of these gases the anticipated levels of these emissions should be specified rather than excluded for disclosure. The impact of these emissions should be evaluated along with the impact of the CO2 emissions using the CO2 equivalence of the anticipated emissions of CH4 and N2O.	<u>Resolution - This calculation is already in the Air Quality section, including a quantitative analysis of the greater greenhouse gas potential. AQ, page 7, lines 36-44</u>

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304	Pima County - Linda Mayro	3	Consultation under the National Historic Preservation Act	12	13-17	Consultation is not concluded, and SHPO has not entered into an MOA, which is still under review and revision.	Resolution - Statement of fact or opinion. No action needed.
305	TON	3	Cultural Resources	1	3_8	Add springs.	Resolution - added to text
306	TON	3	Cultural Resources	14	19, Table 199	Silverbell Interval in Early Archaic not completely accepted.	Resolution - added footnote
307	TON	3	Cultural Resources	21	26-42	There needs to be a stronger statement here that this is the tribes' preferred alternative and it is the only alternative that will preserve and protect the cultural and natural landscape of this portion of the Santa Rita Mountains and the hundreds of cultural and traditional-use sites significant to the Nation and many other tribes.	Resolution - Language to this effect has been added to the No Action Environmental Consequences
308	TON	3	Cultural Resources	29	11_23	Remove the 4% statistic.	Resolution - This was brought up with the Forest Supervisor on 9/3/13 and it was determined that it was appropriate to leave this in the section.
309	TON	3	Cultural Resources	30	26	Provides that the Ball Court should not be impacted, should be changed to will not be impacted.	Resolution - text changed from should to would.
310	TON	3	Cultural Resources	35	13-16	It should be made clear that the tribes believe that no mitigation could be effective. Rather, the measures set out here will have little to no impact on the cultural and religious impacts that the destruction of the project area and associated cultural resources will have on the Nation and other tribes.	Resolution - This language is present in the Cultural Resources Mitigation Effectiveness section.
311	TON	3	Cultural Resources	General Comment		Full analysis still not provided for full impacts to the Nation's members and members of other tribes for the large scale destruction of culturally significant plants and sites. Regarding analysis on TCPs, the FEIS has improved over the DEIS, but the FEIS still does not address the full panoply of adverse impacts that will befall the Nation, its members, and members of other tribes if this project is approved.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
312	TON	3	Cultural Resources	General comment		The FEIS gives more attention to Sobaipuri sites, but more analysis should be in the FEIS.	Resolution - No change. Forest specialist has determined that the analysis disclosed in the FEIS is adequate and appropriate.
313	EPA	3	Cultural Resources			The AFEIS states that the project impact will be irreversible, and that the proposed mitigation measures cannot replicate the unique resources and cultural context that will be destroyed. The Coronado should continue to work in close consultation with affected tribal groups to seek mitigation measures that might more closely address the cultural resource impacts and incorporate any such mitigation identified into the EIS where feasible.	Resolution - Statement of fact or opinion. No action needed.
314	Rosemont - Melissa Notes	3	Cultural Section	32		Com. Impacts - having Federal Laws avoids impacts but then authorities don't avoid impacts	Cannot understand comment. No changes needed.
315	Rosemont-Patti	3	Cultural Section			Language: "tribes are against the project". Need to say instead that "tribal governments are against the project" rather than generalize an entire population	Resolution - Language to this effect has been added to the No Action Environmental Consequences

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316	Rosemont-Jamie	3	Cultural Section			Need to add % of historic tribal area being impacted	<u>Resolution - This was brought up with the Forest Supervisor on 9/3/13 and it was determined that it was not appropriate to add this statistic.</u>
317	Pima County - Loy Neff	3	Cultural Resources, Existing Conditions, Description of the Historic Context	14	19, Table 199	The chronological table lists the "Silverbell Interval" in the Early Archaic without noting this identification is still under debate within the archaeological community and not universally accepted. The label should include a qualifying statement that it is a provisional identification.	<u>Resolution - added footnote</u>
318	Pima County - S. Anderson	3	Recreation and Wilderness Cumula. Effects	35	30-41	The effects of fuels reduction is only temporary, and as such can be tolerated by the recreationists.	<u>Resolution - No action needed.</u>
319	Pima County - S. Anderson	3	Cumula. Effects	36	15-29	The Forest Service's policy toward the closing of roads is unfortunate, but if just illconceived roads are closed, we can live with it. What I didn't see was any reference to trails (not the Arizona National Scenic Trail). What are you going to do to replace the trails (if any) that are displaced by the mine? We'd want a "reclamation" fund for trails to replace the trails that are affected like the OHV plan for the replacement of roads.	<u>Resolution - Minor change in wording in the text in Impacts Common to Action Alternatives that says that other than the ANST, no other trails will be displaced by the proposed project. The referenced text is a reasonably foreseeable action of travel planning NEPA on the Nogales Ranger District, and it is what it is.</u>
320	Pima County - Yves Khawam	3	Dark Skies	1	19	Lighting impact continues to reference plans not reflecting compliance with the 2012 Pima County Outdoor Lighting Code. This approach is prevalent throughout the Dark Skies section	<u>Resolution- it clearly states in the text that RCC and the county disagree on this, and RCC would be required to comply with all applicable state and local laws and regulations.</u>
321	Smithsonian--Emilio Falco, J. Shaw	3	Dark Skies	1	14-17	Delete: "The Kitt Peak National Observatory and the Smithsonian Institution's Fred Lawrence Whipple Observatory are world-class astronomy research facilities located on the Coronado National Forest that rely on the area's naturally dark, unpolluted night skies for optical and infrared astronomy research." Replace with: "The Smithsonian Institution's Fred Lawrence Whipple Observatory is a world-class astronomy research facility located on the Coronado National Forest and relies on the area's naturally dark, unpolluted night skies for optical and infrared astronomy research." Rationale - Kitt Peak National Observatory is not within the Coronado National Forest.	<u>Resolution - clarified text by saying that Kitt Peak and Whipple Observatories are located on or near the CNF. We address Kitt Peak in other places in this section and deleting it is not appropriate.</u>

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322	Smithsonian-- Emilio Falco, J. Shaw	3	Dark Skies	7	8	Add to Relevant Laws, Regulations, Policies, and Plans - Federal: Interagency Agreement for Land Use and Occupancy, U.S. Forest Service, Department of Agriculture & Smithsonian Astrophysical Observatory, Smithsonian Institution – dated 1 Jun 1978	Resolution - No change. As stated - this is an <u>interagency agreement for land use. It is not a law, regulation, policy or plan.</u>
323	Smithsonian-- Emilio Falco, J. Shaw	3	Dark Skies		8 1_2	Please clarify: Pima County asserts that ARS 11-251 implies that RCM must comply with the OLC. If accurate, the FEIS should state that RCM must comply with the OLC.	Resolution- <u>clearly state in the text that RCC and the county disagree on this, and RCC would be required to comply with all applicable state and local laws and regulations.</u>
324	Pima County - Yves Khawam	3	Dark Skies	15	14	Concludes with a “mitigation plan” which has not demonstrated compliance with the 2012 Pima County Outdoor Lighting Code.	Resolution- <u>it clearly states in the text that RCC and the county disagree on this, and RCC would be required to comply with all applicable state and local laws and regulations.</u>
325	Rosemont - Kathy	3	Dark Skies			Dark Skies – Table 5. Different in uplight fraction assumption	Resolution - <u>No change needed.</u>
326	Rosemont - Kathy	3	Dark Skies			Dark Skies – Not 12%. 66%	Resolution - <u>corrected wording in mitigation FS-DS-01 and in Dark Skies</u>
327	Rosemont - Kathy	3	Dark Skies			TYPOS - internally we have a disagreement if there is a problem with the wording or not	Resolution - <u>No change needed.</u>
328	Rosemont - Melissa Notes	3	Dark Skies - lighting		Table 5	Uplight # are different than output #3	Resolution - <u>Corrected wording in Mitigation Measure FS-FS-01 and in Dark Skies section</u>
329	Rosemont - Melissa Notes	3	Dark Skies - lighting			Pima County - Not required for outdoor lighting code flood plain application for water pipeline	Resolution - <u>minor change in wording.</u>
330	AZGS - Lee Allison	3	Economic Activity	719		It appears the two economic analysis studies prepared under the auspices of the AZ Dept. of Mines and Mineral Resources have been omitted from the FEIS. The Arizona Geological Survey has assumed ownership of those documents and will make them available for inclusion.	Resolution - <u>No change. The Regional Office socioeconomic specialist directed that any economic projection reports for which the multipliers and assumptions could not be supplied should be removed. An effort was made to contact the report authors, but did not result in detailed multipliers and assumptions. Therefore these two reports were removed.</u>
331	NPS ARD	3	Environmental Consequences Air Quality	14	Table 28	The FEIS discusses potential NAAQS ozone violation at Saguaro East with no description how the calculations or modeling were performed. Please update this information.	Resolution - <u>Based on discussions on 8/22/13, this language has been removed from the FEIS.</u>
332	NPS ARD	3	Environmental Consequences Air Quality	46	30-40	The FEIS discusses potential NAAQS ozone violation at Saguaro East with no description how the calculations or modeling were performed. Please update this information.	Resolution - <u>Based on discussions on 8/22/13, this language has been removed from the FEIS.</u>

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333	NPS ARD	3	Environmental Consequences Air Quality	53	4_9 Table 49	<p>The document states: "A level 2 screening analysis was therefore performed to better analyze impacts using the actual worst-case meteorological conditions as recorded from the National Weather Service Tucson airport site for the year 2002. The actual worst-case conditions identified from this site were 2 meters per second wind speeds and atmospheric stability class "F." These conditions appear for about 303 hours during the entire year, which translates to approximately 3.4 percent of the hours per year (JBR Environmental Consultants Inc. 2012d). Table 49 presents the results of the level 2 visibility screening analysis performed for Saguaro National Park East".</p> <p>Comment: The above statement is true, but needs to be revised. It is correct that there are exceedances of the Terrain ΔE criteria (change in color) with the meteorological conditions of "F" and a 2 meter per second wind speed (NPS's re-ran VISCREEN and confirms this.) Rosemont needs to determine the percent (%) of hours over the course of the year when impacts stop occurring. NPS's VISCREEN analyses indicates that at the meteorological condition of "F" stability and a wind speed of 3 meters per second, exceedances of the ΔE criteria (change in color) and contrast do not occur for all 5 alternatives. Rosemont should state percent (%) of hours of the years when impacts stop occurring and update Tables</p>	<p>Resolution - The Forest specialist has reviewed all air comments and the section has been changed as warranted.</p>
334	NPS ARD	3	Environmental Consequences Air Quality	General Comment		<p>The National Park Service (NPS) appreciates the opportunity to review the Administrative FEIS prepared in support of Rosemont Copper's mine plan of operations for the development of the Rosemont ore deposit. As a cooperating agency, the NPS has been engaged in this planning process, and has reviewed and commented on air quality modeling protocols, the administrative draft EIS and the DEIS. Our comments provided here are consistent with comments provided on previous documents.</p> <p>We recognize and appreciate the Coronado National Forest's efforts to understand and address NPS concerns regarding impacts to Air Quality Related Values (AQRV) in Saguaro National Park (NP), a Class I area administered by the NPS. We believe many changes made in the AFEIS, particularly in the Required Disclosures Section of Chapter 3, are in direct response to NPS comments.</p> <p>However, we continue to have outstanding concerns related to the Rosemont Copper Proposal itself. Further, we recommend additional changes to how predicted AQRV impacts are disclosed and addressed in the Environmental Consequences section of the AFEIS. In summary:</p> <p>1. Based on the air quality modeling results, the NPS has concluded that the proposed mine operations could result in significant adverse AQRV effects in Saguaro NP from nitrogen deposition and visibility degradation. While the modeled values for the AQRV analyses were disclosed in the AFEIS, the document did not adequately discuss the context of these modeled values, and whether they represent adverse environmental effects in the Environmental Consequences section. We recommend the USFS revise the FEIS to incorporate these changes.</p>	<p>Resolution - No change based on this comment, but overall NPS comments were incorporated almost verbatim</p>

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335	NPS ARD	3	Environmental Consequences Air Quality	General Comment		<p>Rationale for disclosing NPS views on the severity of the predicted AQRV impacts in Saguaro NP from the proposed action:</p> <p>We appreciate the USFS efforts to use NPS recommendations in the FEIS. Consistent with the provisions of the NEPA regulations outlined below, we believe the USFS should also disclose the NPS views and conclusions regarding the severity of the predicted impacts in the applicable Environmental Consequences sections.</p> <p>Cooperating Agency Status & NEPA Requirements</p> <p>The National Park Service is a cooperating agency for the Rosemont Copper Environmental Impact Statement, as defined in 40 CFR 1508.5 (see FS Agreement 11-MU-11030514-012). The purpose of cooperating agency participation, as well as the roles and responsibilities of cooperating and lead agencies are identified in the CEQ at 40 CFR 1501.6. Specifically, any "Federal agency which has special expertise with respect to any environmental issue, which should be addressed in the statement may be a cooperating agency upon request of the lead agency."</p> <p>Given the NPS role as stewards of National Park Service lands, the NPS is deemed to have "special expertise" when assessing potential impacts to lands within its jurisdiction. This is particularly true in the case of parks designated as Class I areas under the Clean Air Act (CAA), such as Saguaro National Park. Under the CAA, the federal land manager for these areas has the "affirmative responsibility to protect the AQRVs (including visibility) of any such lands" (42 U.S.C. §7475(d)(2)(B)). To achieve this complex task, the NPS must use the best available science to: (1) Evaluate the impact new and existing sources of</p>	Resolution - No change based on this comment, but overall NPS comments were incorporated almost verbatim
336	NPS ARD	3	Environmental Consequences Air Quality Deposition Effects	57	25	Please revise this sentence to state: This in turn can result in management consequences, including changes increases in fire frequency and carrying capacity vegetation cover leading to increased fire-carrying capacity, which can alter fire frequency in the ecosystems that are not adapted to frequent wildfires.	Resolution - This text was changed as requested
338	NPS ARD	3	Environmental Consequences Air Quality Deposition Effects	57	30-37	This section characterizes the Critical Load (CL) as the point at which "noticeable" effects begin to occur. Please note that the current accepted technical definition of a CL in the U.S. is: "the quantitative estimate of an exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment are not expected to occur according to present knowledge." More simply put, it is a threshold deposition level at which harm may occur to sensitive resources in an ecosystem; the CL value is linked to a specific harmful effect. Please revise this section and replace "noticeable" with "harmful" to more accurately define the purpose of CL values.	Resolution - This text was changed as requested
339	NPS ARD	3	Environmental Consequences Air Quality Deposition Effects	57	33 & 35	Lines 33 & 35 describe the critical load for "general vegetation;" please revise to state "herbaceous plants & shrubs."	Resolution - This text was changed as requested

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340	NPS ARD	3	Environmental Consequences Air Quality Deposition Effects	57	36 & 37	<p>Lines 36 and 37 of this section accurately reflect that the range of reported critical loads values for North American deserts which is 3.0 to 8.4 kg/ha/yr. However, please note that consistent with our Clean Air Act responsibilities to protect sensitive resources in Class I areas, the NPS uses the critical load value associated with the most "sensitive resource," in this case, the 3 kg/ha/yr critical load value.</p> <p>Recommendations in the interagency FLAG 2010 document reflect this approach, which states in section 3.5.4 "Federal Land Managers (FLMs) agree that a critical load should protect the most sensitive AQRVs within each FLM area and should be based on the best science available." Please revise this section to indicate that consistent with our statutory mandates and policies, the NPS uses the most protective critical load threshold for herbaceous plants, shrubs and lichens, which is 3 kg/ha/yr.</p>	Resolution - This text was changed as requested
341	NPS ARD	3	Environmental Consequences Air Quality Deposition Effects	57-60	38 – 40 & Table 51 and Table 52	<p>This section reports the modeled incremental deposition loading from the Rosemont Copper Mine, as well as estimated Critical Load (CL) and current nitrogen (N) deposition values. However, the document does not address the context, severity and intensity of the incremental deposition impacts. In other words, it does not state that given the current levels of total N deposition, which are at or near the estimated minimum CL, and the magnitude of the modeled Deposition Analysis Threshold (DAT) exceedances from mine operations at Rosemont Copper for all Alternatives, the project is predicted to significantly contribute to adverse environmental effects from cumulative N deposition in Saguaro NP. Please revise this section of Chapter 3 to disclose this information. Specifically, please incorporate the following (or similar) text in the Deposition Effects Section; line references are merely suggestions for where this language could fit within the existing discussion:</p> <p>Line 29, please add the following sentence to this paragraph: Based on this research, the NPS believes that desert and semi-arid ecosystems in the area, such as those found in Saguaro National Park, may be impacted by current levels of nitrogen deposition.</p> <p>After Line 40, please add the following new paragraphs (could also be included in a section dedicated exclusively to deposition impacts in Saguaro NP): Consisting of two districts and up to six distinctive biotic communities, Saguaro National Park exhibits a vast array of biodiversity. Recently, the park has documented up to 1044 different species within its boundaries, more than 400 of which, mostly invertebrate animals and non-vascular plants, were previously unknown in the park. At least one documented species of bryophyte is currently believed to be new to science (NPS Resource Brief 2012).</p> <p>The critical loads values described above were developed to protect these diverse and sensitive ecosystem components from the harmful effects of nitrogen deposition. As shown in table 52, current nitrogen deposition levels are exceeding these minimum critical load values, indicating that herbaceous plants, shrubs, lichens and mycorrhizal fungi communities in Saguaro NP and the surrounding region</p>	Resolution - This text was changed as requested
342	NPS ARD	3	Environmental Consequences Air Quality NAAQS Compliance Modeling	43 & 45	Lines 11-36 & Table 45	<p>The NAAQS compliance modeling demonstrates that the Barrel Trail and Scholefile-McCleary Alternatives could result in violations of the PM10 NAAQS at the project area fenceline. This suggests that these Alternatives may not be a viable option if compliance with the Clean Air Act cannot be demonstrated.</p> <p>Further, the mine could be a significant source of regional particulate emissions. The project area is adjacent to the Pima County PM10 nonattainment area (a partial county designation). The document does not discuss whether the Rosemont mine would potentially contribute to PM10 NAAQS violations in this nonattainment area.</p>	Resolution - A section has been added discussing the potential for triggering nonattainment status for PM10

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343	NPS ARD	3	Environmental Consequences Air Quality Visibility Effects	54	30-32	These lines state: "According to these metrics, all of the action alternatives could contribute to noticeable visibility impairment at each of the Class I areas analyzed. A summary of visibility impacts for each Class I area by action alternative is provided below." Please note that for year one of active mining, all but one of the Alternatives would cause visibility impairment in Saguaro NP, and in years 5 or 12 of active mining, two of the Alternatives would cause visibility impairment in this park based on maximum modeled values. Using the 98th percentile impact for year one, all Alternatives contribute to visibility impairment in Saguaro NP, and the proposed action causes visibility impairment. In years 5 or 12, the Scholefield-McCleary Alternative contributes to visibility impairment in Saguaro NP. Given these results, please include the following text in this section of the document to disclose NPS conclusions regarding the severity of the predicted visibility impacts in Saguaro NP: Visibility impacts of this magnitude are a significant concern to the National Park Service in general, and of particular concern in this circumstance considering that Saguaro NP will not meet the Regional Haze goals under the Arizona DEQ proposed regional haze State Implementation Plan (SIP). Regional modeling completed for the Regional Haze process demonstrates that visibility on the 20% best visibility days at Saguaro NP will degrade in the future. The goal of the regional haze program is to improve	<u>Resolution - This text was changed as requested</u>
344	Pima County - Leslie Nixon	3	Environmental Justice	39	38, 31-32	In spite of Pima County's comments to the Draft EIS, the DFEIS omits any strategy to satisfy the "meaningful involvement" legal standard, which mandates that environmental justice communities merit special outreach efforts in order to ensure they are active stakeholders regarding conditions which will impact their families and communities. In Pima County's previous comments, the following were suggested as appropriate examples of outreach to the protected classes: -small local meetings chaired by community leaders -workshops with participants selected from the protected groups	<u>Resolution - No change. The Forest disagrees and believes that all communities had ample opportunities to be involved in the process.</u>
345	Pima County - Leslie Nixon	3	Environmental Justice	43 68 69, Table 238	14- 17(43) 31- 36(68)	The archeological/cultural resources mitigation plan is incomplete. The Draft Final EIS recognizes the mining project creates a disparate negative impact on the Tohono O'odham Nation "and other tribes" The Native tribes expressed concern about potential impacts of the project on ancestral villages, human remains, sacred sites, and traditional resource collecting areas. In response, the DFEIS presents an archeological and cultural resources mitigation and monitoring plan. However the DFEIS concludes that the mitigation plan is unlikely to "relieve the disproportionality of the impacts to the Tohono O'odham Nation" or other consulting tribes. No additional mitigation is explored or proposed which might relieve this disparity in whole or in part. This could include relocation of structures, modification of the project, or financial mitigation. The potentially serious cultural damage to two of the three protected groups merits this additional consideration and planning	<u>Resolution - This is an issue of the cultural resource mitigation. No change needed in the Environmental Justice section unless the wording of the mitigations for cultural resources change.</u>

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346	Pima County - Leslie Nixon	3	Environmental Justice	68- 69, Table 238		<p>Other than the archeological/cultural resource impact described above, the DFEIS includes no recognition or mitigation of any additional potential disproportionate impacts to the environmental justice communities of the TO Nation, Pascua Yaqui Tribe, or Hispanic residents of Santa Cruz County. By definition, these communities are economically disadvantaged, with inadequate housing, insufficient employment opportunities, a high rate of single parent families, and lower educational achievement. Sociologists, health care agencies, government, and social service providers recognize that environmental conditions have a more serious impact on the poor than on more affluent citizens due to fewer resources, less mobility, inadequate job training and education options, and minimal political influence on policymakers. These factors are relevant to the environmental justice evaluation in this case, specifically because the three protected groups share the following characteristics</p> <ul style="list-style-type: none"> -less mobility due to fewer resources (cannot move away from community with increased air pollution) -minimal or no health insurance (wait until environmentally caused illness, e.g., asthma, is serious before seeking medical care; less resources to purchase medication) -poor access to adequate education and job training (more vulnerable to employment supply fluctuations, such as loss of tourist and recreation jobs) -ineffective political influence to obtain government remediation (road repair for damage caused by mining trucks) <p>These examples demonstrate the fallacy of the conclusion that the three protected communities will suffer no exceptional negative consequences from the mine project other than the archeological impact on the Tohono O’odham Nation and Pascua Yaqui Tribe The DFEIS’s failure to address these disproportionate impacts renders this section of the DFEIS insufficient under the Environmental Justice</p>	<u>Resolution - This is an issue of the cultural resource mitigation. No change needed in the Environmental Justice section unless the wording of the mitigations for cultural resources change.</u>
347	Rosemont - Melissa Notes	3	General			Com. Effects inconsistencies Issues, Rationale - preferred/selected alternative	<u>Resolution - No change. This comment lacks specificity and as such cannot be understood or resolved.</u>
348	Rosemont- Patti	3	General			Really like organization and ease of tracking what has changed (“Changes” sections)	<u>Resolution - No action needed.</u>
349	Rosemont- Patti	3	General			With cooperating agencies, there is a need to discuss dissenting opinions.	<u>Resolution - Dissenting opinions have been addressed in part through the Required Disclosures section, and in part in Chapter 3 (for instance, the "Professional Disagreement and Scientific Uncertainty" sections).</u>
350	Rosemont – “Washington guy”	3	General			Cumulative effects – Inconsistent handling of impacts. Example – for cultural resources, federal actions would minimize impacts. For other sections, conclude that due to conflicting laws “may not have authority”	<u>Resolution - No change. This comment lacks specificity and as such cannot be understood or resolved.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
351	Pima County - Loy Neff	3	General			A discussion of the Clean Water Act, Section 404 permitting requirements and process pertaining to cultural resources is absent from the cultural resources discussion. No maps are provided identifying relationships of Historic Properties and TCPs to Waters of the US, or of Jurisdictional Delineation(s) of Waters of the US relevant to the Rosemont project. Incorporate discussion of Section 404 permitting relevant to cultural resources, or reference this discussion if it is elsewhere in the EIS or in other documents.	Resolution - text changed.
352	Pima County - Julia Fonseca	3	Geology	1	15-16	Loss of federal mineral estate was an important public scoping issue. This EIS fails to acknowledge this, or discuss what the loss of the minerals will mean to future generations.	Resolution - no change. Important public scoping issues to address in the FEIS were determined as a proper part of the NEPA process. Scoping issues to be addressed were determined by the Forest Supervisor.
353	Pima County - Julia Fonseca	3	Geology	1	32-33	Thank you for adding this statement	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
354	Pima County - Julia Fonseca	3	Geology	1	34-38	This still does not disclose Forest Service decision not to exercise discretion to examine validity of lode claims to federal mineral estate that would lie under the proposed waste-tailings pile.	Resolution - The Forest Minerals group has expertise in this area and have determined that validity is not required. No changes needed.
355	Pima County - Julia Fonseca	3	Geology	30		Forest should require monitoring and mitigation of referenced pressures for stability of pit, with standards based on the pit configuration that is actually approved by the Forest in the approved Mine Plan of Operation. This requested monitoring and mitigation measure is different than and in addition to FS-SR-04. The current Call and Nicolas 2012 is for a different pit configuration than is referenced in the EIS, and for a different pit configuration than the Forest may ultimately approve.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the
356	Pima County - Julia Fonseca	3	Geology	30		What response if any will be taken if rock bursts affect crest of Santa Rita mountains or affect pit operations?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
357	Pima County - Julia Fonseca	3	Geology	30		What are the limits of potential mass failures around pit wall before and after mine closure? How might this affect the functioning of stormwater controls, erosion, etc.? What measures would be taken in response after mine closure?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
358	AGFD	3	Geology	33	10-27	The text states that sediment enters stormwater through erosion of native soils, the dry stack tailings facility and the waste rock facility. Stormwater management facilities have been designed to maintain total suspended sediment concentrations in stormwater similar to baseline conditions. Sediment delivery to the downstream watershed is expected to decrease from baseline conditions, while suspended sediment concentrations are expected to remain relatively unchanged. COMMENT: Uncontained stormwater runoff which overtops the compliance point dam may contain sediments from mine processing facilities, the dry stack tailings and waste rock facilities. The repeated failure of the dam may add significant sediment loads to the watershed. RECOMMENDATION: Highly turbid waters discharged to Barrel Canyon should be evaluated against Arizona narrative water quality standards, and potentially adverse effects examined in the text.	Resolution - The dam failure discussion has been revised
359	Pima County - Julia Fonseca	3	Geology	33		Cumulative effects disclose fails to identify any impacts to geology and minerals in the region.	Resolution - Statement of fact or opinion. No action needed. Not sure what the cumulative impact would be - that as minerals are removed from the ground, there are less of them in the ground? All RFAs were analyzed with respect to geology and minerals using a standardized process for assessing cumulative impacts (i.e., effects overlap in space and time). Without specifics, no changes warranted.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
360	Pima County - Julia Fonseca	3	Geology	34		Mitigation and monitoring should be added for pit wall stability, rock bursts, and seismic damage to pit. What measures will be required to reduce potential pit wall slope stability problems during operations and at closure? At closure, any berms and fencing around pit should be located beyond the limits of potential mass failure.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
361	Pima County - Julia Fonseca	3	Geology	34		Mitigation should require proper abandonment of any unused drill holes, existing shafts and adits. These should be identified in final MPO and bonded.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
362	Pima County - Julia Fonseca	3	Geology	NA		FEIS fails to address indirect or cumulative impacts to other mines in the area, including limestone and copper-moly mines, or on mineral supply, smelter availability or reagent availability.	Resolution - This comment indicates a disagreement with analysis technique. However, the Forest specialists have reviewed and found the current scope of the FEIS analysis to be appropriate, and that analysis of these types of global industrial issues are speculative.
363	Pima County - Julia Fonseca	3	Geology			FEIS does not disclose decision of Supervisor to not examine validity of exams.	Resolution - Statement of fact or opinion. No action needed. The FEIS does not address everything else that the Forest Services believes they do not have to do.
364	Pima County - Julia Fonseca	3	Geology			This part of FEIS does not disclose intent to alter surface management through boundary adjustments or land disposal.	Resolution - Comment is not factually correct. This disclosure is included in the Lands section.
365	Pima County - Julia Fonseca	3	Geology			FEIS does not disclose intent to alter Forest Plan to allow mining.	Resolution – Comment not factually correct. That has always been addressed in Chapter 2; and now every section in Chapter 3 includes a description of this.

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
366	Pima County - Julia Fonseca	3	Geology			Cutoff grade is relevant to the definition of waste and hence to the need to use Forest land for waste disposal. This FEIS discloses a cutoff grade. Is this cutoff grade the one that is the current basis for waste/tailings pile? Will Forest permit additional changes prior to ROD?	<u>Resolution - Cutoff grades are already explicitly included in the Geology section.</u>
367	Pima County - Julia Fonseca	3	Geology			Analysis of seismicity fails to address questions about pit slope stability. EIS only disclosed values used for design of the waste-tailing pile.	<u>Resolution - Pit slope stability has been added to the Soils section.</u>
368	Pima County - Julia Fonseca	3	Geology			Potential for subsidence in Cienega Valley has not been addressed outside the mine operations area	<u>Resolution - Have added east side subsidence analysis to GW Quantity section.</u>
369	Pima County - Julia Fonseca	3	Geology			Pratt 2007 referenced need for depressurization but most recent report by Call and Nicolas 2012 calls into question whether there will be sufficient dewatering to prevent slippage or rock bursts due to pore pressures. This should be disclosed.	<u>Resolution - Pit slope stability has been added to the Soils section.</u>
370	Pima County - Akitsu Kimoto	3	Golder (2012)	6		Golder (2012) stated that the sums of peak flow at SCS-1 were calculated by simply adding the peak flows at SCS-1 and 2. However, the timing of the peak is different between these locations. For example, the peak occurred at 35 min for SCS-1 (Run 1, Existing), while it occurred around 20 min for SCS-2. For the postmining condition (Run 1), the time of concentration for BC is 25 min while it is 30 min for TC. This means that there is a significant difference in the timing of the peak. The peak cannot be simply added by simply assuming that the peak occurred at the same time. Please explain why this approach is reasonable.	<u>Resolution - The Golder discussion has been modified to make it more global, now referencing a record memo on the entire surface water review process.</u>
371	Pima County - Akitsu Kimoto	3	Golder (2012)	Appendix A		Vegetation cover density is 20% for both pre and post mining condition (Run1). The vegetation cover for the post-mining condition should be less. Please explain why the vegetation cover density would not be changed by mining activities.	<u>Resolution - The Golder discussion has been modified to make it more global, now referencing a record memo on the entire surface water review process.</u>
372	EPA	3	Groundwater Quality and Geochemistry	7	3_7	<p>The AFEIS states that mineralogical analysis was not necessary to support the geochemical modeling performed for the project. The decision not to perform a mineralogical analysis for this project is contrary to industry standard practice as defined in the Global Acid Rock Drainage (GARD) Guide.</p> <p>The GARD Guide was developed by an international organization of mining companies with the aim of reducing the liabilities associated with acid rock drainage . The GARD Guide identifies mineralogical analysis as an “essential component of static testing...” The GARD Guide refers to mineralogical testing as a required, not an optional, analysis, stating that, “Mineralogical information is an essential component of drainage chemistry prediction because mineralogical properties determine the physical and geochemical stability and reaction rates of geologic materials and mine wastes.” Furthermore, “the type of mineral phase indicates the major chemical constituents and relative reaction rates under different weathering conditions. Surface exposure, grain size and deformities also affect the rate of weathering. One of the most important uses of mineralogical data is to support selection and design of other tests and interpretation of their results. Mineralogical analysis is usually required for a ‘representative’ sub-set of the static test samples and each kinetic test sample... Mineralogical data will indicate which minerals likely contributed to test results and the likelihood they will contribute similar amounts in the field. Properties of interest will depend on the mineralogical composition, questions raised by other test work and site-specific weathering conditions.”</p>	<u>Resolution - The use of mineralogical data were fully reviewed by the Forest specialists. It is acknowledged in the FEIS that there is professional disagreement on this issue. The ramifications of lack of mineralogical data were fully investigated, as described in the FEIS, and the approach was determined to be appropriate. It should be noted that part of this determination was the inclusion of substantial operational testing above and beyond that required solely by Arizona state law, including mineralogical analysis of waste rock and tailings.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
373	EPA	3	Groundwater Quality and Geochemistry	7	8_12	The AFEIS states, "While the geochemical analysis, specifically the potential for acid rock drainage, has been fully assessed and found by the Coronado to be reasonable and valid, in consideration of public concerns regarding the uncertainty associated with geochemical modeling, existing waste rock characterization and interpreting the potential for acid rock drainage, three monitoring components have been incorporated into the mitigation and monitoring plan (see appendix B for full details)." This passage should be revised to acknowledge that monitoring is a key component of any site characterization and prediction program and should be a component of project monitoring regardless of public (or EPA) concerns.	Resolution - This is a statement of fact or opinion. No change incorporated.
374	EPA	3	Groundwater Quantity	5	24-27	The groundwater analysis area extends east of Cienega Creek, yet appears that seeps, springs, streams, wetlands and riparian areas that may lie east of Cienega Creek were not inventoried or assessed for potential effects of groundwater drawdown. Over thirty perennial and seasonal wetlands of various acreages are associated with Cienega Creek within the Las Cienegas National Conservation Area (BLM staff estimate). According to BLM, the majority of these wetlands are adjacent to Cienega Creek between Cinco Canyon and Oak Tree Canyon, and include the Cienequita, Spring Water, and Cinco Ponds wetlands. Other wetlands are found upstream of the Mattie Gulch and Cienega Creek confluence (i.e., Cold Spring wetland). Many of these wetlands and aquatic features would likely qualify as jurisdictional waters of the United States (R. Leidy, personal observation, June 27, 2013). If there are potential project effects on Cienega Creek from groundwater drawdown, it follows that there would also be potential effects from groundwater drawdown on these waters, as they are immediately adjacent and hydrologically connected to Cienega Creek. The EIS should describe these aquatic features adjacent to Cienega Creek, identify their likely CWA jurisdictional status, and indicate what the potential impacts to	Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.
375	Pima County - Myers	3	Groundwater Quantity	7		The AFEIS responds to concerns about using less than the 5-foot drawdown to assess impacts by noting that it corresponds to natural variability (p 7). The AFEIS ignores two points here. Increased drawdown of any amount increases the time that a spring or stream would experience decreased flow or dried conditions. A spring only flows when the groundwater table is above the ground surface or when the hydrostatic pressure upgradient from the spring exceeds the elevation of the spring orifice. Drawdown of the controlling groundwater level adds to the period during which the spring is dry. It also ignores the fact that water can be drawn from a spring, decreasing its discharge, without any groundwater drawdown at the spring if drawdown away from the spring decreases the gradient controlling flow to the spring. A good comparative example is the Moapa Springs in southern Nevada from which the discharge is very sensitive to very small changes in upgradient water level (Mayer and Congdon 2007). At Moapa Springs, drawdown of less than one foot have observable impacts on the spring discharge. Another reason to consider smaller drawdowns is the lag time between the pumping which causes drawdown and its manifestation at the spring of interest. This is a bigger problem the further the spring is from the pumping because of the inherent momentum in the spread of a drawdown cone. As noted by Bredehoeft and Durbin (2008), once a trigger drawdown is detected at a given point, it is too late	Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
376	EPA	3	Groundwater Quantity	18		<p>With regard to the various groundwater models employed, EPA has the following observations:</p> <p>For all models, the AFEIS recognizes that predicting groundwater levels hundreds or thousands of years in the future is “speculative”.</p> <p>For the Montgomery and Tetra Tech models, historic water-level data used as a basis for the models were primarily limited to data beginning in 2008 in the immediate vicinity of the mine. The short period of records for this groundwater data set introduces potentially significant uncertainty and errors affecting model calibration and the ability to make accurate predictions over long time periods. The ability to predict future groundwater levels over the life of the mine and beyond with certainty necessarily requires relatively longer data sets.</p> <p>For the Montgomery and Tetra Tech models, existing Cienega Basin pumpage was not quantified or modeled, but is recognized as increasing. This unknown pumpage will affect the accuracy of future predictions of groundwater drawdown.</p> <p>Based on the model limitations, the EIS should disclose that the groundwater drawdown models are not suitable for predicting impacts to distant surface water resources for the long time periods over which impacts of the proposed project are expected to occur.</p> <p>EPA notes that the Meyers Model has been peer reviewed, but the results of that review were not made available to Coronado National Forest for inclusion in the AFEIS.</p>	<p>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</p> <p>Regarding the Myers model and peer review, the FEIS states exactly what is stated in the comment.</p>
377	Pima County - Myers	3	Groundwater Quantity	20		<p>The AFEIS describes that heap drainage “would discharge from the sump to the ground via an open port”. Throughout the AFEIS, seepage is considered to be spread over the area of the facility but in this case it is clearly a point discharge to the groundwater for which fate and transport has not been discussed.</p>	<p>Resolution - Have clarified heap leach discharge</p>
378	Pima County - Myers	3	Groundwater Quantity	26		<p>The pit lake modeling left out many sources and made too many simplifying assumptions, as indicated by Pima County on previous comments. The following is a list of those comments, with those accommodated in the AFEIS struck out. • Improved pit wall runoff estimates or better justification for the current assumptions • Estimates of water and chemical loading for pit wall interflow • Estimates of water and chemical loading for recharge to the groundwater table through the pit walls. • Loads from the leaching of the fractured rock subsequent oxidation in the pit wall • Differential inflow rates by geologic formation • Oxidation products due to dewatering the aquifers • Better justify their assumptions the pit lake will not stratify or they should include stratification in their model. • Run the model using the MWMP results rather than SPLP results because dissolution is the more important process. This could be considered to provide an upper bound on the pit lake chemistry. This might help to minimize the bias introduced by using unweathered rock in the tests. • Use input chemistry that varies with time based on the number of pore volumes of leachate that has passed the samples. • Description of how the model accounts for changing rock-type proportions. • The report should at a minimum discuss the evolution of water quality with time. The AFEIS is not responsive with respect to the previous comments, therefore they continue to apply</p>	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p>In this case, Myers comments on the pit lake model from the DEIS--very similar to those provided here-- were reviewed by Forest specialists. Then the Forest geochemical expert--SRK--was contracted to provide written responses about the technical validity of each, and whether the changes requested would change the pit lake model. These responses were reviewed by the Forest specialists who determined that the pit lake model was still reasonable and acceptable.</p>
379	EPA	3	Groundwater Quantity	28	Table 53	<p>Issues 3A.1 and 3A.3: The AFEIS concludes that Gardner Canyon, Davidson Canyon and Cienega Creek are unlikely to experience substantial drawdown over any time period. As previously discussed, EPA does not believe this statement is well supported. Please refer to EPA comments and recommendations regarding this issue in the Seeps, Springs and Riparian Areas resource section of Chapter 3.</p>	<p>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
380	Town of Sahuarita	3	Groundwater Quantity	34	16-17	The Sahuarita Wastewater Treatment Plant is an existing permitted Facility. It was permitted to treat up to 1.5 MGD under Aquifer Protection Permit No. P-103602. ADWR has completed the first substantive review of a significant amendment to that permit to increase the capacity to 3.0 MGD. The facility also has an existing Underground Storage Facility Permit and an existing Water Storage Permit for 896 acre-feet per annum (USF Permit No. 72-595209.000 and WSF Permit No. 73-595209.0000, respectively) Please update the text and confirm the proposed activities do not adversely Impact the Town's facility	<u>Resolution - Have added regulatory requirements to assess other recharge facilities prior to issuance of permit.</u>
381	TON	3	Groundwater Quantity	50	14-19	The FEIS indicates only that potential drawdown is not likely to violate the statutory drawdown of 10 feet, however, an estimate is not provided as to actual drawdown.	<u>Resolution - some clarifying text has been added.</u>
382	EPA	3	Groundwater Quantity	68	15-27	If the overall volume of rainfall falling in the basin is expected to decrease, then it is highly unlikely that net recharge in the basin could reasonably be expected to increase, regardless of potential changes in the distribution of precipitation. This passage should also note that higher temperatures would increase evapotranspiration (ET) from plants, thereby reducing groundwater storage and increasing drawdown. Resultant shifts in plant communities (e.g., hydriparian toward xeriparian) could serve to further exacerbate drawdown.	<u>Resolution - No changes. This section already adequately reflects this conclusion (see Climate Change and No Action sections).</u>
383	Town of Sahuarita	3	Groundwater Quantity	69	41	Update Section: Protection of TS wells in accordance with the License Agreement between Rosemont Copper and TS	<u>Resolution - This section has been updated to reflect the License Agreement</u>
384	Town of Sahuarita	3	Groundwater Quantity	70	3	Update Section: Rosemont's commitment to recharge, with Central Arizona project water and within the drawdown area, a minimum of 105% of the amount of water withdrawn from Rosemont wells in accountancy with the License Agreement between Rosemont Copper and TS	<u>Resolution - This section has been updated to reflect the License Agreement</u>
385	Town of Sahuarita	3	Groundwater Quantity	70	43	Update Section: Rosemont's commitment to recharge, with Central Arizona project water and within the drawdown area, a minimum of 105% of the amount of water withdrawn from Rosemont wells in accountancy with the License Agreement between Rosemont Copper an	<u>Resolution - This section has been updated to reflect the License Agreement</u>
386	Town of Sahuarita	3	Groundwater Quantity	71	1_8	Update Section: Rosemont's commitment to recharge, with Central Arizona project water and within the drawdown area, a minimum of 105% of the amount of water withdrawn from Rosemont wells in accountancy with the License Agreement between Rosemont Copper an	<u>Resolution - This section has been updated to reflect the License Agreement</u>
387	Town of Sahuarita	3	Groundwater Quantity	71	15-17	Update Section: Protection of TS wells in accordance with the License Agreement between Rosemont Copper and TS	<u>Resolution - This section has been updated to reflect the License Agreement</u>
388	Town of Sahuarita	3	Groundwater Quantity	71	26-31	Update Section: Rosemont's commitment to recharge, with Central Arizona project water and within the drawdown area, a minimum of 105% of the amount of water withdrawn from Rosemont wells in accountancy with the License Agreement between Rosemont Copper an	<u>Resolution - This section has been updated to reflect the License Agreement</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
389	EPA	3	Groundwater Quantity	1 3	38-41(1) 1-3(3)	<p>This section of the AFEIS provides qualitative conclusions that project-related groundwater drawdown will have either no effect, or will result in only small changes to, seeps, springs, stream flows, and riparian areas. Given that the AFEIS frequently acknowledges the serious limitations of the groundwater models, these conclusions are not well supported. Additional documents and studies, and the opinions of experts (see p. 8, Scientific Uncertainty and Professional Disagreement) are referenced in the AFEIS in support of many of the qualitative conclusions regarding changes to groundwater levels, but none of these supporting materials change the overriding finding that the groundwater models are not able to accurately predict the effects of changes in groundwater levels beyond the 5 foot drawdown contour. In light of the stated inability of the models to provide adequate resolution on this issue, we recommend that impact assessments be based on a risk analysis that considers the likelihood or probability of an event occurring, followed by an assessment of the consequences. The AFEIS should discuss the risk to vulnerable aquatic and wetlands habitats from reliance on predictions from groundwater models that cannot accurately detect small changes.</p> <p>All three groundwater models discussed in the AFEIS predict eventual groundwater drawdown in the assessment area. If the output of the groundwater modeling and the sensitivity analyses are accepted, the probability of occurrence of some level of drawdown (from 0.1 ft up to 5ft) at sensitive waters in the assessment area remains very high. The environmental consequence (i.e., vulnerability) of springs,</p>	<p><u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u></p>
390	Pima County - Myers	3	Groundwater Quantity	15-17		<p>The DEIS had predicted there would be no seepage through the waste rock dumps, essentially because any water simulated as entering the soil would be captured and stored in the surface layer. Comments by Pima County had included that the modeling used inappropriate climate values, most especially using precipitation and evapotranspiration rates from the wrong place. In response, the AFEIS states that they considered an updated seepage model in which there were additional climate model scenarios were considered. The scenarios had to do with the length of simulation but with inappropriate climate values the antecedent conditions were never wet enough to allow additional seepage beyond the surface. The model used unsaturated conductivity values that never allowed seepage past the surface. Even the models that considered ponding simulate the water as remaining on the surface and never entering the waste rock. As noted, the presence of seepage through waste rock all over the country including in areas much drier than Rosemont demonstrates that seepage can occur. The AFEIS presents no discussion of the seepage model parameters, either soils or climate, and it still predicts no seepage. A brief review of the updated model shows that climate from inappropriate locations and soil parameters with such inappropriate parameter were still utilized. The</p>	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>In this case, the infiltration models all underwent independent peer review by outside geochemical experts. This was an iterative review process and changes were made accordingly. Upon receipt of EPA comments on the DEIS, concerned that not enough extreme climatic conditions were applied to the models, the Forest requested that additional modeling runs be made. These were conducted by Rosemont and the results described and incorporated into the FEIS.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
391	Pima County - Myers	3	Groundwater Quantity	17, 20	2	In the Barrel alternative, the heaps have been removed but they remain a part of the plan for all other alternatives. The plan as presented in the AFEIS for closure does not adequately describe the plan. The AFEIS describes a treatment system that would be established in the former pregnant leach pond. The AFEIS implies that the collection system and passive treatment system will also be buried because monitoring would occur through a "concrete riser piped to the surface of the waste rock"; the monitoring will verify that treatment is effective", however it does not indicate how the system would be maintained or fixed if it does not work adequately but is buried under an unspecified depth of waste rock (p 20). The need for this monitoring is apparent because at least some of the treatment, the passive treatment, will not fully treat the seepage; it is only with the "engineered biological system" that concentrations could be reduced below standards (p 20). The description herein does not meet the standards for specifying closure of the heap, as noted previously by Pima County, and does not qualify as a hard look at the plans for closing the facility.	<u>Resolution - Text has been changed to reflect more regarding the heap leach closure.</u>
392	Town of Sahuarita	3	Groundwater Quantity & Geo	8	2	Text in this section should be updated to reflect the groundwater modeling validation and updates being completed by Freeport McMoRan	<u>Resolution - The new groundwater modeling from Freeport McMoRan was investigated. It was found that this modeling is not publicly available and was not available for use as a data source in the FEIS.</u>
393	Town of Sahuarita	3	Groundwater Quantity & Geo	29	24	Update Section: Reflecting the groundwater modeling validation and updates are being completed by Freeport McMoRan.	<u>Resolution - The new groundwater modeling from Freeport McMoRan was investigated. It was found that this modeling is not publicly available and was not available for use as a data source in the FEIS.</u>
394	EPA	3	Groundwater Quantity Also Biological Resources	66 87	37-43(66) 30-40(87 -	The basis for the statement that estimates of reduced surface water flows in Davidson Canyon are conservative is unclear. Because of topography alone, flows from the project site would likely continue to move downslope by surface and or shallow subsurface pathways and contribute recharge to lower Davidson Canyon. EPA recommends that the discussion in lines 37-43 be deleted so as not to inappropriately minimize the significance of the potential impacts to aquifer recharge.	<u>Resolution - Additional text has been added to other sections discussing this, and this section now points to those discussions.</u>
395	Pima County - RWRD - Staff	3	Groundwater Quality and Geochemistry	18-20		Tables 71, 72, and 73 compare the expected seepage water quality from waste rock, heap leach, and tailings, respectively with numeric AWQs and conclude that groundwater quality will comply. However, the values for selenium and perhaps some of the other metals may be a problem if discharge to the aquifer connects with surface water via spring flow downgradient of the facility. If this is the case, the narrative standard of R18-11-405(B) could apply, and the surface water quality standards, which are more stringent for some of these metals, could be applied at the point of compliance in the Aquifer Protection Permit. ADEQ has not taken this approach with their recently issued APP. There has been no analysis of fracture flow or karst development in the area. If fracture or karst are significant controls on subsurface flows, the groundwater modeling results are not a reliable prediction of the likely transport direction for seepage from the facility. The EIS identifies that there is little understanding of the relationship of groundwater levels and spring flow in the area. The Forest Service should make sure that appropriate study of spring flow and groundwater/surface water interaction through isotope studies, tracers, or geophysics, is conducted, so that the narrative standard can be applied where warranted. These	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>In this case, cave/karst potential was fully evaluated by Forest specialists, outside geological and cave experts, and with input from cooperating agencies. These results were incorporated into the FEIS analysis.</u> <u>Past that, the Forest has added on requirements for groundwater quality monitoring beyond those required for the APP.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
396	Pima County - Myers	3	Groundwater Quantity	22, 25		Flow across the model boundaries differs substantially between the M&A and Tetra Tech models. The basic difference is that flow across the boundaries for the M&A model is on the order of a few thousand af/y and for the Tetra Tech model is around 25,000 af/y, inflow and outflow. It is obvious that the models have vastly different conceptualization, although neither model had an a priori estimate of flux across the boundary.	<u>Resolution - Statement of opinion or fact. No actionable comment. No changes needed.</u>
397	Pima County - Julia Fonseca	3	Groundwater Quantity	8, Table 8	Issue 3C.2.	Table 8 is incorrect. Best available demonstrated control technology has not been accepted for all alternatives through the aquifer protection permit process. The APP issued is not for the Barrel Alternative, it is only for the mine plan of operations. This fact was disclosed by Rosemont letter dated February 20, 2012 to the Forest Service. The Letter notes that "once the Forest Service makes a decision on an alternative, Rosemont will make an application for an amendment to the permit...."	<u>Resolution - Have clarified that APP would need to be revised</u>
398	Pima County - Julia Fonseca	3	Groundwater Quantity	8, Table 8	Last Row	Impacts to the Sierrita plume should have been analyzed with respect to proposed Rosemont mitigation measures. It does not make sense to analyze the alternatives, since they are the same with respect to west-side water alternatives. The west-side recharge of CAP should be analyzed for its effects on the plume and disclosed in the EIS.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>In this case, CAP recharge is voluntary and is not guaranteed to occur. The FEIS analyzes impacts as if the recharge did not occur. This is a more conservative approach than assuming there would be no impact to the sulfate plume because CAP recharge would occur, when it may not.</u>
399	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling		Pima County has submitted numerous comments regarding the groundwater model throughout the development of the EIS. The base model used in the AFEIS is the same as used in the DEIS and the model predictions presented in the AFEIS are the same, therefore those comments have not been applied to changed or improve the model. With some exception, the AFEIS does not reply or respond to the comments. The following sections repeat those comments with some additional discussion where appropriate.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>In this case, as should be clear from the description in the FEIS, the references, and the record, a large amount of work was conducted after receipt of DEIS public comments in order for the Forest to assess the models. This included two water panels in which cooperating agencies were involved in the discussion, in addition to specific questions contracted to outside hydrologic modeling experts.</u> <u>The fact that the same models were used does not mean the comments were not heard and acted upon. Rather, it means that the Forest conducted additional work into the acceptability of the models, disclosed that work and its conclusions, and determined that the models are reasonable and appropriate.</u> <u>It should also be pointed out that uncertainty is one reason three different models were used in the analysis, including Myers own model.</u>

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400	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling		One major assumption questioned by Pima County was the location of the western boundary of the model. Because of the intrusive rock massif forming the ridge of the mountain west of the proposed pit, simulating a boundary that will allow flow to cross the ridgeline is inappropriate. The sensitivity analysis discussed in the AFEIS (p 26) tests only the conductance of the boundary, not its location. The results of the AFEIS sensitivity analysis are not responsive to Pima County's comments.	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p><u>The effect of the model boundaries on the model predictions was fully evaluated by the Forest between DEIS and FEIS, as is described in the FEIS, the references, and the record. The Forest is fully aware of the influence of the boundary and determined that the results of the model were acceptable for use, with a full understanding of their limitations.</u></p> <p><u>In addition, three different models were used to inform the analysis, including Myers own.</u></p>
401	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling		Pima County questions the location of boundaries as used in both the Tetra Tech and Montgomery and Associates model, suggesting the agencies consider whether the flow across them is reasonable. The sensitivity analyses discussed in the AFEIS are not responsive to the County's comments regarding whether the boundaries are conceptualized properly. The agencies should make an independent estimate of flow across the boundaries and compare that to the simulated rate.	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p><u>The effect of the model boundaries on the model predictions was fully evaluated by the Forest between DEIS and FEIS, as is described in the FEIS, the references, and the record. The Forest is fully aware of the influence of the boundary and determined that the results of the model were acceptable for use, with a full understanding of their limitations.</u></p> <p><u>In addition, three different models were used to inform the analysis, including Myers own.</u></p>
402	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling		The Tetra Tech model includes a horizontal flow barrier (HFB) simulating the quartz-porphry dike damming off the groundwater flow from the upper reaches of Davidson Canyon to the lower parts. Neither M&A nor Myers included this feature and it is not supported by the data. Comparisons of drawdown figures show that it limits the extent that drawdown reaches down Davidson Canyon Without specific data showing the hydraulic effect of this feature, Tetra Tech has not justified its use; at present, the model is a good interpretative model of what would occur if there were an impervious and horizontally and vertically continuous dike at that location. Specific data could include cores of the dike, geophysical tests, or aquifer tests with monitoring wells up- and downgradient of the dike. The AFEIS does present discussion on some sensitivity analysis that indicates the dike does affect the long-term response of the system to dewatering. The FS should require Rosemont to conduct hydrologic tests in and around the dike to improve its modeling.	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p><u>The effect the HFB was investigated through the peer review process. The fact that one model uses a different assumption is not a bad thing--it is a good thing because it provides a range of possible outcomes to assess. In this case, three models were used, all with different assumptions, and the results of all were used to inform the analysis.</u></p>

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403	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling		<p>Tetra Tech's model allows much more groundwater inflow through its boundaries than did M&A, although each model had boundaries in the same locations Tetra Tech did not appropriately constrain its calibration with flow data which allows this additional groundwater inflow. The simulation of this excess groundwater inflow is not supported by any data or geologic mapping. The inflow should be constrained by an estimate of recharge that would have occurred between the model domain boundary and the basin boundary. The excess groundwater inflow in the Tetra Tech model may limit the expansion of drawdown into the Cienega Basin. Boundary conditions should be supported by the conceptual model of the system with the flow across the boundary estimated independent of the numerical model.</p> <p>The AFEIS fails to do this.</p>	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>The effect of the model boundaries on the model predictions was fully evaluated by the Forest between DEIS and FEIS, as is described in the FEIS, the references, and the record. The Forest is fully aware of the influence of the boundary and determined that the results of the model were acceptable for use, with a full understanding of their limitations.</u></p> <p><u>In addition, three different models were used to inform the analysis, including Myers own.</u></p>
404	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling		<p>Tetra Tech has much more steady state recharge near and above the pit than does M&A. They simulated in excess of 0.53 in/y all along the crest; they essentially forced water into non-receptive bedrock. M&A had simulated similar rates over the Backbone fault but near-zero rates over the granodiorite (pCb) outcrops along the crest of the Santa Rita Mountains. Myers' rates were high near the fault zone but very low south along the ridge near the granodiorite outcrops. The simulation of recharge near and through the mine facilities is a large difference between Tetra Tech's and M&A's model. Tetra Tech has reasoned there would be about 75 af/y more recharge after than before mining; M&A has reasoned that recharge will decrease by a similar amount. The extra recharge as simulated by Tetra Tech provides more water nearer to the proposed pit. This extra water entering the pit area from the west would limit help to fill the groundwater deficit created by dewatering and pit development. It may limit the extent that drawdown moves downgradient into Davidson Canyon. Both estimates are inaccurate, but Tetra Tech's estimate provides additional water that helps to satisfy the pit lake deficit which decreases the predicted impacts due to pit lake development downstream in Davidson Canyon.</p> <p>The AFEIS should present a sensitivity analysis of the recharge rates near the pit to show how sensitive</p>	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>The three different models all use three different methods of estimating recharge. This is a good thing, as it provides a range of possibilities to assess. The results of all three models were used to inform the analysis.</u></p>
405	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling		<p>The Tetra Tech and M&A models used the same rectangular domain with headcontrolled flux boundaries on most sides. Most modeling guidance suggests that the boundaries of a model should be at a point where conditions are known; usually this means the boundaries coincide with a topographic divide or significant change in formation. The ideal is for the boundaries to be a flow line, except for specified inflow and outflow reaches at locations where the flow is constrained. Myers had modeled the region between the topographic divides, and this would have been preferable for both Tetra Tech and M&A because it is preferable to simulate boundaries at locations where conditions are known. As in the comment above, boundary conditions should be supported by the conceptual model of the system with the flow across the boundary estimated independent of the numerical model. The AFEIS fails to do this. Alternatively, some modelers will set arbitrary boundaries at a distance from the area of interest with an expectation that the stresses will not change the flux across the boundary. The AFEIS does not provide any indication of whether these arbitrary boundaries are affected by the drawdown.</p>	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>The effect of the model boundaries on the model predictions was fully evaluated by the Forest between DEIS and FEIS, as is described in the FEIS, the references, and the record. The Forest is fully aware of the influence of the boundary and determined that the results of the model were acceptable for use, with a full understanding of their limitations.</u></p> <p><u>In addition, three different models were used to inform the analysis, including Myers own.</u></p>

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406	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling	12	19-30 Drawdown in both the Tetra Tech and M&A models extends west of the Santa Rita ridge crest. Both the Tetra Tech and M&A models had conceptualized a connection with the west side, even though the granodiorite has low conductivity and the deeply dipping Paleozoic rock in which the pit is constructed may not be connected in a significant way to the formations on the west. Myers' model did not simulate this connection because it had set a boundary at the ridgeline based on the geology and topography. Allowing this connection allows the dewatering and pit lake development to draw water from areas west of the ridge that may not in reality be connected to the pit. This extra water provided to the pit introduces a bias in both models and limits the distance the drawdown extends down Davidson Canyon. The AFEIS discusses this boundary at the referenced lines and acknowledged there would be an effect but suggested it was far into the future and that the amount is a decrease in flow from the model domain. This is not responsive to the comment because it does not consider how much recharge, modeled to occur west of the ridge, flows across the ridge into the pit; if the granodiorite is essentially impermeable, this flow would not occur at all and the test presented in the AFEIS is not responsive to the concerns. If the models had not included this connection between the west and east sides of the ridge, the drawdown in Davidson	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>The effect of the model boundaries on the model predictions was fully evaluated by the Forest between DEIS and FEIS, as is described in the FEIS, the references, and the record. The Forest is fully aware of the influence of the boundary and determined that the results of the model were acceptable for use, with a full understanding of their limitations.</u></p> <p><u>In addition, three different models were used to inform the analysis, including Myers own.</u></p>
407	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling	12	Myers' model simulated drawdown further into the Cienega basin than did either of the other models because he simulated more connection between the bedrock and basin fill in that basin; he also constrained the flows through that basin based on the flows through the Narrows – Tetra Tech did not. Because there are no hydraulic data showing no connection – the pump tests were much too short – impacts into Cienega basin could occur. This could be a substantial error in the primary modeling utilized in the AFEIS and could lead to insufficient monitoring and mitigation plans. The FS should require more extensive data gathering to test the hypothesis of a connection with the Cienega Basin. This could include drilling new wells and completing new, long-term pump tests. The FS should also require sensitivity analyses of the modeling to assess the potential for a connection between basins.	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>Again, the fact that models differ in their assumptions is not a flaw, it is a good thing for the analysis. All three models were used to inform the range of impacts that could occur.</u></p>

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408	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling	12	The DEIS does not consider different groundwater contours maps for different well depths. Such a map would show vertical gradients, which provides information on recharge and discharge areas. Such analysis is critical for writing a conceptual model of an area. The AFEIS did not respond or include such a map or analysis. The AFEIS should also include a map showing areas where groundwater may be perched. Perhaps this could be included with the Seeps, Springs, and Riparian section.	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>Comments similar to these were raised with the DEIS and were evaluated by the Forest. In particular, alternative water level maps were produced and provided by Pima County and Arizona State Parks, with a different interpretation of water levels. The Forest found that the while different interpretations could always be found, the water level maps prepared by Montgomery were reasonable and were informed by all available data.</u></p> <p><u>Additional information on shallow groundwater areas, suggested by Pima County in comments on the FEIS, was reviewed and was not found useful for incorporation into the riparian analysis.</u></p>
409	Pima County - Myers	3	Groundwater Quantity	Groundwater Modeling	12	The ADEIS should provide estimates of the amount of groundwater in bedrock v. the amount in fill and alluvium. This would provide some context to the amount of water to be removed by dewatering The DEIS should also discuss how dewatering affects each of these aquifers, both qualitatively and quantitatively.	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>Comments similar to these were raised with the DEIS and were evaluated by the Forest. No reasonable method of estimating the amount of groundwater in different geologic units was found, nor did the Forest determine that this information would inform the analysis to any great extent.</u></p>
410	Pima County - Julia Fonseca	3	Groundwater Quantity	NA		Analysis of potential to contaminate aquifer does not appear to take into effect that soils underlying the waste/tailings landform will be removed as part of the effort to obtain sufficient "growth media", which has the effect of removing the potential for soil adsorption and other geochemical processes that would otherwise attenuate contaminants prior to entering fractured bedrock.	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>The analysis of aquifer contamination is not affected by the presence or absence of soils. Seepage is known to occur from the tailings and the assumption is that it will reach the regional aquifer. The quality of that seepage is assessed compared to aquifer water quality standards. The presence/absence of soil is not involved in the analysis.</u></p>

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411	Pima County - Julia Fonseca	3	Groundwater Quantity	NA		This chapter assumes the hydraulic sink will be effective even in the early years. But the groundwater models that are the basis for the Forest's EIS indicates that the hydraulic sink effect would be limited in the early years of operation. Montgomery and Associates (2009) mapping shows the water table is within 30 feet of the current land surface underlying part of the mine facilities including waste and tailings. The ground above the shallow water table will be made more vulnerable to contamination because of the removal of soil and vegetation. Please address the potential for contamination in areas outside the hydraulic sink in the first ten years for each alternative, within particular emphasis on the contamination of areas where the depth to water is less than 50 feet	Resolution - Comment is not factually correct. The analysis of what would happen in the time frame before the hydraulic sink develops is analyzed in GW Quality, page 24, Lines 28-42.
412	TON	3	Irreversible and Irretrievable	11	22	"the area" should be changed to "the traditional cultural place known as Ce:wi Duag to the Tohono O'odham and dzil enzho to the Apache.	Resolution - Change has been made
413	Pima County - Linda Mayro	3	Irreversible and Irretrievable Commitment of Resources	11	22	"the area" needs to be replaced and disclosed as "the traditional cultural place known as Ce:wi Duag to the Tohono O'odham and dzil enzho to the Western Apache	Resolution - Change has been made
414	Pima County - S. Anderson	3	Issue 9, Impact on Rec.	2	4_15	What mitigation measures will be utilized to make sure that the opportunities lost (particularly miles of forest road and miles of trail) will be made up adequately elsewhere on forest land or on other lands?	Resolution - No Change. The Forest Supervisor reviewed all mitigations that were brought forward and selected those that were within his authority, that would effectively mitigate for impacts. There are no identified mitigations within FS authority that can mitigate for the loss of public access and recreation opportunities caused by this project - which is clearly disclosed in the Recreation and Wilderness section.
415	Pima County - S. Anderson	3	Issue 9, Impact on Rec.	6	16-19	Increased visitation to "...nearby lands" also include Cienega Creek Natural Preserve, Colossal Cave Mountain Park, the Bar V Ranch and the Arizona State Trust Land northeast of the CNF Nogales District (which all include parts of the Arizona National Scenic Trail), McKenzie Ranch, and the Santa Rita Experimental Range. Also, Pima County's Southeast Regional Park offers motorized recreation opportunities through its 400(+/-) acre Pima Motorsports Park property.	Resolution - added to the text of the Recreation and Wilderness section.
416	Pima County - S. Anderson	3	Issue 9, Impact on Rec.	2-Jan	41,1,2	The mine will actually lead to permanent changes in recreational opportunities. The additional recreation opportunities Pima County will be making available pale in comparison to the opportunities on forest land, which is large and expansive in the area of the mine, and farther away from human habitation than we can provide.	Resolution - no change. The conclusion of mitigated impacts says this: "However, the project area would remain a large-scale industrial mining operation, and the views and user experiences would be dominated by such in the immediate vicinity, or within sight of the project area." This adequately addresses the comment.
417	Pima County - Stofko	3	Land Ownership	5	3_6	The EIS states that 7 known mineral survey fractions would be impacted by the action alternatives and that they would be incorporated into the operations facilities during the construction and operation phases. However, Figure 77 appears to show only 2 of the 7 fractions within the proposed operations facilities. Which is it? If the latter, why not convey just the 2 within the operations facilities to Rosemont?	Resolution - No change. Figure 77 clearly depicts 7 mineral fractions.

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418	Pima County - Stofko	3	Land Ownership	5	3_6	No information is provided describing any known mineral values of the 7 known mineral survey fractions. If 2 or all 7 fractions are conveyed to Rosemont, would they become mineable by Rosemont or its assignee? Or would they be conveyed subject to a restrictive covenant prohibiting mineral extraction in perpetuity?	Resolution - corrections and clarification has been made to the text in chapter 3.
419	Pima County - Stofko	3	Land Ownership	6	16-28	States that Rosemont has agreed to purchase the currently known 7 mineral survey fractions, but that the NFS lacks the authority to require this purchase. It goes on to say, "Should Rosemont Copper choose not to purchase the mineral survey fractions, the NFS's ability to manage these fractions would be severely limited". What is the timing of the proposed purchase? This essentially states a potential problem and proposes a mitigation solution but does not guarantee that it will ever occur. If not, then there is effectively no mitigation of this problem,	Resolution - Mitigation measure RC-LO-01 states that this will occur prior to closure. A statement to that effect has been added to chapter 3.
420	Pima County - Stofko	3	Land Ownership	6	29-37	The same problem as stated in the comment directly above holds with Rosemont's expressed interest in placing a restrictive covenant on any privately held land within the footprint of the tailings and waste rock facilities to restrict potential future development. NFS admittedly lacks authority to require this. So the proposed mitigation may never come to pass.	Resolution - No change. This is a fact that is clearly stated in the document, both in chapter 3 and appendix B.
421	Pima County - Stofko	3	Land Ownership	5_6	31-13	Does "BLM Administered" in the context of the dependent resurvey mean that BLM personnel performed the survey? Or was it contracted out to an outside party? If the latter, to whom? Are the referenced "BLM's Field Notes of the Dependent Resurvey" a summary of the resurvey or are they the survey itself. Is the resurvey available for review?	Resolution - the survey was either conducted by or under the direct oversight of the BLM. The field notes and survey itself are public documents that are available upon a FOIA request.
422	Pima County - Julia Fonseca	3	Livestock Grazing	NA		Pima County's ranch conservation program depends on the use of groundwater wells, intermittent streams, and springs for livestock and domestic purposes (Exhibits A). In particular, Pima County has agreements with ranchers to use County land, springs, streams and grazing leases held by Pima County for ranch purposes at Bar V Ranch. The ability to maintain the ranch program depends on being able to provide the rancher a place to live and work on-site. This in turn depends on potable drinking water at the Bar V ranch house, which is supplied by a spring. Also, the wells used to water livestock must meet agricultural standards for livestock use.	Resolution - The water sources associated with the Bar-V ranch are part of the analysis already. No changes needed.
423	Pima County - Sarah Walters	3	Local and Regional Air Quality: National Ambient Air Quality Standards	21	7	The air quality section should disclose the assumptions regarding where smelting will occur (within Arizona or northern Mexico) and implicate the impacts to air quality for the SO2 NAAQS.	Resolution - Sentence added to Sulfide Ore processing process in Chapter 2.
424	TON	3	Mitigation	37	1_1	Definition of "inadvertent discoveries" should be clarified to include burial, associated grave goods, and ceremonial objects.	Resolution - wording added to Cultural section in ch 3 and to FS-CR-04 mitigation in appendix B.
425	TON	3	Mitigation	37	9_11	Contractors and their employees should be included in discussion of cultural resources protection training.	Resolution - wording added to Cultural section in ch 3 and to FS-CR-04 mitigation in appendix B.
426	Pima County - S. Anderson	3	Mitigation	38	21-22	The Forest Service has a dim view of road crossing of Hwy 83, but the Arizona National Scenic Trail will go under the roadway in box culverts, and the crossing is not that bad, comparatively. We don't mind the road crossings, and we would like to have the trail go this route to make it better.	Resolution - No action needed.

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427	Pima County - S. Anderson	3	Mitigation	38	29-40	It's good that Rosemont is attempting to address the OHV situation. Purchase of additional land would be good for that, and funding that would create new opportunities would be appreciated. The Forest Service and Rosemont should bring the OHV user group in to consult about the replacement of their opportunities.	<u>Resolution - No action needed.</u>
428	Pima County - S. Anderson	3	Mitigation and Mining - Rosemont Copper	39	16-34	Rosemont clearly has some ideas for mitigation, but I would ask the people that live in the vicinity of the mine what they think would be acceptable mitigation measures.	<u>Resolution - No action needed.</u>
429	Pima County - Loy Neff	3	Mitigation and Monitoring – Forest Service	37	1_2	Inadvertent discoveries are defined as “previously unknown archaeological sites.” Also include human remains, associated grave goods and ceremonial objects.	<u>Resolution - wording added to Cultural section in ch 3 and to FS-CR-04 mitigation in appendix B.</u>
430	Pima County - Loy Neff	3	Mitigation and Monitoring – Forest Service	37	9_11	In description of cultural resources protection training, contractors and their employees are omitted. Add “Contractors and their employees” to this section.	<u>Resolution - wording added to Cultural section in ch 3 and to FS-CR-04 mitigation in appendix B.</u>
431	Pima County - Yves Khawam	3	Pima County	8	1	Incorrect reference to enabling legislation for lighting at 11-830 as lighting regulating mines is enabled under §11-251(35).	<u>Resolution - Dark Skies section has new paragraph describing the conflicting opinions between RCC and Pima County on this, and states that RCC must comply with applicable state and local regulations.</u>
432	Pima County - Eric Betterton	3	Projected Effects on Deposition of Sulfates and Nitrates on Class I Areas	57	1	CALPUFF was also used to estimate nitrogen deposition to the Class I areas. The Forest Service shows that nitrogen deposition will exceed the threshold at Saguaro National Park (East and West) and at Galiuro Wilderness (Table 51, page 58). They simply ignore the potential impacts, including the response of vegetation. Overall, it is troubling that the Forest Service appears to have worked so hard to minimize the modeled impacts of the proposed Rosemont mine on human health and welfare, when instead they should be taking a conservative approach to protect the region for the next three decades. Please see attached PDF titled ‘13-07-22 Eric Betterton Comments on ADEQ Permit Application and Mining Plan Revision Final Draft July 19 2013’	<u>Resolution - This has been modified through the inclusion of NPS comments on deposition impacts.</u>
433	Rosemont - Kathy	3	Public Health and Safety	11	15	TYPOS - appears a word is missing - similar again	<u>Resolution - reviewed cited location and could not find any typo or missing word.</u>
434	Pima County - J. Crowe	3	Public Health and Safety	4	27	Table 192, Issue 10.5 fails to mention the anticipated increase in traffic-related deaths and injuries that are predicted to occur on area public roadways as a direct result of project -related traffic. The DEIS indicated that fatal traffic deaths are expected to increase from once every three years to between three to six deaths every three years with the project (see DEIS page 652).	<u>Resolution - No change. This table is a summary of impacts. The potential change in traffic fatalities is described in the text under Environmental Consequences.</u>

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435	Pima County - J. Crowe	3	Public Health and Safety	4	27	The statement in Table 192 that hazardous material spills during transport would only affect a radius of up to 0.5 mile and 1.0 mile for explosives is false – the affected radius could be as much as 25 miles and involve a detour of more than 50 miles. Any hazardous material spill as described on a highway would close the road or highway. The effect will propagate back to the available detour routes. The magnitude of a diversion will depend on the duration and the location of event on the highway. For example, in the case of an event on Sonoita Highway north of the proposed mine entrance; the detour routes are south on S.R. 83 to S.R. 82 (Sonoita), to S.R. 90, to I-10 (Benson), or south on S.R. 83 to S.R. 82, to I-19 (Nogales), to I-10 (Tucson). Either route entails a distance in excess of 50 miles. An event or crash at the S. R. 83 / I-10 interchange could potentially propagate over several states.	<u>Resolution - added language to the text of Environmental Consequences acknowledging that spills could cause road closures.</u>
436	Pima County - Julia Fonseca	3	Public Health and Safety	7		Pima County has a responsibility to the citizens to abate public nuisances, sources of filth and causes of sickness under our health authority. ARS 36-602 is the statute that would apply where groundwater essential for domestic cleanliness and drinking water purposes is no longer available or polluted. 36-602. Abatement of nuisances, sources of filth and causes of sickness; civil penalty; property assessment; procedure A. Notwithstanding any other provision of this title, when a nuisance, source of filth or cause of sickness exists on private property, the county board of health, the local health department, the county environmental department or the public health service district shall order the owner or occupant to remove it within twenty-four hours at the expense of the owner or occupant. The order may be delivered to the owner or occupant personally, or left at the owner or occupant's usual place of abode or served on the owner or occupant in the same manner as provided for service of process under the Arizona rules of civil procedure. If the order is not complied with, the board or department may impose a civil penalty pursuant to section 36-183.04 and shall cause the nuisance, source of filth or cause of sickness to be removed, and expenses of removal shall be paid by the owner, occupant or other person who caused the nuisance, source of filth or cause of sickness. B. A city or county may prescribe by sanitary ordinance or regulation a procedure for making the actual cost of this removal or abatement, including the actual costs of any additional inspection and other incidental costs in connection with the removal or abatement, an assessment on the lots and tracts of land on which the nuisance, source of filth or cause of sickness was abated or removed, subject to the following: 1. Any such ordinance or regulation shall include a provision for appeal of the assessment to the governing body or the board of supervisors or its designee.	<u>Resolution - Statement of fact. No action needed.</u>
437	Pima County - J. Crowe	3	Public Health and Safety	18	28	The report fails to mention that the nearest fire station to the mine site is over 10 miles away (near the junction of I-10 and SR 83). Any hazardous spill response on or adjacent to State Route 83 will be compromised by this distance.	<u>Resolution - No change. This comment assumes that a spill would occur at the mine site. Spills could occur at any point on the transportation route, therefore the location of any specific fire station is moot.</u>

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438	Pima County - J. Crowe	3	Public Health and Safety	18	28	The discussion of hazardous material spills during transport fails to include any mention of roadway closures and traffic impacts that could result from a roadway spill. With an estimated 32 trips per day of hazardous materials, the possibility of a spill appears to be significant. The referenced emergency response guidelines are insufficient and inadequate to address roadway and transportation impacts resulting from a spill.	<u>Resolution - Text added to disclose potential for road closure.</u>
439	Pima County - J. Crowe	3	Public Health and Safety	23	42	There is no mention of truck passing lanes for safety mitigation. Given the expected increase in traffic deaths and “substandard tight, horizontal curves” on State Route 83, widening the roadway shoulders and providing truck-passing lanes should be proposed to address the anticipated increase in traffic deaths and accidents and in particular the need for truck passing lanes between mileposts 44 and 46.	<u>Resolution - No change. Mitigation for SR83 is under the jurisdiction of ADOT. They have worked with RCC to identify mitigation which is documented and analyzed in the FEIS as a connected action.</u>
440	Pima County - Postillion	3	Quantity	13	18	Add 170 to 370 AF/year. In addition, The 170 AF/yr amount appears low based upon some basic water balance information. The final diameter of the lake based on Tetra Techs Geochemical Report is about 3000 feet, and the size of the lake would be about 162 acres. Rainfall in would be approximately 20 inches. Evaporation in this area is estimated at 48 inches. The net difference in water lost to the atmosphere is about 28 inches or 2.33 feet. Thus the water lost annually would be more like 380 AF. Tetra Tech in their Geochemical modeling report came up with 288 AF of net loss which is also probably too low.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>The Forest is satisfied with the outcome of the peer review process and does not believe this rough calculation provides enough evidence to modify the pit lake model.</u>
441	Pima County - Postillion	3	Quantity	39	35	Table 55 begins with “Estimate” Why does the Myers Column need “Estimated” in front of the values for rows of Recharge from Precipitation and Evaporation? This is redundant and unnecessary, and implies that the Montgomery and Tetra Tech values are better.	<u>Resolution - This is necessary because Myers does not as clearly identify his assumptions as does Tetra Tech and Montgomery. Therefore they were estimated from available graphics in the report.</u>
442	Pima County - Postillion	3	Quantity	64	19-24	This discussion appears to be very down played. Equilibrium is over 1000 years away. What really needs to be emphasized is the loss from years 0-20 and 20-200. These impacts are far greater than at equilibrium and will affect the downstream well users and riparian vegetation. Tetra tech estimates at year 200 that 517 AF is evaporated and lost at the pit and that amount will rise as the pit lake grows. Over the 20-year mining period as much as 925 AF/year is lost due to pit dewatering. These are the amounts that need emphasis, not at equilibrium when the current generations are gone. In addition, little discussion regarding water availability for the downstream riparian community is mentioned. This needs elaboration and is an omission.	<u>Resolution - This has already been disclosed with equal weighting in the GW Quantity section. It is included on page 64, lines 25 - 29, immediately after the section cited.</u>
443	Pima County - Postillion	3	Quantity	65	1	A more significant reference for table 67 is at year 20 and 200, not equilibrium. As discussed above, the largest impacts regarding water availability are years 20-200 and maybe slightly beyond. This omission does not emphasize the more near generational impacts of water availability. Equilibrium is only a snapshot of the impact and how many years is that-greater than 1000.	<u>Resolution - No change. This is already adequately described on page 64, lines 25-29</u>

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444	Pima County - Postillion	3	Quantity	69	9	Monitoring is a good thing to assess the impacts from pit dewatering to downstream wells and vegetation. However, a mitigation opportunity overlooked is the ability of the mine to take the 18,000-26,000AF dewatered from the pit and discharge it downstream to replenish the water that would have eventually gone downgradient to begin with. It is understood that the pit water would have to be monitored for water quality. But if the report such as Tetra Tech's (2010b) geochemical model predicts, the quality should meet water quality standards. This mitigation is truly mitigation at the area of hydrologic impact.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
445	Pima County - Postillion	3	Quantity	70	3	Numerous people have asked why Rosemont could not use CAP directly when a pipeline is built that far south. ASARCO is currently using 10,000 AF/yr at their facility based upon the SAWARSA settlement. So legal issues aside, this can be done with cooperation of Rosemont and a willing provider. Why not use imported CAP with a poorer quality for mining processing? Is this too sensible a mitigation measure?	<u>Resolution - No change needed. This is discussed as an alternative considered but dismissed in Chapter 2, page 81</u>
446	Pima County - Postillion	3	Quantity	70	7	Documentation is needed that states the amount and time Rosemont has funded the 7- mile CAP extension. Again, direct use of CAP by Rosemont is a better option. Leaving the higher quality groundwater with lower TDS for potable supply is a more sensible option.	<u>Resolution - No change needed. This is discussed as an alternative considered but dismissed in Chapter 2, page 81</u>
447	Pima County - Postillion	3	Quantity-Thresholds of Concern	7	14-18	The statement "there is no reliable method for separating out ongoing seasonal or annual variation from impacts of the mine" has little basis when significant baseline data has been collected by Pima County and statistical analyses have been performed evaluating seasonal and annual trends in the Cienega Creek Nature Preserve and Davidson Canyon. Continued pre-mining monitoring will allow for separating the mining effects by comparing the historical data to assess the additive effects of the mine. Typical ADWR Assured Water Supply studies are mandated to superimpose the projected modeling results from a large pumping well over the current and historical water-level trend in an area to show the long-term impacts of the land use. We know there has been a historical downward trend the last 15-17 years for water levels in this area. There is no reason why the effects of the pit cannot be superimposed over this.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>The ability to tie drawdown at distant sources to Rosemont has been assessed by the Forest and has not been found to be feasible for incorporation into monitoring measures.</u> <u>Climatic trends aside, the fundamental flaw is that no regulatory framework exists in which to identify any major or minor pumping sources near distant waters like Cienega Creek. Aside from new well drilling, there is no mechanism by which well pumping is reported to ADWR.</u>
448	Pima County - Julia Fonseca	3	RC-SW--01			Stream gage will not be useful for monitoring intermittent along Barrel, because most of the intermittent reach of Barrel Canyon is downstream of the gage. But it could be useful for understanding the overall volume and magnitude of flow. The mitigation measure should disclose what data will be collected here. There is a big difference between operating this as a crest-stage gage, a bubbler, or a water quality sampling site, etc.	<u>Resolution - No change. This detail has not yet been determined, and will be the subject of discussions between Rosemont and USGS with respect to implementation. It would be premature to assign a specific gage type to this measure.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
449	Pima County - S. Anderson	3	Rec. Places	24	18-27	The relocation of the Arizona National Scenic Trail makes little sense in the discussion of the various Alternatives. The best alternatives from a recreation perspective are the Phased Tailings Alternative and the Proposed Action Alternative; they use the least amount of land and do the least damage to recreational opportunities, but their impacts on the Arizona National Scenic Trail are profound. I think these alternatives should be offered with the 12.8 mile relocation of the trail (like in the Barrel Alternative); it insulates trail users from the worst overall effects on the trail (highly engineered, with steps?), and puts the most space between the trail and the mine. Can this 12.8/13 mile option be provided for the Arizona Trail with all the alternatives? The two crossings of the road aren't that bad compared to the effects the mine noise and the disconcerting views will have.	Resolution - No change. The responsible official can <u>mix and match aspects of the alternatives to some degree in the ROD and that includes the final location of the ANST - he can select one alternative and pick the location of the ANST from another in his decision.</u>
450	Pima County - S. Anderson	3	Rec. Places	24	37-43	A direct loss in NFSRs would be regrettable for the motorized community. Have you thought about having the applicant buy some Arizona State Trust lands the motorized recreationists are not using now to make up for the losses to motorized users (and all users, for the matter) adjacent to the forest?	Resolution - No change. This is well beyond the <u>authority of the Forest Service to require.</u>
451	Pima County - S. Anderson	3	Rec. Places	25	16-20	Sightseeing will undoubtedly be affected by the existence of the mine; I prescribe the acquisition of State Trust Land for this malady as well.	Resolution - No change. This is well beyond the <u>authority of the Forest Service to require.</u>
452	Rosemont - Melissa Notes	3	Recreation			Hunting units - AGF	Resolution - this comment lacks the level of <u>specificity necessary to address it in any fashion. That said, the hunting unit affected by the project is addressed in the Recreation and Wilderness section in chapter 3.</u>
453	Rosemont- Jamie	3	Recreation			AGFD has said that no impacts are analyzed for game species, i.e. the "shootable and eatable" ones	Resolution - Impacts to hunting are addressed in the <u>recreation section. Species that are "shootable and eatable" will be addressed in the biological section to the extent determined appropriate by the Forest specialists.</u>
454	AZGS - Lee Allison	3	Recreation & Tourism	726		The section omits any consideration of business related travel related to the mine and geo-tourism including tourist visits to view the mining operations.	Resolution - No change. The modeling of economic impacts took into account travel to the Tucson area for a variety of reasons including business travel. <u>The model was based upon the best n pertinent information available.</u>
455	AZGS - Lee Allison	3	Recreation & Tourism	726		The section does not consider the negative impact on geo-tourism including the Tucson Gem, Mineral, and Fossil Showcase, by denying the mine. Geo-tourists may shun a community that is viewed as openly hostile to their interests.	Resolution - No change. The commentator has not <u>provided reliable sources, nor does the IDT know of such reliable data, to indicate that denying the mine would have any impact on the Tucson Gem and Mineral show.</u>
456	AZGS - Lee Allison	3	Recreation & Tourism	732		There is no consideration of the environmental impacts and external costs associated with recreational exploitation of the affected lands. These need to be subtracted from the estimated benefits.	Resolution - No change. The commentator has not <u>provided reliable sources, nor does the IDT know of such reliable data, to assess "external costs associated with recreational exploitation of affected lands".</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
457	AZGS - Lee Allison	3	Recreation & Tourism	735		Denial of the mine would eliminate one of the largest and likely economic contributors to minority communities in the region. The lack of economic opportunities adversely impacts the environment and human health of the affected inhabitants.	Resolution - The commentator has not provided reliable sources, nor does the IDT know of such reliable data, to indicate that the mine would be one of the largest economic contributors to minority communities.
458	AZGS - Lee Allison	3	Recreation & Tourism	742	5	"Vendor spending" describes only local vendors. Out of area and out of state vendors will spend on business travel and local amenities, and may decide to extend their stays to take advantage of area tourism opportunities.	Resolution - No change. The modeling of economic impacts took into account the best and pertinent information available. The commentator has not provided reliable sources, nor does the IDT know of such reliable data, to indicate that out of area or state vendors would contribute to the economy to the extent that it would make any difference to projected impacts.
459	AZGS - Lee Allison	3	Recreation & Tourism	744	35	The speculation of a 1% drop in tourism spending is unfounded. The mine may actually increase tourism, both from travelers doing business with the mine and with visitors eager to view the operations. The Bingham Canyon copper mine outside Salt Lake City has attracted 3 million visitors since 1992, a 21 year period.	Resolution - No change. The modeling of economic impacts took into account the best pertinent information available. There is no reliable data that supports the supposition that potential visitors to the mine would contribute to the local economy to a degree that it would change the prediction of economic impacts.
460	AZGS - Lee Allison	3	Recreation & Tourism	744	41	The historically disturbed lands and ranch lands around the proposed mine site are valued as "wilderness." Is this a fair valuation or does it apply only to the classic definition of wilderness as lands largely untouched by the hand of man?	Resolution - No action needed. The only lands that are "valued as wilderness" are lands that have been designated by congress as wilderness areas.
461	AZGS - Lee Allison	3	Recreation & Tourism	745	12	The claim of "even the slightest decrease of 1%" in recreation activity is pejorative and inflammatory. This is purely speculative without evidence to support it and in fact is contrary to similar situations. Even if there were a causal decrease, there is no basis to suggest a rate as high as 1%.	Resolution - No change. The analysis was based upon current scientific modeling. The FEIS discloses the uncertainty associated with such modeling. However, the Forest disagrees that such analysis is pejorative or inflammatory.
462	AGFD	3	Recreation and Wilderness	21	14	The text states: "These actions may reduce birding opportunities in the area directly surrounding the project area for all action alternatives. However, direct and indirect impacts to birds are expected to decrease with distance from the project" COMMENT: This paragraph does not state that 11 square miles of public lands will no longer be available to birders. No mitigation is offered for new birding opportunities and economic losses due to loss of birding opportunities are not calculated. RECOMMENDATION: The FEIS should identify the impact of the loss of access to birders and how this loss of an important recreational and economically important activity could be mitigated.	Resolution - No change. The FEIS states in numerous places, including the Recreation and Wilderness and Biological Resources sections, that the area within the perimeter fence will be closed to public access for the life of the mine. All identified mitigation that is both effective and within the authority of the Forest to require has been considered by the Forest Supervisor; however no measures that would effectively avoid, reduce or compensate for these impacts have been identified by any agency or group.
463	Pima County - Julia Fonseca	3	Required Disclosures	1	Geology	EIS fails to disclose that the proposed short-term uses would provide largely for the mineral interests of other nations due to off-take agreements and other financial obligations. This section should address the availability of mineral for future generations of Americans.	Resolution - change made in text.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
464	TON	3	Required Disclosures	2	24-25	It should be clarified that impacts to wildlife and the natural landscape will be permanent.	<u>Minor – Resolve in text. Changes made to text in required disclosures.</u>
465	Pima County - Julia Fonseca	3	Required Disclosures	2	Groundwater Quantity	Line 7-8 beginning “Pumping...” is unclear as to reference. You mean pumping on which side of the mountain? There is pumping on both sides	<u>Resolution - No change. The paragraph referenced says "mine supply pumping" and goes on to say it could be potentially mitigated by recharge in the Green Valley area. As is clear after reading Chapter 2 and the groundwater quantity section preceding the Required Disclosure section, mine supply pumping only occurs from one area, and this is the Rosemont supply wells near Sahaurita in the Santa Cruz River watershed.</u>
466	Pima County - Julia Fonseca	3	Required Disclosures	2	Groundwater Quantity, Surface Water Quantity	Says what the impacts are, but fails to address what this means to future generations of Americans or even residents.	<u>Resolution - added a sentence.</u>
467	TON	3	Required Disclosures	3	10_14	Desecration, destruction, and permanent loss of sacred sites should be added.	<u>Resolution - Added tribal sacred sites to the paragraph, but did not add the terms desecration and destruction. The statement already says the impacts would be permanent.</u>
468	Pima County - Linda Mayro	3	Required Disclosures Biological Resources	2	24-25	Impacts to wildlife and habitat will be permanent. Reclamation is not likely to allow habitat to reestablish itself to pre-mine conditions.	<u>Resolution - Text added to respond to this concern.</u>
469	Pima County - Linda Mayro	3	Required Disclosures Cultural Resources	3	10_14	Desecration and permanent loss of sacred sites is not disclosed.	<u>Resolution - Added tribal sacred sites to the paragraph, but did not add the term desecration n. The statement already says the impacts would be permanent.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
470	NPS ARD	3	Required Disclosures; Short-Term Uses and Long-Term Productivity	2	1_3	<p>This section of the AFEIS states: "Impacts to air quality from mining operations would be short term and are expected to end with mine closure."</p> <p>We would like to point out that mine operations are anticipated to continue for 20 to 25 years. In terms of the impacts to visitors over 25 years, this is not short-term. Air resource impacts from mining operations, such as visibility degradation, could potentially affect multiple generations of park visitors during this time span. Visitors come from around the world to experience Saguaro NP, for some this may be a once in a lifetime event. The park receives around 650,000 visitors annually, contributing approximately 22 million to the local economy. Over an extended time period, impaired visibility and degraded views could detract from the park experience for many millions of visitors who are an important contribution to the region's tourism economy.</p> <p>Service-wide visitor survey data demonstrate that park visitors highly value clean air and scenic views; 90% of NPS visitors surveyed responded that scenic views in National Parks are very important to extremely important. In fact, according to visitors surveyed, clean air and scenic views are among the top five most important attributes worthy of protection in national parks. While visibility and/or ambient air impacts from the Rosemont mine would cease once mining operations are discontinued, the effect of these impacts over a two decade time span are not insignificant.</p> <p>In addition, mine operations are predicted to significantly contribute to adverse nitrogen deposition effects in Saguaro NP. The effects of nitrogen deposition are both cumulative and additive. Once harmful changes begin to occur in an ecosystem, such as shifts in species composition and decreased biodiversity, a cascade of negative impacts can follow. Some changes may irrevocably alter the ecosystem as we have known it, these changes could continue well beyond the life span of the mine</p>	Resolution - added text to qualify short term as the 25-20 year life of the mine.
471	Pima County - S. Anderson	3	Scholefield-McCleary Alternative	33 , 34 , 35	17-20 & (P 35) 9_14	<p>The Scholefield-McCleary Alternative is clearly the worst for the land from a total acreage perspective, and it's the worst alternative for the Arizona National Scenic Trail. It re-routes the trail, and goes right up next to it on the northeast side of the mine. Lots of bad views and mine noise with this one too. There are also major losses for roads (22.8 miles) with this alternative. The loss of motorized recreation opportunities in the Santa Rita Backcountry Touring Area will be profound.</p>	Resolution - No action needed.
472	AGFD	3	Seeps Springs	16	19-20	<p>The text states, in a bullet, that the proposed mine has the potential to directly affect groundwater quality for all three reaches (Upper Cienega Creek, Lower Cienega Creek, and Davidson Canyon) of Outstanding Arizona Waters. No further description or explanation is provided. COMMENT: The "hard look" standard of NEPA requires a more detailed description than vague statements such as "may affect" or "potentially affect." General statements about "possible effects" or "some risk" does not constitute a 'hard look' absent a justification why more definitive information could not be provided. Neighbors of Cuddy Mountain v. U.S. Forest Service, 137 F. 3d 1372 (9th Cir. 1998).</p>	Resolution - No changes needed. This is a discussion of methodology, merely pointing out that there is the possibility that impacts could exist so they need to be analyzed. The whole rest of this section contains the actual analysis.
473	AGFD	3	Seeps Springs	16	21-25	<p>The text states that the mine has the potential to directly affect the surface water quality of Lower Davidson Canyon and Lower Cienega Creek through stormwater runoff. No further description of this potential adverse impact is provided.</p> <p>RECOMMENDATION: The NEPA "hard look" standard requires a description of all potentially adverse environmental effects. 43 U.S.C. 4332(C).</p>	Resolution - No changes needed. This is a discussion of methodology, merely pointing out that there is the possibility that impacts could exist so they need to be analyzed. The whole rest of this section contains the actual analysis.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
474	AGFD	3	Seeps Springs	42	Table 111	The Groundwater Quality section states that seepage from the mine does not exceed AAWQS and that no groundwater quality impacts to OAWs in Davidson Canyon and Lower Cienega Creek are predicted. COMMENT: Table 111 appears to contradict the text on Page 16, lines 19-20 (quoted above) that the proposed mine has the potential to directly affect groundwater quality in Lower Davidson Canyon, Lower Cienega Creek and Upper Cienega Creek. NEPA requires a discussion of all environmentally adverse effects. 42 U.S.C. 4332(C); 40 CFR §1502.1.	Resolution - No changes needed. This is a discussion of methodology, merely pointing out that there is the possibility that impacts could exist so they need to be analyzed. The whole rest of this section contains the actual analysis.
475	AGFD	3	Seeps Springs	44	14-40	The text state that if ADEQ issues a CWA 401 certification to Rosemont certifying that the permitted activity will not violate state surface water quality standards, that "ADEQ by definition is determining that Outstanding Arizona Waters will not be degraded". COMMENT: A.A.C.R. 18-107.01(C)(4) Tier 3 anti-degradation protection standards states that a discharge regulated under a §404 permit that may affect existing water quality of an OAW requires an individual §401 water quality certification to ensure that existing water quality is maintained and protected and that any water quality impacts are temporary (six months or less). The only way to determine whether the mine will have an effect on the water quality of the OAWs is through regular monitoring of surface water quality in the downstream watershed during the mine life, closure and post-closure. According to the Integrated Watershed Summary (The Rosemont Project, June 2012) Rosemont Copper Company, at ADEQ's request voluntarily developed a water monitoring plan to implement surface water quality monitoring at springs throughout Davidson Canyon and surface and groundwater monitoring throughout Davidson Canyon and in Cienega Creek. Full implementation of the plan is dependent on the cooperation of landowners (State, Pima County, private). The Department supports this surface water quality monitoring plan. Surface water quality monitoring	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
476	AGFD	3	Seeps Springs	42-44	Table 112	The text topic is the mine's potential effect on Outstanding Arizona Waters. The text analyzes and summarizes the predicted water quality for waste rock runoff and existing water quality in Barrel Canyon, Davidson Canyon and Cienega Creek, including the ability to meet the anti-degradation standards for Outstanding Arizona Waters. COMMENT: Table 112 indicates that selenium and arsenic from waste rock runoff exceeds existing water quality values for selenium and arsenic in Cienega Creek. A.A.C.R. 18-11-107.01(C)(3) Tier 3 antidegradation criteria requires an applicant seeking authorization for a regulated discharge to a tributary to, or upstream of, an OAW demonstrate in a permit application or in other documentation submitted to ADEQ that the regulated discharge will not degrade existing water quality in the downstream OAW. The Department agrees with the statement in the text that it would be difficult to predict or model any potential impacts given the distance from the mine site to the OAWs (12 miles) and the relatively low values of selenium and arsenic in the waste rock runoff, which reflects the limited contact time of stormwater with the waste rock. As noted above, a water quality monitoring program of captured	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
477	AGFD	3	Seeps Springs	42-44	Table 112	The text and Table 112 focus on waste rock runoff on existing water quality in Barrel Canyon, Davidson Canyon and Cienega Creek. No discussion or analysis of the potential effects of seepage from the Dry Stack Tailings facility is presented.	Resolution - A discussion of the risk for tailings seepage daylighting downstream in Barrel Canyon has been added to the GW Quality section
478	ADEQ- D. Turner	3	Seeps, etc.	42	####	Table 111 (<i>Potential to affect Outstanding Arizona Water in Davidson Canyon and Lower Cienega Creek</i>) – As written, the surface water quality impact summary could be interpreted to contradict Table 97 (Issue 3E.1), p. 4, Surface Water Quality section and the statement on p. 43 (lines 8 – 10). See also comment to p. 44, lines 31 – 40 (Seeps, etc.).	Resolution - No changes needed. Again, this is confusing the acknowledgement that an issue needs to be looked at (Issue statements), and the actual analysis as to whether there is an impact.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
479	ADEQ- D. Turner	3	Seeps, etc.	42	7-8, 12-17	The statements "Direct comparison of predicted water quality from waste rock runoff to the existing water quality in Davidson Canyon and Lower Cienega Creek is problematic and not appropriate (lines 7-8) and "a more appropriate comparison is to compare the predicted water quality from waste rock runoff to the existing water quality for runoff in Barrel Canyon (lines 12-13)" are incorrect. Discharges under CWA 402 or 404 permits must meet surface water quality standards <i>in the</i> receiving water. No degradation of existing water quality is only applicable to Tier 1 (impaired water) and Tier 3 (outstanding Arizona waters). Likewise, the concluding statement "...there is little likelihood that existing water quality in Davidson Canyon or Lower Cienega Creek would be affected" is inaccurate.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
480	ADEQ- D. Turner	3	Seeps, etc.	43		Table 112 (<i>Summary of predicted water quality for waste rock runoff, etc.</i>) – ADEQ understands this table was not updated after removal of the heap leach facility. The table's data is not current regarding predicted water quality runoff from the waste pile. ADEQ further understands that data from the Abrigo Formation may have been transposed with the arkose formations (Table 105 – <i>Water quality for selected waste rock type and applicable designated uses (Barrel Canyon)</i>). Please also note that the values for total and dissolved metals for copper appear to be reversed.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
481	ADEQ- D. Turner	3	Seeps, etc.	44	31-40	In reviewing the CWA Section 404 application, ADEQ must determine whether the applicant has demonstrated that the proposed discharge will meet surface water quality standards, including antidegradation, in the downstream OAW. States Lines 37 – 40 should be revised or deleted because it is premature to make this statement until ADEQ conducts its review of the application.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
482	ADEQ- D. Turner	3	Seeps, etc.	15-16	31-42, 1-2	The Coronado's conclusion about the MSGP issuance is fundamentally incorrect. Any facility that lies within 2.5 miles of an impaired water or OAW is automatically required to submit its SWPPP before coverage is granted. However, ADEQ always has authority to call in any SWPPP for review and require additional monitoring, inspections or other appropriate additions to the SWPPP. For example, Table OA-SW-01, Appendix B, (also in the draft Biological Opinion) correctly states that specific sampling locations would be defined in the SWPPP only after the selection of an alternative in the ROD. Table OA-SW-02 correctly describes the relationship of the SWPPP to the stormwater general permits. Consider referencing these tables when re-writing these paragraphs.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
483	ADEQ- D. Turner	3	Seeps, etc.	15-16		In ADEQ's February 7, 2013 letter to Rosemont, the Department stated that the mine will be required to submit an up-to-date SWPPP at least 60 days prior to commencement of either construction or mining activities. Based on further analysis of the SWPPP at that time, the Department may require additional monitoring, inspections and may impose additional requirements (<i>e.g.</i> , additional control measures) to mitigate the discharge of selenium, copper or other potential pollutants deemed to threaten the water quality of Barrel Canyon or the downstream OAWs. If Rosemont is unable to make an adequate demonstration for the MSGP that its stormwater discharges will not degrade existing water quality in Barrel Canyon or the downstream OAWs, then coverage under an individual AZPDES permit may be necessary with additional controls, as discussed in the comment immediately above. The extent of the additional controls and monitoring will depend on the demonstration needed to satisfy the antidegradation standard. Nevertheless, the Coronado's decision to undertake a more thorough analysis is still warranted for all the reasons stated on page 16 of this section.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
484	ADEQ- D. Turner	3	Seeps, etc.	43-44	15-18,	The Coronado cites two reasons why it is not possible to predict whether stormwater discharges with elevated selenium will degrade water quality in lower Davidson Canyon. The first reason incorrectly infers that ADEQ's issuance of the mining multi-sector general stormwater permit (MSGP) is the agency's final decision and that there is no possibility of a review and modification of the SWPPP, if necessary, before construction/ mining starts. See comment to the Seeps section above, p. 15 – 16.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
485	ADEQ- D. Turner	3	Seeps, etc.			In the context of antidegradation, this conclusion, although qualitative, is premature because the Department will not make a determination on whether the mine will degrade the OAW reach of Davidson Canyon until it first evaluates the project for the activities under the 404 permit for CWA 401 Certification and then evaluates the stormwater discharges from the project for issuance of the MSGP. In both of these actions, the Department must find the ability to meet surface water quality standards, including antidegradation, has been demonstrated.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
487	ADEQ- D. Turner	3	Seeps, etc.			Below is an excerpt from ADEQ's response to comments in its 2002 rulemaking for A.A.C. R-18-11 (note that terminology in this rule for a "unique water" was changed in 2007 to an "outstanding Arizona water"):	Resolution - Partial comment. Actionable comment elsewhere.
488	ADEQ- D. Turner	3	Seeps, etc.			Page 20, lines 20-21, the following language should be removed: "With respect to the outstanding Arizona water in Davidson Canyon, degradation of existing water quality is prohibited, but the reach does not meet the definitions of a wadeable, perennial stream."	Resolution - this text has been modified, but disagree that it is inappropriate to include. The regulatory definitions do not match Davidson Canyon.
489	ADEQ- D. Turner	3	Seeps, etc.			When considering the antidegradation standard, water quantity is a key factor inasmuch as assimilative capacity may be reduced when flow is reduced, which could affect the concentrations of pollutants. More data will be required for ADEQ's antidegradation review. ADEQ must evaluate water quality and quantity changes from all sources entering Davidson Canyon when determining whether the mine's discharges can meet the antidegradation standard. All three statements should be deleted or modified to reflect the comments above.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
490	ADEQ- D. Turner	3	Seeps, etc.,	20	20-21	Issue 4.4: Qualitative assessment of ability to meet legal and regulatory requirements for riparian areas. The conclusion for the Proposed Action and Barrel Alternative is that there will be "no change in ability to meet regulatory requirements for either Cienega or Davidson". This includes the analysis for "Change in surface water quality":	Resolution - Partial comment. Actionable comment elsewhere.
491	AGFD	3	Seeps, Springs	2-Jan	41-43, 1-6	The text states: "it is unlikely that the water table [of the Santa Cruz Basin] will recover to the point that it would support riparian or spring resources. Therefore, this analysis remains absent from the FEIS." COMMENT: Even if water table recovery is unlikely, further groundwater withdrawal for the mine is additive to the existing withdrawal and must be considered as a cumulative effect under the NEPA. RECOMMENDATION: The FEIS should discuss pumping from the Santa Cruz Basin in the cumulative effects section.	Resolution - No changes needed. The effects of pumping in the Santa Cruz basin are fully analyzed in the GW Quantity section, which includes new pumping from reasonably foreseeable development in the cumulative effects section.

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
492	EPA	3	Seeps, Springs & RIPS	6	Table 106	Cienega Creek Reach 1 is characterized as having an ephemeral flow regime. On June 27, 2013, Dr. Robert Leidy, a senior scientist in EPA Region 9's Wetlands Office, visited Cienega Creek Reach 1. Based upon his best professional judgment, the classification of this reach as ephemeral is inaccurate. Significant portions of Reach 1 immediately upstream from the confluence with Gardner Canyon exhibit characteristics of perennial flows and contained surface water at the time of his visit, which coincided with the driest period of the year for this region (June). USFS should examine whether the assumption of this stretch as ephemeral is well founded and/or correct Table 106 to reflect existing perennial conditions in referenced portions of Reach 1. Dr. Leidy is preparing a trip report that will outline his findings and we will provide his report to the USFS for reference.	<u>Resolution - This has been revised in text</u>
493	Pima County - Akitsu Kimoto	3	Seeps, Springs & RIPS	8	12_1 6	"With respect to surface water quality, the resources that..." should be mentioned in Chapter 3, Surface Water Quality.	<u>Resolution - Cannot understand comment. No such phrase exists on this page, and search for phrase in SS&R section did not find any occurrence.</u>
494	EPA	3	Seeps, Springs & RIPS	8	15-18	For those individual springs and seeps for which there is insufficient data to determine the source of water and probable impact, the AFEIS assumes that there will be an impact. EPA applauds the Forest Service for this approach to impact analysis in the face of uncertainty. We recommend applying a similar approach when discussing the scope of impacts related to groundwater drawdown, given that the results from the groundwater modeling contain a very high degree of inherent uncertainty.	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
495	Pima County - Myers	3	Seeps, Springs & RIPS	8	8_10	The AFEIS has not considered isotope data as had been requested by Pima County in several previous filings. Isotope data for the springs would help to identify their source.	<u>Resolution - These data have been discussed more fully in the SS&R section.</u>
496	EPA	3	Seeps, Springs & RIPS	8	8_10	The AFEIS notes that, with the exception of several springs in Davidson Canyon, isotopic data have not been made available to help determine the sources of water to springs in the analysis. Isotopic data for all potentially affected springs in Davidson Canyon would be invaluable. Do isotopic data exist for other potentially affected streams in Davidson Canyon or elsewhere in the study area? If such data are available, they should be acquired, analyzed and incorporated into the AFEIS.	<u>Resolution - These data have been discussed more fully in the SS&R section.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
497	EPA	3	Seeps, Springs & RIPS	15	10_1 7	<p>The AFEIS refers to the groundwater models as “the most appropriate tool for estimating potential impacts to surface waters”, referencing Ugorets et al. 2012. We do not believe that conclusions contained in Ugorets et al. (2012) and in the Groundwater Quantity section of the AFEIS support a conclusion that the quantitative groundwater models are an appropriate tool for estimating impacts to surface waters that the EIS characterizes as “distant” (outside the project area, but within the study area).</p> <p>The AFEIS clearly acknowledges in several resource sections of Chapter 3 and in the expert report by Ugorets et al. (2012) that the models are not able to accurately predict small groundwater changes (changes of less than 5ft) over long time periods (e.g., hundreds to thousands of years). The AFEIS frequently refers to near and long term predictions of groundwater drawdown and the effects thereof using terms such as “speculative” and “highly uncertain”. For example, the near-term model predictions of groundwater drawdown impacts to Empire Gulch stream flow are described as “speculative” (p. 33, lines 23-24). Long-term impacts on Empire Gulch stream flow based on the models are described as “highly uncertain” (p. 33, lines 31-32). The AFEIS concludes that, along Empire Gulch “...predictions of impact to stream flow based on these levels of drawdown would be speculative...with a high level of uncertainty...” (p. 33, lines 39-42). In addition, the AFEIS characterizes the quantitative modeling of the long-term impacts along Cienega Creek as “...highly speculative.” (p. 34, lines 24-25). The FEIS concludes for Cienega Creek that “...because of the margin of error of the models and the long time frames</p>	<p><u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u></p>
498	EPA	3	Seeps, Springs & RIPS	15	10_1 7	<p>Given the limitations of the groundwater models, it is often reasonable to reach opposite conclusions regarding impacts than those presented in the AFEIS. Where applicable, we have outlined in the comments below why the information provided regarding drawdown could also support a conclusion opposite to the one provided in the AFEIS.</p>	<p><u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u></p>
499	Pima County - Postillion	3	Seeps, Springs & RIPS	16	14	<p>“All three reaches” needs to be defined. Cienega Creek has 5 reaches and Davidson has 4,. According to Table 106, p.6.</p>	<p><u>Resolution - This has been clarified in text</u></p>
500	Pima County - Postillion	3	Seeps, Springs & RIPS	16	16	<p>Upper and Lower Cienega Creek and Davidson Canyon needs to be correlated to the Reaches defined in Table 106, p.6 and Figure67, p.5. All one can do is assume that Cienega Creek 1,2 and 3 is upper Cienega and Cienega 4 and 5 is Lower Cienega; Davidson 1 &2 is upper Davidson and Davidson 3 is Lower Davidson. That assumption may be incorrect unless the document correlates the terminology.</p>	<p><u>Resolution - This has been clarified in text</u></p>
501	EPA	3	Seeps, Springs & RIPS	16	21-23	<p>The AFEIS states, “For Upper Cienega Creek there is no direct potential to affect surface water quality, unless changes in stream flow indirectly affect aspects of water quality (temperature, for instance)”. We note that pages 33-35, in the Seeps, Springs and Riparian Areas section state that all three groundwater models suggest that there is the potential for near- and long-term drawdown along Upper Cienega Creek to result from project related groundwater pumping. Small changes in stream flow can result in significant changes in water temperature, especially in warm, arid environments. Water temperature is an important measure of water quality. The AFEIS should disclose that even small surface flow reductions from groundwater drawdown would be likely to increase temperatures, and thus lower surface water quality in Upper Cienega Creek.</p>	<p><u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
502	EPA	3	Seeps, Springs & RIPS	17	Table 108 Issue s 3D.2 & 3D.3	<p>The Proposed Action is stated to have no effects on the number of stream miles changed from intermittent/perennial flow status to ephemeral flow status. We have several concerns regarding this conclusion: As previously discussed, the groundwater models cannot accurately predict small (less than 5 foot), long term changes to groundwater levels, especially on more distant waters, such as Cienega Creek.</p> <p>Tables 60-64 of the Groundwater Quantity resource section report for Upper Empire Gulch Springs present the following ranges of modeled groundwater drawdown based on sensitivity analyses: 1) end of active mining (<0.1-0.2 feet); 2) 20 years after active mine closure (<0.1-0.5 feet); 3) 50 years after closure (<0.1-1.8 feet); 150 years after closure (0.1-5.0 feet); and 1000 years after closure (2.3-6.0 feet). If the output of the groundwater modeling and the sensitivity analyses are accepted, these data indicate that potentially significant groundwater drawdown in the vicinity of Empire Gulch is likely to occur. Furthermore, the upper boundary of the sensitivity analysis performed indicates impacts in excess of 5 feet; the threshold established as the limit of accurate prediction for the modeling performed, further supporting the conclusion that significant drawdown is probable. Hydrologic changes are predicted for Empire Gulch from groundwater drawdown that could have a potential "effect on springs and stream flow, potentially shifting some or all of the stream length from perennial to intermittent" (AFEIS, p. 38,</p>	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
503	USACE -Blaine	3	Seeps, Springs & RIPS	33	37	"near term" in this section is defined as "up to 50 years after mine closure". However, in lines 24/25 page 15 it states" Near-term impacts are defined as those occurring during the active mine life and up to 50 years after 24 final reclamation and closure." These are very different; please be consistent.	<u>Resolution - This has been revised in text</u>
504	EPA	3	Seeps, Springs & RIPS	33	10_4 2	<p>EPA recommends that additional information regarding the potential adverse environmental consequence of seemingly small changes in groundwater levels be added. The AFEIS repeatedly characterizes changes in ground water levels of < 1 foot as "small" (e.g. p. 37, line 24 and p. 38, line 23). The use of the descriptors "small" or "very small" are not meaningful absent some relative measure of ecological significance or risk.</p> <p>Seemingly "small" changes in groundwater levels may have profound adverse affects on surface and shallow subsurface (i.e., groundwater and hyporheic) flows. In part, this is because the wetted surface area of many aquatic habitats in the arid Southwest, including the Cienega Creek watershed, is characterized by shallow surface water depths (e.g., << than a few inches), especially during the drier portions of the year (April-early July), and is, therefore, extremely susceptible to drying from small changes in groundwater levels. Significant changes to stream base flow are possible because, typically, inflow to streams originates from the topmost portions of the subsidizing aquifer; small declines in the water table can significantly reduce groundwater contributions that sustain stream flow. Typically, there is a nonlinear relationship between groundwater-stream interactions such that changes in</p>	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
505	Pima County - Postillion	3	Seeps, Springs & RIPS	33	35-36	The last sentence leaves one hanging and begs the question: Why would this be any different from short-term results? The models are using the same data but just projecting further out in time. More explanation is needed to discuss the reasoning behind this statement. The sentence may imply that short-term data is also speculative because of the models' inherent uncertainties with dealing in fractured bedrock, fissures and other non-Basin groundwater issues.	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
506	USACE -Blaine	3	Seeps, Springs & RIPS	34	40	Same comment as above	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
507	Pima County - Postillion	3	Seeps, Springs & RIPS	34	36-39	This is an admission of an omission. Clearly the contribution of Empire Gulch stream flow is an appreciable amount and no work has been done to estimate that amount. This needs to be rectified by evaluation and analysis to estimate the loss in stream flow to Upper Cienega Creek by impacts of the Mine activities on Empire Gulch.	<u>Resolution - Empire Gulch has been included in the revised estimate of streamflow impacts</u>
508	Pima County - Postillion	3	Seeps, Springs & RIPS	36	36	Catalo does a survey of the entire United States! This reference is misquoted and unacceptable first, and second it should reference watersheds closer to the Davidson watershed. Not sure where the reference to 17,000AF/mi was, but it appears incorrect. Table 3, p.31 of Catalo,2004 references transmission losses from tributaries to the Tucson Basin (Burkam, 1970) and this is another omission. Tributaries to Patano (sic) Wash, more characteristic of the Davidson were estimated at 43-49 AF/mile/yr and 31-57% of transmission loss as percentage of upstream flow (Table 3, p.32).	<u>Resolution - No changes. Clarification text has been added that Catalo was referenced to provide an example, not to try to quantify effects.</u>
509	Pima County - Postillion	3	Seeps, Springs & RIPS	36	37-39	Another omission is the lack of discussion of subflow. Even if the upstream Barrel Canyon contribution from stream flow is recharged, that water continues to move along the shallow alluvium downstream and contributes to the subsurface alluvial water movement into Davidson Canyon. Some of that water may be captured by meso-riparian plants, but most will travel along the alluvial-bedrock interface downstream. Any lost available surface water due to mining activities is a loss to Davidson Canyon and springs/seeps, and should not be down played by this transmission loss discussion.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>There is not a continuous shallow alluvial aquifer from Barrel Canyon 12 miles downstream to Davidson Canyon. There are significant stretches of bedrock where there is no alluvial flow at all.</u> <u>The loss to the Davidson Canyon aquifer would be almost only from losses to stormflow.</u> <u>Text has been added to clarify this conclusion.</u>
510	Pima County - Postillion	3	Seeps, Springs & RIPS	37	1	Again, this discussion downplays the effect of alluvial subflow and should not be added. Discussion of subflow is an omission and needs rectification. The lateral movement of upstream recharged water because of the hydraulic gradients and sub-surface bedrock underlying the shallow alluvium in Barrel and Davidson mean it will move downstream subsurface and eventually contribute to base flow and springs.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>There is not a continuous shallow alluvial aquifer from Barrel Canyon 12 miles downstream to Davidson Canyon. There are significant stretches of bedrock where there is no alluvial flow at all.</u> <u>The loss to the Davidson Canyon aquifer would be almost only from losses to stormflow.</u> <u>Text has been added to clarify this conclusion.</u>
511	EPA	3	Seeps, Springs & RIPS	37	22-23	The statement, "there is no reasonable analysis to indicate that stream flow in Cienega Creek would be impacted in the near term," is not an accurate description of the modeling results or level of accuracy. Because of model uncertainty, it would be equally reasonable to reach an opposite conclusion; that is, that there is no reasonable analysis to indicate that stream flow in Cienega Creek would not be impacted in the near future. This language should be revised to accurately reflect model uncertainty and the ability to make supportable conclusions from the models as previously discussed.	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
512	USACE -Blaine	3	Seeps, Springs & RIPS	37	42-44	Please remove these statements as the DC Parcels will not be part of the Section 404 mitigation and there is no scientific documentation that preservation of these parcels would "effectively mitigate impacts to surface water quality". Please note: there is no discussion at all on mitigation of impacts to WUS.	<u>Resolution - Discussion of the effectiveness of mitigation for WUS has been revised to indicate that this falls within the purview of the Corps. However, note that these same mitigation measures would have some mitigation effect for resources, whether the Corps finds them effective to compensate for WUS or not.</u>
513	EPA	3	Seeps, Springs & RIPS	38	20-36 34-36	The AFEIS states that, "no areas of riparian vegetation associated with Cienega Creek would reasonably be expected to be impacted based upon the hydrologic changes described." The conclusions of little or no predicted hydrologic changes or expected effects on riparian vegetation are based on speculative models characterized by a high degree of uncertainty, or insufficient information. We do not concur with the conclusions that there likely will be no indirect effects on riparian vegetation based on the model results provided. As previously stated, the data presented in Tables 60-64 of the Groundwater Quantity resource section report levels of groundwater drawdown such that if the output of the groundwater modeling and the sensitivity analyses are accepted for Cienega Creek and for the Gardner/Cienega confluence, these data indicate that potentially significant levels of groundwater drawdown are a possibility in the near- and long-term along Cienega Creek. However, EPA maintains that conclusions regarding impacts are not supportable because the modeling is not accurate enough to predict impacts < 5 feet and the discussion fails to recognize that even small fluctuations in the groundwater table can result in significant changes to surface flows. Furthermore, the contribution of flow from Empire Gulch to	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
514	EPA	3	Seeps, Springs & RIPS	38		As previously noted, based upon the personal observations of R. Leidy, EPA, June 27, 2013, the assessment area supports extensive waters, including wetlands, the jurisdictional extent of which has not yet been delineated. This includes the reach of Empire Gulch immediately downstream from Upper Empire Gulch Spring. Please see our previous comments on this matter.	<u>Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.</u>
515	Pima County - Postillion	3	Seeps, Springs & RIPS	42	1_2	Table 111. Two Criteria appear problematic: Riparian Vegetation and Subflow, and they are related. The reduction of surface flow from Barrel Canyon and the mine are quantified reductions and adds to the cumulative reduction in subsurface flow, gradients and thus the amount of water reaching an already diminishing base flow in Cienega Creek. To say these impacts are "muted" is unclear and obfuscatory. Bottom line is the Davidson Canyon subflow will be affected based on the estimated reduction in flow permanently intercepted by the mine. Less water WILL be unavailable to riparian vegetation as it moves subsurface in the alluvial aquifer. This obfuscatory language must be removed. Effects are cumulative from upper to lower watershed and propagate downstream.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>There is not a continuous shallow alluvial aquifer from Barrel Canyon 12 miles downstream to Davidson Canyon. There are significant stretches of bedrock where there is no alluvial flow at all.</u> <u>The loss to the Davidson Canyon aquifer would be almost only from losses to stormflow.</u> <u>Text has been added to clarify this conclusion.</u>

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516	ADEQ	3	Seeps, Springs & RIPS	42	7_11	SS&R, p. 42. Anti-degradation section needs rewritten, especially lines 7-11	<u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u>
517	USACE -Blaine	3	Seeps, Springs & RIPS	43	31,32	Please reword this; there is no need for the Corps to issue a Section 404 permit. The applicant, Rosemont Copper, needs to obtain a Section 404 permit to conduct mining; therefore, a Section 401 WQC is required.	<u>Resolution - this text was removed during previous edits.</u>
518	EPA	3	Seeps, Springs & RIPS	53	16-38	The AFEIS acknowledges that predicted increases in temperatures and reduced precipitation resulting from climate change will continue to reduce the quantity of stormwater and groundwater available for use by riparian vegetation; result in shifts from perennial to intermittent flow along upper Cienega Creek and Empire Gulch; and increase the vulnerability of springs and riparian vegetation. The AFEIS discusses stream flow monitoring results from Pima County that document reductions in the length of wetted-channel/stream flow within the lower reaches of Cienega Creek Preserve from the ongoing decade-long drought. The AFEIS does not, however, adequately characterize potential cumulative effects from project-related groundwater drawdown and increasing demand for groundwater as a result of residential and commercial growth within the context of drought and projected climate change. Currently, only 13 percent of the length of Cienega Creek within the preserve exhibits a wetted channel during the driest portion of the year (i.e., June) on the heels of the ongoing drought. The AFEIS should reflect the latest science on climate change by explicitly acknowledging the moderate-to high levels of confidence of the latest climate change science model predictions for the American Southwest. If, as the AFEIS states,	<u>Resolution - The effect of ongoing trends and expected future changes is fully described in three places in the Seeps, Springs, and Riparian resource section: No Action Environmental Consequences, Climate Change, and in the riparian/streamflow assessment itself.</u>
519	Pima County - Postillion	3	Seeps, Springs & RIPS	56	34_3 5	The well near the Pantano Dam is currently a monitor well. It has not been equipped and pumped for many decades. Please rephrase indicating that the retirement of the pumping rights would occur for this inactive well.	<u>Resolution - No change needed. Believe there is confusion about the well, and this conflicts with concerns raised by just about every other Pima County commenter.</u>
520	USACE -Blaine	3	Seeps, Springs & RIPS	56	41-43	This statement is incorrect. The Corps requests the USFS remove the portion of the statement “to compensate for impacts to WUS” . These parcels are currently not in our mitigation plan and the DC and BC parcels will not be included. We have not yet determined if Mulberry Canyon will be included or not so we urge the USFS to remove the reference to it.	<u>Resolution - Discussion of the effectiveness of mitigation for WUS has been revised to indicate that this falls within the purview of the Corps. However, note that these same mitigation measures would have some mitigation effect for resources, whether the Corps finds them effective to compensate for WUS or not.</u>
521	USACE -Blaine	3	Seeps, Springs & RIPS	57	15-23	Please remove this entire section on SCR. At this time, there is no commitment by any ILF Sponsor to accept SCR.	<u>Resolution - The FEIS has been revised to be consistent with the Conceptual HMMP Summary and the Biological Opinion.</u>

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522	Pima County - Postillion	3	Seeps, Springs & RIPS	57	30-34	Monitoring is a good thing to assess the impacts from pit dewatering to downstream wells and vegetation. However, a mitigation opportunity overlooked is the ability of the mine to take the 18,000-26,000AF (900-1300AF/yr) dewatered from the pit and discharge it downstream to replenish the water that would have eventually gone downgradient to begin with. This water would also help to mitigate for the reduction in surface water recharge due to mining activities. It is understood that the pit water would have to be monitored for water quality. But if the report such as Tetra Tech's (2010b) geochemical model predicts, the quality should meet water quality standards. This mitigation is truly mitigation at the area of hydrologic impact. The mitigation would also provide propagative effects farther downstream in the Davidson Canyon watershed to help compensate for an already significantly decreased base flow and contribution to Cienega Creek.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
523	Pima County - Myers	3	Seeps, Springs & RIPS	57		The AFEIS does not provide mitigation beyond monitoring springs in Barrel and Davidson Canyon (p 57). The AFEIS does not indicate what would be done to mitigate a reduction in flows at these specific springs. The creation of artificial sources in other areas is not a substitute. The AFEIS has failed to provide adequate mitigation for specific springs that may go dry due to the proposed project.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
524	USACE -Blaine	3	Seeps, Springs & RIPS	58	8_20	There is no scientific documentation that any of these actions will effectively mitigate the impacts.	Resolution - Discussion of the effectiveness of mitigation for WUS has been revised to indicate that this falls within the purview of the Corps. However, note that these same mitigation measures would have some mitigation effect for resources, whether the Corps finds them effective to compensate for WUS or not.
525	USACE -Blaine	3	Seeps, Springs & RIPS	10 11	35-41 1_3	The Corps is concerned that this discussion on wetlands may lead the public to assume that all wetlands are jurisdictional under Section 404. We would suggest some clarification that potentially jurisdictional wetlands under Section 404 must meet specific criteria in regard to hydrology, hydrophytic vegetation, and hydric soils.	Resolution - Language has been added to clarify the definition of wetland

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526	EPA	3	Seeps, Springs & RIPS	3	22-28 13 28-36	These two sections of the AFEIS conclude that no seeps, springs, hydroriparian or mesoriparian habitat, areas with perennial stream flow, or critical areas that would be affected by groundwater drawdown were identified within or beyond the western model boundary. The AFEIS should clarify whether detailed surveys of springs and seeps, and other critical areas (similar to surveys conducted on the eastern slopes of the Santa Rita Mountains within the model boundaries) were conducted within and immediately adjacent to the western model boundary, particularly within the Santa Rita and Empire mountains.	<u>Resolution - This has been clarified in a memo for the record.</u>
527	EPA	3	Seeps, Springs & RIPS	34-35		See above comments regarding the risk or significance of 'small' drawdown affecting surface flows, such as those modeled for Upper Cienega Creek.	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
528	EPA	3	Seeps, Springs & RIPS	39-40		The AFEIS concludes, "Predictions of losses to recharge to the shallow alluvial aquifer and therefore loss of water available to support riparian vegetation have a high level of uncertainty." (p. 40, lines 5-6). The Surface Water Quantity resource section of Chapter 3 states that quantification of aquifer recharge is not possible and therefore has not been completed (see Indirect Effects to Aquifer Recharge, p. 32, lines 29-33). The AFEIS then concludes that, "Reach 4 of Davidson Canyon has been classified as hydroriparian habitat. Similarly, this habitat is unlikely to experience effects, given the unlikely effects on recharge of the alluvial aquifer [from the project]." (p. 40, lines 15-16). Based on our earlier comments related to this issue, and since there is great, unquantified uncertainty in the predictions, this conclusion is not supportable.	<u>Resolution - this text has been modified to remove the conflict with other sections.</u>
529	USACE -Blaine	3	Seeps, Springs & RIPS	54 55	3_43 1_23	Weak discussion on cumulative effects. It identifies them but does not really get into enough detail on the effects and how they relate to RM.	<u>Resolution - The cumulative effects sections were reviewed and modified if appropriate.</u>
530	EPA	3	Seeps, Springs & RIPS	8_11		Several springs, seeps, streams, and riparian areas within the assessment area likely contain jurisdictional waters of the United States, including wetlands that will be indirectly impacted by the proposed project, primarily from groundwater drawdown. Although the AFEIS estimates 407 acres of mapped hydroriparian habitat in the assessment area, a subset of these are jurisdictional waters of the United States that have not been delineated. For example, BLM staff estimate that over thirty perennial and seasonal wetlands of various acreages are associated with Cienega Creek within the Las Cienegas National Conservation Area (J. Simms, personal communication with Dr. Robert Leidy, EPA, June 2013), some or all of which may be waters of the U.S. Without a jurisdictional determination covering the assessment area, the Corps and EPA will be unable to determine the full scope of indirect impacts to areas regulated under the Clean Water Act. We recommend that the EIS be revised to acknowledge that potentially extensive areas of waters of the United States, including wetlands, occur in the analysis area, that the reach and extent of these waters has not yet been determined, and that, therefore, potential indirect impacts from the proposed actions on	<u>Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
531	Pima County - Myers	3	Seeps, Springs & RIPS	General		This section discusses changes in ephemeral flows on the washes due to changes in topography around the mine site, as requested. However, the AFEIS does not discuss changes in recharge due to changes in ephemeral flow. Mountain front recharge is primarily the recharge of ephemeral runoff and should be considered as such. The AFEIS also has not considered how the changed location of recharge affects drawdown or pit refill, as requested by Pima County in previous comments	<u>Resolution - Comment is not factually correct. Changes in mountain front recharge is considered in GW Quantity, page 65, line 17. This estimate was made with an analysis procedure that would include recharge in ephemeral channels.</u>
532	USACE -Blaine	3	Seeps, Springs & RIPS	58	18-20 23-24	There are no studies which document this statement: "The new riparian habitat that would be created downstream of Pantano Dam would replace hydriparian habitat if any is lost, although these lands are located just outside the analysis area." In fact, preliminary investigations by PC RFCD indicate a hydrologic sink below Pantano Dam. The likelihood of development of hydriparian habitat below Pantano Dam is extremely speculative due to geomorphology. A very speculative statement which should be removed.	<u>Resolution - Discussion of the effectiveness of mitigation for WUS has been revised to indicate that this falls within the purview of the Corps. However, note that these same mitigation measures would have some mitigation effect for resources, whether the Corps finds them effective to compensate for WUS or not.</u>
533	USEPA	3	Seeps, Springs & RIPS			Indicate a more conservative approach needs to be taken for riparian impacts. A risk assessment showing the ecological effects of the drawdown that might occur. Finds the current approach "schizophrenic" and don't accept the jump in logic from models that can't answer the question to using those same models for a qualitative assessment. The fundamental disagreement: just because you can't predict the effects doesn't mean there is no effect, it could mean an even greater effect	<u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u>
534	USEPA	3	Seeps, Springs & RIPS			Not a sufficient discussion of cumulative effects for models	<u>Resolution - Not clear description of issue, or whether "cumulative effects" is being used in the NEPA sense or other sense.</u> <u>Suspect this relates to the riparian analysis and if so then this was changed. No further changes needed.</u>
535	EPA	3	Seeps, Springs and Riparian Areas	44	10	This passage should be revised. Any discharge from the mining site must meet permit requirements and applicable water quality standards at the point of discharge. The AFEIS indicates that water samples collected from Barrel Canyon exceed current Water Quality Standards and seems to suggest that, for this reason, discharge from the mine that exceeds standards is less significant.	<u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
536	EPA	3	Seeps, Springs and Riparian Areas	44	17	The AFEIS concludes that "...in the case of the Outstanding Arizona Waters (OAW), the (401) regulatory permitting process will also provide a safeguard against degradation of existing water quality...if the certification is issued, then the ADEQ by definition is determining that Outstanding Arizona Waters will not be degraded." (Chapter 3, Seeps Springs and Riparian Areas, p. 4, lines 14-21, and 22-23). In practice, the protection of OAW is more complex, and will depend, in part, on the scope of several regulatory actions. The EPA believes that the area of effect includes water bodies beyond the direct fill footprint that are appropriately considered under ADEQ's 401 action. However, we also believe the Forest Service must consider State antidegradation standards and policies to protect designated uses and prohibit any lowering of water quality in OAW, and that compliance with CWA anti-degradation requirements must be independently assured under the Section 404(b)(1) Guidelines (40 CFR 230.10(b) and (c), and 40 CFR 230.11(b), (e), and (h)).	<u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u>
537	EPA	3	Seeps, Springs and Riparian Areas	44		The AFEIS concludes that any stormwater discharge would not result in an impact to the downstream Outstanding Water because ADEQ's issuance of coverage under the MSGP (see above), would not allow it. This conclusion cannot be reached until the SWPPP has been submitted and accepted by ADEQ under the MSGP requirements. The SWPPP must demonstrate that any discharge will not degrade water quality in the downstream OAW. For the purposes of NEPA, it should not be assumed that mitigation measures and BMPs applied under the SWPPP would be fully effective without foreknowledge of the nature of the mitigation and control measures that would be employed.	<u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u>
538	EPA	3	Seeps, Springs, and Riparian Areas	42-45		<p>Of particular concern to EPA is the analysis of the mine project's potential effects to Outstanding Arizona Water (OAW) in Davidson Canyon and Lower Cienega Creek. We recommend revision on a number of fronts.</p> <p>The AFEIS states that the contribution from the mine site would represent only a portion of the runoff reaching the OAW (lines 7-11). It also states that the existing water quality in Davidson Canyon and Lower Cienega Creek have already incorporated the existing water quality for Barrel Canyon and, therefore, if predicted water quality from waste rock runoff does not exceed that which exists in Barrel Canyon, there is little likelihood that existing water quality from the OAWs would be affected (lines 15-17). The fundamental error in this analysis is the failure to acknowledge the additive effect (i.e., mass loading) of pollutants into stream channel.</p> <p>The modeling performed for estimating runoff from the mine site did not include total dissolved solids (TDS); therefore, a comparison to existing water quality could not be made (p. 43). High TDS can adversely affect the health of aquatic organisms.</p> <p>Predicted concentrations of some pollutants from waste rock runoff exceed concentrations downstream in Davidson Canyon and Lower Cienega (e.g., arsenic, lead, selenium and zinc) (Table 112). The AFEIS notes the limited availability of water quality data, yet it relies on the same partial data to conclude that,</p>	<u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
539	EPA	3	Seeps, Springs, and Riparian Areas	42-45		<p>(continued from above)</p> <p>Any degradation of Davidson Canyon and Cienega Creek water quality would be significant because they are designated as high quality waters that constitute Outstanding National Resource Waters due to their exceptional recreational and ecological significance to the State of Arizona. The State of Arizona classifies Davidson Canyon and Cienega Creek as Arizona Outstanding Waters (AOWs), also referred to as Tier III waters under federal anti-degradation policy. Arizona's anti-degradation rules provide that the "[d]egradation of an AOW ... is prohibited." ACC R18-11-107. This provision is consistent with federal anti-degradation requirements, which provide that water quality shall be maintained and protected in Tier III waters, and that the water quality in Tier III waters may not be lowered to accommodate economic or social development in the area where the waters are located. 40 CFR 131.12(a). As discussed, the proposed project's potential to result in reduction in stream flows to Davidson Canyon Wash and Cienega Creek, its alteration of sediment transport, groundwater drawdown, and contribution of metals such as selenium may represent a failure to maintain and protect existing water quality in those AOWs. This would be inconsistent with applicable anti-degradation policy.</p> <p>The 404(b)(1) Guidelines at 40 CFR 230.10(b)(1) restrict discharges that would violate applicable State water quality standards (which include anti degradation policies) in waters. Such significant degradation</p>	<p><u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u></p>
540	ADEQ- D. Turner	3	Seeps, Springs, and Riparian Areas		25	<p>Regardless of the uncertainty, this potential reduction raises doubts about whether the project can meet the antidegradation standard, because the reduced volume could increase the concentration of pollutants in the downstream receiving OAWs and degrade aquatic habitat. Any reduction in assimilative capacity could lead to a violation of the antidegradation standard.</p>	<p><u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u></p>
541	ADEQ- D. Turner	3	Seeps, Springs, and Riparian Areas		28	<p>To this end, serious consideration must be given to requiring contingency plans to mitigate the potential reduction in surface flow by supplying make-up water for the OAWs. In addition, more surface water data must be collected before the project starts to establish baseline data to ensure there will be no degradation in water quality of the OAW. Precedence on this issue of make-up water can be found in the Tonto National Forest Record of Decision for the Carlota Copper Project's FEIS: <i>"Implementation of the wellfield mitigation plan would mitigate impacts to riparian zones and aquatic habitat by ensuring that base flows in Haunted Canyon, Powers Gulch and Pinto Creek do not drop below defined monthly minimum streamflows."</i></p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
542	AGFD	3	Seeps, Springs, Riparian	29, 34		<p>COMMENT: The FEIS does not clearly address additive effects of loss of water in the watershed on Cienega Creek.</p> <p>In addressing the effects of groundwater drawdown on Cienega Creek, this section acknowledges that all models predict drawdown of Empire Gulch, and that loss of water throughout the watershed resulting from the mine pit dewatering “have an additive effect that could impact riparian vegetation or aquatic species” and that “this possibility was disclosed in the DEIS and remains valid (page 34 line 28-31.)”</p> <p>However, the summary on page 34, line 42 states “there is no reasonable analysis to indicate that the stream flow in Cienega Creek would be impacted by groundwater drawdown caused by mine pit dewatering.” This is contradictory and seems designed to confuse the reader into thinking that Cienega Creek will not be impacted (under “any reasonable analysis”) when in fact the analysis shows that the additive impacts “have an additive effect.”</p> <p>RECOMMENDATION: The Department recommends that this section be expanded and clarified.</p>	<p><u>Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.</u></p>
543	Smithsonian--Emilio Falco, J. Shaw	3	Socio	9	Issue 11A.7 Qualitative assessment of economic effect on astronomy industry	<p>Delete:</p> <p>“Adverse impacts on dark skies could result in an impairment of observatories near the project area, which could result in a decrease in State revenues generated from astronomy, space, and planetary research and tourism. Although the increase in night sky illumination is not expected to be significant, the negative public perception of having a copper mine next to an observatory may impact observatory revenues.”</p> <p>Replace with:</p> <p>“Adverse impacts on dark skies would result in an impairment of observatories near the project area, which would result in a decrease in State revenues generated from astronomy, space, and planetary research and tourism. Slight increase in night sky illumination will impact faint object astronomy. In addition the negative public perception of having a copper mine next to an observatory has already impacted future observatory revenues, particularly diversion of future leading edge projects to other “darker” locations.”</p> <p>Rationale – consistent with text in the EIS Dark Skies and Socioeconomics section.</p> <p>“However, even with the revised lighting plan’s reduction of lighting impacts, mine lighting would have a long term, adverse impact on dark skies during the premining and active mining phases.” (EIS Ch 3 Dark Skies p15, lines 20-22)</p>	<p><u>Resolution - Wording was modified, but not to match that provided. Commentor did not provide supporting analysis or data for the conclusions drawn.</u></p>
544	Smithsonian--Emilio Falco, J. Shaw	3	Socio	61	36	<p>Delete: “These risks cannot be reliably quantified.”</p> <p>Rationale – None of the next series of \$700M+ “Giant” observatories are planned for the Arizona area. This should be sufficient anecdotal evidence to note impacts of concerns regarding deteriorating lighting conditions.</p>	<p><u>Resolution - The statement was added to the text and attributed to the commentor.</u></p>
545	Smithsonian--Emilio Falco, J. Shaw	3	Socio	61	16-17	<p>Delete: “The increases in illumination under the revised lighting plan generally do not appear to be very significant from observatory’s perspective, though”</p> <p>Rationale – The SAO position is that any increased illumination is detrimental to science operations</p>	<p><u>Resolution - Changed some wording, but left the fact that the IDT and observatory representative may differ in their perspectives.</u></p>

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546	Pima County - Craig Horn	3	Socioeconomics and EJ	51	2_4	The cited \$3.5 million annual direct local property taxes paid by the company dates to a reference in the Rosemont Copper Project Feasibility Study, Volume 1, August 2007, which noted this tax amount was based on "a study performed by Donald Ross Consulting." The same \$3.5 million annual property tax projection has been used in all economic impact analyses, even though Arizona subsequently decreased the property tax assessment ratio for mining from 24% (in 2007) to 20% (in 2011 and 2012). Beginning with 2013, the assessment ratio for mining will further decrease by 0.5% each year until it reaches 18% in 2016. With a lower assessment ratio (i.e., a decreased taxable value for the mine), actual property tax revenues collected by local governments and school districts would be only 75% of the amount cited in the economic impact analyses and accepted by the USFS.	<u>Resolution - County statement adds to text and tax amount recalculated to match county statement.</u>
547	Rosemont - Melissa Notes	3	Socioeconomics and EJ	53	Top	No reduction of property values to continue to show reduction in values.	<u>Resolution - No change. Comment lacks specificity and cannot be addressed.</u>
548	Town of Sahuarita	3	Socioeconomics and EJ	54	15-20	Update Section: Protection of TS wells in accordance with the License Agreement between Rosemont Copper and TS	<u>Resolution - added a statement at this location acknowledging the license agreement stipulation to recharge 105% in a recharge area just north of the Town.</u>
549	Town of Sahuarita	3	Socioeconomics and EJ	62	8_15	Update Section: Protection of TS wells in accordance with the License Agreement between Rosemont Copper and TS	<u>Resolution - referenced the license agreement in this location also.</u>
550	Pima County - J. Crowe	3	Socioeconomics and EJ	63	1	This section, in general, does a poor job of identifying and determining the costs of roadway impacts resulting from the project. Specifically, it fails to list the cost to Pima County taxpayers of public roadway improvements, repairs, maintenance, and replacement that will be required as a result of this project. Besides State Route 83, impacts are anticipated on County roadways such as Sahuarita Road and Santa Rita Road, which will provide secondary access to the project. All affected roadways should be listed and costs estimated for project-related roadway costs. Specifically, costs for required roadway improvements should be distinguished from roadway maintenance costs.	<u>Resolution - No change. Neither the Sahuarita Road or the Santa Rita Road are proposed for use to access the mine. As stated in several places in the FEIS (Chapter 2, Transportation and Access, Socioeconomics) worker commuter traffic is anticipated to occur primarily on I-10 and SR83. Mine deliveries are anticipated to utilize the same roads.</u>
551	Pima County - J. Crowe	3	Socioeconomics and EJ	63	1	This section documents known historical roadway maintenance costs, but it fails to also estimate future roadway maintenance costs which will likely exceed historical expenditures. Future maintenance costs should be estimated and provided.	<u>Resolution - no change. See above. When read in context this comment assumes high levels of mine related traffic on the Sahuarita and Santa Rita Roads, which is not expected to occur.</u>
552	Pima County - J. Crowe	3	Socioeconomics and EJ	63	1	This section fails to include the costs of required roadway improvements such as turning and passing lanes, shoulder stabilization and paving, and pavement overlay. This cost information can and should be provided. Pima County estimates the cost of constructing truck lanes along State Route 83 to be as much as \$13 million.	<u>Resolution - no change. Rosemont is funding the cost of all currently planned road improvements to SR 83. These are limited to improvements at the intersection of the primary access road, and a connected action under ADOT oversight to resurface SR 83 from I-10 to the primary access road. There are no planned "truck lanes".</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
553	Pima County - J. Crowe	3	Socioeconomics and EJ	63	1	The report states that “damages resulting from ... (heavy truck traffic) ... would be difficult to quantify”, but roadway maintenance costs can be estimated. Pima County estimates that a structural overlay of all affected roadways would cost as much as \$14.6 million. A mitigation measure of simply “conducting a baseline analysis of road conditions along State Route 83” is wholly inadequate and is only the first step in providing roadway mitigation for the project.	<u>Resolution - no change. Pima County continues to state that a number of roads would be used for heavy mining traffic, when the EIS states in numerous times that this traffic will be limited to I-10 and SR 83 (with some product traffic possible on other state routes to the south). Therefore the \$14.6 million figure is not accurate. Rosemont is working with ADOT to fund an overlay of SR 83 from I-10 to the primary access road. It is not known if or when future overlays will be needed, and to guess would be speculative.</u>
554	Pima County - J. Crowe	3	Socioeconomics and EJ	63	1	Gas tax revenues are stated as a way of paying for required roadway improvements and maintenance. However, gas tax revenues alone resulting from vehicle fuel purchases will be wholly inadequate to pay for all roadway improvements and maintenance as required for this project. Gas tax revenues from project-related truck traffic and vanpools should be estimated and then compared to anticipated roadway expenditures described in the comments above. Unless the project sponsor agrees to pay the full cost of required roadway improvements, the burden will be shifted to Pima County taxpayers to pay for needed roadway improvements and maintenance that will occur during the lifetime of the project.	<u>Resolution - no change. The roads in question are federal and ADOT jurisdiction. The statements here are not accurate. See earlier responses about mine use of Sahuarita and Santa Rita roads.</u>
555	TON	3	Socioeconomics and EJ	76	28	Remove apostrophe.	<u>Resolution - done</u>
556	TON	3	Socioeconomics and EJ	76	34	The Nation does not recall that there was an agreement reached that Rosemont would be transplanting critical plant resources. The tribes proposed that Rosemont transplant these plants to an on-site nursery for use by tribal members, but that proposal was rejected.	<u>Resolution - No change. This is a mitigation that was proposed by the Forest and accepted by Rosemont.</u>
557	TON	3	Socioeconomics and EJ	76	37	This concept is unnecessarily vague and could mean anything. If something concrete is being proposed, then put it in there. Otherwise, leave it out as it’s meaningless.	<u>Resolution - No change. This is a mitigation that was proposed by the Forest and accepted by Rosemont.</u>
558	TON	3	Socioeconomics and EJ	76	3_5	It should be added that additional items were recommended by the tribes, which were not acceptable to the Forest Service. The tribes do not believe that the items set out here at all “compensate” for the destruction of tribal cultural resources.	<u>Resolution - No change. It is not necessary or appropriate to describe in the text of the FEIS all the mitigations that were proposed by various agencies and others that were not adopted by the Forest Service. In this case, many or most of these would be described in notes from tribal consultation meetings that are contained in the project record.</u>
559	TON	3	Socioeconomics and EJ	77	9	The line “The only alternative that will not have a disproportionate impact upon the Tohono O’odham Nation and other tribes is the no action alternative” should be added.	<u>Resolution - added to impacts of the No Action alternative for EJ.</u>

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560	Pima County - Craig Horn	3	Socioeconomics and EJ	47 51	30- 32(47) 14- 17(51)	On Page 47, USFS concludes employment would have “minimal demands on the local housing supply during the operational phase of the mine” because the number of employees would be far below the number of vacant housing units in the study area. This conclusion, which could very well be accurate, implies there will be no (or little in the way of) new property tax revenue collected by local governments and school districts because the necessary housing stock to support mining operations already exists and is already being taxed. Indirect Revenue Impacts of \$107.6 million from the Applied Economics study are cited on Page 51. Property tax revenues collected by local governments and school districts comprise \$58.19 million of the \$107.6 million. Based on the USFS conclusion that essentially all needed housing already exists, the \$58.19 million of local property tax revenue reported by Applied Economics would not represent new, additional property taxes from new housing construction. Instead, this would be the amount of taxes paid by direct, indirect and induced employees who live in already existing homes and apartments. Thus, the overall tax revenue impact associated with mining operations is actually less than the impact amount reported by Applied Economics, as the term “impact” means this is new, additional revenue that would not exist without the project being analyzed.	<u>Resolution - No change. The property taxes described in the Socioeconomics section are for RCC private lands and facilities, not for newly constructed houses for workers.</u>
561	TON	3	Socioeconomics and EJ	69 71		The word “potential” should be removed from page 69 table 238 in the cultural box and page 71, line 21. The paragraph on page 71 goes on to acknowledge that these resources are “known,” so the use of “potential” is confusing to the reader. Since any action alternative will result in the destruction of ancestral villages, human remains, sacred sites, and traditional resource collecting areas, the use of “potential” is unwarranted and misleading.	<u>Resolution - Done.</u>
562	TON	3	Socioeconomics and EJ	69-71		The Environmental Justice section in the FEIS has been improved over the DEIS. However, it still downplays and does not fully analyze the full impact of this action upon the Nation and other tribes.	<u>Resolution - No change. The comment offers no specific suggestions regarding modifications or changes, and lacks the specificity that would allow consideration of esits or changes.</u>
563	Rosemont-Patti	3	Socioeconomics and EJ			often is a separate section, but is not required	<u>Resolution - No change.</u>
564	Rosemont-Patti	3	Socioeconomics and EJ			Three EJ communities are described: Tohono O’odham, Pascua Yaqui, and Hispanic (in Santa Cruz County, right?). But the impacts are only addressed for one of these.	<u>Resolution - Text changed to address all identified communities. See Jeremy’s revisions on 8/9/13.</u>
565	Rosemont-Patti	3	Socioeconomics and EJ			There are no problems with how communities were selected	<u>Resolution - No change.</u>
566	Rosemont-Patti	3	Socioeconomics and EJ			Jim states that “we’re looking at EJ with our expert”	<u>Resolution - No change.</u>
567	Pima County	3	Socioeconomics and EJ			EIS fails to address the disproportionate impacts to TO, Pascua Yaqui, and Hispanic residents	<u>Resolution - Text modified to better disclose impacts. See Jeremy’s revisions on 8/9/13.</u>
568	Pima County	3	Socioeconomics and EJ			Action agencies have failed to provide for meaningful involvement of these communities	<u>Resolution - No Change. All communities had ample opportunities to be involved in the process, in a wide variety of ways.</u>
569	Pima County	3	Socioeconomics and EJ			Mitigation does not relieve the impacts	<u>Resolution - No Change. EIS clearly states that mitigation cannot avoid, offset or compensate for impacts.</u>
570	Pima County	3	Socioeconomics and EJ			Requirement of SAWRA to evaluate drawdown on TO. EIS demonstrates impacts will occur.	<u>Resolution - No change. The IDT evaluated this, and determined that disproportionate impacts would not occur.</u>

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571	Pima County	3	Socioeconomics and EJ			Tax revenue is overstated in two specific ways	Resolution - text changed to clarify.
572	Rosemont - Melissa Notes	3	Socioeconomics and EJ			Talks of 3 EJ communities, but seems to only analyze T.O. not others. Jim: Re-doing EJ by expert	Resolution - Resolved. See Jeremy's edits on 8/9/13.
573	Rosemont - Melissa Notes	3	Socioeconomics and EJ			Cultural Section - put table wording consistent with section, use less biased wording	Resolution – Resolved in text.
574	Rosemont - Melissa Notes	3	Socioeconomics and EJ			10% of National Copper production -beneficial impacts	Resolution - No change.
575	Rosemont-Patti	3	Socioeconomics and EJ			Are there other EJ impacts related to resources other than cultural? If so, include them. Are there benefits to EJ communities that need to be addressed?	Resolution - No change. Considered this but came up with no additional impacts or benefits to EJ communities.
577	Rosemont-Patti	3	Socioeconomics and EJ			Cultural section and Table in Chapter 2 – there are subjective terms like “severe” and “notable” and “adverse” and “significant” and “massive”. Consider revising	Resolution - resolved this in the text.
578	Rosemont - Kathy	3	Socioeconomics and EJ			Socioeconomics – Dr. McPheters review. Inconsistent approach on property values. I.e., in one place conclude there is no discernible change within 0.6 miles, and then assume decreases within 5 miles	Resolution - No change. IDT specialist reviewed and determined it is correct as presented. His recommendation is that no change is needed. See 8/9/13 email.
579	Rosemont-Jamie	3	Socioeconomics and EJ			Wants % copper production stated somewhere	Resolution - No change.
580	Pima County - Julia Fonseca	3	Soils	14	19-20	Rosemont’s test plots show that the use of weathered bedrock has been successful only where native soil depths were adequate. Pima County staff visited the reclamation sites with Holly Lawson on August 16, 2012. We observed that where there was a high percentage of native soil admixed with bedrock, the plant cover was on the reclamation plots was very high, but on the portions of the Arkose plot where there was very little soil admixed into the Arkose, there was almost no plant cover. Thus, soil depth and composition is a critical factor for reclamation success. And yet the text does not mention the one-foot soil depth standard or provide any performance standards for soil particle size and depth, which are critical to success.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. With respect to several similar comments, there are details that would be addressed during the final MPO stage, but are not appropriate at the FEIS stage. Specific performance standards or success criteria are in this category, although where possible the FEIS indicates what could be used.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
581	AGFD	3	Soils	15	9-16	<p>The text states: “AMEC Earth and Environmental (2009) conducted stability analyses of the dry-stack tailings facility, and Tetra Tech (Mohseni 2010) conducted stability analyses of the waste rock facility. In both cases, modeling indicated that the designed waste rock and tailings facilities are more stable than what is required by regulations, based on the planned crest height, bench widths, and slopes. The minimum factor-of-stability values required under regulations as best available control technology are 1.0 for seismic failure and 1.3 for static failure. As modeled, the factor-of-stability values for the tailings and waste rock facilities range from 1.0 to 1.2 for seismic failure and from 1.9 to 2.3 for static failure”.</p> <p>COMMENT: The Technical Memorandum, Liquefaction and Stability Analyses-Rosemont Dry Tailings Facility (Tetra Tech, June 12, 2007) notes that based on laboratory test results, liquefaction of the DSTF may occur at moisture contents $\geq 18.8\%$. According to the text, since the tailings are proposed to be ‘dry-stacked’ at a moisture content below 16% for handleability and trafficability during conveyor transport and placement, “the tailings will not normally be susceptible to liquefaction”.</p> <p>COMMENT: The text may need to describe the conditions under which the tailings may lose stability and how the DSTF is engineered to avoid that result.</p>	<u>Resolution - Discussion of liquefaction risk is now included in the Soils section.</u>
582	Pima County - Julia Fonseca	3	Soils	15	7_8	<p>Mesquite, acacia, mimosa and juniper all have heavy seeds that are seldom blown into sites by wind (see Laura Jackson’s work in Pinal County abandoned farms for a reference as to the delay in revegetation). What is the basis for the Forest Service’s belief that these species would readily colonize the reclaimed sites? The hydrology will not bring the seeds onto the reclaimed surfaces. By August 2012, tree species had not colonized the reclamation test plots in numbers sufficient to support this speculation. Even if they had, the reclamation plots are much smaller in size and less isolated from animals and adjacent seed materials than the large and highly elevated waste-tailings pile, and they had the advantage of abundant topsoil that had not been stockpiled. Some if not all soil that is used for reclamation will be stockpiled for long periods of time, a factor that may affect seed viability. Does the Forest Service have any data to cite for its conclusion?</p>	<u>Resolution - The issue of native seed beds being relied upon has now been addressed in the Soils section.</u>
583	Pima County - Julia Fonseca	3	Soils	15		<p>FEIS should evaluate long-term impacts to surrounding soils due to pit wall instability.</p>	<u>Resolution - Pit slope stability has been added to the Soils section.</u>
584	Pima County - Julia Fonseca	3	Soils	15		<p>Please disclose whether any additional rock crushing will be needed to create the “soil” from onsite materials, where, and when this will occur.</p>	<u>Resolution - It has been clarified in text that no mechanical processing will be used and no off-site borrow pits will be used.</u>
585	Pima County - Julia Fonseca	3	Soils	15		<p>Table 23—Pima County continues to encourage the Forest Service to require a much more diverse seed mix than is shown here, inclusive of native annuals and including tree seeds.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>With respect to several similar comments, there are details that would be addressed during the final MPO stage, but are not appropriate at the FEIS stage. Specific performance standards or success criteria are in this category, although where possible the FEIS indicates what could be used.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
586	Pima County - Julia Fonseca	3	Soils	27		Revegetation success criteria would be determined and specified in the final MPO, and thus are not available for our review. Omission of particle size standards, soil porosity, and soil depth is a fundamental flaw in this analysis—no one can predict capabilities of the soil without this fundamental information.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. With respect to several similar comments, there are details that would be addressed during the final MPO stage, but are not appropriate at the FEIS stage. Specific performance standards or success criteria are in this category, although where possible the FEIS indicates what could be used.
587	Pima County - Julia Fonseca	3	Soils	27		The amount of soil (topsoil, not crushed rock) is likely to be a critical factor in revegetation, but no standards or reclamation success criteria have been provided by the Forest Service in the text. In lines 30-31, it says almost all slopes would receive either a cover of soil or a mixture of soil and rock cover. What is the basis for this statement? How much soil (soil depth) must slopes and flats receive to get to the desired vegetation?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. With respect to several similar comments, there are details that would be addressed during the final MPO stage, but are not appropriate at the FEIS stage. Specific performance standards or success criteria are in this category, although where possible the FEIS indicates what could be used.
588	Pima County - Julia Fonseca	3	Soils	32		The text should clarify that the vast majority of this volume is not soil derived from pedogenic processes but bedrock	Resolution - No changes needed. This is an opinion and is not supported by the available soil reports.
589	Pima County - Julia Fonseca	3	Soils	34		Are there any restrictions on the range of materials that can be considered as “growth media”? The FEIS should disclose what materials will be added, and whether any of the growth media is to be imported to the site	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. With respect to several similar comments, there are details that would be addressed during the final MPO stage, but are not appropriate at the FEIS stage. Specific performance standards or success criteria are in this category, although where possible the FEIS indicates what could be used.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
590	Pima County - Julia Fonseca	3	Soils	35	29	What amount of cover is "sufficient cover"?	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>With respect to several similar comments, there are details that would be addressed during the final MPO stage, but are not appropriate at the FEIS stage. Specific performance standards or success criteria are in this category, although where possible the FEIS indicates what could be used.</p>
591	Pima County - Julia Fonseca	3	Soils	15 and ff		How much topsoil admixture (as opposed to bedrock) will be necessary to achieve the desired vegetation conditions? This is the critical factor for revegetation efforts.	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>With respect to several similar comments, there are details that would be addressed during the final MPO stage, but are not appropriate at the FEIS stage. Specific performance standards or success criteria are in this category, although where possible the FEIS indicates what could be used.</p>
592	Pima County - Julia Fonseca	3	Soils	2 and FF		Analysis of stability fails to address pit. And which pit would be analyzed?	<p>Resolution - Pit slope stability has been added to the Soils section.</p>
593	Pima County - Julia Fonseca	3	Soils	2 and FF		Potential for increasing stability of pit walls should be addressed, and if possible, required as part of closure plan	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
594	Pima County - Julia Fonseca	3	Soils	2 and FF		If no attempt will be made to reclaimed and revegetated pit wall benches, the text should explain why.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
595	Pima County - Brian Powell	3	Soils & Reveg	6	NA	On what basis is the following made: "Soil productivity would be reclaimed following placement of soil or soil/rock cover and revegetation"? Soils take thousands of years to build up productivity, but crushing rock and placing B, C, and R-horizon soils and rocks in its place, with little or no organic material will not reclaim soil productivity for many more hundreds or thousands of years (if ever). The FS need to be honest about this.	<u>Resolution - No changes needed. "The growth media are expected to support vegetation but would not develop a natural soil profile for many decades after closure of the site." Soils, page 15, lines 28-30. The FEIS is honest about this.</u>
596	Pima County - Akitsu Kimoto	3	Soils & Reveg	14	27-29	The studies conducted by the University of Arizona (Lawson, 2011) pointed out that the important factors for successful revegetation in the project area are to retain soil moisture and to prevent soil erosion. The FEIS does not describe the detail plan or studies to address those potential issues. Please explain what action would be taken for successful revegetation.	<u>Resolution - The SWPPP was reviewed for any specific methods for preventing erosion. It contained insufficient detail to incorporate into the FEIS.</u>
597	Pima County - Brian Powell	3	Soils & Reveg	15	38	Adaptive management is once again invoked as a tool for both refining success criteria and to "meet the revegetation criteria." In the context of reclamation, adaptive management might otherwise be appropriate, but really this is a matter of experiments. The EIS outlines the results of the current experiment going on onsite, but we question the applicability of those results to future site conditions (this is partially acknowledged later in the Soils and Revegetation section) because the experimental sites had very few rock fragments and considerable amount of mulch.	<u>Resolution - Statement of opinion or fact. No actionable comment. No changes needed.</u>
598	Pima County - Brian Powell	3	Soils & Reveg	15	40	It is difficult to understand why the FS is waiting until the final MPO to unveil the success criteria for revegetation measures. That should be available now	<u>Resolution - Draft success criteria have been added to Soils section, and have been approved by the Forest specialist.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
599	Pima County - Brian Powell	3	Soils & Reveg	22	11	Throughout the planning process, Rosemont touted reclamation drawings with large trees (presumably oaks). It is now clear, based on page 22, that trees are not part of the mix. How then, is the FS planning on mitigating for the loss of tens of thousands of oak trees that will be killed as part of this mine? The loss of these oak trees, which support wildlife and other species, is scarcely mentioned in any other part of the EIS.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
600	Pima County - Brian Powell	3	Soils & Reveg	27	10	The EIS stated that “the Coronado would dictate the criteria that must be met for the revegetation to be considered successful and complete.” Later the document indicates that it is not reasonable to compel Rosemont to conduct reclamation far beyond the mines’ closure. But what contingencies would be put into place to ensure that success criteria are met if not to hold the company responsible beyond closure?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
601	Pima County - Brian Powell	3	Soils & Reveg	34	7	I am not aware of any good climate models that predict “warmer and wetter conditions in the Southwest”. Please clarify.	Resolution - No change needed. There are models that predict more extreme rain events, particularly monsoonal events.
602	Pima County - Brian Powell	3	Soils & Reveg	NA	NA	The FS should require that Rosemont develop a rigorous and realistic revegetation experiment—one that uses growth medium that will represent the actual soil and groundcover conditions of the post-mine reclamation site.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
603	Pima County	3	Soils & Reveg			EIS does not discuss reclamation bond	Resolution - Comment not factually correct. Bonding is discussed in Chapter 2.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
604	Pima County	3	Soils & Reveg			Reclamation for trees is not adequate	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
605	Pima County - Julia Fonseca	3	Springs	1	23	I agree that the use of the Pima County riparian maps for this EIS is appropriate, as compared to the maps used in the 2011 DEIS.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
606	Pima County - Julia Fonseca	3	Springs	1	NA	As a general comment, the discussion in the rest of the chapter does not live up to the definition of riparian that is on page 1. Functional values of ephemeral streams, in particular, receive scant discussion in the chapter. Most of the chapter focuses on perennial streams and hydromesoriparian vegetation.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
607	Pima County - Julia Fonseca	3	Springs	2	1_6	I Some of the existing aquatic and riparian resources that are analyzed in this latest EIS are located in the Upper Santa Cruz basin (Tucson Active Management Area). The Tetrattech groundwater model assumes that groundwater from the Upper Santa Cruz Basin can move from that area into the Cienega groundwater basin to fill the aquifer drawdowns that the mine would create around the pit. The analysis is made in this version of the EIS for some of the springs in the Upper Santa Cruz Basin, so the EIS contradicts the statement made here that the analysis remains absent and that there are no resources in the Upper Santa Cruz basin.	Resolution - This has been clarified in the text.
608	Pima County - Akitsu Kimoto	3	Springs	2	11- _15	"Desert washes in the footprint of the pit, tailings facility, and.....(P.2, L11-15)" should be mentioned in Chapter 3, Surface Water Quantity.	Resolution - No changes needed. These are already included in both the SS&R section and the SW Quality section.
609	Pima County - Julia Fonseca	3	Springs	6	Barrel 12	Barrel Canyon 2 has an intermittent flow reach within the area you classify as ephemeral. See PAG (2000) report that we transmitted on August 6, 2012 to Melinda Roth and Chris Garrett of streams and shallow groundwater areas—this report indicates an intermittent flow reach occurred on Barrel Canyon. This reported reach was based on field observations by PAG staff and US Forest Service RASES, which are riparian assessments provided by USFS for the Sonoran Desert Conservation Plan	Resolution - These data sources were reviewed. All of the intermittent source areas are associated with individual springs that were analyzed in the FEIS. Details of how these information sources were reviewed and handled are included in the project record (see Garrett memo dated 8/29/13).
610	Pima County - Julia Fonseca	3	Springs	6	Table 106 and Rest of the Chap er	Your definition of ephemeral fails to take into consideration whether depth to groundwater is shallow. This is information that has been made available to the Forest and Corps through this EIS process, but the analysis in this chapter is very inconsistent with respect to the impacts that will have on the vegetation along ephemeral streams, which can be greatly influenced by the water table.	Resolution - These data sources were reviewed. All of the intermittent source areas are associated with individual springs that were analyzed in the FEIS. Details of how these information sources were reviewed and handled are included in the project record (see Garrett memo dated 8/29/13).

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
611	Pima County - Julia Fonseca	3	Springs	6		How would the effects on intermittent streams affect their values for landscape connectivity?	<u>Resolution - This is also analyzed in the Biological Resources section, in addition to the SS&R section.</u>
612	Pima County - Julia Fonseca	3	Springs	7	33-37	Illogical reasoning. Although perennial springs are likely to be fed by regional aquifer, it does not follow that a non-perennial spring is NOT related to the regional aquifer. In some areas, groundwater observations indicate that there have been declines in the regional aquifer, therefore cessation of flow at a nearby spring WOULD BE CONSISTENT with a connection to the aquifer.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>Very few springs are disregarded in the analysis on the basis that they are localized ephemeral springs. Those that are have a decent track record in which no flow has been observed for multiple years or seasons. Comparatively, there are quite a few other springs that have exhibited consistent flow that has not dropped off.</u> <u>Most springs are considered to be impacted because the source of water is now known. But where physical field observations indicate persistent lack of flow, where elsewhere flow persists, that is reasonable evidence for a localized, ephemeral spring not tied to the regional aquifer.</u>
613	Pima County - Julia Fonseca	3	Springs	8	1_7	Discounting the standard industry practice of relying upon spring discharges as indication of the regional aquifer does not make sense in those Rosemont mine areas where the water-level elevation of the aquifer is known.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>Water-level elevations are known, but not so well known as to be used to rule out springs as being tied to the regional aquifer. In this case, it was felt that this was insufficient evidence to remove springs from being potentially impacted. This is a conservative approach, and errs on the side of caution, rather than the assumption that springs are not tied to the regional aquifer solely because they exist at a higher elevation than identified in nearby wells, which may or may not be engaging similar fractures.</u>
614	Pima County - Julia Fonseca	3	Springs	8	8_10	Why do you state that isotopic data have not made available? These data are posted on the Forest EIS website. See Montgomery and Associates 2009 Hydrogeologic Characterization.	<u>Resolution - These data have been discussed more fully in the SS&R section.</u>
615	Pima County - Julia Fonseca	3	Springs	12	Table 107	There are a few parts of table 107 that do not conform with the cited reference, for instance stem density of Goodding's willow did correlate with permanence whereas cottonwood did not, and mesic competitor tree basal area did not correlate with permanence	<u>Resolution - some changes have been made to the table. However, it should be noted that the analysis in this section relies on more than this one study, and the results of this particular study also require some judgment to weigh conflicting responses.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
616	Pima County - Julia Fonseca	3	Springs	21	FS- SSR- 01	As written, this measure depends on the cooperation of Pima County Regional Flood Control District with respect to the severance and transfer to areas within the Preserve. Likewise, the measure also depends on the willingness of other agencies to accept the transfer, whether it is protested, and whether ADWR will grant the in stream flow.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
617	Pima County - Julia Fonseca	3	Springs	24	FS- WUS- 01	A conservation easement with a third party beneficiary is a more effective conservation measure than a restrictive covenant because there is monitoring and rights of enforcement, and often an endowment for stewardship. If a restrictive covenant is used, there should be an endowment established for monitoring, and provisions for enforcement. EIS should either provide these additional features or acknowledge the deficiencies of a restrictive covenant.	<u>Resolution - The term restrictive covenant came out of the conservation measures themselves, which the Forest Service did not develop and cannot modify of its own accord. The use of this term is an attempt to say that some sort of restrictions will be placed upon the title of the land that will follow it through subsequent owners, and this could include a conservation easement or other instruments that accomplish the same thing.</u>
618	Pima County - Julia Fonseca	3	Springs	31	10_2 1	This discussion in the EIS reflects WestLand's misunderstanding of the County's classification and mapping.	<u>Resolution - This is a statement of fact or opinion, with no actionable comment.</u>
619	Pima County - Julia Fonseca	3	Springs	31		Surface flow analysis fails to address evidence of intermittent flows reported by Westland in various years of surveying intermittent streams for leopard frogs occurrence	<u>Resolution - These data sources were reviewed. All intermittent waters identified overlapped with springs that were already analyzed in the FEIS. Additional language was added to indicate that intermittent stream segments associated with these springs may be affected. See Garrett memo dated 8/29/13.</u>
620	Pima County - Julia Fonseca	3	Springs	32		The No Action alternative discussion in the EIS ignores the evidence for declining baseline conditions in the area. Many intermittent to perennial springs and streams are currently dry or intermittently dry. Water tables that used to be shallow enough to support denser vegetation or hydromesoriparian vegetation are dropping, and the condition of this vegetation is declining in a consistent manner. Climate change projections, coupled with projected population growth and water use suggest that this trend will continue.	<u>Resolution - The effect of ongoing trends and expected future changes is fully described in three places in the Seeps, Springs, and Riparian resource section: No Action Environmental Consequences, Climate Change, and in the riparian/streamflow assessment itself.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
621	Pima County - Julia Fonseca	3	Springs	40		<p>The belief that the shallow water table under Barrel is somehow separate from the rest of the aquifer and will not be affected by the drawdown seems speculative and unsupported by Montgomery and Associates mapping and interpretation.</p> <p>Areas of shallow water table may be located in alluvial deposits, but they may be fed by fracture flow from older, underlying bedrock or consolidated basin fill units. There is evidence in the well data for upward gradients from older units.</p>	<p><u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u></p> <p><u>This decision is not speculative. It is based on field evidence, primarily the type of vegetation identified in and around drainages. Primarily xeroriparian vegetation is an indication that shallow groundwater is not present and readily available.</u></p> <p><u>It is acknowledged that hydrology is complex, and that there are many unknown connections. However, the most reasonable scenario must be used when evidence presents itself.</u></p>
622	Pima County - Julia Fonseca	3	Springs	41	FS-BR-24	<p>Please describe the thresholds that Forest will use for determining NEPA compliance. I can't tell what is meant by this phrase.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
623	Pima County - Julia Fonseca	3	Springs	53		<p>Please disclose how the level of uncertainty of impacts that was described in the text will be dealt with ensuring the mandatory mitigation measures are effective. I see that there will be monitoring, but it does not address how they will be used to ensure mitigation is effective.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
624	Pima County - Julia Fonseca	3	Springs	54		This cumulative effects analysis only considered other proposed projects. Doesn't really take into account cumulative effects of past and present actions that have already degraded the riparian environment in the analysis area, nor does it take into consideration the reasonably foreseeable actions of Pima County in terms of future development (see previous comment).	Resolution - No changes needed. This commenter does not understand the concept that the Existing Condition upon which the direct and indirect effects analysis is based includes the effects of past and present actions if they are relevant to the analysis. When you add foreseeable actions to this - you have a cumulative effects analysis.
625	Pima County - Julia Fonseca	3	Springs	54		The Andrada mine is included but not the one in Davidson Canyon proper? I don't understand the omission.	Resolution - The reasonably foreseeable actions are appropriate as indicated. Note that the expansion of the limestone quarry in Davidson is identified as an RFA (Charles Seel lease). Existing or ongoing actions are part of the Affected Environment.
626	Pima County - Julia Fonseca	3	Springs	54		What about the ADOT improvements to SR83 and their impacts to Davidson?	Resolution - ADOT improvements are connected actions as identified in Chapter 2. Impacts from these improvements are included in the impact assessment in the Seeps, Springs, and Riparian Areas section.
627	Pima County - Julia Fonseca	3	Springs	57	30-34	Why can't monitoring results be used to make mitigation more effective by including responsive management measures?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
628	Pima County - Julia Fonseca	3	Springs	58	14-20	Proposals to sever and transfer could be protested. Our experience has been that ADWR does not act on protested proposals. I am unaware of any successful sever-and-transfers to in-stream flow; SRP has been waiting for years for ADWR to approve theirs on the San Pedro,. These are facts which must be disclosed in the EIS.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. With respect to sever-and-transfer, language has been added to the FEIS to acknowledge the uncertainty of this process.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
629	Pima County - Julia Fonseca	3	Springs	58	14-20	This discussion does not acknowledge the uncertain outcome. SRP has been trying to sever-and-transfer to instream flow as a mitigation measure on the San Pedro, and the state has yet to approve such a measure. I'd love to see ADWR move ahead with type of action, but the record to support this as an effective mitigation measure is not yet established.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>With respect to sever-and-transfer, language has been added to the FEIS to acknowledge the uncertainty of this process.</u>
630	Pima County - Julia Fonseca	3	Springs	58	18-19	I've heard Westland and Rosemont refer to legal obstacles on Upper Cienega Creek. The sever-and-transfer does not resolve legal obstacles on lower Cienega Creek. I think you should confirm with BLM that there are legal obstacles on Upper Cienega Creek, if you have not already done so.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>With respect to sever-and-transfer, language has been added to the FEIS to acknowledge the uncertainty of this process.</u>
631	Pima County - Julia Fonseca	3	Springs	58	18-20	Placing this statement in the same paragraph as the sever-and-transfer is confusing the two different strategies.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>With respect to sever-and-transfer, language has been added to the FEIS to acknowledge the uncertainty of this process.</u>
632	Pima County - Julia Fonseca	3	Springs	58	25-29	Why can't monitoring results be used to make mitigation more effective by including responsive management measures?	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
633	Pima County - Julia Fonseca	3	Springs	1, 15		It really does not make sense to say on p. 1 that you are using the County maps because of their value in defining habitat corridors, and then on p. 15 to say that IRAs are not important. The reason that the Science Technical Advisory Team included the "important" riparian designation on top of some of the mapped polygons was to identify watercourses thought to be important for connectivity in that region. The IRA is not a meaningless regulatory definition of the County's, it was developed with input from a broad array of professional biologists with field experience in our area, and it included at the time the first and only Coronado National Forest plant ecologist.	<u>Resolution - Comment is not factually correct. There is no judgment made on page 15 that IRAs are not important. What is stated is that the IRA designation is a regulatory designation. The analysis presented in this section is based on field evidence to the extent possible. A regulatory designation does not assist in this effort.</u>
634	Pima County - Julia Fonseca	3	Springs	11_1 4		I support the use of the referenced sources. This is a good general description of the relationships among hydrological variables and riparian vegetation response for perennial and intermittent streams with a shallow water table.	<u>Resolution - Statement of opinion or fact. No actionable comment. No changes needed.</u>
635	Pima County - Julia Fonseca	3	Springs	57-58		Need to clarify in the final version which are mandatory and which are not, and what the relationships are between BO and Corps decisions.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
636	Pima County - Julia Fonseca	3	Springs	8, 10		The County's 2005 mapping considered shallow groundwater areas underlying riparian areas, to the extent they were known. Where it was known that shallow groundwater areas existed at the time of the classification, then the riparian areas above the shallow groundwater table were classified as hydromesoriparian, indicating their potential to support such vegetation, even if the vegetation did not exist at that time. It was not known until later that shallow water tables underlie part of the Rosemont waste-and-tailings disposal area.	<u>Resolution - A record memo has been produced to respond to this. The evidence provided in the mapping is not sufficient to change the riparian mapping. The logic does not follow--the shallow groundwater has been there in perpetuity, why would it suddenly develop hydromesoriparian vegetation that isn't there now? No changes are warranted.</u> <u>In any case, the analysis for GW Quality already assumes that seepage can get to groundwater. The depth is not a critical factor for any analysis.</u> <u>See Garrett memo 8/29/13.</u>
637	Pima County - Julia Fonseca	3	Springs	NA	NA	Effects analysis does not take into account the impairments that failure of the stormwater controls will have. Pima County Flood Control has serious concerns about the ability of the stormwater controls to handle multi-day storms, and after closure there is no plan to maintain anything.	<u>Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.</u>
638	Pima County - Julia Fonseca	3	Springs	NA	NA	As far as I can tell, the EIS does not address altered riparian processes like dissipation of energy, cycling of nutrients, removal of elements and compounds, retention of particulates, export of organic carbon and maintenance of animal communities. These would be needed for the Corps permit, at the minimum, but also for understanding other effects on the human environment	<u>resolution - These effects have been acknowledged in the SS&R section.</u>
639	Pima County - Julia Fonseca	3	Springs	NA	NA	Neither the Springs Chapter nor the issues selected in Table 108 treat the functional values of the headwaters streams. Many first- and second-order streams are visible in an independently mapped stream delineation presented below and in our 2012 DEIS comments. The MPO in orange at left, Preferred (Barrel) Alternative in pink at right. Although many of these headwater ephemeral streams were not included in the jurisdictional determinations of the U.S. Army Corp, the loss of their functional values should not be ignored in the FEIS. Over 100 miles of streams would be directly affected by the MPO, shown at left above. An equal number of streammiles would be affected by the Forest's Preferred Alternative (Barrel), shown at right. To what degree will the new mine landform replace these functional values?	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>Its true that these smaller headwater streams aren't included in the calculation of Waters of the U.S. for the Corps--that's because the Corps doesn't count them within their jurisdiction.</u> <u>However, it is not true that these weren't analyzed. The Pima County riparian mapping includes most if not all of these smaller headwater streams. And the impacts from the loss of that riparian are analyzed in the FEIS.</u>
640	Pima County - Julia Fonseca	3	Springs	NA	NA	Has a Corps-approved functional/condition assessment been performed for this project? I did not see any information about this referenced. It would be a good source of information, if it were available.	<u>Resolution - The only assessment compiled to date is related to the mitigation calculations. The Corps has apparently not required this for other waters of the U.S. No changes able to be made.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
641	Pima County - Julia Fonseca	3	Springs	NA	NA	The Corps developed an hydrogeomorphic model that was used for six different locations in the Gila River basin, including the Santa Cruz watershed. Contact Kelly Burks-Cope at ERDC for more information.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>The Forest has analyzed the potential changes in geomorphology downstream, and has put monitoring in place to track potential impacts.</u> <u>There are other techniques that could be used. The Forest selected the approach utilized in the FEIS as appropriate to the situation and the level of data available.</u>
642	Pima County - Julia Fonseca	3	Springs	NA	NA	Please discuss any temporal losses of aquatic resource functions that could be caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site.	<u>Resolution - The effectiveness determination has been modified.</u>
643	Pima County - Julia Fonseca	3	Springs	NA	NA	Perhaps I missed it, but where do you draw conclusions about whether we are going to see an increase in tamarisk or other invasive non-native species affecting adjacent riparian areas because of the mine?	<u>Resolution - This is already in the riparian analysis. No changes needed</u>
644	Pima County - Julia Fonseca	3	Springs	NA	NA	You have the information on the distribution of more intermittent streams than are discussed in this chapter. On August 6, 2012, at your request, we transmitted to Melinda Roth and Chris Garrett our GIS files of intermittent streams and shallow groundwater areas. This should have been used in the analysis. See also 2012 DEIS comments, which included the map below. This included new intermittent streams that were derived from information provided for the EIS process by Rosemont consultants, as well as the Barrel Canyon intermittent flow reach which was originally mapped by PAG (2000).	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>There is a project record memo reviewing this information and whether it is appropriate for inclusion. For the most part these areas are already analyzed because of springs. But intermittent streams language has been added to the SS&R section to reflect this.</u> <u>See Garrett memo 8/29/13.</u>
645	Pima County - Julia Fonseca	3	Springs	NA	NA	The EIS does not disclose impacts to Box Canyon, which is an important Forest resource identified in the Forest Plan. It should continue to be managed for the unique wildlife and vegetative resources per the current Forest plan.	<u>Resolution - Box Canyon is analyzed in the FEIS in the appropriate locations, including: riparian, individual springs, intermittent reaches (based on other Pima County comments), transportation, recreation.</u>
646	Pima +H639+640:6 42+640:644+ 640+640:642	3	Springs	NA	NA	Rosemont also holds an option to acquire a diversion dam and a well site, totaling some two acres in size that is next to Cienega Creek. Forbidding that this wellsite ever be pumped would remove or prevent the decline of the aquatic resource due to the threat of pumping the well. This is a mitigation measure that does not depend on any agreement with Pima County, and should be considered a prerequisite to any other type of mitigation involving the water rights at the dam.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
647	Pima County - Julia Fonseca	3	Springs	NA	NA	What are the effects, duration of effects, and mitigation with respect to Traditional Cultural Property values? Or is that dealt with somewhere else?	Resolution - Analysis of springs as sacred sites is contained in the Cultural Resources section. No change needed.
648	Pima County - Julia Fonseca	3	Springs	NA	NA	The idea of consolidating analysis of riparian effects into a single chapter is a good change from 2011 DEIS.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
649	Pima County - Julia Fonseca	3	Springs	NA	Table 110	The footnote referring to the difference between the habitat designation and the field descriptions would not be necessary if WestLand understood the classification system.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
650	Pima County - Julia Fonseca	3	Springs	Table 102		This Table and this EIS fail to analyze all intermittent streams within the analysis area. Where in the EIS can I find the rest of the intermittent streams analyzed?	Resolution - Disagreement with analysis technique, but change is not appropriate. There is a project record memo reviewing this information and whether it is appropriate for inclusion. For the most part these areas are already analyzed because of springs. But intermittent streams language has been added to the SS&R section to reflect this. See Garrett memo 8/29/13.
651	Pima County - Julia Fonseca	3	Springs	Table 108	Issue 3D.2	With reference to no action, the Assessment of Climate Change in the Southwest US Summary for Decision Makers by Jonathan Overpeck and others (2013) notes observed recent climate change includes reduced flows in four major drainage basins of the Southwest, and declines in river flow and soil moisture will continue.	Resolution - The effect of ongoing trends and expected future changes is fully described in three places in the Seeps, Springs, and Riparian resource section: No Action Environmental Consequences, Climate Change, and in the riparian/streamflow assessment itself.
652	Pima County - Julia Fonseca	3	Springs	Table 108	Issue 3D.2	With reference to action alternatives, why do you predict no impacts? I disagree with the conclusion. Box Canyon, Box Canyon tributary called Sycamore on USGS topo, Barrel, Sycamore in Santa Cruz Basin, Adobe Tank Wash and Mulberry have intermittent flow reaches and are within 5 mile zone. Impacts to Box Canyon, in particular, were a topic of discussion at the third cooperator meeting on biological mitigation held July 24, 2012 and this was identified for follow-up by Forest Service personnel according to the meeting notes in the EIS references.	Resolution - Disagreement with analysis technique, but change is not appropriate. There is a project record memo reviewing this information and whether it is appropriate for inclusion. For the most part these areas are already analyzed because of springs. But intermittent streams language has been added to the SS&R section to reflect this. See Garrett memo 8/29/13.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
653	Pima County - Julia Fonseca	3	Springs	Table 108	Issue 4.1	With respect to the No Action Alternative, no loss of riparian areas is predicted due to disturbance. However, for the Pima County Multi-species Conservation Plan, we use a spatially explicit projection of where losses due to future residential and commercial development will occur. The attached excerpted figure for the Cienega-Rosemont vicinity shows that even without the mine, we expect impacts at the periphery of the National Forest and along the length of Davidson Canyon. This development projection, which is being used for a habitat conservation plan under the Endangered Species, should be taken into consideration in the EIS analyses of impacts to biological resources, including riparian areas. We can provide you the GIS data files so you can calculate how many acres of riparian or upland losses would occur in your area of analysis.	Resolution - Disagreement with analysis technique, but change is not appropriate. Reasonably Foreseeable Actions are based on projects with permits or other indications that they will occur. It would not be appropriate to replace it with a projection as that included in the MSCP.
654	Pima County - Julia Fonseca	3	Springs	Table 108	Issue 4.3	With respect to the No Action alternative, U. S. Geological Survey's Miguel Ponce has detecting some trends in vegetation in the entire Cienega Creek watershed that include the loss of riparian vegetation in the lowlands, and loss of woodlands in favor of grasslands at middle elevations of the Cienega Creek Watershed that have not been taken into account by this EIS No action alternative. Miguel Villareal has also provided me the attached photos showing the declining condition of riparian trees along Davidson Canyon. These repeated photos are part of a series of USGS photographs that go back decades, having been started by the Raymond Turner at USGS. The Forest Service and Corps should take advantage of the USGS information about riparian vegetation trends in this watershed.	Resolution - The effect of ongoing trends and expected future changes is fully described in three places in the Seeps, Springs, and Riparian resource section: No Action Environmental Consequences, Climate Change, and in the riparian/streamflow assessment itself. These new data sources were reviewed for their appropriateness and incorporated if available and pertinent.
655	Pima County - Julia Fonseca	3	Springs	Table 108		What is the duration of the impacts? I saw the earlier discussion about near/far term and uncertainty, but it's unclear what time frame was used for this table.	Resolution - No change needed. This is a summary table. All detail cannot be included here. Full analysis, including long-term versus near-term impacts is included in the rest of the chapter.
656	Pima County - Julia Fonseca	3	Springs		39-40	Davidson Canyon has experienced declining groundwater conditions and declining length of intermittent flow from the evidence that PAG has gathered over the years. From Miguel Villareal's work, we see declining condition in riparian vegetation. The record supports the notion that whatever the complexity of the links, vegetation and streamflow has responded in a way that is consistent with the declines in the regional aquifer.	Resolution - The effect of ongoing trends and expected future changes is fully described in three places in the Seeps, Springs, and Riparian resource section: No Action Environmental Consequences, Climate Change, and in the riparian/streamflow assessment itself. These new data sources were reviewed for their appropriateness and incorporated if available and pertinent.
657	Pima County - Julia Fonseca	3	Springs		Issue 3D.2	With respect to the No Action alternative, the table says no impacts are predicted. Please reconsider the evidence for a declining baseline. PAG monitoring data show that the number of flowing stream miles and ground water levels along lower Cienega Creek and Davidson Canyon have been declining. See http://www.pagnet.org/Programs/EnvironmentalPlanning/Water/HydrologicResearch/CienegaCreekProjects/CienegaCreekHydrologicResearchandFindings/tabid/1012/Default.aspx .	Resolution - The effect of ongoing trends and expected future changes is fully described in three places in the Seeps, Springs, and Riparian resource section: No Action Environmental Consequences, Climate Change, and in the riparian/streamflow assessment itself. These new data sources were reviewed for their appropriateness and incorporated if available and pertinent.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
658	Pima County - Julia Fonseca	3	Springs			This analysis should take into account that the ecological and recreational significance of Cienega Creek is amplified because it is one of a very few remaining examples of a desert riparian environment. Environments of this type once paralleled many of the water courses and drainages in southern Arizona such as the Santa Cruz River near Tucson. During the past century, the extent of these riparian areas has been greatly reduced.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
659	Pima County - Carla Danforth	3	Springs	4	9_17	Rosemont Copper has "agreed to consider" implementing mitigation measures? Shouldn't all of these mitigation measures be a requirement of any permits issued to Rosemont Copper for the proposed actions?	Resolution - Comment not factually correct. Page 4 of the SS&R section is a figure. A search for "agreed to consider" in the SS&R section turned up no instance of this phrase. Checked the Bio Resources section and this is not pertinent to page 4 in that section either. In any case, the jurisdiction of mitigation measures, and the distinction between mandatory and voluntary measures is fully described in the intro to Appendix B.
660	Pima County - Carla Danforth	3	Springs	15	8_9	Important Riparian Areas (IRA) are mapped based on many factors including landscape linkages, wildlife corridors, and hydrologic connectivity, as well as vegetation. IRA boundaries are not subject to amendment under the Pima County Floodplain Management Ordinance. Due to the ecological importance of the function of IRA, why does the IRA classification not factor into the assessment of riparian impacts in the FEIS?	Resolution - Comment is not factually correct. There is no judgment made on page 15 that IRAs are not important. What is stated is that the IRA designation is a regulatory designation. The analysis presented in this section is based on field evidence to the extent possible. A regulatory designation does not assist in this effort.
661	Pima County - Carla Danforth	3	Springs	31	20-21	Hydroriparian and Mesoriparian habitat are subject to the same regulations under the Pima County Floodplain Management Ordinance. No regulatory distinction is made between the two classes. These stream reaches have intermittent flow, a criteria of mesoriparian habitat. If an applicant seeks to amend the riparian classification, plant surveys and documentation will be required and is subject to Pima County review and approval to issuance of a Floodplain Use Permit (FPUP)	Resolution - Statement of fact or opinion. No action needed.
662	Pima County - Carla Danforth	3	Springs	31	28-29	These stream reaches have intermittent flow, a criterion of mesoriparian habitat.	Resolution - Disagreement with analysis technique, but change is not appropriate. There is a project record memo reviewing this information and whether it is appropriate for inclusion. For the most part these areas are already analyzed because of springs. But intermittent streams language has been added to the SS&R section to reflect this. See Garrett memo 8/29/13.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
663	Pima County - Carla Danforth	3	Springs	41	11_2 7	Monitoring to assess impacts to streamflow is incorporated into the mitigation plan but what measures will be taken to reduce impacts if monitoring shows negative impacts on stream flow and groundwater levels? Monitoring is not valuable unless measures are identified to be undertaken should monitoring data show negative impacts on resources.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
664	Pima County - Carla Danforth	3	Springs	55	16-18	How will the enhancement of the Sana Cruz River near Sahuarita be accomplished and by whom?	Resolution - text has been added to describe this
665	Pima County - Carla Danforth	3	Springs	46-56	all	Given the large number of acres of riparian habitat and streams that will be impacted by the proposed actions, how and where can these impacts be adequately mitigated?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
666	Pima County - Carla Danforth	3	Springs	53-54	36- 38/1_ 2	The FEIS states springs & seeps will be monitored to determine impacts due to dewatering of the regional aquifer in vicinity of the mine pit but does not state what actions will be taken if the water levels are negatively impacted..	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
667	Pima County - Carla Danforth	3	Springs			How will reintroduction of beaver into Cienega Creek offset "any" impact due to dewatering of the regional aquifer, offsets should be quantified. If flows are diverted into upper Cienega Creek how will the diversion affect the biologically rich reaches of lower Cienega Creek?	<u>Resolution - No changes needed. Comment not factually correct. Reintroduction of beaver is not a mitigation, it is a foreseeable action. See SSR, Page 55, lines 19-23. The paragraph in question says nothing about offsetting impacts from the project.</u>
668	Pima County - Brian Powell	3	Springs, Riparian	8	15	The FS expanded their analysis to a larger set of springs for this version of the EIS. That is good, but in analyzing the effects of the mine, it was not recognized that baseline conditions were taken during the height of one of the most severe droughts of recorded history. Data from elsewhere in the watershed (e.g., Cienega Creek Preserve) support this, but again, this is not taken into consideration	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>Very few springs are disregarded in the analysis on the basis that they are localized ephemeral springs. Those that are have a decent track record in which no flow has been observed for multiple years or seasons. Comparatively, there are quite a few other springs that have exhibited consistent flow that has not dropped off.</u> <u>Most springs are considered to be impacted because the source of water is now known. But where physical field observations indicate persistent lack of flow, where elsewhere flow persists, that is reasonable evidence for a localized, ephemeral spring not tied to the regional aquifer.</u>
669	Pima County - Brian Powell	3	Springs, Riparian	11	20	The report cited is the wrong study (what was cited was a fact sheet) and the correct report was not provided.	<u>Resolution - This has been remedied</u>
670	Pima County - Brian Powell	3	Springs, Riparian	15	27	The FS cites long-term uncertainty about impacts to water and vegetation resources as being largely shaped by externalities ("Long-term impacts are less certain or even speculative, not only because the uncertainty of the model results increases with time but because the cumulative effects from other future actions and climate change are entirely unpredictable during these long time frames"). These factors are certainly important, but this is the wrong approach; what is before the FS is a mine proposal that will have impacts on geological time scales and this should compel the FS to invoke the precautionary principle	<u>Resolution - Statement of opinion or fact. No actionable comment. No changes needed.</u>
671	Pima County - Brian Powell	3	Springs, Riparian	23	1	Pima County has collected baseline data at Bobo, Mescal, Davidson, and Becky spring (indicated as #92; this is important spring for Bar-V Ranch and is an important source of domestic water for the ranch). We can provide these data to the FS for their analysis and we would welcome data collection at these sources. In fact, it is surprising that we were not contacted by the FS or Rosemont consultants about these springs. All of them are very accessible (i.e., not "too remote")	<u>Resolution - This new information was requested, reviewed, and incorporated if appropriate and pertinent.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
672	Pima County - Brian Powell	3	Springs, Riparian	54	1	Further development in Davidson Canyon and the installation of more wells seems to be a reasonably foreseeable action that should be analyzed based on population projections for the area and the fact that there is no other water supply for future growth.	Resolution - Statement of fact or opinion. No action needed. Unless there are specific plans, this does not rise to the level of a foreseeable action. However, we did take population growth and associated development into account in the no action alternative and the existing condition upon which the analysis of impacts is based.
673	Pima County - Brian Powell	3	Springs, Riparian	56	9	There is no clear connection between a number of the mitigation and monitoring activities in this section (e.g., perimeter buttresses, growth media salvage) to seeps, springs, and riparian areas. Document should be explicit about how some of these mitigation measures would impact these resources.	Resolution - Clarification has been added to several mitigation measures
674	Pima County - Brian Powell	3	Springs, Riparian	58	1	The document states "revegetation of disturbed areas would also reduce impacts to riparian resources by allowing more water to flow downstream as soon as possible during the active mining phase." It is not clear how more vegetation, which holds and uses water, would allow more water to flow downstream.	Resolution - Text modified
675	Pima County - Brian Powell	3	Springs, Riparian	58	19	"The new riparian habitat that would be created downstream of Pantano Dam would replace hydriparian habitat if any is lost." Has this been evaluated? If so, how much hydriparian habitat would be created?	Resolution - The effectiveness determination has been modified.
676	Pima County - Brian Powell	3	Springs, Riparian	NA	NA	There is no analysis of the impact of fire and/or pests on these resources. As springs and shallow groundwater areas are dewatered, they will be more susceptible to wildland fire and/or pathogens. This is an important indirect effect.	Resolution - this indirect effect has been added to the SS&R section
677	Pima County - Brian Powell	3	Springs, Riparian	NA	NA	A large body of evidence from regional studies of riparian and aquatic plants points to thresholds as systems respond to changes in groundwater levels. Crossing these thresholds does not always result in replacement with another communities, but can (at first, or over a very long period time) result in reduced vigor (particularly in riparian trees) and loss of grasses and forbs. This has not been analyzed for springs (and their associated plant communities), nor has such analysis been extended to Davidson Canyon and Cienega Creek.	Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.
678	Pima County - Sarah Walters	3	Air Quality Summary of Effects by Issues Factor by Alternative	13	1	Table 28: there are multiple places in this table where it appears information is missing, i.e. Issue 2.1: PM2.5 versus background and threshold – under the Proposed Action column '...Active mining: 4 increase...' what value does the 4 go with, i.e. is it a 4 percent increase? Earlier in the document it specifies a '4 X increase', but in this section it is not specified	Resolution - No changes needed. This is the summary table. It can't include every detail.
679	USEPA	3	Surface Water			Cienega Creek and Empire Gulch have not been delineated for jurisdictional wetlands or waters of the U.S. EPA believes that 404 needs to include these indirect impacts.	Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
680	USEPA	3	Surface Water			Need to improve the discussion of CWA Section 404	Resolution - Comment is not actionable. However, 404 section has been rewritten as per USACE comments.
681	USEPA	3	Surface Water			Mitigation proposed is "grossly inadequate"	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
682	USEPA	3	Surface Water			EPA indicated the EIS stated that the lands offered fully compensate for impacts to riparian areas	Resolution - The effectiveness determination has been modified.
683	USEPA	3	Surface Water			402 permit – Do not believe we can assess effectiveness of permit without having the SWPPP in hand	Resolution - Comment preliminary and was superceded by written comments.
684	USEPA	3	Surface Water			401 water quality certification – EPA indicated that the 401 permit decision by ADEQ is extremely limited in scope, and is only focused on the dredge and fill of waters of the U.S., but no indirect impacts. It does not offer protection for water quality	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
685	USEPA	3	Surface Water			Surface water quality – Questioned why suspended sediment was not modeled for its effect to downstream waters	Resolution - Comment preliminary and was superceded by written comments.
686	ADEQ	3	Surface Water			Primary concern is surface water quality and anti-degradation. Problems with Table 112 and concern over prediction of runoff quality	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
687	ADEQ	3	Surface Water			Asked why replenishment and makeup water (a previous ADEQ suggestion) was not incorporated as mitigation	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
688	ADEQ	3	Surface Water			Would like to see a quantification of how much Barrel contributes to the watershed	<u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u>
689	ADEQ	3	Surface Water			Need to rewrite 402 sections, they mischaracterize the MSGP process	<u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u>
690	ADEQ	3	Surface Water			Check to see if Table 111 contradicts SW Quality section. Might want to change “currently absent” wording as well.	<u>Resolution - This wording has been checked and changed.</u>
691	ADEQ	3	Surface Water			Consider expanding FS-BR-19 to include basics of surface water monitoring	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This particular measure was expanded to include more details.</u>
692	Pima County	3	Surface Water			Fails to address Pima County floodplain regulations and outdoor lighting code. Pima County insists that state law only restricts zoning, not other regulation. Indicates if Rosemont doesn't comply they will be sued.	<u>Resolution - Comment preliminary and was superceded by written comments.</u>
693	Pima County	3	Surface Water			Erosion and flood hazard – Indicates that inappropriate techniques were used	<u>Resolution - Comment preliminary and was superceded by written comments.</u>

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694	Pima County	3	Surface Water			Concerns over CAP recharge description	Resolution - Comment preliminary and was superceded by written comments.
695	Pima County	3	Surface Water			Indicates there is a 10-foot drawdown restriction that is not properly disclosed	Resolution - Comment preliminary and was superceded by written comments.
696	Pima County	3	Surface Water			No measures to protect aquifer through proper well abandonment etc.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This particular measure was added.
697	Pima County	3	Surface Water			Forest should protect water quality at springs	Resolution - Statement of fact or opinion. No action needed.
698	USACE -Blaine	3	Surface Water Qual	3	11_1 2	We, again, request you remove the statement regarding "experts in the field" since you did not identify them. If you referenced reports, etc, in the appropriate sections, then the "experts" will be apparent.	Resolution - Have revised text
699	USACE -Blaine	3	Surface Water Qual	3	6_7	We, again, request you remove "to assess direct impacts to surface water quality". It is acceptable to state "to assess direct impacts to potentially jurisdictional waters of the U.S." A PJD is to be used for purposes of Section 404/401. The EIS should not only be addressing impacts to surface water quality (401) but also quantity (404).	Resolution - This text has been changed
700	USACE -Blaine	3	Surface Water Qual	5	Issue 3:E:4	Table 97: the acres of WUS impacted has changed with the latest modeling. For example, acres of WUS impacted by the Barrel Alternative is now ~ 68.	Resolution - Has been changed to match latest 404(b)1
701	USACE -Blaine	3	Surface Water Qual	6	20	Table 76: This table is misleading because it is not being revealed that the reduction in stormwater flows during mine operations for the Barrel Alternative is much higher than 17%.	Resolution - Table 76 and 90 were revised. Subsequent tables were not.
702	USACE -Blaine	3	Surface Water Qual	19	1,2	Table 103: Please contact WL for revised numbers on WUS affected. There have been very recent changes.	Resolution - Has been changed to match latest 404(b)1
703	USACE -Blaine	3	Surface Water Qual	30	19	Table 90: Same comments as above. The Corps' concern is that a reduction in flow of close to 40% during mining will impact downstream areas to such a degree that the 17% reduction in flow postclosure won't matter.	Resolution - Table 76 and 90 were revised. Subsequent tables were not.
704	USACE -Blaine	3	Surface Water Qual	33	16/17	Table 92: Same as above.	Resolution - Table 76 and 90 were revised. Subsequent tables were not.
705	USACE -Blaine	3	Surface Water Qual	34	35-41	This statement is incorrect. The Corps requests the USFS remove the portion of the statement "to compensate for impacts to WUS". These parcels are currently not in our mitigation plan and the DC and BC parcels will not be included. We have not yet determined if Mulberry Canyon will be included or not so we urge the USFS to remove the reference to it.	Resolution - Discussion of the effectiveness of mitigation for WUS has been revised to indicate that this falls within the purview of the Corps. However, note that these same mitigation measures would have some mitigation effect for resources, whether the Corps finds them effective to compensate for WUS or not.
706	USACE -Blaine	3	Surface Water Qual	34	4_12	As stated in Surface Water Quantity Section, the Cumulative Effects section is extremely weak.	Resolution - The cumulative effects sections were reviewed and modified if appropriate.

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707	USACE -Blaine	3	Surface Water Qual	37	1_32	Very weak discussion on Cumulative Effects.	Resolution - The cumulative effects sections were reviewed and modified if appropriate.
708	USACE -Blaine	3	Surface Water Qual	39	41-44	This statement is incorrect. The Corps requests the USFS remove the portion of the statement "to compensate for impacts to WUS ". These parcels are currently not in our mitigation plan and the DC and BC parcels will not be included. We have not yet determined if Mulberry Canyon will be included or not so we urge the USFS to remove the reference to it.	Resolution - Discussion of the effectiveness of mitigation for WUS has been revised to indicate that this falls within the purview of the Corps. However, note that these same mitigation measures would have some mitigation effect for resources, whether the Corps finds them effective to compensate for WUS or not.
709	USACE -Blaine	3	Surface Water Qual	40	14-22	Please remove this entire section on SCR. At this time, there is no commitment by any ILF Sponsor to accept SCR.	Resolution - The mitigation effectiveness section includes items from both the HMMP summary and the Biological Opinion. This measure has been modified to reflect the BO.
710	USACE -Blaine	3	Surface Water Qual	42	17-23	Please remove this entire paragraph as it is incorrect. Not only will the Corps not be accepting the DC/BC parcels but there has been no scientific determination that acquisition and protection of these parcels or SCR would "effectively mitigate impacts to surface waters".	Resolution - Discussion of the effectiveness of mitigation for WUS has been revised to indicate that this falls within the purview of the Corps. However, note that these same mitigation measures would have some mitigation effect for resources, whether the Corps finds them effective to compensate for WUS or not.
711	USACE -Blaine	3	Surface Water Qual	42	26-28	Please remove this statement: "While it is outside the analysis 26 area for surface waters, discharge of water below Pantano Dam would also be effective at creating or maintaining surface waters in the region." There is no scientific documentation that this statement is correct. In fact, there is an hydrologic sink below Pantano Dam which could result in substantial infiltration of surface waters passed over the dam.	Resolution - The effectiveness determination has been modified.
712	ADEQ- J. Emde	3	Surface Water Quality	25	20-21	If the preferred Barrel Alternative is adopted, a POC at the Compliance Point Dam may not be required by the APP, although some form of inspection may be required in the MSGP after the stormwater pollution prevention plan (SWPPP) is reviewed. ADEQ notes, however, that the Forest Service does caution the reader that some permits will be modified to conform to the preferred alternative.	Resolution - No changes needed. As noted, we already note it.
713	ADEQ- J. Emde	3	Surface Water Quality	25	31-42, 1-2	The phrase "and the physical appraisal of design capacity" does not belong here. It does not relate to the waste rock storage facility, but rather to the inspections for the heap leach pad.	Resolution - text changed as requested.
714	ADEQ- J. Emde	3	Surface Water Quality	25		The phrase "after every major storm event or surface flow event" does not apply to the waste rock facility. The phrase should be "after significant rainfall events." The surface flow event language pertains to the inspections of the three process ponds.	Resolution - text changed as requested.
715	ADEQ- J. Emde	3	Surface Water Quality	27	3-Feb	An aquifer water quality standard exceedance for selenium during SPLP testing would require segregation, under the waste rock segregation plan. Under that scenario, segregation is would be a requirement, not an option.	Resolution - text has been added to clarify

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
716	EPA	3	Surface Water Quality	31	2_10	<p>The reference to ADEQ's action with regard to coverage under AZ Multi Sector General Permit (MSGP) is not accurate. ADEQ has issued an authorization certificate to Rosemont Copper but still requires the submission of the Storm Water Pollution Prevention Plan (SWPPP) 60 days in advance of any mining activity. If the discharge from the mining operation had been within 2.5 miles of the OAW, Rosemont would have been required to submit the SWPPP with the NOI vs. 60 days in advance of mining; because it is not, Rosemont must submit the SWPPP 60 days prior to commencement of mining operations.</p> <p>The SWPPP must demonstrate that the discharge will not degrade existing water quality in the downstream Outstanding Arizona Waters (OAW). ADEQ will review the SWPPP and determine if coverage is granted under the MSGP. ADEQ can also deny coverage under the MSGP and require the applicant to apply for an individual permit. Throughout the document, there are references to a storm water plan describing controls and management; however, an SWPPP, as required by the MSGP, has not yet been submitted for review and action by ADEQ.</p> <p>The EIS should reflect the correct status of ADEQ's permit coverage and the requirements associated with the SWPPP.</p>	<p><u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u></p>
717	AGFD	3	Surface Water quality	33	9-14	<p>The text states that “[b]ecause the compliance point dam would be constructed of inert rock, has a small capacity, would be rebuilt, and is not considered a dam under the jurisdiction of dam safety regulations, any possible effects of the dam’s being destroyed are considered insignificant”.</p> <p>COMMENT: This statement was the subject of an AGFD DEIS comment that the destruction of the compliance dam is not an ‘insignificant event.’ The FEIS repeats the DEIS statement that the loss of the dam is “insignificant”.</p> <p>The destruction of the dam during storm events removes the last stormwater and sediment control structure before stormwater discharges to the downstream watershed and into the surface waters of Davidson Canyon and Cienega Creek.</p> <p>AGFD notes that Rosemont has yet to submit a stormwater pollution protection plan to ADEQ.</p> <p>RECOMMENDATION: The FEIS should analyze potential mitigation measures, such as runoff containment. If this is not feasible, all adverse effects to downstream watersheds should be analyzed and disclosed. An EIS shall provide a full and fair discussion of significant environmental impacts. 42 U.S.C. 4332(C); 40 CFR §1502.1.</p>	<p><u>Resolution - Have added clarification about compliance point dam role</u></p>
718	AGFD	3	Surface Water quality	34	4-12	<p>COMMENT: The discussion of cumulative effects on surface water quality is inadequate. The text should discuss the cumulative effects of mine stormwater runoff in connection with other potential development projects in the watershed. <i>Klamath-Siskiyou Wildlands Center v. Bureau of Land Management</i>, 387 F. 3d 989 (9th Cir. 2004).</p>	<p><u>Resolution - No changes needed. Other developments that are Reasonably Forseeable Actions have already been incorporated into the Cumulative Effects.</u></p>

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719	AGFD	3	Surface Water quality	34	14-18	The text notes that with regard to surface water quality, climate change predicts an increase in extreme rainstorms and flooding across the desert Southwest, and that this predicted change in weather patterns could have an effect on the quality of stormwater runoff. An increase in more extreme rainstorms and flooding would create higher volumes of surface flow passing through the ephemeral channels in a shorter period of time. RECOMMENDATION: The FEIS should expand this discussion to discuss the surface water effects of extreme storms potentially creating unregulated contact stormwater runoff from mine facilities and ore stockpiles down the Barrel Canyon drainage and into OAWs.	<u>Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.</u>
720	AGFD	3	Surface Water quality	1, 33	30-37; 7-9	<p>The text states: "Construction and operation of tailings, waste rock, and leach facilities have the potential to result in sediment or other pollutants reaching surface water and degrading water quality, leading to a loss of beneficial uses. If sediment enters streams, turbidity will increase, and State water quality standards could be exceeded. Downstream segments of Davidson Canyon and Cienega Creek are Outstanding Arizona Waters (Tier 3), which are given the highest level of antidegradation protection. As outstanding resource waters under the ARS, Tier 3 waters must be maintained and protected, with no degradation in water quality allowed."</p> <p>The FEIS does not fully describe the impacts of sediments and other pollutants from the mine site on downstream watersheds.</p> <p>The Rosemont Aquifer Protection Permit Application, Volume 1 (Tetra Tech, February 2009), Table 5.02 on page 33 contains a summary of rainfall run-off flow and volume reporting to the compliance point dam for six scenarios, from baseline to year 19 of mine operations. According to the Table, at baseline 468 AF of rainfall reports to the compliance point dam during a 2-year, 24-hour rain event; a 100-year, 24-hour storm results in 1,419 AF at the dam. From Year 0 to Year 19 of mine operations, a 2-year, 24-hour storm event will report from 406 AF to 229 AF to the dam; a 100-year, 24-hour event will report water volumes of 1,258 to 839 AF to the dam.</p> <p>The FEIS text states that "[t]he design of the compliance point dam is such that large flows are expected to overtop and occasionally destroy the dam. If the dam were damaged by a storm event, it would be repaired and rebuilt as necessary".</p>	<u>Resolution - Have added clarification about compliance point dam role</u>
721	EPA	3	Surface Water Quality	18-22		<p>The AFEIS does not adequately address the cumulative impacts on the designated uses and applicable water quality that would result from reductions in stream flow and potential sediment loading to downstream waters. Mining activities are expected to last 24.5 – 30 years (depending on the alternative chosen), and the report identifies significant impacts to waters of the US (WUS), including removal /permanent impacts to portions of Scholefield, Wasp and McLeary Canyons and Barrel Canyon, and 154 ephemeral drainages (35.3 - 52.6 acres), which are all ephemeral tributaries to Davidson Canyon and downstream Cienega Creek.</p> <p>The AFEIS did not model suspended sediment concentration or total dissolved solids coming off of waste rock, (Chapter 3, Seeps and Springs, p.43); therefore, a comparison to existing suspended sediment concentrations in the water could not be made.</p>	<u>Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
722	AGFD	3	Surface Water quality	25, 33		<p>AGFD repeats its DEIS Comment concern that the FEIS text does not describe potential adverse consequences to Outstanding Arizona waters of Davidson Canyon and Cienega Creek, their riparian resources and aquatic organisms, if stormwater discharges from the minesite breach or destroy the compliance point check dam.</p> <p>The Rosemont AZPDES Stormwater Multi-Sector General Permit permits the off-site discharge of stormwater that has not been in contact with mining operations and mine site materials. The text describes how stormwater leaving the site will be impounded and tested for constituents of concern. The compliance point dam is the final temporary impoundment pond located at the outlet of Barrel Canyon. The location for the compliance point dam was chosen because it is the downgradient edge of the collective drainages associated with mine project activities.</p> <p>The dam would be approximately 6 feet tall, designed as a porous, flow-through sediment pond with a capacity of 2 acre-feet. It is to be constructed using inert or acid-neutralizing waste rock and is to be the last point of detention in the series of stormwater controls and a point for surface water flows to be monitored and tested for chemical and sediment content in accordance with the Rosemont AZPDES permit prior to release into the Barrel Canyon channel. Stormwater is to temporarily impounded behind the dam during storm events and then slowly released downstream through the porous rock-fill embankment. The dam will also allow the settling and reduction of suspended sediments before the impounded stormwater is discharged downstream.</p>	Resolution - The proposed monitoring is already included in Appendix B. No actionable comment.
723	ADEQ- D. Turner	3	Surface Water Quality	31-33	####	<p>The third bullet should be revised to read, "The results of baseline surface water sampling indicate that stormwater runoff from the tailings and waste rock facilities from all action alternatives <u>may exceed the surface water quality standard for is not expected to degrade the existing surface water quality in the project area, with the exception of selenium.</u>" The fourth bullet in part states, "Predicting the likely selenium concentration in runoff from waste rock is not feasible." ADEQ acknowledges the difficulty of the task, but, in order to lay the groundwork for a prediction of whether surface water quality may be degraded, it should be done.</p>	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
724	ADEQ- D. Turner	3	Surface Water Quality	31-33	31-40	<p>The final three bullets rely on Rosemont's ability to make a demonstration under the MSGP (Part 1.1.4.6(2)) that the antidegradation standard can be met. This demonstration has not yet been made, because Rosemont has not yet submitted its SWPPP to ADEQ. ADEQ's approval to discharge under the MSGP will hinge on whether discharges will meet surface water quality standards, including the antidegradation standard (see also MSGP Part 1.1.4.6(3)). These bullets should be rephrased or deleted, because the conclusion that the mine can meet surface water standards is premature, in part because the information in the SWPPP, which is required by the MSGP, is not yet available. If Rosemont is unable to make an adequate demonstration for the MSGP that its stormwater discharges will not degrade existing water quality in Barrel Canyon or the downstream OAW, then coverage under an individual AZPDES permit may be necessary to demonstrate that standards can be met. The individual permit may require additional controls (in addition to what the Coronado may require in its mine plan of operations), as well as <u>expanded and more frequent monitoring and reporting.</u></p>	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
725	ADEQ- D. Turner	3	Surface Water Quality	31-33	7-8, 12-17	<p>Conclusions of Ability to Meet Surface Water Quality Standards:</p>	Resolution - Partial comment. Actionable comment elsewhere.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
726	ADEQ- D. Turner	3	Surface Water Quality	31-33	7-8, 12-17	Pg 33: the third bullet in part states, "runoff from the tailings and waste rock facilities ... <i>is not expected to degrade the existing surface water quality</i> ..." This statement is incongruous with the fourth bullet's discussion is about selenium exceedances. In addition, no samples were analyzed for dissolved copper yet the results of baseline surface water sampling in Barrel Canyon show persistent exceedances of the dissolved copper standard (Table 102). Based on the information in Table 102 and discussion on page 10, lines 35-36, the second bullet should read "Existing surface water quality in Barrel Canyon exceeds applicable standards for arsenic, lead, <u>copper</u> and silver." Barrel Canyon, as an ephemeral stream, carries an aquatic & wildlife ephemeral designated use (A&We). A&We does not have a dissolved copper standard, however, both Davidson Canyon and Cienega Creek carry an aquatic & wildlife warm water designated use for which there is a dissolved copper standard.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
728	AGFD	3	Surface water quality		6-19	The text and Table 105 reflects that selenium concentrations in stormwater discharges from the waste rock facility show selenium in excess of the surface water quality standard of 0.033 milligram per liter in Barrel Canyon based on synthetic precipitate leaching procedure testing, designed to simulate the exposure of waste rock types to slightly acidic rainwater. The text further notes that whether stormwater would actually be exposed to these waste rock types would not be fully known until operations begin. COMMENT: Approximately 1.2 billion tons of waste rock will be disposed in the Waste Rock Storage area over the life of the mine. The Department endorses and supports the rigorous monitoring program described in the FEIS for mine-related releases in seepage and stormwater. See Comments below.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
729	Pima County - Akitsu Kimoto	3	Surface Water Quantity	3	37	The Coronado Forest recognizes "change in recharge of the aquifer by runoff and the frequency of runoff" as "identified issues" The change in recharge could substantially affect the "Potential Waters of the United States" and Davidson Canyon. However, the FEIS did not clearly explain what action would be taken to prevent, minimize or address. Please explain.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

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730	Pima County - Canfield	3	Surface Water Quantity	3	19-22	<p>The method used to estimate erosion is not appropriate to evaluate the impact of mining alternatives and is far below industry standards. While Rosemont's consultant, Tetra Tech, has justified their use of the PSIAC method (Tetra Tech, August 18, 2011, comment 2), the two studies cited by Tetra Tech (Rasely, 1991; Renard and Stone 1982 [Tetra-Tech neglected to mention the co-author Stone]), clearly state that the PSIAC method is inappropriate for site level assessment: 'The method developed by the Water Management Committee of PSIAC (1968) was intended for broad planning rather than specific project formulation where more intensive investigations are required.'</p> <p>p. 130 in Renard KG and Stone JJ. 1981 "Estimating Erosion and Sediment Yield from Rangeland." Proceedings of the Symposium on Watershed Management, ASCE, Boise, Idaho, July 21-23, 1980 'It should be emphasized that the PSIAC sediment yield procedure is quite different from the Universal Soil Loss Equation, USLE, (Wischmeier and Smith, 1978) because the USLE evaluates on-site soil disturbance in relationship to agricultural cropland, which is the gross soil erosion in an individual soil and farm field setting, while the PSIAC sediment yield procedure rates sediment delivery from rangeland and mountainland which is net soil loss in a watershed hydrologic unit setting.'</p> <p>p. 6 in Rasely, RC. 1991. "Proposed Revision of the Sediment Yield Procedure Pacific Southwest Interagency Committee Report of the Water Management Subcommittee, 1968." Upper Colorado River Basin Rangeland Salinity Control Project, Salt Lake City, UT. U.S. Department of Agriculture, Natural Resources Conservation Service, 17 p</p> <p>This quote from Rasely, 1991 clearly indicates that PSIAC is meant to be used on undisturbed rangelands and mountainlands, while other methods, such as USLE,</p>	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.
731	Pima County - Canfield	3	Surface Water Quantity	5	6	<p>The PAEIS erroneously states that Pima County recommends the PC-Hydro model for determining peak flows. Instead, RFCD Tech Policy 015 describes which hydrologic model should be used in different situations, and Tech Policy 018 describes how these models should be applied.</p>	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.
732	Pima County - Akitsu Kimoto	3	Surface Water Quantity	5	11_1 7	<p>The FEIS stated that the relative difference in percent change of peak flow was 13% for the Golder model, compared with 17% for the Rosemont model. The FEIS concluded that the Rosemont model was reasonable based on this comparison. Although the Golder's study has some technical issues, the study result actually showed why we concerned the Rosemont modeling result. Table 3 of the Golder's study (2012) showed that the percent change for Run 1 (high rainfall with high CN) could be 28% while it was 13% for Run 3 (low rainfall with low CN). Our previous comments for the Rosemont model are 1. the model should use higher rainfall, and 2. the model should use higher CN. The Golder's result clearly showed that the percent change (between pre- and post-mining) could be much less (13% versus 28%) if the morel does not use appropriate rainfall and CN. We believe that the Rosemont model used low CN with low rainfall (similar to Run 3 in the Golder's model), resulting in a smaller percent change. The Golder's study indicated that the Rosemont modeling study could underestimate the percent change because they used low rainfall with low CN. Apparently the Golder's study does not support the Rosemont modeling results. Please explain why the Rosemont model with low</p>	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
733	Pima County - Akitsu Kimoto	3	Surface Water Quantity	5	11_17	The FEIS stated that the relative difference in percent change of peak flow was 13% for the Golder model, compared with 17% for the Rosemont model. The FEIS concluded 4% difference is insignificant. However, according to Table 76 (p.7), the peak difference is 22%, not 17%. It appears that the 17% difference is for average annual runoff (Table 76). The difference between 13% and 22% are not insignificant. Therefore the conclusion that the Rosemont model is reasonable and appropriate should be reconsidered.	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.
734	Pima County - Canfield	3	Surface Water Quantity	5	18 to 22	The PAFEIS states that 24-hr rainfall values of 4.75 inch and 5.35 inches were compared. However, the return period of the event is not stated, so it is unclear how the findings should be interpreted.	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.
735	Pima County - Canfield	3	Surface Water Quantity	5	18 to 22	The PFAEIS uses 24-hr storms for all hydrologic analysis which may not address the storm of biggest concern. Sometimes shorter-duration higher intensity storms can cause higher flood peaks, so FEMA directs practitioners to consider the critical design storm for the basin. As we have demonstrated in previous comments, in some cases the 3-hr storm or shorter duration storms can produce higher flood peaks. By limiting analysis to the 24-hr event, the analysis underestimates the peak flood risk. Therefore, the hydrologic analysis should follow FEMA guidance to assess flood peak risk by determining the rainfall event duration and distribution that produces the highest flood risk for the return period of interest (e.g. 100-yr). By limiting the hydrologic analysis to the 100-yr storm Rosemont will undersize infrastructure by basing design on storm events that will not produce the critical storm on the watershed.	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.
736	Pima County - Canfield	3	Surface Water Quantity	5	18 to 22	The PFAEIS uses 24-hr storms for all hydrologic analysis which may not result in cumulative rainfall depths that can cause overtopping of ponds or soil moisture conditions that cause geotechnical failures. Therefore, the hydrologic analysis should consider rainfall depths for longer period events, such as the 7-day rainfall depth (e.g. 7-day 100-yr rainfall depths).	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.
737	Pima County - Canfield	3	Surface Water Quantity	5	18 to 39	The analysis presents no actual values of runoff peak or volume and makes statements that could be interpreted either way (e.g. the 'model results' in lines 33 to 39 do not specifically state whether these results are measures of peak or volume). Therefore, it is impossible to assess the appropriateness of the analysis, when what is being compared (peak or volume) is not specifically stated. Furthermore, the 'percent difference' are of little help when the rainfall event used and the measure (peak or volume) is not specifically stated.	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.
738	Pima County - Akitsu Kimoto	3	Surface Water Quantity	5	18-32	One of the previous comments has not been addressed. The rainfall value used to runoff calculation in the Golder model is based on the point rainfall at an elevation of 4429 feet. The elevation the Golder model used is the lowest end of the project site instead of the average elevation of the project area. The Forest should explain why the lowest elevation of the project site was selected to estimate rainfall value. The rainfall value affects runoff volume calculation. Appropriate runoff volume calculation is important to estimate the impacts to the "Potential Waters of the United States" and Davidson Canyon.	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.
739	Pima County - Canfield	3	Surface Water Quantity	5	25 to 34	The PAFEIS states that a minimum CN of 85 was used in the hydrologic analysis and notes that CN is the most sensitive parameter. However the Preliminary Site Water Management Plan for the Barrel Alternative (TetraTech, July 2012) includes areas with CN of 75 (Upper and Lower Barrel Canyon p. 7 of that report) and 74 for the Trail Creek Basin. Therefore, the discussion presented incorrectly asserts that higher runoff producing potential was assumed in the modeling.	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.

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740	Pima County - Akitsu Kimoto	3	Surface Water Quantity	5	29-32	The Rosemont and Golder models used soil type C for the peak and runoff calculations. The USDA SSURGO soil map shows that the project area is mostly soil type D. Please explain why soil type C was selected. As the draft FEIS pointed out, Curve Number (closely related to the selection of soil types) can significantly affect volume calculations. And, appropriate runoff volume calculation is important to estimate the impacts to the "Potential Waters of the United States" and Davidson Canyon.	<u>Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.</u>
741	Pima County - Akitsu Kimoto	3	Surface Water Quantity	5	33-39	The Golder's study discussed about the difference in the peak discharge to justify the use of the Rosemont model. In addition to the difference in peak, the difference in runoff volume between the models should be discussed. The change in runoff volume could substantially affect the "Potential Waters of the United States" and Davidson Canyon.	<u>Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.</u>
742	Pima County - Canfird	3	Surface Water Quantity	5	4 to 43	The Golder Model report is not available as supporting data on the EIS report or the rosemonteis.us web site. Therefore, the conclusion that the 'Rosemont Copper modeling is reasonable and appropriate...' is unsupported in the analysis presented.	<u>Resolution - Process complaint. In fact, all references were provided to the cooperating agencies on July 1. Several that were missed were provided upon request soon thereafter.</u> <u>The Golder report was one of those provided to Pima County at their request.</u>
743	Pima County - Akitsu Kimoto	3	Surface Water Quantity	5	4_43	The Coronado Forest described that the Rosemont model results are reasonable, based on the Golder Associates' study. However, we found issues in the Golder's approach (Golder, 2012). Please address the issues cited below and explain why the Rosemont model results are reasonable based on the Golder's study.	<u>Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.</u>
744	Pima County - Canfird	3	Surface Water Quantity	10	8 to 16	The recognition that fires occur in the project area, that the largest burn areas have occurred since 2005 and that fires can dramatically impact the hydrologic regime should include a plan to address these concerns. There is no acknowledgment of associated hazards which occur in post-fire conditions including gully/erosion and debris flows which could impact drainage infrastructure both during operations and post closure. There are many examples of gully/erosion and post fire debris flows, including the Schultz fire that occurred near Flagstaff in 2010. Therefore, PAEIS does not offer a plan to address a likely hazard to occur in the project area during the operations and post-closure of the mine (i.e. fire and the associated flooding and debris flow hazard) and it should.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>

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745	Pima County - Akitsu Kimoto	3	Surface Water Quantity	21	10_21	One of the previous comments has not been addressed. The Forest assumes that sediment transport linearly increase/decrease with changes in a watershed area. The assumption is inadequate because high elevation areas receive more rain than downstream areas due to orographic effects. The project area is located upstream of the Davidson Canyon. The FEIS described that changes in sediment load would not significantly impact the fluvial geomorphology of the stream system because the area affected by the proposed mine is relatively small. However, the Forest admitted that "the reach of Barrel Canyon could be affected... (p.23, L8), and "This reach of Barrel Canyon ...could be impacted by the reduction of sediment load." Also, as shown in Table 104 (p. 22), the reduction of contributing watershed area can be more than 50%. Because the project site is located at upstream area with high elevation, the reduction of contributing area could have much more significant impacts on the annual sediment delivery than the Forest's estimates summarized in Table 104. The appropriate sediment delivery analysis is important because it could affect geomorphology, vegetation and fluvial system of the "Potential Waters of the United States".	Resolution - Disagreement with analysis technique, but change is not appropriate. The geomorphology analysis takes into account the entirety of the project, not just average annual sediment delivery.
746	Pima County - Akitsu Kimoto	3	Surface Water Quantity	22	22-30	The FEIS acknowledged that there will be a reduction in sediment yield from Barrel Canyon watershed but no change in the geomorphology of the channel is expected. The FEIS only discusses about annual average sediment delivery. The FEIS did not consider cumulative impacts of sediment delivery change over the active mine period and post-closure. Considering the proposed active mine life is over 20 years, the FEIS should assess long term impacts on sediment yield, delivery and channel geomorphology.	Resolution - Disagreement with analysis technique, but change is not appropriate. The geomorphology analysis takes into account the entirety of the project, not just average annual sediment delivery.
747	Pima County - Akitsu Kimoto	3	Surface Water Quantity	23	8_13	The impacts of mining activities on sediment transport could change over time during the active mine life and after the closure. The FEIS reported that the reach of Davidson Canyon is currently a sediment transport-limited system. However, with a reduction in sediment load from the project area over time, it is possible that loose sediment is washed out and as a result the sediment transport system could be changed. The changes in sediment balance could affect the fluvial geomorphology of the Davidson Canyon and Cienega Creek. Appropriate sediment transport analysis is necessary to estimate long-term impacts of mining activities on channel geomorphology, vegetation and fluvial system of the "Potential Waters of the United States". Cumulative impacts of possible changes in sediment transport system on "Potential Waters of the United States" over time should be disclosed.	Resolution - Disagreement with analysis technique, but change is not appropriate. The geomorphology analysis takes into account the entirety of the project, not just average annual sediment delivery.
748	AGFD	3	Surface Water Quantity	25	11-19	The text notes that the Rosemont Copper Company mining multi-sector general stormwater permit requires zero discharge of stormwater that comes into contact with ore stockpiles or processing facilities. Contact stormwater runoff from these areas is to be retained onsite in stormwater or process ponds and recycled as process water. COMMENT: The text should reflect that on-site stormwater and process ponds may not capture all contact stormwater from large or extreme storm events. It must also be noted that the dam might not retain flows from even moderate precipitation events given the small size of the impoundment. RECOMMENDATION: The FEIS should disclose the frequency of 2AF or greater storm events reporting to the compliance dam.	Resolution - Have added clarification about compliance point dam role

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749	Pima County - Canfird	3	Surface Water Quantity	25	19 to 21	The reduction of flows to downstream during the first 10 years of operations will put the offsite riparian areas at risk.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed.
750	Pima County - Akitsu Kimoto	3	Surface Water Quantity	25	20-21	Inconsistent results: The maximum runoff to the watershed during the first 10 yrs (the period with the max impact) is more than 30-40%? The table 90 shows the post closure runoff is over 45% in some cases.	Resolution - This discrepancy has been addressed
751	Pima County - Canfird	3	Surface Water Quantity	30	11-31	The analysis of downstream water volume effects on Davidson Canyon and Cienega Creek is flawed, because Predicting Regulatory (100-yr) Hydrology and Average Annual Runoff Downstream of the Rosemont Copper Project (Zeller, 2011a) ignores the fact that greater rainfall occurs higher on the high elevations like the mine site, and will contribute more water to downstream areas than low+ elevation watersheds. By assuming that all areas contribute runoff equally underestimates the impact the mine site will have on surface water and riparian habitat in Davidson Canyon and Cienega Creek. Therefore, Rosemont should revise the analysis to more accurately reflect the effect the differences in rainfall depths on downstream runoff and its impact on riparian habitat.	Resolution - Text has been added describing why this effect was determined to not be a significant concern.
752	Pima County - Canfird	3	Surface Water Quantity	30	28-31	The SWCA Report (2012) is not provided in the PAEIS or on the rosemonteis.us website, so the finding that stormwater flow will be reduced by 4.3% (for the Barrel Alternative?) is unsupported and cannot be evaluated.	Resolution - Process complaint. In fact, all references were provided to the cooperating agencies on July 1. Several that were missed were provided upon request soon thereafter.
753	Pima County - Akitsu Kimoto	3	Surface Water Quantity	30		One of the previous comments has not been addressed. Orographic lifting causes precipitation in the Southern Arizona. As a result of the orographic effects, mountain areas receive more rain than downstream areas. The runoff volumes shown in Table 90 were calculated based on the assumption that runoff volumes would be reduced in proportion to the drainage area. The analysis of orographic effects on annual runoff volume should be included in the FEIS. This is because runoff volume is one of the most important factors for riparian vegetation in Davidson Canyon and Cienega Creek. In fact, the FEIS mentioned that the reductions in runoff are primarily important because they indirectly impact the water availability for downstream use (p. 30, Line 32-33). Reduction of annual post closure runoff volume could be larger due to the orographic effects. Annual Post Closure runoffs shown in Table 90 should be reevaluated. Appropriate runoff volume calculation is important to estimate the impacts to the "Potential Waters of the United States" and Davidson Canyon.	Resolution - Text has been added to SW Quantity Environmental Consequences describing why this effect was determined to not be a significant concern.
754	Pima County - Akitsu Kimoto	3	Surface Water Quantity	30		The FEIS acknowledges that the modification of stormwater peak flows and volume is important in multiple aspects. However, the FEIS does not include any plans to address possible issues resulting from the modification of storm flow. For example, what would happen if the reduction of runoff volume significantly affects Davidson Canyon and Cienega Creek? The FEIS lacks a "backup" plan. Please explain what actions would be taken when problems are identified.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

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755	Pima County - Akitsu Kimoto	3	Surface Water Quantity	31		The FEIS described that surface water rights beyond Davidson Canyon are unlikely to be impacted by changes in surface water hydrology in the project area based on the proportion of the area of the project site (p.31, L.20-23). Impacts of the reduction of storm flow from the project area on annual basis may not be substantial to downstream. However, cumulative impacts over time could be significant. Assessments of cumulative impacts of mining activities over time (premining, active mining and post-closure periods) to downstream should be disclosed.	<u>Resolution - Disagreement with analysis technique, but change is not appropriate.</u> <u>The analysis does take into account the changes over time, including post-closure periods.</u>
756	Pima County - Akitsu Kimoto	3	Surface Water Quantity	31		The FEIS acknowledges that some water sources would be impacted (p.31, L.30). However, the FEIS did not clearly explain who would be responsible of addressing issues. Please cite a responsible party to address potential issues, threat to health and natural resources and explain how to address issues when identified.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
757	Pima County - Akitsu Kimoto	3	Surface Water Quantity	32	14-15	One of the previous comments has not been addressed. The FEIS mentioned about the best management plan, but the plan was not provided. Therefore it is not possible to assess the effectiveness.	<u>Resolution - Statement of fact or opinion. No action needed.</u>
758	EPA	3	Surface Water Quantity	32	29-33	The indirect/secondary effects of reduced aquifer recharge and bank storage from the proposed action on downstream waters in Davidson Canyon and Cienega Creek are potentially significant, as aquifer recharge is important in maintaining surface flows and shallow subsurface water levels for aquatic organisms and riparian vegetation and wetlands. We question the conclusion in the AFEIS that aquifer recharge cannot be quantified. Estimates of pre- and post-project aquifer recharge have been conducted for several development scenarios in the adjoining San Pedro River watershed (for example see (1): Levick L., et al. 2006. Simulated changes in runoff and sediment in developing areas near Benson, Arizona. U.S. EPA Office of Research and Development, Las Vegas, NV, and USDA Agricultural Research Service, Tucson, AZ, EPA/600/R-06/158 and ARS/1873. (2): Goodrich D.C. et al. 2004. Comparison of methods to estimate ephemeral channel recharge, Walnut Gulch, San Pedro River Basin, Arizona. Pp. 77-99 In Recharge and Vadose Zone Processes: Alluvial Basins of the Southwestern United States, ed. By F.M. Phillips, J.F. Hogan, and B. Scanlon, Water Science and Application 9, Washington D.C.). To the extent feasible, the EIS should provide a quantitative analysis of reductions in aquifer recharge to	<u>Resolution - this text has been modified to remove the conflict with other sections.</u>
759	Pima County - Akitsu Kimoto	3	Surface Water Quantity	33	8_9	Who is responsible repairing and rebuilt the dam if damaged?	<u>Resolution - Could not find referenced text. No changes.</u>

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760	Pima County - Akitsu Kimoto	3	Surface Water Quantity	34	32-35	If severe scour or aggradation is identified, how to address the issue?	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</p>
761	Pima County - Akitsu Kimoto	3	Surface Water Quantity	35	21-28	What action would be taken if water quality exceeds the standard or contamination of surface or groundwater is detected? Is there a public notification system if monitoring data shows that the level of contamination is above the standard or could potentially risk human health?	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</p>
762	Pima County - Akitsu Kimoto	3	Surface Water Quantity	37		Expansion of the limestone quarries in lower Davidson Canyon....this should be mentioned at p.3 Issue 3D; Surface Water Availability.	<p>Resolution - This is a foreseeable action and as such needs to be mentioned in cumulative effects - not an issue statement. No changes needed.</p>
763	Pima County - Akitsu Kimoto	3	Surface Water Quantity	37		Cumulative impacts of the reduction of storm flows downstream of the project site have not been evaluated. The FEIS focuses on the changes in either annual runoff or storm peak flow but ignored the cumulative impacts over the 20 years active mining life. Long-term, cumulative impacts of the reduction of flow from the project site on Davidson Canyon and Cienega Creek need to be evaluated.	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p>This is exactly what is analyzed in the SS&R section.</p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
764	Pima County - Akitsu Kimoto	3	Surface Water Quantity	38	6_9	What action would be taken if monitoring data shows the impacts to surface water quality in the Davidson Canyon during active period and post-closure?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
765	Pima County - Akitsu Kimoto	3	Surface Water Quantity	40		How will the monitoring data be used? What would happen if the monitoring data shows problems? The FIES should explain what actions would be taken when a problem arises.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
766	Pima County - Akitsu Kimoto	3	Surface Water Quantity	41		How long will the Rosemont Copper fund USGS to monitor the flow after the closure? The monitoring should continue after the closure to assess the mitigation effectiveness.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. The length of funding is clearly identified in Appendix B.
767	EPA	3	Surface Water Quantity	37-38		Refer to previous comments and recommendations regarding climate change.	Resolution - Statement of fact or opinion. No action needed.
768	Pima County - Julia Fonseca	3	Surface Water Quantity	NA	NA	The waste and tailings will create unplanned surface water bodies around the perimeter of the site where natural flows are blocked or where drainage collects. In addition, the mine plan of operations propose the creation of PCAs (perimeter containment areas) that may retain water periodically. Effects on surface water quality have not been analyzed.	Resolution – Comment not factually correct. The description of PCAs is correct. But the effect on SW Quality has been fully analyzed in the SW Quality section. The water in the PCAs will not be discharged downstream.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
769	Pima County - Julia Fonseca	3	Surface Water Quantity	NA		The EIS fails to analyze effects of SR 83 roadway alternations including drainage alterations resulting from the SR83 connected action.	Resolution - These have been added to the list of other connected actions that have minimal effects on surface water. Text changed.
770	Pima County - Julia Fonseca	3	Surface Water Quantity	NA		EIS fails to disclose WUS impacts associated with the SR 83 roadway improvements	Resolution - SR 83 roadway improvements are a Connected Action as described in Chapter 2, and are included in the impacts analysis for all resources
771	Pima County - Akitsu Kimoto	3	Surface Water Quantity	P.25 L1-4, P.27 L.40-41, P.28 L.1-9		The Forest recognizes the ephemeral stormwater flow from the project area would change, primarily as a result of the retention of water at the project site. Although the FEIS acknowledged that several cooperating agencies expressed concerns of the amount of water removed and a resulting serious impact to downstream riparian resources, the FEIS did not evaluate how the water removal could impact downstream riparian resources over time (pre-mining, active mining and postclosure periods). Please disclose cumulative impacts of the reduction of storm water to riparian vegetation, channel geomorphology and groundwater drawdown.	Resolution - Disagreement with analysis technique, but change is not appropriate. The requested analyses are already in the FEIS. Impacts to geomorphology are included in the SW Quality section. Impacts to riparian resources are included in the SS&R section. These include impacts over all time frames.
772	Pima County - Julia Fonseca	3	Surface Water Quantity		31	The secondary standards for total dissolved solids do have relevance for the character of the riparian vegetation and macroinvertebrate communities. Excessive salinities in particular can be damaging and encourage the growth of tamarisk. TDS levels at Oracle Ridge mine monitoring wells and tailings seep have been as high as 1200 mg/l. The Oracle Ridge mine is a skarn deposit similar to the Rosemont mine. The EIS should disclose the degree to which TDS will be affected in the Outstanding Waters, and provide for monitoring of such.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
773	Pima County - Julia Fonseca	3	Surface Water Quantity		35	A separate contingency fund should be established to deal with mitigation of impacts to surface water quality. The Cienega Creek Watershed Conservation Fund should not be used for dealing with surface water quality impacts caused by the mine, as that fund is inadequate for mitigating other impacts.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
774	ADEQ- D. Turner	3	Surface Water Quantity			<u>General comment:</u> What are the surface water inputs from the other downstream reaches to Davidson (not just Barrel) and how would these flows affect the concentrations of selenium and the other parameters predicted to exceed surface water standards (fluoride, sulfate and TDS – though it has no standard)?	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
775	ADEQ- D. Turner	3	Surface Water Quantity			<u>General comment:</u> ADEQ could not find a response to its January 18, 2012 comment regarding the provision of make-up water for what is lost to downstream surface waters due to the mine's presence. This option should be given serious consideration and addressed in one or both of these sections.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
776	ADEQ- D. Turner	3	SS&R Table 108		Table 108	"For Upper Cienega Creek, there is no direct potential to affect surface water quality, unless changes in stream flow indirectly affect aspects of water quality (temperature, for instance). For Lower Davidson Canyon and the portion of Lower Cienega Creek downstream of the confluence with Davidson Canyon, there is the potential to directly affect surface water quality through stormwater runoff."	Resolution - Partial comment. Actionable comment elsewhere.
777	EPA	3	SS&R Table 111, 112			As stated in the 404(b)(1) Guidelines, no discharge of dredged or fill material shall be permitted if it causes or contributes to violations of an applicable state water quality standard (40 CFR 230.10(b)(1)). Reductions in stream flows, alterations in sediment transport, groundwater drawdown and increases in the concentrations of pollutants have the potential to degrade water quality (e.g., warm water aquatic wildlife) and the aquatic ecosystem. The proposed project may not comply with the restriction on discharge as required by the Guidelines. Indirect effects may result in significant degradation to outstanding natural resource waters in violation of applicable water quality standards.	Resolution - This topic has been discussed between the Corps and Forest. There is a disagreement of position between the Corps and USEPA on this topic. The Forest is relying on the 404(b)1 analysis to define indirect impacts, which do not include those from groundwater drawdown. Note that the Forest has properly disclosed impacts to riparian areas in the NEPA document, regardless of their status as jurisdictional waters. No changes.
778	Pima County - Postillion	3	GW Quantity Thresholds of Concern	7	1_18	The EIS authors incorrectly claim that natural water-level fluctuations in wells make interpretation of the predicted draw downs from the mine pit more difficult and inaccurate, thus making the 5-foot predicted decline a better or preferred indicator. We believe that the impacts from the mine pit and all other sources are additive. This means that if seasonal changes currently lower the water levels below stream channels and occasionally affect riparian trees and other vegetation, the drawdown from the pit will increase the time and magnitude of these impacts and will be superimposed upon the current impacts. Thus, a one-foot decline contour will show an ADDITIVE effect on the currently documented declining water levels and base flows of the Cienega and Davidson Basins. A recent study we can supply, statistically documents the 15-year drought in the Cienega Creek Nature Preserve, and can serve as a baseline for any potential mine activity (Powell, 2013). The study uses statistics to show the long-term trends and allows for seasonal variability. This justification should be dropped. Also, substantial natural fluctuations observed in deep bedrock aquifers as opposed to basin fill aquifers could indicate that impacts from a large open pit will move through these aquifers much more quickly than predicted with the groundwater model. This could result in larger draw downs manifesting faster	Resolution - The Riparian analysis has been rewritten based in parts on USEPA comments, including how the groundwater models have been interpreted and used. The Forest specialists have reviewed and approved the section.
779	Pima County - J. Crowe	3	Transportation/Access	1	8	The FEIS fails to present any quantified discussion of impacts to Santa Rita Road, yet this Pima County maintained unpaved road is planned to be used as a secondary access to the project site.	Resolution - No change. See earlier responses. No substantial mine-related traffic is anticipated to occur on the Santa Rita Road.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
780	Pima County - J. Crowe	3	Transportation/Access	1	14	The FEIS fails to present any quantified discussion of impacts to Sahuarita Road, yet this Pima County maintained road is the most direct access from any points south of downtown Tucson. This road will serve as a key secondary access road to the project site.	Resolution - No change. See earlier responses. No substantial mine-related traffic is anticipated to occur on the Sahuarita Road.
781	Pima County - J. Crowe	3	Transportation/Access	9	1	The FEIS fails to provide any quantitative discussion of potential usage or impacts from traffic generated by the proposed project on Sahuarita Road, a Pima County maintained paved roadway classified as a Rural Principal Arterial under USDOT / FHWA criteria.	Resolution - No change. See earlier responses. No substantial mine-related traffic is anticipated to occur on the Sahuarita Road.
782	Pima County - J. Crowe	3	Transportation/Access	13	15, 37	Lines 14-15 state that heavy-duty vehicles account for 6-12 percent of the traffic load according to the manual counts, but lines 37-38 state that heavy-duty vehicles account for only 4 per cent of the traffic load according to the ADOT counts. This is a difference of 50 to 200 per cent – which is correct? An accurate presentation of the heavy truck component is critical to subsequent discussions of the comparative increase in heavy trucks generated by the proposed project both during construction and operations. Heavy trucks are a key component of level of service, highway safety and traffic noise analysis.	Resolution - No change. A review of this comment in the context in which it is presented in the FEIS indicates that no change is needed. Lines 14-15 are presented as manual data collection; while lines 37-38 are presented as ADOT volume counts that were conducted IN ADDITION TO MANUAL DATA COLLECTION. Refer to the Transportation section in Chapter 3 for a complete review of the lines cited in their original context.
783	Pima County - J. Crowe	3	Transportation/Access	14	3	The FEIS fails to provide any traffic data on Sahuarita Road and Santa Rita Road, which will carry project traffic.	Resolution - No change. As stated numerous times, neither the Sahuarita or Santa Rita Roads are anticipated to carry substantive project traffic.
784	Pima County - J. Crowe	3	Transportation/Access	14	3	The FEIS fails to provide any traffic counts nor level of service data for SR 83 from the proposed mine entrance north to I-10, where the majority of mine traffic is expected to travel.	Resolution - No change. The comment is incorrect. Page 13, lines 27-31 of the Cooperating Agency version of the FEIS state this: In addition to the manual traffic counts described above, ADOT's Transportation Planning Division collected traffic volume counts of vehicles along the section of SR 83 between SR 82 and I-10 in 2006 and 2011 (Arizona Department of Transportation 2011), to arrive at an annual average daily traffic volume estimate for SR 83, as shown in table 165 (Arizona Department of Transportation 2011).
785	Pima County - J. Crowe	3	Transportation/Access	17	19	The Highway Capacity Manual states "...all grades of 3 percent or more with a length of 0.6 mi or more must be analyzed as specific upgrades or downgrades" (page 20-1, Highway Capacity Manual 2000). State Route 83 in the vicinity of Greaterville road meets the conditions of this restriction but there is no indication that such an analysis was made. There is no discussion of how the variations in conditions along the segments were averaged into a single value applicable to miles of roadway.	Resolution - No change. Analyzing state highways for their compliance with the Highway Capacity Manual is well beyond the scope of this analysis.
786	Pima County - J. Crowe	3	Transportation/Access	19	20	The FEIS fails to include any discussion of bicyclists and pedestrians which are both common and legal modes on S.R. 83 and all other public roadways except the controlled access portions of I-10. Bicyclists present special issues for level of service (overtaking and passing) and safety	Resolution - wording added in text.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
787	Pima County - J. Crowe	3	Transportation/Access	19	20	The FEIS fails to disclose that the Vail School bus turn around at milepost 46.9 on SR 83 is immediately south of the proposed Rosemont Copper primary access road at milepost 46.82. The fact that both school busses and heavy truck traffic converge at this one location increases the potential for school bus and mine truck conflicts. The FEIS fails to address this potential conflict or suggest possible mitigation measures to ensure safety.	Resolution: No change. Comment is incorrect - the FEIS states this on page 19, lines 22-28: "Current school bus stops are at the following locations: Hoffman – mileposts 52 and 51.3; Ghost Dance – mileposts 50.8 and 49.7; Hilton Ranch Road – milepost 49.1; Greaterville Road – milepost 42.6; and Yucca Ash Farms Road – milepost 37.6. The current school bus traffic pattern consists of two separate loops. One loop runs from Sahuarita Road to the turnaround at milepost 46.9 on SR 83. The second loop runs from SR 82 to Greaterville Road. Currently, the school bus pick-up and drop-off locations are located such that students do not have to cross SR 83 to get to the bus stop. did not read the ADOT mitigation that includes the construction of new bus pullouts." The concerns expressed in the comment have been considered in the analysis and in ADOT mitigations.
788	Pima County - J. Crowe	3	Transportation/Access	19	20	The FEIS fails to address how the increased number of heavy trucks traveling to and from the mine site will impact the safety of school busses stopping within the travel lanes of SR 83. Neither does the FEIS address how school busses stopping will affect level of service under increased mine traffic.	Resolution - No change. The FEIS states, "Traffic is sometimes delayed because vehicles must stop and cannot legally pass a school bus during student loading and unloading." Mine related trucks must follow traffic laws along with all other drivers. This is a given and does not bear repeating in the FEIS.
789	Pima County - J. Crowe	3	Transportation/Access	21	30	Table 169 states that all 1,250 workers will commute in 37 buses. How will this be organized and enforced? If not required, there will be much more commuter traffic using SR 83 and local roadways and the traffic impacts would be much greater than what was assumed for the traffic impact analysis.	Resolution - No change. This is a commitment that RCC has made and it will be a requirement of the final MPO.
790	Pima County - J. Crowe	3	Transportation/Access	23	34	Although it is impossible to predict how much commuter and mine-related traffic will use Sahuarita Road, it is highly likely that some traffic will use this route because it is the closest arterial roadway to the proposed mine. It provides the most direct access to Green Valley, Sahuarita and southern Tucson. The current pavement condition is poor so any additional traffic will further deteriorate this roadway and accelerate the need for improvements.	Resolution - No change. The majority of commuter traffic to and from the mine is anticipated to occur on I-10 and SR-83.
791	Pima County - J. Crowe	3	Transportation/Access	26	1	There is no discussion of level of service impacts on roadways under the jurisdiction of Pima County (Sahuarita Road, Santa Rita Road, and Valencia Road adjacent to the Port of Tucson which will have increased traffic, especially heavy trucks, due to Rosemont mine construction and operations	Resolution - No change. The roads analysis in the Transportation section of the FEIS addresses all roads anticipated to experience increased traffic associated with the mine.
792	Pima County - J. Crowe	3	Transportation/Access	28	19	The secondary access road connection to Santa Rita Road will require a Right-of-Way Permit from Pima County. A similar permit or permits would be required for any utility facilities that are located within the Santa Rita Road right-of-way.	Resolution - Added a statement that the county says RCC must obtain a count permit wherever its activities encroach on the county ROW.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
793	Pima County - J. Crowe	3	Transportation/Access	30	24	The 100-150 estimated daily heavy truck traffic during the 20 year mine production life will have a greater impact on level of service on State Route 83 and other affected roadways than the simple number would indicate. How are the effects of heavy vehicles in the traffic stream taken into account in the estimation of level of service impacts?	Resolution - No change. The analysis methodology is described in Analysis Methodology in the Transportation and Access section of Chapter 3.
794	Pima County - Neva Connolly	3	Visual Resources	39	Figure 86	Figure 86: The proposed project area does not include the utility corridor, though corridor impacts were discussed in this chapter. The acres of potential seen area will increase greatly if the visibility analysis included the utility corridor.	Resolution - No change. The visual impacts from the utility corridor are addressed qualitatively in the Visual Resources section of Chapter 3.
795	Pima County - Neva Connolly	3	Visual Resources	30-31	43-3	Viewpoint 9 along Sahuarita Road is said to be representative of views from the Tucson area. It is not in the Tucson metropolitan area and it is not representative geographically. It is miles closer and on an opposite aspect (angle of repose) and lower elevation than much of the Tucson residential population.	Resolution - Slightly modified the wording in the cited paragraph. The project area is not visible from the vast majority of the Tucson metro area. This viewpoint is intended to represent those residential areas in the general vicinity of Sahuarita Road with a background view of the project area.
796	Pima County - Neva Connolly	3	Visual Resources	NA		EIS should disclose whether Forest will take any measure to response to damage of crest of Santa Ritas during operations and after mine closure.	Resolution - No change. No impacts to damage to the crest of the Santa Rita's has been predicted nor is it expected, and addressing response to impacts not expected to occur is speculative at best.
797	Smithsonian-- Emilio Falco, J. Shaw	3	Dark Skies	14	27-31	Delete: "While the Pima County Outdoor Lighting Code currently keeps light pollution at levels that do not adversely affect astronomy research, the trend toward increasing urban and industrial development and mineral resource exploration, development, and extraction would adversely impact night skies in terms of the nighttime light levels required for astronomy research." Replace with: "Although the Pima County Outdoor Lighting Code currently keeps light pollution at levels that minimize adverse effects to astronomy research, the trend toward increasing urban and industrial development and mineral resource exploration, development, and extraction would adversely impact night skies in terms of the nighttime light levels required for astronomy research." Rationale – any light level impacts astronomy.	Resolution - Changes made in text, although somewhat modified from that offered.
798	Smithsonian-- Emilio Falco, J. Shaw	3	Dark Skies	15	2	Add: "Dark Skies mitigation and monitoring plan is described in Appendix B."	Resolution - No change. This is stated in earlier section of Chapter 3 and does not need to be repeated in every section.
799	Pima County - Brian Powell	3	Bio Resources???	106	2	No acknowledgement of the impacts on the Sonoran desert tortoise in the Cienega Creek area	Resolution - it has been noted that habitat for this species also occurs around Cienega Creek and Davidson Canyon.
800	AGFD	3				COMMENT: See Comments below. AGFD repeats its DEIS comment that the dry stack tailings facility is expected to discharge seepage for 500 years, that portions of the seepage are outside the mine pit capture zone, and that the seepage will proceed down the Barrel Canyon drainage.	Resolution - A discussion of the risk for tailings seepage daylighting downstream in Barrel Canyon has been added to the GW Quality section

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
801	AGFD	4	Biological Resources	92, 93	18-29 10-14	<p>COMMENT: The FEIS correctly states that “the project would result in significant fragmentation of mountain habitat” compared to the existing condition.</p> <p>This project area is high quality habitat that functions as the hub of a number of corridors which radiate out to other sky islands like the spokes of a wheel. Page 93 correctly states that wildlife movement “throughout the area would be severely compromised for some species” yet in the Mitigation Effectiveness section little to no mitigation for wildlife movement impacts have been identified as required under NEPA.</p> <p>RECOMMENDATION: The Department recommends that previously identified mitigation measures be described to address the impacts to wildlife connectivity at modeled wildlife linkages fragmented by highways and across the project area.</p>	<p>Resolution - No change. The Forest Supervisor has reviewed all suggested mitigation and selected those that are within his authority and that would be effective. AGFD fails here to specify which previously identified mitigation measures they are talking about.</p>
802	Smithsonian-- Emilio Falco, J. Shaw	2 Alternatives, Including the Proposed Action	Table 12 Alternatives impact	104	Issue 11A.7 Qualit ative asses sment of econo mic effect on astron omy industr y	<p>Delete:</p> <p>“Adverse impacts on dark skies could result in an impairment of observatories near the project area, which could result in a decrease in State revenues generated from astronomy, space, and planetary research and tourism. Although the increase in night sky illumination is not expected to be significant, the negative public perception of having a copper mine next to an observatory may impact observatory revenues.”</p> <p>Replace with:</p> <p>“Adverse impacts on dark skies would result in an impairment of observatories near the project area, which would result in a decrease in State revenues generated from astronomy, space, and planetary research and tourism. Slight increase in night sky illumination will impact faint object astronomy. In addition the negative public perception of having a copper mine next to an observatory has already impacted future observatory revenues, particularly diversion of future leading edge projects to other “darker” locations.”</p> <p>Rationale – consistent with text in the EIS Dark Skies and Socioeconomics section.</p> <p>“However, even with the revised lighting plan’s reduction of lighting impacts, mine lighting would have a long term, adverse impact on dark skies during the premining and active mining phases.” (EIS Ch 3 Dark Skies p15, lines 20-22)</p>	<p>Resolution - Table 12 conclusion of impacts changed to match that in the Socioeconomic section in Chapter 3.</p>
803	Smithsonian-- Emilio Falco, J. Shaw	2 Alternatives, Including the Proposed Action		12	34-35	<p>Please clarify the statement:</p> <p>“The original lighting plan remains a part of the proposed action, whereas the updated lighting mitigation plan applies to all other action alternatives.”</p> <p>This sentence is ambiguous. The FEIS should clearly state that RCM must implement the Monrad Lighting Plan (2012) in any approved action.</p>	<p>Response - No change. The wording is clear as stated. The Responsible Official is free to select components and apply them to different alternatives in the ROD.</p>
804	Smithsonian-- Emilio Falco	2 Alternatives, Including the Proposed Action		13	14,15	<p>Please clarify the statement:</p> <p>“Elevated hazard areas, such as the mine process area and pit, would mostly require high-pressure sodium lighting or solid-state LED lighting fixtures that would be aimed and shielded to minimize light pollution.”</p> <p>The Monrad plan (2012) does not include any HPS.</p>	<p>Resolution - Changed to state that high pressure sodium lights may be required.</p>

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805	Pima County - John Wisner	3 - Public Health		22	41	Pima County Office of Emergency Management, Local Emergency Planning Committee, Fire Chief's Association & Sheriff Department should be included in the planning process for the response plans, at least for review and comment, indicated in this section along with additional plans required by law, statute and local ordinances.	Resolution - Edits made, here and in Appendix B.
806	Pima County - Chavez	3 - Socioeconomics	Table 238- Potential environmental justice impacts	70	Water Quantity	The FEIS states there would be an adverse impact to water quantity, but no disproportionate impact because wells experiencing drawdown would not extend to environmental justice communities. We disagree. Many well owners experiencing the impacts of drawdown would be affected. Potential impacts of the projected drawdown to the Tohono O'odham Nation are not adequately addressed.	Resolution - No change. See earlier response to this issue. This was reviewed and it was confirmed by the IDT that no disproportionate impact would occur.
807	EPA	3 & App B	Multiple			The AFEIS does not adequately support the statement that mitigation measures compensate for impacts to waters of the U.S. EPA believes that implementation of the mitigation measures described in the AFEIS and discussed below would not fully compensate for the project's impacts to waters of the United States (waters) (40 CFR 230 Subpart J). The substantial loss and degradation of water quality and other aquatic ecosystem functions are likely if the proposed mine is constructed. Of particular concern is that the geographic extent of indirect effects to waters from groundwater drawdown related to the mine dewatering is not fully known, in part because waters have not been fully delineated within the assessment area. In the absence of a full delineation of waters, it is not possible to provide adequate compensatory mitigation for indirect effects.	Resolution - The effectiveness determination has been modified.
808	Pima County - Carla Danforth	3 & Appx B	Springs	56 & 58 21 (B)	29-30 & 14-20	If the surface water rights are transferred to an entity which allows the water to flow downstream of the dam, Del Lago Golf Course (current user of the surface water diverted from Cienega Creek) will need to find an alternative irrigation source. What will this alternative water source be? No plans exist for a reclaimed or CAP water line to be constructed to the golf course, have the effects on Cienega Creek of pumping a new well for golf course irrigation been analyzed? The water rights severance and transfer process is a lengthy legal process, which is likely to be protested, and the applicant has no guarantee it will occur. The amount of water physically available through the severing and transferring senior water rights for in-stream flow along Lower Cienega Creek is limited and decreasing, water rights do not equal wet water. The trend in streamflow of Cienega Creek is declining water levels, the median annual flow has decreased from 1.5 cfs to 0.4 cfs between 1984-2012 (Powell 2013). This declining flow due to climate change and the effects on the stream reach should be addressed in the FEIS.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
809	Pima County - Carla Danforth	3 & Appx B	Springs	57 & 35(B)	24-29	\$2 million endowment is not sufficient to mitigate the large number of acres being impacted by the proposed actions. \$2 million spread over 10 years will not finance many acres of mitigation. Restoration of functional streams and ecosystems is very costly, in the range of \$80,000 – \$200,000/acre or more including long-term monitoring and maintenance.	Resolution - No change. This is a conservation measure and Term and Condition from the BO. The FS does not have the authority to dictate the amount of money in this account.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
810	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont	1	26	"The potential for subsidence to occur is linked primarily to groundwater withdrawal. " It may be possible that undrilled, mis- or unidentified cave or dissolution features (hypogenic) could be missed or still might exist at depth below the current water table). Many cave experts understand that various caves in the SW exhibit directly or imply a hypogenic stage on their history. Dissolution processes and outcomes, produced from upward migration of heated brines (geothermal) along faults, fractures and bedding planes from fault reactivation and transient associated pressure releases from past and modern seismic events had also produce additional rock deformation, and/ changes to overburden pressures. Associated hydrosulfuric acid production and resultant dissolution have been tied to the process for not only caves genesis in carbonate- / evaporite-rich strata, but also for the emplacement of economic or other mineralization (e.g. metasomatism) at local and regional scales. It is theorized that the early genesis of many caves in the SW and SE AZ was most likely initiated through combinations of these processes. Later tectonic deformation, uplift, isostatic unroofing, and other exhumation/erosional processes lead to the removal of overburden. With sufficient loss of overburden processes epigenic	Resolution - Have added east side subsidence analysis to GW Quantity section.
812	Pima County - J. Crowe	3	Transportation/Access	30	16	The FEIS states that during construction of the mine as many as 1,250 workers will be bussed to the site (37 busses) from staging areas along I-10 or in Sonoita. Where will these "staging areas" (parking lots) be located, will they involve permitting (ADOT, local jurisdictions), and will they disturb new ground not accounted for in the FEIS? Construction is stated to occur in one shift; what will be the impacts on State Route 83 traffic and level of service from the platoons of busses headed to the mine at about the same time? If the busses leave the project site after delivering workers there will be up to 148 additional bus trips per day on S.R. 83. at the height of the construction activity. This is not addressed in the FEIS.	Resolution - No change. Locations of these facilities is currently unknown. The following is stated on page 30 lines 13-17 of the Transportation section (Cooperating Agency version): "According to the revised information in the "Rosemont Primary Access Road Traffic Impact Analysis," crews would be bused from staging areas around I-10 to the north and Sonoita to the south, totaling approximately 37 bus trips. The exact locations of the staging areas would be undetermined until the locations of the majority of the workers' neighborhoods are known."
813	Pima County - J. Crowe	3	Transportation/Access	32	12	If copper concentrate is shipped via rail to Nogales, the projected train traffic would impact several Pima County at-grade roadway crossings including Hughes Access Road, Old Vail Connection Road, and Whitehouse Canyon Road. These impacts have not been addressed.	Resolution - Added to the text in the analysis of train traffic increases
814	Pima County - J. Crowe	3	Transportation/Access	32	20	This section fails to address impacts to bicyclists and pedestrians, both common on S.R. 83, especially in relation to safety, overtaking and passing and the increase in truck traffic.	Resolution - added to the text of transportation section
815	Pima County - J. Crowe	3	Transportation/Access	34	31	Constructing bus pullouts would not improve traffic flow because school children may still need to cross the street to board or depart the bus. Given the additional truck traffic, school children may require the bus to stop traffic so that they can safely cross the street. The bus pullouts will therefore not improve student safety.	Resolution - No change. Information received from the Vail School District indicates that childered do not currently need to cross SR83 to catch the school bis. This is disclosed in the Transportation and Access section of the FEIS.
816	Pima County - J. Crowe	3	Transportation/Access	34	39	The proposed mitigation measure requiring truck traffic to avoid times of high commuter or school bus traffic conflicts with the statement on page 31 line 4 that "the largest volume of mine traffic...would occur...between 6-8 a.m. ..." This timeframe coincides with school bus traffic and morning peak hour traffic. How would this measure be accomplished?	Resolution - No change. Rosemont would require its vendors to avoid times of high commuter or school bus traffic.
817	Town of Sahuarita	3	Transportation/Access	1	40-41	Would like to have confirmation and a notation in the FEIS that mine deliveries would not use Sahuarita Road on regular basis	Resolution - No change. The FEIS states that I-10, SR 83 and other state routes south of the project area would be used primarily for deliveries and outgoing shipments. However, Sahuarita Road is a public roadway open to all highway legal vehicles without any further permit.

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818	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont		2	20-21 <p>"The probability of finding paleontological and cave resources can be broadly predicted from the geological units present at or near surface." True in part—but maybe not so much. The statement is largely unsupported, statistically or otherwise, in relation to caves. Oil geologists learn early in carbonate stratigraphy training that reservoir properties are heterogeneous in small and large ways- laterally and vertically. Small and larger facies changes and intra-formational parasequence boundaries can and do result in changes to subsurface porosity (storage) and permeability (void connectivity) (mostly secondary) across and within carbonate units. The idea of "pure limestone" (no insoluble residues) hardly exists in the SE or elsewhere in the Paleozoic carbonates. Hoag et al, 2012 and Spencer (2012) commentary provided to the CNF elect to reveal select list of examples of "known" caves and summations or opinions on modern karst and paleokarst developments. The caving community is familiar with many caves that what is published. Much of the data and locations are known to the CNF. It seems that there is an implication to the presence and likelihood of caves in the Paleozoic units are common to Colorado Plateau and central AZ "transition" regions, as well as SE AZ, but a wobbly case that the degree of hosted mineralization in SE AZ deduces the likelihood of cave formation at the proposed mine site is practically nill because the host rock has been completely changed in its dissolution character—and because no caves have been found in the immediate area. It seems scientifically unsupported to imply that the greater the distances of known caves (humanly accessible features) from the proposed pit site, the lower the chance that cavern formation in or near the immediate area (or any other area that hosts both intensively or moderately deformed and mineralized carbonate strata for that matter). Studies abound in the cave science, geoscience and geological engineering literature that caution strongly against employing such local or distal assumptions. The 2012 reports to the CNF team also imply that groundwater interconnectivity and behavior within the Rosemont area is well understood (and therefore, capable of being modeled to a high degree of accuracy) . The implication relies is largely on standard geologic surface mapping that had targeted mineral exploration and not cave exploration. The absence and size of exposed various surface dissolution and cave</p>	Resolution - Disagreement with analysis technique, but change is not appropriate. The Forest has fully evaluated the potential for caves and karst following public comments on the DEIS, including involvement of cooperating agencies.
819	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont CNF Land and Resource Mgmt Plan Federal Cave Res Protect Act 1988	8_9	37-41; 23-25	<p>...knowingly destroying, disturbingany significant cave or altering free movement of any animal or plant life into or out of any significant cave on Federal lands....</p> <p>Will there be/should there be monitoring protocol(s) that gain for the public unbiased, independent, timely and scientifically qualified, determinations and reporting of dissolution features that intersect and very likely extend beyond the pit dimensions--laterally and vertically?</p> <p>At other caves in SE AZ and elsewhere throughout AZ and the U.S., qualitative and quantitative measures for assessing of linkage and probable extension of underground passageway away or within mining areas that involve mineralized and non-mineralized carbonate strata are successfully being applied and beneficial. These include various analyses of different air and water data, identification and analysis of diagnostic geologic and hydrologic features (e.g. scalloping, vug frequency/dimension studies, presence of certain clastic and calcium carbonate sedimentary deposits in voids, etc.) at the surface or internal to the feature which are diagnostic and underground flow that favors both dissolution and deposition, certain geophysical surveys that are properly designed and targeted to image voids in carbonate media, tracer studies, and other tools of investigation. In many carbonate terrains the identification of dissolution corridors, even small ones at one location, can be indicative of the potential of linked and larger dissolution and permeability development elsewhere and proximal within the system—regardless of whether relatively rare and direct surface exposures such as sinkholes, or cave entrances are located, have or have not been accurately identified and logged (e.g. collapsed or non-collapsed sinkhole or corridor filled and masked by sediment and vegetation, mined out, etc.). Thus, time and pre-planned cost-effective investment in updated, accurate, and independent (non-industry related) inventorying and monitoring of surface features before and during mining activities and features uncovered or intercepted during mining seems prudent to consider. This might include protocols for ascertaining currently "unknown" or missed cave indicator features/data that could be more proximal to the proposed site than what is currently in the literature—and/or what pre-mine standard economic geologic mapping and drilling analyses deterministically revealed, described or was able to deduce. In well studied cave and karst settings all over the world and even in SE AZ, investment of time and study are teaching both the cave management and geoscience community that the typical economic geology field mapping methods, scale, and tools employed by accomplished geologists, hydrologists and cavers may not</p>	Resolution - Disagreement with analysis technique, but change is not appropriate. The Forest has fully evaluated the potential for caves and karst following public comments on the DEIS, including involvement of cooperating agencies.
820	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont		9	37 <p>The wording of this cave management section emphasizes or implies that the location and characterization of karst resources is already known. This is misleading and negates significance for pre-development surveying of cave karst resources for a better understanding and protection and surface and subsurface hydrologic function that supports cave ecosystems. From a statistical and cave/karst genesis standpoint, most if not all all carbonate and evaporate formations throughout the Southwest either host known karst/cave elements, and/or present a potential to host such features that have not yet discovered, are buried or lie within the subsurface. State licencing of geological engineers and well-published experts in the field of karst science (most who were not consulted in the development of this FEIS) agree that in deformed carbonate strata that karst elements most likely exist and therefore, should be engineered and modeled in planning and development stages. In almost all carbonate regimes, studies show that the state of knowledge in determining the true geographic character and hydrologic connectivity of surface and subsurface karst/cave elements still remains largely under-characterized--due in part to the lack of human access into parts of the system, lack of actual or discovered surface expressions (e.g. sinkholes, etc.), and the incompleteness and scale of many standard surface/subsurface geological and geophysical reconnaissance, survey and mapping programs—whose intent and objectives are not to identify, log and investigate subtle and obvious clues for karst and cave development on the surface or in the relatively shallow subsurface. It is not a coincidence that when a significant cave is discovered, the majority of so-called "cave experts" and geologists</p>	Resolution - Disagreement with analysis technique, but change is not appropriate. The Forest has fully evaluated the potential for caves and karst following public comments on the DEIS, including involvement of cooperating agencies.

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821	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont	11	19	<p>Faulting</p> <p>NO mention of interpreted and documented oblique components on compressional and extensional fault features and zones in the southern or norther Santa Ritas and the Rosemont area is provided. The logic behind this tread of thought is to provide a better understanding of stress fields, strain on the likelihood for fault reactivations and variations in fault character, mineralization and groundwater behavior—which appears to not adequately address such variation and linkage to enhance secondary porosity and zones permeability. Additionally, locations and trends of strike-slip or oblique components relative to regional or local stress fields influence frictional strength and fluid flow characteristics that can vary significantly and locally along and/or within the same fault or fault zone. In some areas, the fluid-rock frictional strength linkage and local stress fields played important roles in hypogenic and epigenic processes that controlled mineralization emplacement, and coeval and later state cave-development histories and processes.</p>	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p>The Forest conducted a full geological analysis, including that related to caves and karst formation. This was conducted directly in response to comments on the DEIS, including from Arizona State Parks.</p> <p>Faulting is fully described in the Geology section.</p>
822	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont	11	30	<p>ROSEMONT GEOMORPHIC DESCRIPTION, INFORMATION & MAP FOR REVIEW & IMPROVED UNDERSTANDING</p> <p>It is noted that although a detailed description of the Rosemont Deposit geology is provided to the public, no significant details or maps relevant to the geomorphic landscape, processes, and elements (e.g. drainage network pattern analysis, spring locations, etc. to name just a few). Although it was decided by the CFS prior to the DEIS to include springs into a separate section, an overlay or map of springs and drainage networks (down to first-order streams) that were provided to the CNF would be prudent to allow reviewers a more comprehensive and detailed picture of the natural geologic fabric and composition of the study area</p>	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p>Such a figure would not be of sufficient usefulness to better inform the analysis.</p>
823	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont	14		<p>Add geomorphic map with drainages, topo contours, springs</p>	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p>Such a figure would not be of sufficient usefulness to better inform the analysis.</p>
824	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont	29	15	<p>In regard to the discussion on the definition of karst relating to topographic influences and features that influence drainage that results in rock dissolution, this is fine. However, the statement that “definitional features of karst topography with respect to supplying water to caves, are not present in Southeastern AZ”—may well be erroneous depending on which cave expert one is informed by. At a host of surface and underground locations throughout SE AZ, karst topography and processes can be observed and deduced to be at play. Processes and observational features vary greatly in scale. In fact, topographic and subsurface geomorphic and geologic studies at easily accessible locations like Kartchner Caverns reveals that karst processes and settings are active and classifiable. Be assured that many are subtle but that also some which are and were obvious relatively large in scale, were previously missed or not identified by many field geologists—unless they were directed to look closely and cognizant of what lay beneath them in the subsurface. Comparative geologic studies of cave and karst elements at Kartchner for example, indicate that features and processes can vary greatly in their expression (size, scale, morphological character, composition), and yet, are spatially and genetically linked to significant cave and karst processes and cave features lying just tens to 100s of feet below the surface. Definitive comments like the one above should be tempered so the CNF will noted as presenting the information in an objective and most science-informed</p>	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p>The Forest has fully evaluated the potential for caves and karst following public comments on the DEIS, including involvement of cooperating agencies.</p>
825	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont	32	4, 5, 6	<p>Line 4 is correct.</p> <p>However, line 5-6: “A review of available information by the Coronado’s consulting geologists (mining geologists) and cave specialist indicated that no impacts are expected to any unknown caves.”---- seems to be a catch-22.</p> <p>The statement implies the plausibility of unknown caves that might be encountered. This is logical given the natural heterogeneity in rock properties and mineralization that will most likely characterize the stacked and highly deformed carbonate strata that straddle both mineralized and less or non-mineralized areas.</p> <p>Given that the CNF consulting geologists are mining geologists could this inadvertently put the CNF into a false picture of a “conflict of interest” or application of the best technical experience on behalf of the public interest? Can/should the CNF provide an independent argument and research for the public on this matter by inviting another, more experience, and well-published cave scientist to independently review the topic and genetic linkage.</p> <p>The issue here is not only involves cave features that may exist within the mineralized zone (lower risk based the rock alteration), but also hypogene and epigene features that may lie adjacent to, or under the economic mineralized area and possess linkage with the pit via regional and local geologic structure that are on trend (bedding planes, faults, fracture networks).</p> <p>Was this potential connectivity adequately addressed or modeled and risked in the accepted groundwater model?</p>	<p>Resolution - Disagreement with analysis technique, but change is not appropriate.</p> <p>The Forest has fully evaluated the potential for caves and karst following public comments on the DEIS, including involvement of cooperating agencies.</p>

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826	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont	33	37	<p>"No effects from expected climate change are anticipated for geological, paleontological, or cave resources."</p> <p>Given known and proven genetic linkages between surface and groundwater hydrologic settings and cave resources and ecosystems all over the world, never mind SE AZ, what evidence can/is CNF providing to the public on support of such a definitive statement?</p> <p>Has the CNF team independently reviewed the superb descriptive and statistical analyses, modeling and published results of the book "Assessment of Climate Change in the Southwest U.S." by UA researcher Greg Garfin and others?</p> <p>How does the EIS statement stand in regard to this study?</p> <p>Some brief explanation of validation and source of data for review is recommended.</p>	B
827	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont	34	13	<p>"--coordinate the investigation with appropriate resource specialist"."</p> <p>Will this include experienced and independent monitoring and science-based investigation by an external independent academic cave scientist and researcher?</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>See Bev comments and Terry email from 8/30/13</u></p>
828	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont			<p>It might be worth adding a discussion that various mines and mineral programs in the CNF had their roots in cave discoveries first. Subsequent working of the prospect or deposit all but obliterated evidence of the surface expressions and linkage. H</p> <p>How much statistical research has the CNF done on this association? There may be some interesting statistical and genetic findings related to landscape evolution and land use development that are revealed by such independent research.</p>	<p><u>Resolution - Statement of fact or opinion. No action needed. This has nothing to do with the decision at hand.</u></p>
829	ASP- Casavant	3- Affected Environment and Environmental Consequences	Geology, Minerals, Paleont			<p>Issue of WET vs DRY caves.</p> <p>Discussions and belaboring on this topic in earlier consulting presentations and reports is largely semantics. It may be inadvertently attempting to designate the value of "dry" caves over "wet" caves. Dry (and for that matter so-called relic caves) present active formation development, support a variety of unique cave life as well as important ecosystem processes and linkages. They are still part of the local hydrology because the channel meteoric waters into the aquifer.</p>	<p><u>Resolution - Statement of fact or opinion. No action needed.</u></p> <p><u>This comment also misses the point of why wet/dry was incorporated into the analysis. There is no question that caves can channel meteoric water into the aquifer. The question is whether changes in the regional aquifer would affect a cave.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
830	Pima County - Julia Fonseca	3 and Appendix B	Soils	34		Will there be offsite excavations of alluvial materials in order to gain sufficient "growth media" for reclamation? This should be prohibited or disclosed, as the effects have not been analyzed in this EIS.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
831	Pima County - Julia Fonseca	3 and Appendix B	Soils	34		Please specify the methods, frequencies and action thresholds that would be used in monitoring required by the Forest Service.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
832	Pima County - Julia Fonseca	3 and Appendix B	Soils	35		What is the mechanism that would prevent future development of private lands on top of waste rock and tailings?	<p><u>Resolution - No changes needed. On NFS lands - Forest Plan direction and NEPA analysis requirements; private lands - conservation easements should RCC choose to record them. Regardless, development is not foreseeable and therefore it is not relevant to this decision.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
833	EPA	3 App B	Seeps, Springs, and Riparian Areas Introduction	58 3	6-8 6-8	<p>Chapter 3. Affected Environment and Environmental Consequences includes a section titled, Conclusion on Mitigation Effectiveness, which states that mitigation measures presented in each section of the analysis would effectively avoid, minimize, reduce, rectify, or compensate for impacts (Chapter 3, p. 58, Appendix B, p. 3, lines 6-8). The AFEIS provides no supporting documentation/assessment demonstrating how the mitigation proposed to offset impacts to waters is compensatory.</p> <p>The statement that, “Davidson Canyon parcels would be effective at avoiding future impacts to xeroriparian resources located along Davidson Canyon by establishing conservation easements” (Ch. 3, p. 58, lines 8-10) does not acknowledge the fact that these riparian resources may be degraded from the indirect impact of the copper mine due to their location both downstream of the project and within the cone of depression for groundwater drawdown. Although the AFEIS acknowledges conservation at Sonoita Creek Ranch is outside the analysis area and the Cienega Creek watershed, it provides no justification to support the conclusion that this parcel would be effective at mitigating riparian resource impacts (p. 58, lines 10-13).</p> <p>Other proposals for enhancement below Pantano Dam in Cienega Creek have not been properly vetted in the document, given the uncertain ecological benefits and the legal complexities for securing water rights (Ch. 3, p. 58, lines 14-20). The statement in lines 23-24 of p.58 that, “The creation, enhancement,</p>	<u>Resolution - The effectiveness determination has been modified.</u>
834	EPA	3 3 App B	Biological Resources Seeps, Springs and Riparian Areas	141 55		<p>Under the Summary of Mitigation Effectiveness in Chapter 3 of the Biological Resources section, the AFEIS notes that mitigation measures, both onsite and offsite, can help offset effects in the project area. Despite proposed mitigation, the AFEIS concludes that, “While these measures would partially compensate or offset for impacts of the mine, they would not effectively offset all impacts, and significant impacts to habitat and some species would remain.”</p> <p>The mitigation measures described in the AFEIS rely on the development of two ILF programs and land conservation. As previously stated, EPA does not believe these actions are likely to be compensatory. The USFS also identifies design features to minimize impacts to waters. While design features may qualify as mitigation for the NEPA analysis, this form of mitigation is related to impact avoidance and minimization, not compensation. Section 404 of the CWA requires “mitigation” to consist of all three, with compensation required for impacts that are not avoidable (e.g., through design features). The proposed mitigation is insufficient to meet the restrictions on discharge required by the Guidelines at 40 CFR 230.10(d) and 40 CFR 230.12(a)(3)(iv).</p> <p>Independent of the requirements to avoid, minimize and, finally, compensate for impacts, the 404(b)(1) Guidelines prohibit discharges which will cause or contribute to significant degradation of waters of the United States. In consideration of the mitigation measures described in the AFEIS, the direct and indirect/secondary impacts from discharges of dredged or fill material from the proposed project will not be adequately offset. As a result, these impacts are likely to cause or contribute to significant</p>	<u>Resolution - The effectiveness determination has been modified.</u>
835	Pima County - John Wisner	3- Hazardous Materials	Table 156	6	19	Add: 40 CFR 300 to 313 – Emergency Planning & Community Right-to-Know Act...The commodities and quantities fall under these additional sections.	<u>Resolution - added to table</u>
836	Pima County - John Wisner	3- Hazardous Materials		7	27.5	6. Appropriate annual reporting of hazardous materials and hazardous waste onsite. NOTE: This information is used in Community Planning for Emergencies.	<u>Resolution - No change. The cited list is a statement of Forest Service policies as stated in the Forest Service manual.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
837	Pima County - John Wisner	3- Hazardous Materials		25	7	Potential Releases within the mine: no mention of any detection systems to be in place to detect & report a release of a hazardous material at the mine.	Resolution - No changes needed. Discussed with Mindy and this is detail to come later. Discussion of release detection (required by APP) already in GW quality section.
838	Pima County - John Wisner	3- Hazardous Materials		7 & 29		NO mention is made of the following items during a Potential Release: Notifications-on & off site (including the Local Emergency Planning Committee (via Pima County OEM) & the National Response Center; Activation of Response Teams-facility or local responders; creation & activation of a Facility Emergency Response Plan and Hazardous Waste Plan; means to alert the Public & employees of a release;	Resolution - This is all detail that will be developed later in the final MPO, and is premature to include in the FEIS. No changes.
839	EPA	App B	Mitigation Measure FS-BR-08	30-31		<p>The 1,200-acre Sonoita Creek Ranch is six miles south of Sonoita, Arizona. Approximately 590 acre-feet per annum of water rights are appurtenant to the ranch. The AFEIS states Rosemont Copper would purchase and convey the property and water rights to a Corps approved ILF sponsor, for the establishment of an ILF project. The ILF project would include the discontinuation of agriculture and the use of perennial flows from Monkey Springs to establish wetland and riparian habitat. The mitigation credits generated by the ILF project would be available for purchase by Rosemont Copper. The AFEIS states Rosemont Copper would also receive some compensatory mitigation credit for the conveyance of the ranch and water rights to the ILF sponsor. The amount of credits for purchase is yet to be determined, though the anticipated number of credits would provide only a portion of the overall mitigation credit requirement for the proposed project.</p> <p>The Corps and EPA have discussed with Arizona Game and Fish Department (AGFD), as a potential ILF sponsor, the feasibility of enhancing and restoring Sonoita Creek Ranch. EPA recognizes the conservation value of Sonoita Creek Ranch, but given the existing geomorphology of the site, we remain concerned with proposals to create and enhance wetlands on the ranch. In addition, the site is far removed from the Davidson Creek/Cienega Creek watershed and therefore, does not provide ecological benefit for the loss of acreage and function that would occur from the proposed project.</p>	Resolution - This is a conservation measure and mitigation from the BO, and a potential mitigation from the 404 permit. Final wording will be determined once those permits are final.
840	EPA	App B	Mitigation Measure FS-SSR-01	21-22		<p>The U.S. Army Corps of Engineers (Corps) and EPA, in coordination with potential In Lieu Fee (ILF) sponsors, Pima County and Tucson Audubon, are evaluating the feasibility of enhancing approximately 22 acres of Cienega Creek, downstream of Pantano Dam. The proposed ILF project would utilize surface water rights purchased by Rosemont Copper, severed and transferred to the ILF sponsor, Pima County, and released downstream of the Pantano Dam. Rosemont Copper would purchase ILF credits from the ILF sponsors to mitigate impacts from the proposed copper mine.</p> <p>While EPA supports returning surface water to Cienega Creek, it is uncertain whether additional water downstream from Pantano Dam would result in the proposed ecological enhancements along Cienega Creek. This ecological uncertainty is based, in part, on incomplete information on the existing geologic conditions below Pantano Dam. The potential exists for surface water to percolate deep into the aquifer without creating the necessary hydrologic conditions to support enhancement of the existing riparian community (Pima County, Tucson Audubon pers comm.) Added to this uncertainty are the long-term effects of the ongoing decadal drought and climate change to Cienega Creek. ILF sponsors acknowledge that the proposed quantity of water rights currently being considered for sever and transfer from Rosemont Copper to the Pima County is not sufficient to support enhancement of the creek. Additional water rights, the purchase of an existing groundwater well and a long term assessment of the proposed enhancement project would be required in order to determine whether this is a viable ILF project and</p>	Resolution - Discussion of the effectiveness of mitigation for WUS has been revised to indicate that this falls within the purview of the Corps. However, note that these same mitigation measures would have some mitigation effect for resources, whether the Corps finds them effective to compensate for WUS or not.

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
841	EPA	App B	Mitigation Measure FS-WUS-01	24		<p>The lands proposed for conservation consist of 383 acres of ephemeral wash and riparian habitat in Davidson Canyon, Mulberry Canyon and Barrel Canyon. The parcels include upland buffer habitat, as well as three springs. The restrictive covenant would preclude real estate development and restrict grazing. The AFEIS states that the proposed recordation of restrictive easements would compensate for loss of waters, but does not describe how this would be compensatory (Appendix B, p.24).</p> <p>Pursuant to the Final Rule for Compensatory Mitigation for Losses of Aquatic Resources (2008 Mitigation Rule), preservation as 404 mitigation can be used when the resources to be preserved provide important physical, chemical or biological functions for the watershed; contribute significantly to the ecological sustainability of the watershed; and are under threat of destruction or adverse modification (40 CFR Part 230.93(h)).</p> <p>Based on the information provided in the AFEIS, EPA does not believe preservation of these parcels is appropriate compensation for project impacts. These mitigation parcels do not have water rights. In addition, most of the mitigation parcels all lie downstream from the impacted drainages and may themselves suffer indirect effects from the proposed copper mine. Mitigation parcels located in Reach 2 of Davidson Canyon will be adversely affected by reduction in stormwater surface flow and potentially</p>	<p><u>Resolution - Discussion of the effectiveness of mitigation for WUS has been revised to indicate that this falls within the purview of the Corps. However, note that these same mitigation measures would have some mitigation effect for resources, whether the Corps finds them effective to compensate for WUS or not.</u></p>
842	AGFD	App. B	Mitigation and Monitoring Plan	15		<p>COMMENT: FS-GW-01 (Monitoring of Waste Rock for Seepage) notes that the waste rock facility is not predicted to allow infiltration of precipitation and subsequent seepage. FS-GW-01 contains a monitoring requirement for moisture content of the waste rock facility for through the active mining phase. If seepage occurs, the leachate is to be collected and sampled on a quarterly basis.</p> <p>COMMENT: While the FEIS contains a Waste Rock Segregation Plan (OA-GW-02) and additional waste rock characterization (FS-GW-03), the text lacks discussion of possible mitigating measures if acidic seepage or seepage with metals constituents in excess of water quality standards develops. Okanogan Highlands Alliance v. Williams, 236 F. 3d 468 (9th Cir. 2000) (EIS which contained general discussion of steps to prevent acid rock drainage if it develops, such as increased frequency of monitoring; implementation of interim water management plan to stabilize the situation; development of a conceptual engineering plan of water treatment system alternatives to remedy situation, such as precipitation, filtration, ion exchange; reverse osmosis, etc. satisfies NEPA's requirements for a reasonably complete discussion of possible mitigation measures).</p> <p>RECOMMENDATION: The FEIS and FS-GW-01 should be expanded with a general discussion of the process for achieving compliance with water quality standards in compliance with NEPA, 40 CFR 1502. 16 (EIS shall include a discussion of means to mitigate adverse environmental impacts).</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
843	AGFD	App. B	Mitigation and Monitoring Plan	16		<p>COMMENT: The Department strongly supports FS-GW-02, in which the Forest requires additional sampling of flowing springs and groundwater wells at off-site locations. The Department suggests, in addition to semi-annual sampling at springs, additional sampling following uncontrolled stormwater discharges from the minesite, including sampling in Davidson Canyon and Lower Cienega Creek OAWs. The Department also suggests that Rosemont timely report (within 30 days) to CNF results of sampling upon receiving any analytical reports showing exceedances of AAWQs or surface water numeric or narrative standards (rather than reporting the results on an annual basis).</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
844	AGFD	App. B	Mitigation and Monitoring Plan	17		COMMENT: The Department strongly supports FS-GW-03, in which CNF requires as a supplementary monitoring measure (in addition to ADEQ requirements) a more detailed waste rock and DSTF characterization sampling plan with its sampling protocols, to be approved before the final MPO. The purpose of the plan is to develop an ongoing comprehensive data set during mine operations in order to determine the composition and potential long-term, post-closure behavior of waste materials with respect to acid generation and metals leaching. The text notes that this information will better inform the Forest's long-term management of waste rock and tailings facilities, including the Forest's management responsibilities that would continue after release of bonding and after discontinuation of surface and groundwater quality monitoring under Rosemont's Aquifer Protection Permit. The FEIS should also contain a discussion of the mitigation measures that can be undertaken in the event characterization suggests that acid mine drainage or metals leaching may occur from the Rosemont facility during operations or post-closure. All relevant mitigation measures that could improve the project are to be identified, even if outside the jurisdiction of the USFS. 40 CFR 1502.16(h); 1505.2(C). It should be noted in the FEIS that EPA is proposing the development of financial responsibility requirements for the hardrock mining industry. 74 F.R. 37213 (Identification of Priority Classes of	Resolution - paragraph added to financial assurance in Chapter 2
845	AGFD	App. B	Mitigation and Monitoring Plan	17		COMMENT: FS-GW-03 contains as a requirement additional DSTF tailing characterization (both tailing and process water) during operations, to be described in a detailed waste rock/DSTF sampling plan to be developed by Rosemont and approved by CNF prior to the final MPO. FS-GW-03 should be expanded to include monitoring of the DSTF for seepage, and a discussion of possible mitigating measures if sulfates, acidic seepage or seepage with metals constituents in excess of water quality standards develops. See the Comment above on FS-GW-01. Potential mitigation measures should include a general discussion of installation of interceptor wells to capture seepage.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
846	AGFD	App. B	Mitigation and Monitoring Plan	21		FS-SSR-01 provides for the transfer of portions of Cienega Creek surface water rights to the "Arizona Game and Fish Department" or "another entity authorized under Arizona law to hold a surface water right for recreation or wildlife purposes", and the described sever and transfer of those water rights to become in-stream flow rights to Upper Cienega Creek within the Las Cienegas National Conservation Area appears to be contingent on a future determination by ADWR that a special use permit may be issued for transferring these water rights to BLM lands. It is unknown at this time whether ADWR would accept a special use permit as a sufficient legal interest. COMMENT: This mitigation may be beyond the authority of CNF to ensure or enforce. No entity is identified in FS-SSR-01 who has agreed to accept transfer of these water rights. Furthermore, CNF cannot guarantee that this mitigation can be performed, as the action depends on the successful navigation of complex administrative and legal proceedings involving the Arizona Department of Water Resources, the water rights holder, BLM, and, potentially other permitted and certificated water rights holders on Cienega Creek. Given these uncertainties, FS-SSR-01 cannot categorically state that the measure would partially mitigate for potential impacts to jaguar, ocelot, CLF, Gila chub, Gila topminnow, Huachuca water umbel, western yellow-billed cuckoo, and SWWF. ESA mitigation measures must involve "specific and binding" plans, "solid guarantees", and a "clear,	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
847	AGFD	App. B	Mitigation and Monitoring Plan	22		<p>FS-BR-16 states: "The Cienega Creek Watershed Conservation Fund could be used for monitoring of success of replacement or enhanced water features. If springs levels decrease, mitigation could come from this fund."</p> <p>COMMENT: Rosemont's long-term management and maintenance fund for enhanced or additional water features, not the Cienega Creek Watershed Fund, should mitigate for losses of replacement or enhanced water features. See Comment below.</p>	<p>Resolution - No change, pending final wording from the 404 mitigation and/or the final BO. This is a conservation measure and a requirement of the BO. No change will be made unless it is reflected in the final BO.</p>
848	AGFD	App. B	Mitigation and Monitoring Plan	28		<p>FS-BR-05 states that Rosemont will be required to establish a long-term management and maintenance fund for maintenance of enhanced or constructed water features. No further details are provided.</p> <p>RECOMMENDATION: The text should be expanded to require this fund to cover the costs of management and maintenance of all enhanced or constructed water features for a definite period.</p> <p>Given that the dewatering of natural seeps and springs by the mine pit is in perpetuity, there should be sufficient funding to maintain the replacement water features in perpetuity (e.g. 100 years).</p>	<p>Resolution - No change, pending final wording from the 404 mitigation and/or the final BO. This is a conservation measure and a requirement of the BO. No change will be made unless it is reflected in the final BO.</p>
849	AGFD	App. B	Mitigation and Monitoring Plan	31		<p>FS-BR-10 states that Rosemont would contribute \$50,000 for camera studies on large predators, in order to determine locations where road crossing structures may be warranted in the future.</p> <p>COMMENT: The Department agrees there is limited data on the movement patterns of these species as well as other state trust species in the vicinity of the Rosemont Copper project, and little data on the extent to which the area is used by jaguars and ocelots. The Department has stated to CNF and FWS its concern that \$50,000 is not enough to conduct the necessary studies and does not appear to be sufficient to determine much, and will likely contribute little, toward conservation of large carnivores or other terrestrial wildlife.</p> <p>RECOMMENDATION: The Department recommends a comprehensive study tracking the movement of wildlife species such as mountain lions, deer and javelina using satellite transmitter-collared animals. The cost of such a project is approximately \$285,000. A camera study would be less effective, but a well-designed camera-only study would cost \$175,000 at a minimum.</p> <p>Appendix B only requires RCC to fund a study to make a recommendation for a suitable crossing structure, rather than recommending conservation measures that will remediate the loss of connectivity. The funding provided is inadequate and does not meet CEQ Guidance that federal agencies should not commit to mitigation measures absent the expectation that the mitigation will be performed.</p> <p>Furthermore, there is no requirement that Rosemont fund any mitigation that may be identified as a</p>	<p>Resolution - No change, pending final wording from the final BO. This is a conservation measure and a requirement of the BO. No change will be made unless it is reflected in the final BO.</p>
850	AGFD	App. B	Mitigation and Monitoring Plan	34		<p>COMMENT: FS-BR-14 requires Rosemont to survey for western yellow-billed cuckoo in potential nesting areas prior to vegetation clearing.</p> <p>COMMENT: A.R.S. §17-236 makes it unlawful to take, injure or harass any bird upon its nest, or remove the nests or eggs of any bird, except as authorized by an order of the Arizona Game and Fish Commission. Absent an Avian Protection and Mitigation Plan coordinated with the Arizona Game and Fish Department, FS-BR-14 should be applied to all nesting birds protected by state law pursuant to ARS §17-236.</p>	<p>Resolution - Wording regarding this state regulation has been added to Chapter 2 and the Biological Resources section in Chapter 3.</p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
851	AGFD	App. B	Mitigation and Monitoring Plan	35		<p>FS-BR-16 requires Rosemont to establish an “endowment”, the Cienega Creek Watershed Fund, to restore the watershed, promote “adaptive management” conduct “on-the-ground” restoration and “preserve and enhance aquatic and riparian ecosystems” and” potentially compensate for or offset impacts to” six federally-listed species. The Fund is to be managed by “AGFD or other to-be-designated third party”.</p> <p>Rosemont would be responsible for funding the Conservation Fund at a rate of \$200,00/year for 10 years beginning on April 1 of the year following the year in which copper concentrates are initially produced. The BLM and AGFD would be responsible for identifying potential mitigation actions; coordinating those actions with the Forest Service, USFWS, and other key stakeholders; overseeing expenditures from the Fund; and all monitoring and reporting.</p> <p>COMMENT: Both the funding, and the implementation of conservation measures to benefit federally-listed species, is the responsibility of Rosemont. The FEIS does not clearly identify Rosemont as the entity responsible for the implementation of ESA conservation measures. No other entity, including AGFD, has agreed to assume the responsibilities outlined in FS-BR-16. CEQ Guidance and Ninth Circuit Court of Appeals case law require the federal action agency to ensure that identified conservation measures can be performed.</p> <p>The Draft BO requires conservation measures to be implemented, and annual reports prepared, for the life of the mine (25 years) and for five years post-closure. FS-BR-16 only requires Rosemont to contribute funds for a 10-year period. Payment of these funds, at only \$200,000/year, is prima facie insufficient to create an endowment that can generate sufficient interest to fund all activities contemplated for the Fund over a 30-year period.</p>	<p>Resolution - No change, pending final wording from the 404 mitigation and/or the final BO. This is a conservation measure and a requirement of the BO. No change will be made unless it is reflected in the final BO.</p>
852	AGFD	App. B	Mitigation and Monitoring Plan	35		<p>FS-BR-16 states that up to 15 percent of the Cienega Creek Watershed Fund could be used for “administrative costs”.</p> <p>COMMENT: A payout from the Fund at \$200,000/year results in a yearly allowance of \$30,000 for administrative costs, which is apparently expected to cover the following: the undesignated third party’s direct costs for salaries, ERE, travel, meals and incidental costs in meeting with CNF, BLM, FWS, and “other key stakeholders” in identifying and planning projects; costs responding to requests from the CNF Biological Monitor; all habitat and species inventories; all “research”, all permitting and environmental/regulatory compliance costs (e.g. NEPA); legal costs in defending water rights; costs of fund portfolio administration; costs of fund expenditure audits by CNF and “all monitoring and reporting” which presumably includes the costs of compiling data and preparing the Cienega Creek Watershed section of Rosemont’s Annual Conservation Measure Implementation and Monitoring Report for submission to CNF for the life of the mine and five years post-closure.</p> <p>AGFD, which has extensive experience in permitting, designing and implementing on-the-ground conservation projects, was not consulted in any aspect of the development of the Conservation Fund concept. The provision for \$30,000 a year for only 10 years “administrative costs” is completely</p>	<p>Resolution - No change, pending final wording from the 404 mitigation and/or the final BO. This is a conservation measure and a requirement of the BO. No change will be made unless it is reflected in the final BO.</p>
853	AGFD	App. B	Mitigation and Monitoring Plan	38		<p>COMMENT: In FS-BR-19 CNF will require monitoring of roadkill (which is expected to increase from increased mine traffic) on SR 83 but does not describe potential mitigation based on this information. . The purpose of such data collection should be to determine where a wildlife crossing or what other mitigative action should occur. The FEIS is required to identify all reasonable alternatives to the loss of wildlife connectivity, including a discussion of mitigation measures such as the construction of road crossing structures. 42 U.S.C. 4332(C).</p>	<p>Resolution - No change, pending final wording from the 404 mitigation and/or the final BO. This is a conservation measure and a requirement of the BO. No change will be made unless it is reflected in the final BO.</p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
854	AGFD	App. B	Mitigation and Monitoring Plan	72		<p>RC-TA-01 describes an agreement between Rosemont and ADOT to implement road construction improvements to reduce impacts to the public resulting from increased traffic on SR 83.</p> <p>COMMENT: No road improvements, such as wildlife crossing structures, are described to mitigate for wildlife mortalities or loss of genetic diversity caused by the loss of connectivity between mountain blocks as a result of Rosemont-generated mine traffic.</p>	Resolution - No change. This mitigation was considered and determined to be (1) beyond the jurisdiction of the Forest Service; and (2) not practical until further information was gathered to determine where a crossing would be effective. See BO.
855	AGFD	App. B	Mitigation and Monitoring Plan	78		<p>COMMENT: RC-TA-02 states Rosemont would enter into the Cooperative Landowner Incentive Program to allow some public access to portions of Rosemont-owned private lands. The Department will work with Rosemont to facilitate public access. "Landowner Incentive Program" should be changed to "Landowner Relations Program". The Landowner Incentive Program is a Natural Resource Conservation Service funded program for which the Department no longer receives funding.</p>	Resolution - text changes in Appendix B, Transportation and Access, and Recreation and Wilderness
856	AGFD	App. B	Mitigation and Monitoring Plan	30-31		<p>FS-BR-08 states that Rosemont would purchase the Sonoita Creek Ranch and certificated water rights and convey them to a Corps-approved In Lieu Fee sponsor. Long-term site protection would be provided by the ILF sponsor. This mitigation measure is to partially mitigate mine impacts to nine identified federally-listed species.</p> <p>COMMENT: Neither the FEIS nor FS-BR-08 imposes any funding commitment upon Rosemont to implement conservation measures for federally-listed species at SCR, or to fund the maintenance of SCR in perpetuity for connectivity for federally-listed species. Mitigation measures without a clear, definite commitment of resources for future improvements violate the ESA. National Wildlife Federation v. National Marine Fisheries Service, 524 F. 3d 917 (9th Cir. 2008).</p> <p>Federal regulations for Compensatory Mitigation for Losses of Aquatic Resources, 33 CFR at 332.3(j)(3), allow Section 404 compensatory mitigation projects to provide compensatory mitigation under the ESA, but the same credits may not be used to provide mitigation for more than one permitted activity (33 CFR 332.3(j)(1)(ii)). The proceeds from the sale of ILF credits are to be deposited into a dedicated account and spent only toward Corps-approved wetland function projects (32 CFR 332.8(i)). The ILF sponsor may not expend ILF funds to implement ESA-mandated conservation measures, or mandatory terms and conditions of an incidental take statement for federally-listed species.</p> <p>FS-BR-08 is incorrect in its statement that that the ILF sponsor is responsible for implementing ESA-required habitat projects benefiting jaguar, ocelot, Mexican spotted owl, LLNB, Gila Chub, Gila topminnow, CLF, western yellow-billed cuckoo, or the Huachuca water umbel. If the existence of SCR in a conservation status is perceived to be a benefit to listed species incidental to its function as an ILF</p>	Resolution - No change, pending final wording from the 404 mitigation and/or the final BO. This is a conservation measure and a requirement of the BO. No change will be made unless it is reflected in the final BO.
857	Smithsonian--Emilio Falco, J. Shaw	Appendix B	FS-DS-01 – Implementation of an outdoor lighting plan that would reduce potential impacts from artificial night lighting	43	Description	<p>Add: Rosemont Copper and the Forest Service will review effectiveness of the lighting mitigation measures on at least an annual basis throughout the operational lifetime of the mine.</p>	Resolution - Additional lighting monitoring measures have been brought forward by SAO and considered by the Forest. These are now included as appropriate.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
858	Smithsonian-- Emilio Falco, J. Shaw	Appendix B	FS-DS-01 – Implementation of an outdoor lighting plan that would reduce potential impacts from artificial night lighting	44	Monito ring/R eporti ng Action	Delete: "Effectiveness: Baseline data monitoring would occur at a frequency to be determined that represents periods of maximum outside night light use during the active mining phase. Monitoring would duplicate the baseline monitoring that is described in the Monrad et al. (2012) "Rosemont Copper Project Light Pollution Mitigation Recommendation Report," dated June 18, 2012, pages 23–24 (which would be incorporated into the final MPO), and the "20 Year Monitoring Plan: Light at Night – Measurements at Rosemont Copper Project," dated May 20, 2012. Includes mobile aerial, mobile ground-based and static ground-based measurements. If additional shielding could be placed to further reduce lighting effects without adverse impacts to safety and unreasonable operational expectations, Rosemont Copper would implement that additional shielding in a manner consistent with safe mining." Replace with addition: "Effectiveness: Baseline data monitoring would start before RCM construction to establish levels prior to RCM operations. On-going monitoring would occur continually during the active mining phase. Monitoring would duplicate the baseline monitoring that is described in the Monrad et al. (2012) "Rosemont Copper Project Light Pollution Mitigation Recommendation Report," dated June 18, 2012, pages 23–24 (which would be incorporated into the final MPO), and the "20 Year Monitoring Plan: Light at Night – Measurements at Rosemont Copper Project," dated May 20, 2012. Includes mobile aerial, mobile ground-based and static ground-based measurements. In addition, there will be a permanent fixed monitoring site on Mt Hopkins along with several permanent fixed ground	Resolution - Additional lighting monitoring measures have been brought forward by SAO and considered by the Forest. These are now included as appropriate.
859	Smithsonian-- Emilio Falco, J. Shaw	Appendix B	FS-DS-01 – Implementation of an outdoor lighting plan that would reduce potential impacts from artificial night lighting	44	Perfor mance Criteri a	Delete sentence: "Effectiveness monitoring would demonstrate that all site lighting lumen emissions is 15 percent or less of the amount allowed by the Pima County Outdoor Lighting Code lumen per acre table for Zone 1a" Rationale: incorrect quote from report. Percentage is not mentioned on referenced page.	Resolution - Additional lighting monitoring measures have been brought forward by SAO and considered by the Forest. These are now included as appropriate.
860	Smithsonian-- Emilio Falco, J. Shaw	Appendix B	FS-DS-01 – Implementation of an outdoor lighting plan that would reduce potential impacts from artificial night lighting	44	Perfor mance Criteri a	Delete: "Effectiveness: Monitoring would provide for review and comparison of lighting emissions of the Rosemont Copper Mine and other new developments. Effectiveness monitoring would demonstrate that all site lighting lumen emissions is 15 percent or less of the amount allowed by the Pima County Outdoor Lighting Code lumen per acre table for Zone 1a (Monrad et al. (2012) "Rosemont Copper Project Light Pollution Mitigation Recommendation Report," dated June 18, 2012, page 5). The intent is to fully comply with the Pima County Outdoor Lighting Code; however, deviations may be required to comply with Mine Safety and Health Administration (MSHA) regulations." Replace with: "Effectiveness: Monitoring would provide for review and comparison of lighting emissions of the Rosemont Copper Mine and other new developments. Effectiveness monitoring would demonstrate that all site lighting lumen emissions is less than the amount allowed by the Pima County Outdoor Lighting Code lumen per acre table for Zone 1a (Monrad et al. (2012) "Rosemont Copper Project Light Pollution Mitigation Recommendation Report," dated June 18, 2012). The intent is to fully comply with the Pima County Outdoor Lighting Code. If deviations are required to comply with Mine Safety and Health Administration (MSHA) regulations, then the lighting plan will be balanced to reduce a similar amount of illumination in non-critical use areas."	Resolution - Additional lighting monitoring measures have been brought forward by SAO and considered by the Forest. These are now included as appropriate.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
861	Smithsonian-- Emilio Falco, J. Shaw	Appendix B	FS-DS-01 – Implementation of an outdoor lighting plan that would reduce potential impacts from artificial night lighting	44	Timing	<p>Delete:</p> <p>“Annual or semiannual monitoring (in accordance with the “20 Year Monitoring Plan: Light at Night – Measurements at Rosemont Copper Project,” dated May 20, 2012). Monitoring localized and regional quantitative trends in sky-brightness changes due to on-site lighting systems to establish current sources and allow for comparison of Rosemont Copper Mine and all other new developments would determine whether predictions of lumens are accurate; would include direct measurement of sky brightness using over flights and land-based measurements. Monitoring every 5 years during later years of operations phase (in accordance with the “20 Year Monitoring Plan: Light at Night – Measurements at Rosemont Copper Project,” dated May 20, 2012). Review of the efficacy of light mitigation measures would occur following construction of the mine.”</p> <p>Replace with:</p> <p>Continual monitoring (in accordance with the “20 Year Monitoring Plan: Light at Night – Measurements at Rosemont Copper Project,” dated May 20, 2012). Monitoring localized and regional quantitative trends in sky-brightness changes due to on-site lighting systems to establish current sources and allow for comparison of Rosemont Copper Mine and all other new developments would determine whether predictions of lumens are accurate; would include direct measurement of sky brightness using over flights and land-based measurements.”</p>	<u>Resolution - Additional lighting monitoring measures have been brought forward by SAO and considered by the Forest. These are now included as appropriate.</u>
862	Smithsonian-- Emilio Falco, J. Shaw	Appendix B	FS-DS-01 – Implementation of an outdoor lighting plan that would reduce potential impacts from artificial night lighting	44		The FEIS should state that outdoor light monitoring will be conducted by RCM, with the help and oversight from cooperating agencies including SAO. The FEIS should specify mechanisms to report Rosemont Mine light levels above measured above baseline sky brightness levels, and to ensure elimination or mitigation of any violations. The FEIS should indicate that the FS will handle such violations in the same manner as violations of permit violations of environmental requirements such as those for water and air quality.	<u>Resolution - Additional lighting monitoring measures have been brought forward by SAO and considered by the Forest. These are now included as appropriate.</u>
863	Smithsonian-- Emilio Falco, J. Shaw	Appendix B	FS-DS-01 – Implementation of an outdoor lighting plan that would reduce potential impacts from artificial night lighting	44		The FEIS should indicate that the light fixtures will be inspected prior to mounting for compliance with the Monrad lighting plan and to establish the “as built” baseline. The FEIS should specifically the identify the responsible organizations, such as Monrad Engineering, who will inspect the light fixtures to verify the as-installed RCM lighting follows the Monrad (2012) lighting plan in terms of fixtures, their orientations, and lumen outputs. Annual light fixtures inspections should be performed, to verify the Monrad plan is followed during RCM operations.	<u>Resolution - Additional lighting monitoring measures have been brought forward by SAO and considered by the Forest. These are now included as appropriate.</u>
864	Pima County	Appendix B	General			Too little inclusion of responses if mitigation fails or monitoring exceeds	<u>Resolution - No change. Forest disagrees.</u>
865	Pima County	Appendix B	General			No measures to address the effects of rock bursts, pit wall failures, debris flows, and accidental disposal of material over the crest of the Santa Ritas	<u>Resolution - No change. Pit wall stability is addressed in mitigation FS-SR-04. The occurrence of rock bursts, debris flows, and accidental disposal of material over the crest is not anticipated, and to develop measure to address these would be speculative at best.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
866	Town of Sahuarita	Appendix B	Mitigation RC-GW-02	74	N/A	Update this section to include Rosemont's commitment to recharge, with Central Arizona Project water and within the drawdown area, a minimum of 105% of the amount of water withdrawn from the Rosemont wells in accordance with the License Agreement between Rosemont Copper and the Town of Sahuarita	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>With respect to Town of Sahuarita license agreement, language has been added to several mitigation measures in Appendix B.</u>
867	Town of Sahuarita	Appendix B	Mitigation	add'l	32	Update Appx B to reference the License Agreement between Rosemont Copper and the Town of Sahuarita (contract # CO13-0009)	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>With respect to Town of Sahuarita license agreement, language has been added to several mitigation measures in Appendix B.</u>
868	Town of Sahuarita	Appendix B	Mitigation	add'l	N/A	Chp 3 Air Quality, p66 Appx B OA-AQ-02 & Appx, OA-SR-01: Include a mitigation measure to monitor and mitigate fugitive dust along the utility corridor that is in accordance with the License Agreement between Rosemont Copper and the Town of Sahuarita	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>With respect to Town of Sahuarita license agreement, language has been added to several mitigation measures in Appendix B.</u>
869	Smithsonian--Emilio Falco, J. Shaw	Appendix B	Mitigation and Monitoring – Forest Service	3	20	Please clarify: The FEIS says "Rosemont Copper has publicly agreed to consider or implement the mitigation and monitoring items under this heading. These may include contractual and financial agreements over which the Forest Service and other agencies have no jurisdiction." Is RCM bound by the MPO to act as asserted in the RCM Light Pollution Mitigation Recommendation Report (Monrad 2012) and as described in pages 43-44 of Appendix B? 20	<u>Resolution - No change. It is clearly stated that the FS mitigation measures are mandatory. That is stated in the introduction and again in the heading of the FS mitigations.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
870	Smithsonian-- Emilio Falco, J. Shaw	Appendix B	Mitigation and Monitoring – Forest Service	3	20	<p>Comment:</p> <p>The RCM Light Pollution Mitigation Recommendation Report (Monrad 2012) says, “However, as part of its commitment to best possible environmental practices, Rosemont Copper Company (Rosemont) will voluntarily employ an advanced light pollution mitigation plan. (page 2) As for monitoring, however, it says only, “Measurements may be made in the future to determine the impact of the Project, its compliance with established goals and mitigation methods, and to identify other newly introduced sources of light pollution in the Tucson region and their relative impacts. (p. 3).</p> <p>The FEIS should state that RCM will perform a monitoring program as described in pages 43-44 of Appendix B.</p>	<u>Resolution - No change. This can be addressed in the ROD.</u>
871	Smithsonian-- Emilio Falco, J. Shaw	Appendix B	Mitigation and Monitoring – Forest Service	3	20	<p>Comment:</p> <p>The FEIS should state that, were Augusta Resources to sell RCM, the new owner would be held to the Monrad lighting plan, with the same conditions as in the current FEIS.</p>	<u>Resolution - No change. Address in the ROD.</u>
872	Pima County - Loy Neff	Appendix B	Mitigation and Monitoring Plan	1_5	all	<p>General Comment: The organization of the introductory discussion of the Mitigation and Monitoring Plan combines environmental, cultural, and other mitigation and monitoring tasks without regard for the nature of the affected resources. Instead, the very brief discussion is organized according to areas of designated responsibility and the Appendix is mostly a table listing mitigation and monitoring tasks. There are separately identified sections according to resources types, which tends to confuse issues related to specific programs for different resource types. The discussion needs to be organized to clearly distinguish between the mitigation and monitoring strategies according to resource types.</p>	<u>Resolution - No change.</u>
873	Pima County - Loy Neff	Appendix B	Mitigation and Monitoring Plan: potential Future Mitigation Measures	3_4	20-36	<p>This section includes a reference to the cultural resources MOA and HPTP but does not discuss where they are located, how to access them, what is the completion status of the documents, or other pertinent information. Some information is given in Lines 19-24, which include a disclaimer that some mitigation or monitoring plans are contingent upon which Alternative or combination of Alternatives is selected and will be required as part of the MOA or permit requirement of the appropriate regulatory agency. This section is too brief and needs additional explicit information about the MOA and especially the HPTP to provide information, at minimum, on where and how the reader can access them, and when to expect them to be executed or completed documents.</p>	<u>Resolution - No change. The MOA is in one of the appendices and the HPTP is incorporated by reference, and therefore available upon request. Specific details about the MOA and HPTP are in those documents and need not be related in the introduction to the mitigation and monitoring plan.</u>
874	ADEQ- J. Emde, D. Turner	Appendix B	OA – GW-01, OA – GW-02, OA – GW-03, OA – GW-04, OA – GW-05, OA – SW-01	66-71		<p>Appendix B of the FEIS contains a series of tables that summarize various requirements by other regulatory and permitting agencies (such as ADEQ) for mitigation and monitoring. In the tables cited at left, the expression is repeated often that “ADEQ is responsible for spot-checking monitoring activities and for evaluating monitoring results to determine compliance with...” [the APP or the stormwater permit]. ADEQ does not understand what “spot-checking” means, unless it means that the agency will perform periodic compliance inspections or that “ADEQ is responsible for determining compliance” as in OA – SW-02. Please remove all references to “spot-checking” and replace with wording such as, “ADEQ is responsible for determining compliance” or “ADEQ is responsible for performing periodic compliance inspections,” as appropriate.</p>	<u>Resolution - This language has been removed from applicable measures in Appendix B</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
875	Pima County - Julia Fonseca	Appendix B	Sediment	FS-Sr- 05		Can you state how you would determine that erosion and downstream geomorphological changes exceed compliance with NEPA?	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
876	Pima County - Julia Fonseca	Appendix B	Soils	14		Mitigation measure FS-SR-04 should provide for post-closure monitoring. The risks do not go away after operation ceases.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
877	Pima County - Julia Fonseca	Appendix B	Soils	15		A more diverse seed mix to include more native trees should be considered a required mitigation measure. Trees have not been shown to establish significant cover.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
878	Pima County - Julia Fonseca	Appendix B	Soils	15		I encourage the Forest Service to consider adding some additional plant species that will tolerate high copper concentrations from the Arkose. During our visit in August 2012, we observed abnormally large and vigorous Eschscholzia plants on the Arkose plot. This is a species which is known to thrive in high copper concentrations. A special seed mix that is adapting to high copper and possibly other metals (arsenic comes to mind) is needed.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
879	Pima County - Julia Fonseca	Appendix B	Soils	FS-SR-01	7	The measure says it applies to all disturbed areas except the mine pit. Does this mean that there will be NO soil salvage for over one square mile that overlies the pit? The soils which overlie the pit should also be salvaged. The wording needs to be clarified as to applicability.	Resolution - Text has been revised to clarify soil salvage will occur in the area of the mine pit as well.
880	Pima County - Julia Fonseca	Appendix B	Soils	FS-SR-01		What is the threshold for compliance with the NEPA decision? How will you know when adaptive management is within the NEPA decision?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
881	Pima County - Julia Fonseca	Appendix B	Soils	FS-SR-02		What is the threshold for compliance with the NEPA decision? How will you know when adaptive management is within the NEPA decision?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
882	Pima County - Julia Fonseca	Appendix B	Soils	NA		Pit wall benches above pit lake water surface elevation should be reclaimed as part of closure plan and as mitigation measure. And included in reclamation bond.	Resolution - Statement of fact or opinion. No action needed. The Forest determined that reclamation of the pit wall benches are a safety issue. However, there is a mitigation in which the Forest and RCC will work to identify and implement technologies that would accomplish this if it can be done in a safe and effective manner.
883	Pima County - Julia Fonseca	Appendix B	Soils	Slope stability monitoring p. 14		Pit slope stability should be monitored after closure. As written, this applied only throughout life of mine.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
884	Pima County - Julia Fonseca	Appendix B	Soils	Slope stability monitoring p. 14		This monitoring should be tied to management actions in the event that there is the potential for collapse of any pit wall, not just collapse of "high wall".	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
885	Pima County - Julia Fonseca	Appendix B	Soils		10	Pit wall benches should be reclaimed and revegetated to enhance water quality protection and provide habitat.	Resolution - Statement of fact or opinion. No action needed. The Forest determined that reclamation of the pit wall benches are a safety issue. However, there is a mitigation in which the Forest and RCC will work to identify and implement technologies that would accomplish this if it can be done in a safe and effective manner.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
886	ADEQ- D. Turner	Appendix B	Table RC-SW-01			Rosemont has voluntarily agreed to continued operation/ monitoring and data gathering at the USGS flow gage in lower Barrel Canyon. Although this answers ADEQ's request in our January 18, 2012 letter to restore funding for continued monitoring, the Forest Service explains in the opening text of Appendix B that it does not have the authority to require this monitoring measure. ADEQ strongly urges the Coronado to re-evaluate this determination of its authority, because this information will be necessary in ADEQ's evaluation of downstream impacts to Davidson Canyon and Cienega Creek, which may be an ongoing process over the life of the mine (during MSGP permit coverage) including both water quality, quantity and sediment loadings.	Resolution - This is not within the Forest's authority. However, all mitigation and monitoring comments have been reviewed by the Forest for action.
887	Pima County - Loy Neff	Appendix B	Table: FS-CR-01	6		The description in this section states, "All archaeological sites within the areas of direct impact." This does not account for indirect effect (impacts occurring later in time or with distance); for example, sites in proximity to the realigned segment of the Arizona Trail are subject to potentially significant indirect impacts, which need to be accounted for and mitigated. Add "indirect impacts" to the phrase quoted above.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
888	Pima County - Julia Fonseca	Appendix B		NA		Forest should require a contingent mitigation for rehabilitating areas of the crest of the Santa Ritas during and after operations.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
889	Pima County - Julia Fonseca	Appendix B		NA		Forest should require contingent mitigation for rehabilitating areas of the pit during operations.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
890	Pima County - Julia Fonseca	Appendix B, and Chapter 3: Biology, Seeps and Springs, Livestock Grazing				<p>Pima County should be on the interagency team overseeing the mitigation fund. Pima County has worked to protect and conserve natural resources in the Cienega basin since 1986, with the creation of the Cienega Creek Natural Preserve. According to the County Administrator's Office, total acquisition costs for lands in the Cienega Creek basin total nearly \$64 million. Most notably, these include portions of lower Cienega Creek and Davidson Canyon, downstream of the proposed mine. The Cienega Creek Natural Preserve is a 4000-acre protected area owned by Pima County Regional Flood Control District containing intermittent and perennial flow reaches, and springs supported by a shallow water table. Acquisition costs total \$8.6 million for the Preserve. Acquisition began in 1986 and was largely completed in the early 1990s. The Bar V Ranch, located along Davidson Canyon south of Interstate Highway 10 was acquired for \$8.1 million in 2005. The State Transportation Board unanimously approved a contribution of \$500,000 to acquire 600 acres of the ranch along Davidson Canyon to preserve viewsheds along state-designated scenic roads and highways. Bar V Ranch includes a vital wildlife linkage recognized by Arizona Game Fish Department along Davidson Canyon. In addition, the county also acquired 58 acres near the Empire Mountains at a cost of \$190,000 called the Amadon and Nunez properties. These lands are located five to six miles east of the mine, and were purchased in conjunction consistent with the U.</p>	<p><u>Resolution - No change. This is a term and condition from the BO, and will only be modified if the T&C is changed in the final BO.</u></p>
891	NPS ARD	Appendix B. Mitigation and Monitoring Plan	Air Quality	49	FS- HM- 01	<p>Blasting</p> <p>At 154 TPY, blasting is the second-largest NOX source category from Rosemont mine operations.</p> <p>The FEIS proposes no specific mitigation of these emissions; Mitigation Measure FS-HM-01 states: "An explosives and blasting management procedure would be required to be implemented to ensure best management practices are applied." The document does not define what these BMPs may be, or what they would achieve.</p> <p>A technical review yielded articles suggesting that NOX emissions from blasting could be reduced by addition of calcium compounds, silicon, and urea to the blasting agent. The USFS should analyze whether these options may be feasible for blasting operations at the Rosemont Mine, and if not, document why in the FEIS.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>Specifically with respect to air quality, the Forest Supervisor instructed that all additional mitigation measures be investigated. This measure was fully investigated for implementation.</u></p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
892	NPS ARD	Appendix B. Mitigation and Monitoring Plan	Air Quality	64	QA-AQ-9	<p>Given NPS concerns regarding nitrogen deposition and visibility impacts, the NPS has previously recommended that the USFS require NOx mitigations for significant NOx emission sources operating within the mine. By far, the largest source of NOx emissions are the thirty-one 250-Haulage Trucks, with 996 TPY NOx estimated in the 7/2010 permit application. There appears to be some discrepancies between the total annual NOx emissions from haul trucks reported in the April 2011 JBR Emission inventory for the EIS, and what is reported in the permit application (e.g., 860 TPY). None-the-less, haul trucks comprise a significant portion of the total annual NOx emissions from mine operations. The FEIS proposes to mitigate these emissions as follows:</p> <p>MITIGATION MEASURE QA-AQ-9 - Reduction in air emissions from diesel engines associated with mobile sources (haulage equipment, etc.) Use of newer engine designs on haulage equipment and on select mobile sources; includes use of Tier 4 EPA compliant equipment for emission standards on selected non-road engines (all except haul trucks and the 2,000 horsepower front-end loaders); use of Tier 2 diesel engines for haul trucks; and use of Tier 4 engines for large haulage trucks and support equipment purchased after 2014.</p> <p>Although the 1/31/2013 AZ DEQ technical support document states that, "The Permittee is required to purchase 6 haul trucks that meet US EPA Tier 4 requirements," we could find no such requirement in the 1/31/2013 permit.</p> <p>We recommend that all haul trucks be required to meet EPA Tier 4 emission standards upon commencement of mine operations. EPA's Tier 2 standards limit NOx emissions to 9.2 g/kWh, while Tier 4 allows 3.5 g/kWh, a reduction of 62%. If all thirty-one of the 250-Haulage Trucks meet Tier 4 standards, emissions would be reduced to 379 TPY. On the other hand, converting only six of the 250-Haulage Trucks to Tier 4 would yield only a 12% reduction and leave 877 TPY of NOx.</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>Specifically with respect to air quality, the Forest Supervisor instructed that all additional mitigation measures be investigated. This measure was fully investigated for implementation.</p>
893	Pima County - Loy Neff	Appendix D	MOA	6	1_3	<p>This "Whereas" states that the Forest, "...consulted with Pima County and the Town of Sahuarita as part of the Section 106 process and has been invited to be a concurring party to this MOA; and" Add language similar to that used for the Tribes that have set forth resolutions in opposition to the Rosemont Mine Project, to the effect that, "Pima County has apprised the Forest, SHPO, Tribes, and other consulting parties of its opposition to the Project, and the Board of Supervisors has set forth a resolution, BOS Resolution 2007-15, January 16, 2007, in opposition to the project.</p>	<p>Resolution - This is a comment on the MOA. No action needed. Opportunities to edit the MOA have been many, and are now over.</p>
894	Pima County - Loy Neff	Appendix D	MOA	10	17	<p>Line 17 of Stipulation J has a typographical error, "Cultural-Sensitivity cultural sensitivity." Delete the redundant clause.</p>	<p>Resolution - This typo in the MOA has been reviewed and modified.</p>
895	Pima County - Julia Fonseca	Appendix B mitigation				<p>Pima County requests that Rosemont voluntarily provide mitigation for impacts to the Maeveen Marie Behan Conservation Lands System (CLS), which is part of the County's land use plan, and an adopted part of the Sonoran Desert Conservation Plan. The CLS represents the biological reserve design that was adopted by Pima County after years of development by many technical studies and an interagency Science and Technical Advisory Team which included the Coronado's plant ecologist, as well as representatives of US Fish and Wildlife Service, as well as Arizona Game and Fish Department If the impacts for the Barrel alternative are as described in the EIS, then Rosemont should acquire approximately 12,900 acres of mitigation in the CLS to offset the loss.</p>	<p>Resolution - No change, unless RCC comes forward with this mitigation voluntarily. This is new to the Forest, and it is up to Pima County to approach RCC on this issue.</p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
896	Pima County - Julia Fonseca	Appendix B mitigation , Chapter 3 mitigation effectiveness	Pantano Dam, Del Lago water rights			The mitigation and mitigation effectiveness are affected by the means of diversion. According to Jonathan Garrett, ADWR, personal communication April 24, the amount diverted and reported to ADWR for the Del Lago golf course use was 461.75 acre-feet in 2010, 352.62 acre-feet in 2011, and 347.5 af in 2012. These amounts are far lower than the 1100 acre-feet that may be available in any given year. See also Powell (2013, attached to these comments) for more information about flows delivered to the site and for photographs of the means of diversion.	Resolution - The effectiveness determination has been modified.
897	Pima County - S. Anderson	Appendix B. Mitigation and Monitoring Plan		47-48	No line	You didn't put specific information about the trailheads in the Mitigation and Monitoring Plan; that's probably on purpose. Talk to the Arizona Trail Association to get their current standards.	Resolution - No change. Specifications will be to FS standards.
898	Pima County - Sarah Walters	Appx B	Air Quality	60	NA	To reiterate: Roads not directly on the mine site are not under the jurisdiction of the ADEQ Air Quality Permit and will require compliance with Pima County Code Title 17, including but not limited to: any required Fugitive Dust Activity Permits (PCC 17.12), and compliance with Visible Emission Standards (17.16).	Resolution - The PC air permit has been added to both Chapter 3 and Chapter 2.
899	Pima County - Sarah Walters	Appx B	Air Quality	61	NA	The Dust Control Plan should contain enforceable dust control measures, and requirements for implementation of dust control measures prior to high wind events. The Dust Control Plan should also include visual monitoring of the open areas and storage piles such that vulnerable areas are identified prior to high wind events.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed. This is an ADEQ permit, and they will determine the permit conditions.
900	Pima County - Sarah Walters	Appx B	Air Quality	64	NA	The use of Tier IV engines is specified as only occurring at, and after year 10 of operations; this does not apply as a mitigation measure during any other years, and as such this should be specified in the ADEQ permit and in the EIS.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

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901	Pima County - Brian Powell	Appx B	ALL	Most	NA	<p>Appendix B outlines a host of monitoring and mitigation measures that Rosemont is agreeing to or is willing to consider. Key, general points about the entire document are:</p> <ul style="list-style-type: none"> • There is scant detail on what action(s) would ensure if a threshold has been reached. Monitoring is fine, but without locking into place at least a process and (bonded) funding or operational penalties for exceeding those thresholds, the proposed (or suggested) thresholds and monitoring have very little meaning. This is a critical and it bolsters a common argument against monitoring that does not lead to meaningful outcomes. • There is insufficient information to properly critique most aspects of the mitigation and monitoring plan, such as: what thresholds will be used (and associated confidence intervals on estimates and their associated Type I and Type II errors) , what, where, when, and how often will monitoring take place, and (as mentioned earlier), what will be done when significant change occurs. The FS indicates that more information is forthcoming and will be part of the ROD, but the lack of specifics in this document is troubling. 	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
902	Pima County - Julia Fonseca	Appx B	Biology	2	FS-BR-01	The Forest should require that limits of disturbance be marked in the field with orange field barricade to facilitate the weekly inspections, and to reduce the likelihood of accidental incursions into areas that were intended not to be disturbed.	Resolution - No change.
903	Pima County - Julia Fonseca	Appx B	Biology	24	FS-BR-01	This mitigation relies on initial review of plans and weekly visual inspections to ensure that plans and execution conform with the footprint of the final MPO and closure and reclamation plan. The Forest should be provided with shapefiles representing the MPO and plans to facilitate the Service's review of plans.	Resolution - No change. This is a level of detail the Forest and their partners on the monitoring task force need to determine when crafting the details of how all monitoring results, permits and requirements will be evaluated.
904	Pima County - Julia Fonseca	Appx B	Biology	24	FS-BR-02	What is the frequency of monitoring?	Resolution - No change. See individual monitoring items in Appendix B
905	Pima County - Julia Fonseca	Appx B	Biology	24	FS-BR-02	The Forest should require that limits of disturbance be marked in the field to facilitate inspections, and to reduce the likelihood of accidental incursions into areas that were intended not to be disturbed	Resolution - No change.
906	Pima County - Julia Fonseca	Appx B	WUS	24	FS-WUS-01	The EIS should disclose the restrictions on water use within the easement, and other restrictions that may apply.	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

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907	Pima County - Julia Fonseca	Appx B	Biology	29	FS-BR-07	The restriction should be in the form of a conservation easement held by a second party, with the USFWS as a third party beneficiary. This would increase the effectiveness of the measure. There should be an endowment established for monitoring, and rights to access and enforce the restrictions to someone other than the owner.	Resolution - No change, unless changes are made to final 404 mitigation and/or final BO terms and conditions.
908	Pima County - Julia Fonseca	Appx B	Biology	29	FS-BR-07	The EIS should disclose the restrictions on water use within the easement or covenant, and other restrictions that may apply.	Resolution - No change. These are not known at this time, if they are specified in the final BO or 404, the mitigations will be modified.
909	Pima County - Julia Fonseca	Appx B	Biology			A new monitoring requirement should be in place to detect inadvertently formed surface water bodies within the mine perimeter fence as a protection for Forest land, water, and wildlife resources. Detection should trigger monitoring for maintenance of narrative and quantitative surface water quality standards for wildlife, and contingent provisions for fencing. (Monitoring measure FS-GW-01 is not intended to identify unplanned surface water bodies, and thus will not address this issue.) (Monitoring measure FS-BR-03 does not address protection of wildlife from inadvertently formed ponds).	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
910	Pima County - Linda Mayro	Appx B	Entire			The issue of Social Justice is not addressed. While impacts to the human environment are addressed under NEPA, the FEIS recognizes the mining project will have a disparate negative effect on the Tohono O'odham Nation, other tribes and communities, and concludes that "the archaeological/ cultural resources mitigation plan is unlikely "to relieve the disproportionality of these impacts." There is also the issue of how to mitigate impacts to the social and cultural fabric of the Tohono O'odham and other affected communities. Other than the cultural resources mitigation plan (HPTP), no other mitigation measures are considered or offered or explored.	Resolution - No change. EJ is addressed in the Socioeconomics and Environmental Justice section in Chapter 3 of the FEIS. That section clearly states that these are impacts that cannot be mitigated, and that view has been confirmed by the consulting tribes.

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
911	Pima County - Krieski	Appx B	FE-SW-02	20-21		<p>Need to Release Additional Surface Water into Downstream Drainages Postclosure</p> <p>1. Eliminate Perimeter Containment Areas - Release Surface Water Downstream</p> <p>As shown in the PA DEIS (Chapter 2, p57, Figure 19 – Barrel Alternative Stormwater Concept) and on Figure 13 (Barrel Alternative Landform) of the CDM Smith Preliminary Reclamation and Closure Plan (July 2012), two Perimeter Containment Areas (PCA2 and PCA3) are located around the southern boundary of the Waste Rock disposal mound. The PCAs are stormwater retention basins, intended to capture and hold all incoming surface water, with no release to downstream drainages.</p> <p>As shown on Comment Figure 1, stormwater collected in the two PCAs include contributions from the lower slopes of the Waste Rock mound and adjacent upper slopes of the Barrel Canyon watershed (Area 1), and the entire watershed area associated with the Pit Diversion Channel (Area 2). Area 1 has a surface area of about 335 acres; Area 2 has a surface area of about 240 acres, with an approximate 100-yr discharge of 1800 cubic feet per second. Combined, Areas 1 and 2 have a watershed surface area approaching 1 square mile in size.</p> <p>As noted in Chapter 3 of the DEIS under Barrel Alternative-Stormwater Management after Closure, “The diversion channel west of the pit would collect precipitation in stormwater retention ponds along the southern toe of the waste rock facility and would be allowed to infiltrate as aquifer recharge, but it would not be able to flow downstream as surface water due to topography”.</p> <p>The “topography” referenced here is simply the geometric result of the intersection of the graded waste rock pile and existing slopes of upper Barrel Canyon (the remnant surface of the large graded pile superimposed on hilly topography nearby the upper watershed boundary). As a result, stormwater collected in Area 1 is trapped between the lower slopes of the Waste Rock mound and the existing topography at the head of Barrel Canyon. As noted on Figure 1, Rosemont Copper</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

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912	Pima County - Krieski	Appx B	FE-SW-02	20-21		<p>Stormwater retained in PCA2 and PCA3 is problematic both during mining operations and throughout the postclosure period. Stormwater ponded against waste rock, to depths of about 50 ft, will cause leaching of contaminants into the groundwater as the ponded water moves laterally into and through the waste rock mound. Instead, stormwater should be transferred around the Waste Rock mound for release into downstream drainages for perpetuity.</p> <p>Surface waters collected in Areas 1 and 2 certainly do not have to be captured and held in PCA2 and PCA3. These waters can, and should, be collected and transferred via a continuous perimeter drainage channel, and released downstream into the Trail Creek - Barrel Canyon drainage system as fundamental stormwater management component of the facility operational and postclosure condition. This can be accomplished by integrating and implementing the following operations:</p> <p>A. Design minor modifications to the geometry of southern Waste Rock mound side slopes to facilitate passage of perimeter stormwater.</p> <p>B. Perform excavations through the hilly topography of the upper Barrel Canyon watershed, as required, for construction of the perimeter stormwater management system.</p> <p>C. Utilize abundant waste rock materials for construction of the perimeter stormwater management channel, including placement of waste rock materials adjacent to the toe of the Waste Rock slope to construct a stormwater transfer system designed to function in perpetuity.</p> <p>There is sufficient grade for a continuous perimeter stormwater channel from PCA2 all the way around to the Trail Creek outlet. As shown on Figure 1, the Waste Rock mound perimeter distance from Point SW-1 (elev ~ 5220 msl) to Point SW-2 (elev ~ 4820 msl) is about 20,000 ft, with an elevation drop of about 400ft. This corresponds to an average slope of approximately 2% for the perimeter system.</p> <p>Design and construction of a continuous perimeter stormwater system is doable,</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

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913	Pima County - Krieski	Appx B	FE-SW-02	20-21		<p>2. Release Additional Surface Water from the Lower Tailings Mound Sideslope An additional wraparound or perimeter channel should be constructed along the northeastern side of the Tailings mound. As shown on Figure 1, there is no collection channel planned to transfer water collected at the bottom of the Area 3 sideslope interval. Instead, stormwater collected on this lower sideslope ponds along the base of the sideslope within three primary headwater areas below the adjacent north-trending ridgeline. This situation is similar in nature to the trapped water in the PCAs noted in Part 1 above.</p> <p>As indicated on Figure 1, a perimeter channel should be designed and constructed to collect and transfer stormwater from the base of the subject sideslope, by utilizing the same techniques noted above in Part 1 (operations A, B and C). Collected stormwater should be routed into the lowest planned bench at the northeast corner of the Tailings mound, for transmission release into the wraparound channel and release in to Barrel Canyon. Agency Review 163</p> <p>2. Release Additional Surface Water from the Lower Tailings Mound Sideslope An additional wraparound or perimeter channel should be constructed along the northeastern side of the Tailings mound. As shown on Figure 1, there is no collection channel planned to transfer water collected at the bottom of the Area 3 sideslope interval. Instead, stormwater collected on this lower sideslope ponds along the base of the sideslope within three primary headwater areas below the adjacent north-trending ridgeline. This situation is similar in nature to the trapped water in the PCAs noted in Part 1 above.</p> <p>As indicated on Figure 1, a perimeter channel should be designed and constructed to collect and transfer stormwater from the base of the subject sideslope, by utilizing the same techniques noted above in Part 1 (operations A, B and C). Collected stormwater should be routed into the lowest planned bench at the</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
914	Pima County - Julia Fonseca	Appx B	FS-BR-05			<p>The water features described herein are unlikely to replace the functional values of the springs and streams that would be impacted to wildlife. The Forest and Corps should consider adding the mitigation measure described by Frank Postillion, which would involve discharging pit water for recharging selected aquifers. This could reduce the short-term indirect impacts to streams and springs, and buy time to ensure that other offsite mitigation measures can really succeed.</p>	<p><u>Resolution - No change. This is a conservation measure and Term and Condition from the BO.</u></p>
915	Pima County - Brian Powell	Appx B	FS-BR-10	31	NA	<p>Transplanting Pima pineapple cactus has proven to be quite ineffective.</p>	<p><u>Resolution - No change. This is a conservation measure and Term and Condition from the BO.</u></p>
916	Pima County - Brian Powell	Appx B	FS-BR-10	31	NA	<p>Helvetia North is showing as having Pima pineapple cactus, but how many? If it is mitigation land, then disclose the number of PPC on site.</p>	<p><u>Resolution - No change. This is a conservation measure and Term and Condition from the BO.</u></p>
917	Pima County - Brian Powell	Appx B	FS-BR-14	33	NA	<p>A significant population of yellow-billed cuckoos is found downstream of the confluence of Cienega Creek and Davidson Canyon, but no mitigation actions are proposed there. That should be addressed, as the mine will likely impact their habitat there.</p>	<p><u>Resolution - No change. This is a conservation measure and Term and Condition from the BO.</u></p>
918	Pima County - Brian Powell	Appx B	FS-BR-14	33	NA	<p>Buffer around nests needs to be larger-this species is notorious for spooking easily. At least a 100 m buffer should be afforded the species.</p>	<p><u>Resolution - No change. This is a conservation measure and Term and Condition from the BO.</u></p>

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919	Pima County - Brian Powell	Appx B	FS-BR-15	34	NA	The plan for the Coleman's coral root is survey for known individuals and mark those. This is not sufficient, as we know (based on our limited knowledge of the biology of the species), that individuals only flower every 3-6 years. By only marking individuals that flower in a particular year, up to 85% of the population may not be accounted for. Modifications to this plan need to be made.	Resolution - Statement of fact or opinion. No action needed.
920	Pima County - Brian Powell	Appx B	FS-BR-16	35	NA	A fund for \$2M will do very little to "help restore the watershed to a functioning ecosystem." The ecological repair needs of the Cienega Watershed—over and above the mitigation activities committed to by Rosemont—will far exceed the amount pledged for this conservation fund.	Resolution - No change. This is a conservation measure and Term and Condition from the BO.
921	Pima County - Brian Powell	Appx B	FS-BR-16	35	NA	The document states that BLM and AZGFD will be responsible for identifying mitigation actions. Pima County would like to be involved in those decisions.	Resolution - No change. This is a potential mitigation from the 404 permitting process and/or conservation measure and Term and Condition from the BO.
922	Pima County - Brian Powell	Appx B	FS-BR-18	37	NA	Plans to "addressing [plant and 1 invertebrate] species that are found in disturbance areas, such as but not limited to documentation, collection, translocation, seed collection". This should be done before approval because it is unclear what mitigation measure would actually work for each of these species. Is translocation really possible for these species? (Probably not). We should already know the answer to this question, but the FS has not attempted to address this question for these species and has chosen to put off that work until after mine approval. However, it means that a complete analysis of the mine's impact has not been undertaken because we don't know what mitigation measures are possible.	Resolution - No change. The Forest believes this mitigation to be sufficient, and that they have met their obligation under law and regulation.
923	Pima County - Brian Powell	Appx B	FS-BR-18	38	NA	Monitoring for effects of pit dewatering is fine, but what do we do with this information? There needs to be a reasonable response. This should tie into release from bonding issue.	Resolution - No change. This is a conservation measure and Term and Condition from the BO.
924	AGFD	3	Biological Resources	6	22 note 9	<p>The text states: "It should be noted that wildlife of special concern in Arizona was used in lieu of species of greatest conservation need because the former list was approved by the State Game and Fish Commission, while the latter is in development (i.e. in draft form)."</p> <p>COMMENT: The Department has asked the Forest to use the Department's finalized (USFWS approved and publicly vetted) Arizona State Wildlife Action Plan and the species lists therein.</p> <p>The Department requested the FEIS analyze impacts to wildlife species for which the state has public trust responsibility, specifically those species listed within our State Wildlife Action Plan (SWAP) under Species of Greatest Conservation Need (SGCN) and Species of Economic and Recreational Importance (SERI). Impacts to wildlife on these lists were not evaluated or described and mitigation for those impacts was not considered, developed, or listed in the FEIS.</p> <p>RECOMMENDATION: NEPA requires a full and fair discussion of all environmental impacts. 42 USC 4332(C). The FEIS should contain a discussion of the Department's conservation policies underlying the SWAP. FEIS should include analysis of project impacts to the SGCN and SERI species.</p>	Resolution - text has been added regarding state regulations regarding wildlife, and SGCN and SERI are evaluated in the biologists' report.

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925	Pima County - Brian Powell	Appx B	FS-BR-20	38	NA	Monitoring roadkill of jaguar, ocelot, and their prey base is because the mine effectively cuts off the northeastern portion of the Santa Rita Mountains to the movement of animals (the mine is placed from ridgeline to the west, Highway 83 to the east.) So yes, mortality will increase due to funneling animals onto the highway (which of course also creates a safety hazard for motorists). But what management actions will this invoke? Will there be changes to Highway 83 to allow for safe passage of animals? If not, then this is another example of collecting data for the sake of collecting data and pretending it is mitigation.	Resolution - Wording in Chapter 3 has been updated to reflect the determination that there is little risk of vehicle-caused mortality to jaguar. This is also addressed in the BO.
926	Pima County - Brian Powell	Appx B	FS-BR-21	38	NA	Describe what "ascertain whether shielding from artificial night light emitted by the mine is possible or prudent" means.	Resolution - No change. Wording is adequately clear as written
927	Pima County - Brian Powell	Appx B	FS-BR-3	26	NA	There is an assertion that the security fence will be equipped with a frog barrier fence, but the security fence (Chap 2, page 14) is only chain-link near access roads; everywhere else it will be barbed wire. Specify how such a fence will be amenable to a frog barrier.	Resolution - No change. This is a Term and Condition from the Draft BO. Changes will be made based upon whatever is contained in the final BO.
928	Pima County - Brian Powell	Appx B	FS-BR-3	26	NA	Because the security fence will be barbed wire, wildlife will be able to enter the site, but there is an assumption that wildlife will not be able to enter the site. This should be clarified.	Resolution - No change. A careful reading of this mitigation measure will show that it is specifically focused on additional barriers (potentially including fencing) of specific features (such as ponds) to exclude wildlife.
929	Pima County - Brian Powell	Appx B	FS-BR-4	27	NA	Replacing up to 300,000 agaves with approximately 35,000 individuals should not be allowed; there should be greater emphasis on this species.	Resolution - No change. This is a BO requirement, and will only be changed if the final BO contains changes.
930	Pima County - Brian Powell	Appx B	FS-BR-4	27	NA	Monitoring of agaves should set number of plots and sites, and how often	Resolution - No change. This is a BO requirement, and will only be changed if the final BO contains changes.
931	Pima County - Brian Powell	Appx B	FS-BR-4	27	NA	Planting of agaves should be staggered across years to ensure a good interannual distribution of flowing plants	Resolution - No change. This is a BO requirement, and will only be changed if the final BO contains changes.
932	Pima County - Brian Powell	Appx B	FS-BR-4	27	NA	Plant stock grown in nurseries should be from or very near to the site.	Resolution - No change. This is a BO requirement, and will only be changed if the final BO contains changes.
933	Pima County - Brian Powell	Appx B	FS-BR-5	28	NA	It needs to be determined what the trigger will be that would compel Rosemont to construct artificial waters. Without such a trigger, it could be very easy for Rosemont to stall implementation.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

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934	Pima County - Brian Powell	Appx B	FS-BR-6	29	NA	Qualified biologists need to be on hand during construction of power lines to ensure that talus are not disturbed.	Resolution - No change. The BO requires a Forest Service journeyman biologist be the primary contact to oversee all monitoring. See Chapter 2 and the BO.
935	Pima County - Brian Powell	Appx B	FS-BR-7	29	NA	Conservation easement on the Helvetia ranch should preclude mining as an activity and all valid mining claims relinquished.	Resolution - No change. This is a BO requirement, and will only be changed if the final BO contains changes.
936	Pima County - Brian Powell	Appx B	FS-BR-9	31	NA	A camera study is not a meaningful mitigation effort.	Resolution - No change. This is clearly presented in appendix B as a monitoring item, not a mitigation measure.
937	Pima County - Brian Powell	Appx B	FS-GMP-1	6	NA	Putting Rosemont in the position of suspending operations after discovery of "significant" paleontological resources puts an unreasonable expectations and charge of responsibility on the company and their staff. What is "significant" and how will untrained staff know when this resource (and threshold from "insignificant") has been discovered? What is involved in this "after action review" and for how long will work stoppage take place? More details and guidance is needed	Resolution - No change. The Forest disagrees, and RCC has agreed to this measure.
938	Pima County - Brian Powell	Appx B	FS-GMP-2	7	NA	Again, having Rosemont report on these resources is unrealistic. Further, the document states that "Upon discovery of such resources, Rosemont Copper would suspend work at that site and notify the Forest Service, and the site would be investigated in the same 24-hour period by the Forest Service before work resumes." This means that, for example, if a cave resource is discovered at midnight on a Saturday night that an investigation would be completed (not started) by Sunday night. This is not realistic. Instead, an independent entity should be brought in to oversee work and this type of investigation because it is simply not in the company's interest to report these resources.	Resolution - No change. The Forest disagrees, and RCC has agreed to this measure.
939	EPA	Appx B	FS-GW-03	18		Under this mitigation measure, one sample would be collected and submitted for testing for every 250,000 tons for PAG and every 5,000,000 tons for Non-PAG. In most cases, the number of samples is based on tons but not varied by classification. This approach would allow for 250,000 tons of PAG to be diluted within 4,750,000 tons of Non-PAG. The EIS should offer data to support why the proposed sampling rate is appropriate for ensuring adequate operational geochemical characterization and how this approach compares to one based on taking cores from each ore shoot.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
940	Pima County - Brian Powell	Appx B	FS-RW-03	49	NA	Moneys will be given to the Forest to study and improve conditions from ORVs, but studies and subsequent mitigation should take place on other parcels, closer to Tucson, such as the County's Bar-V and Cienega Creek Natural Preserve, both of which will likely receive more ORV traffic as a result of the loss of the Rosemont site.	Resolution - No change. This planning would not occur until after approval of the ROD and final MPO. The Forest has the ability to enter into a joint NEPA analysis with other agencies such as the County and State if they feel it would be beneficial and all parties agree to participate.

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941	Pima County - Brian Powell	Appx B	FS-SR-01	8	NA	Success criteria for growth media should be established prior to final approval. It should be made more clear exactly what will be accomplished by “refining” success criteria. In fact, the document claims already that reference sites will be used for this purpose.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
942	Pima County - Brian Powell	Appx B	FS-SR-01	8	NA	The document cites the use of an adaptive management approach to refine those success criteria. This is not an appropriate use of adaptive management, which (according to the very source that is being cited) seeks to reduce uncertainty of management actions and not (as proposed) to develop criteria for success. This is just one small part of the adaptive management cycle.	Resolution - This has been fixed in FS-SR-01.
943	Pima County - Brian Powell	Appx B	FS-SR-01	8	NA	Recommended that the FS have a very strict standards for soil particle size, soil stability, etc as reclamation progresses. Certainly some areas will need additional work, but for the FS and Rosemont to go back to previously reclaimed areas and enhance elements such as soil particle size is simply unrealistic; standards should be well articulated and they should be met as work progresses.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
944	Pima County - Brian Powell	Appx B	FS-SR-01	8	NA	With regards to bonding (which we are not privy to reviewing), sufficient money should be allocated for erosion repair and vegetation establishment for years after mine closure.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.

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945	Pima County - Brian Powell	Appx B	FS-SR-01	8	NA	Identify "established" NRCS protocols for growth media.	<u>Resolution - This has been clarified.</u>
946	Pima County - Brian Powell	Appx B	FS-SR-01	8	NA	The document indicates that "Available, onsite woody debris from clearing of the mine site would be used on the reclaimed growth medium surfaces to provide stability, organic matter, and microhabitats for seed germination, invertebrates, and small vertebrate species." This may not be realistic for more than a few years out from the initial vegetation clearance action because these woody elements will decompose. What, then, will be the plan for woody components at the time of mine closure?	<u>Resolution - No changes warranted. The problem with timing is well acknowledged by the Forest. If there's no woody debris, there simply is no woody debris.</u>
947	Pima County - Brian Powell	Appx B	FS-SR-01	8	NA	If the success criteria are matched to areas of natural vegetation and that standard cannot be met, there is no indication in the document as to what action the FS would take other than "determine the need for additional mitigation measures for more successful revegetation and increased soil stability", which of course is referring to on-site actions. The FS should include a provision (and appropriate bonding) for off-site mitigation if the on-site actions are not sufficient.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
948	Pima County - Krieski	Appx B	FS-SR-01	8		<p>Create Specifications within the Final Reclamation and Closure Plan for the Systematic Monitoring and Reporting of Volumes of Soil Growth Media Utilized</p> <p>This Monitoring / Reporting mitigation measure should specify requirements for the systematic monitoring and documentation of all Soil Borrow Areas from which soils are obtained, the quantity of soils obtained, and the quantity of soils utilized in relation to applications on specific acreages of reclaimed surfaces.</p> <p>These activities should correspond to requirements raised in related PA DEIS comments, including the preparation and updating of Mine Reclamation Soil Management Maps every 2 years, and updating soil volume calculations for site reclamation needs every 2 years.</p> <p>The Forest Service recognizes the importance of the systematic collection of this data as part of monitoring the concurrent reclamation activity: As noted in the Training Guide for Reclamation Bond Estimation and Administration, For Mineral Plans of Operation authorized and administered under 36 CFR 228A, USDA-Forest Service, April 2004 within Earthwork:</p> <p>“The operator should be required in the POO to regularly submit an accounting of stockpiled materials such as subsoil, and topsoil so that the reclamation review calculations are based on factual data rather than conjecture. It is incumbent on FS personnel to ensure that the operator is stockpiling any such materials as the mine is developed and that the stockpile volumes are accurate. We do not want to have to ‘mine’ needed reclamation materials from another site in order to reclaim the mine.”</p> <p>Change Requested:</p> <p>1. Include formal specifications within the Final Reclamation and Closure Plan for requirements for systematic monitoring and reporting of the Soil Borrow Areas from which the soils were obtained, the quantity of soils obtained, the quantity of soils utilized for reclamation and slope rehabilitation, and the</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
949	Pima County - Brian Powell	Appx B	FS-SR-01	11	NA	<p>As with the soil metrics, the FS is not using adaptive management in the right context for the revegetation success. Adaptive management should not be used to adjust success criteria, which can be articulated now.</p>	<p>Resolution - This has been fixed in FS-SR-01.</p>
950	Pima County - Brian Powell	Appx B	FS-SR-01	11	NA	<p>There is a reference to “three types of plots” but no definition of what this means.</p>	<p>Resolution - This has been fixed in FS-SR-02.</p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
951	Pima County - Brian Powell	Appx B	FS-SR-01	11	NA	The number, location, and frequency of monitoring plots (or transects) can be established now- there is no justification for waiting on this, especially if natural reference conditions are used as baseline	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
952	Pima County - Brian Powell	Appx B	FS-SR-01	11	NA	Livestock grazing on reclaimed sites should be addressed explicitly. Given the steep slopes and potential for erosion, grazing should not be allowed until after success criteria are met.	<u>Resolution - Statement of fact or opinion. No action needed. As stated in the FEIS, grazing is prohibited unless the FS determines it would be beneficial to reclamation.</u>
953	Pima County - Brian Powell	Appx B	FS-SR-01	11	NA	Controlling invasive species is generally a good thing, but more detail is needed. In the document there is a justification for using a National Park Service protocol for invasives, but that protocol is for natural areas, and surveys are targeted on areas with some level of disturbance. In contrast, the entire Rosemont reclamation site is disturbed land and therefore far more susceptible for the establishment of invasive weeds. In addition, it might be prudent not to view all invasive species as harmful. For example, on areas that have no vegetation and are susceptible to erosion, the presence of some species such as Lehman's lovegrass may not be as undesirable as at times and locations where erosion is not a significant concern. Therefore, an invasive species management plan should be developed that is explicit about goals and objectives related not only to the actual species present, but also to the associated soil and hydrological considerations. Development of such an approach is ideally suited to a structured decision making process, which is increasingly being used by Federal land management agencies.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
954	Pima County - Brian Powell	Appx B	FS-SR-01	11	NA	There is no explicit consideration of the tens of thousands of oak trees that will be impacted by this project. Specific targets should be set for these trees and if on-site revegetation will not work, then off-site should be found.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
955	Pima County - Krieski	Appx B	FS-SR-01	7_10		<p>Develop Specifications for Soil Availability for the Final Reclamation Operation According to Figure 6 (Soil Stockpile at End of Operation Year 15) of the CDM Smith Preliminary Soil Salvage Management Plan (July 2012), two soil salvage stockpiles are located on the surface of the Tailings and Waste Rock mound. Stockpile 3 has a capacity of 335,000 cy, and Stockpile 4 has a capacity of 283,000 cy, for a combined total capacity of 618,000 cy.</p> <p>Chapter 3, Figure 36 of this PA EIS depicts the area which remains to be reclaimed for Years 16-22 Reclamation Work. This figure corresponds to Figure 12 (Composite of Yearly Reclamation Areas) contained in the CDM Smith Preliminary Reclamation and Closure Plan for the Barrel Alternative (July, 2012). Information in this report indicates some 57% of the Tailings and Waste Rock mound (approximately 1,990 acres) remains to be reclaimed in the period of Years 16-22. Table 4-1, Concurrent Reclamation Areas (Year Pre – Post Production), of the CDM Smith Preliminary Soil Salvage Management Plan (July 2012) provides similar reclamation information.</p> <p>At the end of Year 15 in the mine’s life, and probably closer to Year 10, there are no longer any areas available on-site from which to borrow soils. At this time, potential soil borrow areas have already been removed through excavation or covered by mine waste materials. Any removal of soils from undisclosed off-site locations would itself trigger the formal reclamation of these same areas.</p> <p>With a minimum specification of 1 ft of soil cover needed for the 1,990 acres which remain to be reclaimed at the end of Year 15, soil quantities required for this operation alone require some 3,200,000 cy. With stockpiles 3 and 4 containing the only remaining available soil for final reclamation, there appears to be a deficiency of about 2,500,000 cy for final reclamation of the landform (3,200,000 cy - 618,000 cy).</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
956	Pima County - Krieski	Appx B	FS-SR-01	7_10		<p>Changes Requested:</p> <ol style="list-style-type: none"> 1. Clarify the apparent, significant discrepancy of 2,500,000 cy of soil needed for final reclamation of the Tailings and Waste Rock mound for Years 16-22. For final reclamation purposes, where will additional soils be obtained, either on-site or off-site, for reclamation of the mine waste disposal landform? 2. For soils obtained from additional on-site or off-site areas, identify these general soil borrow areas and provided specifications for how these areas themselves will be reclaimed. 3. Include within the Final Reclamation and Closure Plan specific Mine Reclamation Soil Management Maps which clearly show, for the life of the mine through Final Reclamation, where soil would be obtained (Soil Borrow Areas) and stockpiled (Soil Stockpile Areas) to provide complete site reclamation activities for the period of Year 10 – Final Site Reclamation. Include annual estimated volumes which are expected to be obtained from each Soil Borrow Area, and annual estimated volumes which are expected to be stored in each Soil Stockpile Area, for the period of Years 10 – Final Site Reclamation. 4. Provide specifications in the Final Reclamation and Closure Plan to formally update the Mine Reclamation Soil Management Maps every 2 years during the life of the mine and through Final Reclamation. 	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
957	Pima County - Krieski	Appx B	FS-SR-01	7	10	<p>Recalculate Soil Volume Needed for Final Reclamation and Postclosure Table 3-1 (Reclamation Needs) of the CDM Smith Preliminary Soil Salvage Management Plan (July 2012) includes estimates of the volume of soil needed for total site reclamation. A nominal depth of 12 inches is used to calculate soil needs for reclaimed areas.</p> <p>However, a nominal depth of 12 inches results in a significant underestimation of actual soil needs due to three primary reasons:</p> <ol style="list-style-type: none"> 1. Placement of Soil on Waste Rock Surfaces 2. Uniform Soil Loss through Downslope Movement / Slope Rehabilitation 3. Soil Needed for the Post-Reclamation (Postclosure) Period <p>Placement of Soil on Waste Rock Surfaces</p> <p>The vast majority of landform slopes and surfaces to be covered with a minimum of 1 ft of growth media salvage consist of a waste rock application surface. The placement of soil on an irregular waste rock surface, inherently irregular and pocked with void spaces, will required considerably more soil than a nominal 1 ft calculated thickness in order to physically construct a 1 ft minimum thickness layer. A significant amount of soil will be required to first fill in the many voids and irregularities of a waste rock surface, prior to the construction of a 1 ft minimum thickness growth media layer.</p> <p>Uniform Soil Loss through Downslope Movement / Slope Rehabilitation during the MPO Reclamation Period</p> <p>No calculated soil loss quantities have been included within the volume estimate of growth media salvage soil for the approximately 2,500+ acres of sideslopes to be reclaimed as part of Concurrent Reclamation, and from additional landform surfaces covered during Final Reclamation activities. Successful revegetation of these reclaimed surfaces will take tens of years; significant uniform loss of soil will occur during Concurrent and Final Reclamation activities. In addition, localized</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
958	Pima County - Krieski	Appx B	FS-SR-01	7_10		<p>Soil Volume Requirements for the Postclosure (Post-Reclamation) Period</p> <p>Following the conclusion of Final Reclamation activities and during the Post-Closure Period, until such time that the Forest Service approves the success of the vegetation over the total landform reclamation area (~2,700 acres), soil loss through downslope movement and area-specific rilling/gullyng will continue unabated. Surface slope soil needs for rehabilitation activities during this time period, particularly in the decades following “Final Reclamation”, may be significant. Under Timing – Effectiveness, “Monitoring would begin; continuing through placement of growth media to ensure that it is stable, placed according to the final reclamation plan, and does not erode excessively.”</p> <p>Change Requested</p> <p>In order to quantify more realistic soil volumes which will be required for placement of soil growth salvage media for total landform reclamation activities, in contrast to the nominal 1 ft thickness presented in the PADF EIS, provide specifications in the Final Reclamation and Closure Plan for determinations of the following:</p> <ol style="list-style-type: none"> 1. The anticipated additional soil volume requirements for construction of a minimum 1 ft thick soil growth media surface on top of an irregular waste rock surface. 2. The estimated volume of annual soil loss from reclaimed sideslopes during the period of Concurrent and Final Reclamation of the site. 3. In conjunction with an associated comment regarding the preparation and updating of Mine Reclamation Soil Management Maps every 2 years, update soil volume calculations for site reclamation needs every 2 years. 4. Soil volume needs for slope rehabilitation activities during the Postclosure (Post Reclamation) period, until such time the Forest Service can definitively state the site is “stable”. Specify the locations of Soil Borrow Areas to be utilized for these Postclosure soil needs? 	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
959	Pima County - Krieski	Appx B	FS-SR-02(12-13) FS-SW-02(21)	12_1 3 21		<p>Specifications / Bonding Requirements Needed for Postclosure – Continuing Operations and Responsibilities after Reclamation: Soil Loss, Slope Stability, Revegetation Operations, Maintenance of Facility Stormwater Systems</p> <p>Within the section Soil Development and Productivity Lost to Erosion after Reclamation (PA EIS Chapter 3, Soils and Revegetation, p 15), the following is noted:</p> <p>“Postclosure, reduction of soil loss from the watershed would be dependent on structural and engineered sediment controls and on revegetation of the site to prevent erosion from occurring. Reduction of the actual erosion of soil from surfaces can only be accomplished through revegetation of the site or the use of protective rock cover, which is generally undesirable with respect to recovery of soil productivity.”</p> <p>As stated, following the conclusion of Reclamation activities and well into the Postclosure period, reduction of soil loss / soil erosion is dependent upon sediment controls and successful revegetation of the site. Clearly, soil loss through downslope movement and rilling/gullyng will continue unabated into the postreclamation (postclosure) period as vegetation plantings try to take root and survive. Slope surface rehabilitation operations, including replacement of lost soil, and revegetation of unsuccessful zones of initial plantings, may require decades of time.</p> <p>As noted in Appendix B, FS-SW-02 (Stormwater Diversion ... downstream drainages postclosure), monitoring and maintenance of site stormwater management systems / engineered sediment controls in the postclosure period will also be an essential site operational activity: “Monitoring postclosure for a period of time to be determined ensures that facilities would operate with no or minimal maintenance.”</p> <p>Within the PA EIS Appendix B, FS-SR-02, p 12, Responsible Party, Implementation</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
960	Pima County - Krieski	Appx B	FS-SR-02(12-13) FS-SW-02(21)	12_1 3 21		<p>Within the PA EIS Appendix B, FS-SR-02, p 13, Timing, the following are noted: "Implementation: Monitoring would begin and would continue until the Forest Service determines that no further revegetation efforts (seeding, planting, site stabilization, etc.) are necessary to meet the revegetation plan and final reclamation and closure plan and objectives during final reclamation and closure and postclosure phases." In summary, postclosure facility operations required for soil replacement, slope stability, revegetation and maintenance of facility stormwater management systems may be required for many years, and possibly decades, following "final reclamation" activities at the end of mining. From the above statements from the PA EIS, the Forest Service will monitor the closed facility. However, the question remains: who is responsible for funding and executing postclosure operations required for necessary revegetation, soil replacement, and slope stability activities, including monitoring and maintenance of site stormwater management systems, until such time that the closed mine site reaches functional equilibrium with the surrounding natural environment? The Forest Service has not specifically stated that Rosemont Copper is responsible for these operational activities in the postclosure period (until such time the Forest Service approves the final product and Rosemont Copper is allowed to "Walk Away"). Per 36 CFR 228 Part A and in 2800 Section of the Forest Service Manual, "To the extent practicable, reclaimed National Forest System land shall be free of long-term maintenance requirements." To the contrary, however, per documents prepared by Rosemont Copper, the mining company intends to "walk away" from the mine site following the conclusion of reclamation activities. According to information contained in Chapter 13 (Reclamation and Closure Costs) of the CDM Smith Preliminary Reclamation and Closure Plan for the Barrel Alternative (July, 2012), no cost / bonding provisions are included for facility postclosure revegetation, soil replacement,</p>	<p>Resolution - This is inherent in the bonding process and it is discussed in chapter 2 of the FEIS. No changes needed.</p>
961	Pima County - Brian Powell	Appx B	FS-SR-03	13	NA	<p>Conformance with many of the mitigation measures is monitoring using "visual inspections" to ensure, for example, that "surfaces would be stable and excessive erosion would not occur." The mitigation plan should articulate what constitutes these thresholds. Better yet, do not rely on qualitative measures, like aerial LiDAR.</p>	<p>Resolution - Statement of fact or opinion. No action needed.</p>
962	Pima County - Brian Powell	Appx B	FS-SR-03	14	NA	<p>Specify location and distance: "Activities near known lesser long-nosed bat roosts"</p>	<p>Resolution - Statement of fact or opinion. No action needed. This comes from the BO terms and conditions.</p>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
963	Pima County - Brian Powell	Appx B	FS-SR-04	14	NA	<p>“Rock slopes within the mine pit would be remotely monitored for movement.”</p> <p>Monitoring is good, but the document fails to identify what measures would be put in place if movement does happen. Aside from obvious human safety issues, there are also biological concerns, such as impacts to talus snail habitat. Bonding should be identified for potential slope movement.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
964	Pima County - Brian Powell	Appx B	FS-SR-05	14	NA	<p>Sediment transport monitoring stops at SR 83 bridge, but what about downstream? The County has great concern for sedimentation into Bar-V Ranch and Cienega Creek.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
965	Pima County - Brian Powell	Appx B	FS-SR-05	14	NA	<p>Thresholds have not (but need to be) identified and this can be done by conducting baseline assessment and pairing Barrel with nearby, unimpacted sites to determine the relative contribution of sediment in Barrel Canyon.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
966	Pima County - Brian Powell	Appx B	FS-SSR-01	22	NA	With regards to timing of purchase of water rights, the document says: "throughout the life of the project (pre-mining through final reclamation and closure phases) and for 5 years following mine closure." Clarify what this is referring to and if water rights would be reversionary.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
967	Pima County - Julia Fonseca	Appx B	FS-SSR-02			The Cienega Creek Watershed Conservation Fund is inadequate for all of the stated purposes. Also, need to disclose how you determine an "effect", particularly if you are allowing discontinuance when "observations indicate the absence of standing water..." etc. This mitigation measure is really not thought out well.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
968	Pima County - Julia Fonseca	Appx B	Ground water Quality	FS- GW- 01		How many pans or lysimeters will be deployed? This is needed to quantify costs. The mitigation measure also needed to state what the threshold will be for determining that seepage is occurring.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
969	Pima County - Julia Fonseca	Appx B	Ground water Quality	FW- GW- 02		This mitigation measure and the EIS fail to disclose which water quality constituents will be monitored. This disclosure is needed not only for anyone to understand what is being monitored, but also for quantifying costs in the reclamation bond. The mitigation measure should specify that monitoring will encompass constituents and characteristics comprising both the narrative and quantitative surface water quality standards for aquifer uses in the Forest (livestock and wildlife, primarily). The measure should disclose what actions the Forest Service is prepared to take if the standards are not met.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
970	Pima County - Julia Fonseca	Appx B	Ground water Quality			The Forest Service should also use visual evidence of seepage around the margins of the waste rock and tailings a separate monitoring measure	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
971	Pima County - Julia Fonseca	Appx B	Ground water Quality			Mitigation should require proper abandonment of any unused drill holes, existing shafts and adits on Forest lands and on Rosemont's lands within the pollutant management area before the operations begin to protect ambient groundwater. These sites should be identified in final MPO and bonded. If there are sites that have already "treated", these should have been identified in the PA FEIS.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This specific measure has been added to Appendix B.</u>
972	Pima County - Julia Fonseca	Appx B	Ground water Quality			Mitigation measure is needed for require proper abandonment of any unused drill holes, wells, and piezometers as part of reclamation and closure plan to protect groundwater quality and quantity.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This specific measure has been added to Appendix B.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
973	Pima County - Julia Fonseca	Appx B	Ground water Quality			Forest Service should require that all existing wells have been evaluated for proper wellhead protection to ensure ground water quality is not impaired where the continued use of wells for drinking water, stock, monitoring and wildlife uses is proposed in this EIS. If deficiencies are found, these should be rectified. This mitigation measure would protect groundwater uses in the area.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This specific measure has been added to Appendix B.</u>
974	Pima County - Julia Fonseca	Appx B	Land Ownership	76	RC- LO-01	This is a federal action that could have significant impacts on the human environment. This EIS has not analyzed the impacts of transferring ownership on natural and cultural resources. This should not be considered a mitigation measure. If it is to be considered, it should be analyzed as a connected federal action, not a voluntary mitigation measure of Rosemont's. This measure cannot be implemented without federal action.	<u>Resolution - No change. Transferring ownership is not anticipated to have an impact on cultural natural or cultural resources. The total acreage for these parcels is 5.5 acres. Surveys of cultural resource and TES plants have been or would be conducted prior to sale, and any resource conflict addressed through the terms of the sale. Note that these are very small slivers of land that are already surrounded by private RCC land (see figure in Landownership section).</u>
975	Pima County - Julia Fonseca	Appx B	Land Ownership	76	RC- NA	Rosemont should make good on its promise to Green Valley that neither Broadtop Butte nor Copper World is ever mined by placing a conservation easement on the deeded lands that comprise these ore bodies.	<u>Resolution - No change. This is not related to the decision or analysis at hand.</u>
976	Pima County - Julia Fonseca	Appx B	Land Ownership		Figur e -77	This figure fails to disclose the majority of the mineral survey fractions fall in what Rosemont has defined as the Broadtop Butte mineral resource. Also fails to show location relative to mine facilities other than the perimeter fence.	<u>Resolution - No change. This figure depicts the 7 mineral fractions that the Forest proposes be purchased by RCC. A comparison to figures in Chapter 1 shows the relation of these fractions to mine facilities.</u>
977	Pima County - Postillion	Appx B	Mitigation and Monitoring – Evaluation and Reporting	4	39	Please indicate the agency responsible for the Stormwater Pollution Prevention Plan. Is it Pima County? ADEQ? EPA? Disclosure of the regulatory Authority is needed. It appears to be a general AZPDES SWPPP	<u>Resolution - specified that it is issued by ADEQ.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
978	Pima County - Postillion	Appx B	Mitigation and Monitoring – Evaluation and Reporting	11	3	Anchoring of the growth medium will be essential, yet it is not emphasized. A sentence needs addition to state "sufficient growth medium and anchoring of that medium to ensure re-vegetation success"	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
979	Pima County - Postillion	Appx B	Mitigation and Monitoring – Evaluation and Reporting	21	NA	An additional mitigation measure that will significantly contribute to downstream subflow and spring and seep restoration would be controlled discharge of the water derived from pit dewatering to locations downstream of the mine. Based on Tetra Tech's modeling, the pit dewatering is predicted to be of good quality. In addition, good quality groundwater from the Upper Santa Cruz Basin is scheduled for use at the Mine. If additional makeup water or dust control water is needed, then Santa Cruz groundwater (or better yet, CAP) should be used since the groundwater removed from the pit through dewatering would have eventually moved downgradient to the Davidson and Cienega Creek Basins, absent the mine. This mitigation would be fundamental in providing the wet water so critical to the downstream riparian areas and to restoring an already reduced base flow on Cienega Creek.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
980	Pima County - Postillion	Appx B	Mitigation and Monitoring – Evaluation and Reporting	22	Timing	For both FS-SSR-01 and 02 the timing aspect of 5 years post mining is insufficient. Effects of the mine pit on drawdown and reduction of runoff volume for many of the springs will not show effects until many more years after mine closure. Who will monitor and bear the cost of monitoring these springs after 5 years post closure. Knowing that the long-term effects of the pit will have long-term water-level declines, the mine must leave a mitigation fund to compensate for the loss of the springs and potential base flow loss in Cienega Creek.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
981	Pima County - Postillion	Appx B	Mitigation and Monitoring – Evaluation and Reporting	28	3_4	The long-term management and maintenance fund needs to be specified with initial monies based on predicted impacts to affected springs as per the FEIS. Estimates of cost need to be established so Rosemont is held responsible for an initial fund to be adjusted as mining proceeds.	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</p>
982	Pima County - Postillion	Appx B	Mitigation and Monitoring – Evaluation and Reporting	74	NA	RC-GW-03 could go further to allow for the pipeline to come to the Rosemont supply line and Rosemont directly use CAP, when available, instead of groundwater which is a lower TDS and could be better utilized as a potable source. In addition, this would help mitigate impacts to adjacent well owners and loss of their wells. This is currently being implemented at ASARCO Mine as they use 10,000 AF/yr of CAP for mine process water. We understand that CAP will not always be available. However, when it is available, Rosemont needs to use CAP instead of groundwater and allow for flexibility in its infrastructure to accomplish this action.	<p>Resolution - Statement of fact or opinion. No action needed. See Alternatives considered but dismissed in chapter 2.</p>
983	Pima County - Linda Mayro	Appx B	Mitigation and Monitoring Plan	3	20-36	This section includes a reference to the cultural resources MOA and HPTP, but does not discuss their purpose and relatedness, consulting parties, concurring parties, and whether completed, and is generally too brief.	<p>Resolution - No change. That info is either in the Cultural Resources section in Chapter 3 or in the MOA itself.</p>
984	Pima County - RWRD - Staff	Appx B	Mitigation and Monitoring Plan	16-17	All	It is critical to monitor ground water quality conditions for this site. However, in FSGW-02, “Water Quality Monitoring beyond Point-of-Compliance Wells” there is no mention of a data management plan, which should include statistical analysis, trending, and outlier examination. Gathering a huge amount of data is only valuable if the data is managed and presented in a way where trends in pollutant concentration can be examined. The Forest Service should require a Data Management Plan to include periodic statistical analysis, trending and conclusions based on data summaries.	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
985	Pima County - Julia Fonseca	Appx B	OA-GW-05			What is being measured for NEPA compliance? How much deviation is tolerated before monitoring results are deemed "out of compliance" with NEPA decision?	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
986	EPA	Appx B	OA-GW-06	70		We recommend that Coronado require that Rosemont install mid-point groundwater monitoring. Specifically, monitoring wells should be placed between possible sources and the POC wells. In particular, monitoring wells should be placed down gradient of the proposed heap leach for those alternatives that include this facility.	Resolution - All mitigation/monitoring comments have been reviewed by the Forest for action. This particular recommendation is not feasible. There are no mid-points between the facilities and the POC wells. The POC wells are located at the foot of the facilities.
987	Pima County - Julia Fonseca	Appx B	OA-GW-07			The threshold for NEPA compliance should be clearly stated in performance criteria. The ADWR permit allows 6000 acre-feet per year pumping, but the NEPA analysis says they will only pump up to 5400 acre-feet per each of the first eight years. But the performance criteria is "as specified by ADWR permit", which means that the pumping could exceed the NEPA assumptions for 600 acre-feet per year, or a total of 4800 acre-feet. The threshold that the Forest will use for NEPA compliance should be the ones used for the groundwater analysis, not the limits stated in the ADWR permit.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
988	Pima County - Sarah Walters	Appx B	Other Monitoring Items for Air Quality	64	NA	Opacity Monitoring should be required during high wind events. Also, monitoring of property boundary should be conducted to ensure compliance with PCC Title 17 Visible Emission Standards that should be included within the ADEQ Air Quality Permit.	Resolution - The Forest Service considered this and determined based upon past opacity monitoring that it would not allow determination of whether the source of decreased opacity is the mine, and so decided not to include it as a monitoring item.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
989	Pima County - Akitsu Kimoto	Appx B	Sediment Transport Monitoring	14-15		More frequent and quantitative sediment transport monitoring (e.g. suspended sediment concentration) is required in Barrel Canyon. Quarterly visual inspections proposed in the FEIS are not enough to assess the impacts of mining activities on sediment transport. Especially frequent monitoring is necessary during a monsoon season. Please consider additional monitoring	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</p>
990	Pima County - Akitsu Kimoto	Appx B	Soil and Revegetation	8		What corrective actions would be taken if revegetation and soil stability are unsuccessful?	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</p>
991	Pima County - Akitsu Kimoto	Appx B	Soil and Revegetation	9		No explanation about the best management practices that will be implemented for sediment control. What practices will be implemented? This information is particularly important for revegetation and soil stabilization on steep slopes. Please disclose the information.	<p>Resolution - The SWPPP was reviewed for any specific methods for preventing erosion. It contained insufficient detail to incorporate into the FEIS.</p>
992	Pima County - Akitsu Kimoto	Appx B	Soil and Revegetation	9		"The Forest Service is responsible for establishing success criteria to determine whether the growth media is sufficient to support revegetation objectives of the final reclamation and closure plan and soil stability requirements". The success criteria should be clearly defined.	<p>Resolution - Have added draft success criteria to the Soils section. Approved by Forest specialist.</p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
993	Pima County - Akitsu Kimoto	Appx B	Soil and Revegetation	9		It is not clear that the number of reclamation monitoring sites (plots? How many?). It is important to have multiple monitoring sites with different conditions to assess the mitigation effectiveness. Please disclose detail monitoring plans and sites.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
994	Pima County - Akitsu Kimoto	Appx B	Soil and Revegetation	10		The FEIS cited that "Monitoring would begin when salvage of soil (growth media) begins to ensure that storage pile(s) are stable and do not contribute large quantities of dust during wind events; continuing through placement of growth media to ensure that it is stable, placed according to final reclamation plan, and does not erode excessively". However, it is not clear how to monitor the impacts of storage piles on wind erosion or dust. Please explain.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
995	Pima County - Julia Fonseca	Appx B	Surface Water Quantity	70	OA-SW-01	EIS should disclose the analytes that will be monitored and what kind of triggers or responses would be taken. Without this information, it is impossible to evaluate effectiveness.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
996	Pima County - Julia Fonseca	Appx B	Surface Water Quantity	70	OA- SW- 01	How would this monitoring affect (mitigate) sediment load? Given this purpose, there should be a threshold and a mitigation measure attached to this item that would control sediment loads.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
997	Pima County - Julia Fonseca	Appx B	Surface Water Quantity	70	OA- SW- 01	There should be effectiveness monitoring by Forest to ensure that construction of all stormwater facilities in the final MPO are constructed in a timely manner. This was an issue at the Carlota mine, where lack of effective phasing of stormwater facilities resulted in pollution during runoff events.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
998	Pima County - Julia Fonseca	Appx B	Surface Water Quantity	FS- GW- 03		EIS fails to disclose what analytes will be monitored. There is no reason that these cannot be disclosed at this time, and in fact this is needed for any estimate of cost and for a basic understanding of the monitoring proposal.	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
999	Pima County - Julia Fonseca	Appx B	Surface Water Quantity			<p>The Forest and Fish and/or Wildlife Service should require monitoring narrative and quantitative surface water quality standards for Aquatic and Wildlife (warm-water) at the locations of all new planned surface water bodies, to include arsenic, selenium, copper and mercury. This should include any new mitigation waters created for wildlife or stock, the existing water bodies at mitigation areas, stock tanks, and the pit lake, which would provide an attractive nuisance.</p> <p>Big Pond, a livestock and wildlife watering site on State Trust land east of the facility;</p> <p>East Dam, a livestock and wildlife watering site located less than one miles east of the facility, on Forest land, an important site for the Chiricahua leopard frog;</p> <p>Adobe Tank, a livestock and wildlife watering site, located less than two miles east of the facility on State Trust land in the upper;</p> <p>Highway Tank and Oak Creek Canyon Tank, livestock and wildlife watering site located one to two miles east-southeast of the facility, on Forest land and habitat for the Chiricahua leopard frog;</p> <p>4066 Tank, a livestock and wildlife watering site on Forest land southeast of the facility;</p> <p>McCleary stock tank;</p> <p>Greaterville area tanks which harbor Chiricahua leopard frogs may receive airborne contaminants from the mine site;</p> <p>Cienega Creek base flows restored at the Pantano dam should also be monitored (if part of the mitigation for this project)</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
1000	Pima County - Julia Fonseca	Appx B	Surface Water Quantity			<p>The pit lake that would be created by this permit would have a volume of 96,000 acre-feet, making it one of the largest water bodies in southern Arizona. The pit lake would be accessible to wildlife, and would reflect primarily the characteristics of the aquifer at the mine site but would be influenced by inflows from the pit walls and drain-back from other parts of the mining facilities under plans discussed in the APP. The APP provides no monitoring for the pit lake. The Forest and Fish and Wildlife Service must require post-mining water quality monitoring to assess potential toxicity to wildlife and minimize potential take under the Migratory Bird Treaty Act.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1001	Pima County - Akitsu Kimoto	Appx B	Surface Water Quantity and Quality	20		“Structures would be stable and would show no excessive erosion, settling, slumping, or deformation that could affect water routing. Water would be routed to desired natural features (washes) in an efficient manner. Permanent facilities would be designed to minimize the need for long-term maintenance post-closure.” The FEIS describes the effectiveness of the mitigation but it does not explain what actions would be taken if mitigation does not achieve the expected or required level. Please explain.	<u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u> <u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u>
1002	Pima County - Linda Mayro	Appx B	Table: FS-CR-01	53-58		This does not address or explore any mitigation for the loss of integrity of the overall traditional cultural property and its impacts to social and cultural fabric of the tribal communities affected. To give the appearance of mitigating impacts to the entire TCP, only mitigation of impacts to its component parts – springs, archaeological sites, gathering sites, etc. is proposed. This is inadequate. A TCP is more than its component parts, and may be likened to the premise that desecrating the cathedral is OK provided the statues and candles are removed.	<u>Resolution - No change. The effectiveness of these mitigation measures are addressed in the cultural resource section in chapter 3.</u>
1003	Pima County - Julia Fonseca	Appx B	Temporary Cessation of Operations			Notification of temporary cessation is not addressed by the Monitoring or Mitigation Plan. Section 2.8 of the APP permit, Temporary Cessation, provides requirements to Rosemont Copper should they cease operations of the facility for a period of 60 days or greater: “the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation.” And “During the period of temporary cessation, the permittee shall provide written notice to the Water Quality Compliance Section and the Southern Regional Office of the operational status of the facility every three years.” The Forest must be made aware immediately of Rosemont’s plans during any period of temporary cessation, regardless of how short or long the duration might be. The Forest should not have to rely on ADEQ for this information.	<u>Resolution - Text will be added to Chapter 2 regarding temporary cessation of activities.</u>
1004	Pima County - Julia Fonseca	Appx B	Visual Resources	46	FS-VR-03	Mitigation for visual impacts to crest or west side of the Santa Ritas due to inadvertent cuts, fills, or collapses should be specified. Monitoring for these impacts is needed.	<u>Resolution - No change. See earlier responses.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1005	Pima County - Julia Fonseca	Appx B	Water Quality	FW- GW- 02		<p>Forest Service should require monitoring of streams around of the facility and in the National Forest to verify that such Forest streams continue to meet surface water quality standards. The proposed FS-GW-02 does not address intermittent streams located on Forest lands. In mineralized areas, it is critical to collect such baseline data so that impacts during operation and post-closure may be distinguished from pre-mining ambient conditions. This monitoring measure lacks an implementation or response—what happens if there is non-compliance? Surface water quality monitoring should be required at springs or intermittent flow reaches at locations listed below, inclusive of mitigation lands in the area:</p> <ul style="list-style-type: none"> • Box Canyon and Box Canyon tributary called Sycamore Canyon, important site for Chiricahua leopard frog and other species, as well as recreation on Forest land • Sycamore Canyon north of the facility on Forest land, important for wildlife and recreation; • Papago Canyon north of the facility on Forest land, important for recreation and wildlife; • Mulberry Canyon northwest of the facility, on Forest land, important for wildlife and recreation, and part of the mitigation lands; • Intermittent reach on Barrel Canyon located downstream and east of the facility on Rosemont’s land; important for recreation and wildlife, and inclusive of the mitigation land there; • East Fork Davidson Canyon, an intermittent and ephemeral stream important for recreation and wildlife, located east of the facility on Forest, state trust and Rosemont land, including mitigation land; <p>Upper McCleary Canyon, located one mile or less northwest and upstream of the facility, used for recreation, wildlife and stock purposes</p>	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
1006	Pima County - Iris Rodden	Appx B		27		<p>Part of the proposed mitigation to Palmer’s agave includes “seasonal grazing restrictions to increase flowering success of agave”. There should be more details about this proposal as agave stalks grow throughout most of the spring and summer months – are they proposing to only graze in fall and winter? This could impact native grasses and other plants by focusing grazing pressures after summer rains when the plants are trying to reproduce. Continuously grazing in the fall is something we actively avoid doing on our own ranches.</p>	<p>Response - No change. This is a conservation measure and term and condition from the BO for future updating of allotment management plans, in which this level of detail would be explored.</p>
1007	Pima County - S. Anderson	Appx B		48	No line	<p>How wide is the easement going to be? It should be, at a bare minimum, 15’ in width or greater, and nothing should be developed or placed on the land on either side for at least 500’. The exception would be existing structures, such as Hwy 83 or the box culvert under the highway, or a trailhead. Those can stay, but nothing new can be placed in proximity to the Arizona Trail that is not trail-related. The easement should be non-terminable, and everything should be spelled out in the document. You should reference the Arizona Trail Association on these pages too.</p>	<p>Response - No change. This is a conservation measure and term and condition from the BO and/or potential mitigation of the 404 permit. Details will be worked out at a later date.</p>
1008	Pima County - S. Anderson	Appx B		49	No line	<p>The OHV Recreation Plan that will be funded by Rosemont to replace the displaced OHV opportunities should consider lands outside, but abutting, the forest. Arizona State Trust Lands could be used for this purpose.</p>	<p>Resolution - No change. See earlier response about the possibility of multi-party NEPA.</p>
1009	Pima County - S. Anderson	Appx B		74	No line	<p>If the CAP is extended 7 miles to the south, we’re going to want the CAP Trail extended as well. The CAP is a National Recreation Trail, and it goes everywhere the CAP goes. I will advise the BOR as to Pima County trail desires.</p>	<p>Response - No change. This is in no way connected to the project, analysis or decision at hand.</p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1010	TON	Appx B		1_5		Section should distinguish between the mitigation and monitoring strategies according to resource type.	Response - No change. That is exactly how appendix B is organized.
1011	TON	Appx B		Table FS-CR-01		Does not address indirect impacts.	Response - No change. Indirect impacts are addressed in the individual resource sections in Chapter 3.
1012	TON	Appx B		Table FS-CR-01		Does not address or explore mitigation for the loss of integrity of the TCP and associated impacts on the Nation and other tribes.	Response - No change. This is addressed in the Cultural Resource section in Chapter 3.
1013	<u>Pima County - Sarah Walters</u>	Appx B				<u>The ADEQ Air Quality Permit should require the Dust Control Plan to be updated as needed if the Mine Site has repeated deficiencies and/or enforcement actions associated with fugitive dust emissions. The Dust Control Plan should include visual inspections of the surface of the tailings to determine areas vulnerable to windblown dust, and action plan to address these vulnerable areas prior to high wind events</u>	Resolution - Statement of opinion or fact. No actionable comment. No changes needed. <u>This is an ADEQ permit, and they will determine the permit conditions.</u>
1014	TON	Appx B				The project will conclusively lead to the destruction of a population of Coleman's coralroot. Despite this fact, Coleman's coralroot not included in Appendix B Mitigation and Monitoring Plan. Mitigation should be developed for Coleman's coralroot.	Resolution - No Change. Coleman's coralroot is specifically addressed in the following mitigation measures: FS-BR-02; and FS-BR 15.
1015	Pima County - Linda Mayo	Appx D	MOA			The draft MOA in Appendix D is different from the current version under review. Neither version includes a provision that the FS will ensure that the Historic Properties Treatment Plans (HPTP) and all mitigation tasks for the mine and for the utilities will be implemented in their entirety, especially if the mine ceases operations. A clear statement is required in the MOA that states the FS will ensure there will be adequate funding included in the Financial Assurances and Reclamation Bonding to complete all elements of the HPTP in the event the mine ceases to operate. This issue can be addressed in the STIPULATIONS: ROLES AND RESPONSIBILITIES Section I.A The Forest shall...	Response: No change. The Forest made it clear to the Cooperating Agencies that this was a draft document that would be replaced with the final once that document was available, but prior to the decision being made.
1016	USACE -Blaine	Appx G	Comments			The Corps' comments to the DEIS have not been included or addressed in Appendix G. The Corps requests our comments be included and be addressed.	Resolution - The Corps' DEIS comments have been reviewed again and incorporated as appropriate.
1017	Pima County - Chavez	Chapter 3- Groundwater Quantity	Affected Environment	30	7_8; Table 54	ARS45-2711 should be included as an applicable state requirement. This statute requires the ADWR director to conduct a hydrologic analysis of well impacts from nonexempt wells that may impact the Tohono O'Odham Nation. If the projected withdrawal from the initial five-year period of withdrawal will cause a water level decline of ten feet or more at any point on the exterior boundaries of the reservation, the application shall be denied. The estimated drawdown attributable to pumping will be up to 70 feet impacting an area of 3 to 4 miles from the pumping center This drawdown will reach into the San Xavier District and the impacts to the Tohono O'Odham Settlement Agreement should be addressed	Resolution - Comment not factually correct. This analysis was included in the FEIS in GW Quantity. The statement of pumping impacts (at 140 years in the future) does not match the regulatory requirement (at 5 years in the future). No change needed.
1018	Pima County - Chavez	Chapter 3- Groundwater Quantity	Affected Environment	30	7_8; Table 54	A recovery permit from ADWR should be included in the list of State Law/Regulation if Rosemont intends to replenish the groundwater it is withdrawing from the Sahuarita well field	Resolution - This has been added to Chapter 2 and Chapter 3.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1019	Pima County - Chavez	Chapter 3- Groundwater Quantity	Analysis Methodology: Thresholds of Concern	6	18-23	FEIS states the threshold is a drop in water levels greater than ten feet over any period and that there is no regulatory mechanism prescribing a threshold. However, AAC R12-15-1302.B.1 limits the impact to ten feet of additional drawdown after the first five years of operation. A drawdown of ten feet is significant enough to cause affected well owners to replace groundwater wells with ones that reach deeper into the aquifer at a significant cost to affected well owners. This includes several wells owned by Pima County within the four-mile impact zone of the Rosemont well fie	Resolution - No change needed. The regulatory framework was adequately described.
1020	Pima County - Chavez	Chapter 3- Groundwater Quantity	Conclusion of Mitigation Effectiveness	70	41-44	Rosemont is proposing a mitigation measure that is not reliable. The availability of CAP water is uncertain. Ongoing drought conditions indicate a 45 percent chance that a shortage declaration will be made in 2016 (Don Gross, ADWR, Drought Interagency Meeting, May 20, 2013) triggering the 2007 shortage sharing agreement that will reduce the Arizona's allotment by 324,000 acre-feet. This will affect the availability of excess CAP water that Augusta Resource is planning to acquire. To date it has acquired 42,593.02 acre-feet in long term storage credits and an additional 77,406.98 acre-feet is yet to be recharged to meet the 120,000 acre-feet commitment. Rosemont has applied for a 5,000 acre-feet allotment of CAP water being made available under the non-Indian agricultural (NIA) priority reallocation process. Of the 12,000 acre-feet water being made available for industrial pool applicants, ADWR received requests of 41,248 acre-feet. It is doubtful that Rosemont will receive its full request, if at all. One of the evaluation criteria is that the applicant be an existing municipal or industrial user. Further, the NIA priority water has a lower priority than the Indian and Municipal and Industrial priority water and is expected	Resolution - No change. The EIS clearly states that it is uncertain, and that determination of impacts does not assume the implementation of this measure.
1021	Pima County - Chavez	Chapter 3- Groundwater Quantity	Conclusion of Mitigation Effectiveness	71	####	Maintaining water storage and using inventory records to show that CAP recharge credits are balanced against groundwater removed is an ineffective mitigation strategy. Mitigation of groundwater pumped would entail acquisition of CAP water, storage in the area of hydrologic impact and extinguishment of the recharge credits annually by assigning them under ARS 45-854.01 to another party who would hold them for mitigation purposes to ensure that they are never recovered. Rosemont's reliable access to CAP water is questionable. Rosemont has stated it might not recharge at the CWC basins and may recharge at other recharge sites in the TAMA, and has no commitment to extinguish accrued long term storage credits. The FEIS itself notes (at line 19) that the exact recharge site is as of yet unknown.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed. The limitations of the effectiveness of the voluntary CAP recharge are fully disclosed in the GW Quantity section.
1022	Pima County - Chavez	Chapter 3- Groundwater Quantity	Conclusion of Mitigation Effectiveness	71	1_8	Rosemont suggests is will recharge at the Community Water Company recharge area, however, elsewhere in the FEIS it is noted that the recharge site in unknown, the project is partially funded and the completion date is undetermined. Furthermore the FEA prepared by the Bureau of Reclamation in July 2010 concluded that the CWC delivery system is a separate utility from the proposed Rosemont mine, not a connected action and that Rosemont can meet its commitment to replenish water using other sources of CAP and other groundwater storage facilities.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed. The limitations of the effectiveness of the voluntary CAP recharge are fully disclosed in the GW Quantity section.
1023	Pima County - Chavez	Chapter 3- Groundwater Quantity	Conclusion of Mitigation Effectiveness	71	28-40	Rosemont's mitigation of the groundwater decline consists of an agreement with the Rosemont United Sahuarita Well Owners, CAP recharge and the Sahuarita Heights neighborhood agreement. These measures are inadequate- because recharge of CAP water will not be in the vicinity of the mine water supply wells.	Resolution - Statement of opinion or fact. No actionable comment. No changes needed. The limitations of the effectiveness of the voluntary CAP recharge are fully disclosed in the GW Quantity section.

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1024	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Conclusion of Mitigation Effectiveness	71	9_11	Rosemont has made it clear it is using groundwater pursuant to its mineral extraction permit. If Rosemont intended to use storage credits to balance water pumped from the mine supply well field, it would have applied for a recovery permit from ADWR, which it has not. An appropriate mitigation measure to offset groundwater withdrawals from the mine supply well field is for Rosemont to extinguish its long term storage credits on an annually.	<u>Resolution - This has been added to Chapter 2 and Chapter 3.</u>
1025	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Conclusion of Mitigation Effectiveness	72	13-17	Appropriate mitigation would be for Rosemont to commit to extinguish recharge credits annually, not voluntarily. If Rosemont were proposing to reclassify the Sahuarita well field as a recovery wells, it should list a recovery permit in Table 54, page 30.	<u>Resolution - No changes needed. The limitations of the CAP recharge are fully described in the GW Quantity section, including extinguishment of credits.</u>
1026	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Cumulative Effects	67	38	The FEIS notes that two proposed recharge projects, the Community Water Company recharge basins and the FICO groundwater savings facility, are not quantified as part of the modeling effort. It is clear that Rosemont intends to recharge at the CWC project, because the need for a water storage permit was noted in Table 3, page 30. Consequently the impacts of recharging should have been addressed in the groundwater models.	<u>Resolution - No changes needed. The recharge is a completely voluntary measure outside of the Forest's jurisdiction. The disclosure of impacts through modeling was conducted without recharge in order to show impacts in the most realistic light possible. It would be inappropriate to downplay groundwater impacts by incorporating the recharge that may never occur.</u>
1027	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Cumulative Effects	68	4_14	Current efforts to improve reduce pumping, conserve water, use renewable sources of water and improve groundwater levels are not acknowledged. Water providers and users are working to deliver renewable supplies to reverse groundwater declines. These efforts will be negated by the proposed mine water use. Agricultural lands are being converted to residential use and CAP allocations that are coming online need to be mentioned in predictions.	<u>Resolution - Statement of opinion or fact. No actionable comment. No changes needed.</u> <u>The limitations of the effectiveness of the voluntary CAP recharge are fully disclosed in the GW Quantity section.</u>
1028	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Effect on Overall Groundwater Availability	50	1_7	Rosemont proposes to recharging 120,000 acre-feet of CAP water over the life of the mine and has recharged 42,593.02 acre-feet to date. The impacts of acquiring an additional 77,406.98 acre-feet CAP water should be evaluated in the context of the decreased availability of CAP water supplies to the TAMA region.	<u>Resolution - No changes needed. The limitations of the CAP recharge are fully described in the GW Quantity section, including the decreased availability of CAP water</u>
1029	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Effect on Overall Groundwater Availability	50	1_7	Rosemont evaluated the availability of CAP water in a report The Potential for Future Colorado River Shortages to Impact Rosemont Operations (Montgomery & Associates, January 13, 2012) and identified two alternatives should CAP supplies be curtailed during shortage: long-term storage credits and multi-year leases. The availability of long term storage credits is limited. Of the one million acre-feet of long-term storage credits accrued in the TAMA, a majority are held by the Arizona Water Banking Authority and the municipal water providers. The two entities that might be willing to consider sale of long-term storage credits, the Tohono O'odham Nation and Mohave Ventures, LLC, have a combined 96,446 acre-feet of long-term storage credits (see ADWR Long Term Storage Account Summary dated May 24,2013)	<u>Resolution - No changes needed. Recharge of CAP water is a voluntary measure that is outside of the Forest's jurisdiction. The limitations and potential methods of accomplishing the recharge have been fully disclosed in the Mitigation Effectiveness section of the GW Quantity section.</u>

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1030	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Effect on Tohono O'odham Nation	50	14-19	The FEIS states that modeling shows no impacts that violate statutory restrictions. However, the modeling was based on withdrawals of 5,400 acre-feet, while the mineral extraction permit allows for withdrawal of 6,000 acre-feet. The estimated areal extent of the drawdown impacts is close enough to the Tohono O'odham lands that the analysis should be re-evaluated	<u>Resolution - No changes needed. The impacts analyzed in a NEPA document are based on the proposal at hand. The responsibility of ADWR to analyze the full permit requirements would be undertaken by ADWR, not the Forest. The Forest has undertaken an analysis of possible impacts to Tohono O'odham in light of SAWRSA, but is not required to perform ADWR's regulatory responsibility</u>
1031	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Groundwater Recharge	31	22-32	The location of Rosemont's planned recharge should be identified, as this could be a connected action if it is within the groundwater impact area. Rosemont has submitted an application for 5,000 acre-feet per year of non-Indian agricultural pool CAP water that must be used by 2020. Of the 12,000 acre-feet of NIA pool water available for potential industrial subcontractors, there were applications for 17,000 acre-feet. NIA pool water will have a lower priority during shortage years, so its availability is not certain	<u>Resolution - No changes needed. Recharge of CAP water is a voluntary measure that is outside of the Forest's jurisdiction. The limitations and potential methods of accomplishing the recharge have been fully disclosed in the Mitigation Effectiveness section of the GW Quantity section.</u>
1032	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Mitigation and Monitoring	70	3_6	Rosemont is recharging 105 percent of the water pumped from the Santa Cruz Basin. However, it is accruing long term storage credits that can be sold, exchanged or traded to others to pump groundwater elsewhere in the TAMA. Consequently, it is not truly mitigating the groundwater pumped at the Sahuarita well fields. Rosemont should be required to recharge in the Green Valley area and to extinguish its accrued long term storage credits annually (not eventually) to replace the water pumped. This would leave Rosemont's CAP water in the Green Valley area.	<u>Resolution - No changes needed. Recharge of CAP water is a voluntary measure that is outside of the Forest's jurisdiction. The limitations and potential methods of accomplishing the recharge have been fully disclosed in the Mitigation Effectiveness section of the GW Quantity section.</u>
1033	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Modeled and historic rates of waterlevel change for selected wells	48	17	Table 57. As described in Chapter 1, the active mining phase of the project is 20 to 25 years; the groundwater modeling for the water supply was conducted for only 20 years. If mining continues for longer than 20 years, which is a likely scenario, then additional water use and additional impacts to groundwater levels above and beyond those described by the modeling would occur.	<u>Resolution - No changes needed. This scenario has already been analyzed in the GW Quantity section. The incremental drawdown if pumping is extended past 20 years is disclosed.</u>
1034	Pima County - Chavez	Chapter 3 - Groundwater Quantity	Modeled groundwater level drawdown for selected public supply, municipal or government wells	49 and 50	20	Table 59. Modeled groundwater-level drawdown for selected public supply, municipal, or government wells. Five Pima County wells were evaluated: D-17-13-25DAB This is an inactive non-exempt well. The ADWR registry says we acquired it 10/19/07 from Granite D-17-14-08ADD This non-exempt well managed by NRPR is used for irrigation at Sahuarita District Park. Well depth 500 feet; water level 330 D-17-13-14CAB This non-service industrial water production well managed by Solid Waste used for dust control at the Sahuarita landfill. Solid Waste reports the well depth is actually 470 feet and there will be no adverse impact D-17-13-36CDD ADWR well registry indicates this well is a piezometer used for monitoring, so it is not a valid well to evaluate for drawdown impacts D-17-13-36DAC This well is part of a group of shallow piezometers no longer used. Two wells used for compliance purposes at the Green Valley WRF would be impacted: • D17-13-36CAD (ADWR #55-509603) is 230 feet deep and screened from 170 to 225 feet. Recent water level readings were 175 feet. • D17-13-36BDD (ADWR #55-509604) is 230' deep and screened from 162 to 228 feet. Recent water level readings were 163 feet. Drawdown of 20 feet at these wells would still put the water level within the screened interval. Since Pima County	<u>Resolution - these details have been added to the text.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1035	Pima County - Chavez	Chapter 3- Groundwater Quantity	SAWRSA and Associated Litigation	31 and 32	35-41 and 1-6	Although modeling indicates that the Rosemont Copper water supply would violate the SAWRSA statutory restrictions, the modeling was based on withdrawals of 5,400 acre-feet, while the mineral extraction permit allows for withdrawal of 6,000 acre-feet. The estimated areal extend of the drawdown impacts is close enough to the Tohono O’odham lands that the analysis should be re-evaluated.	<u>Resolution - No changes needed. The impacts analyzed in a NEPA document are based on the proposal at hand. The responsibility of ADWR to analyze the full permit requirements would be undertaken by ADWR, not the Forest. The Forest has undertaken an analysis of possible impacts to Tohono O’odham in light of SAWRSA, but is not required to perform ADWR’s regulatory responsibility</u>
1036	TON	General Comment				The Forest Service should consider changing the FEIS to a Supplemental EIS. There have been substantial changes in the mine plan between the DEIS circulated for public comment and the Draft Administrative DEIS. Of course, the major change was the withdrawal of the oxide heap leach and accompanying solvent extraction/electro-winning plant facilities. Although the removal of these facilities appears to be environmentally preferable, the purpose of NEPA is to ensure that the public and the decisionmakers are fully informed about the project and its impacts. The public has not been provided an opportunity to comment on this new configuration, which is likely to leave gaps in the decisionmakers’ analysis. The FEIS should be changed to a SEIS and re-circulated to the public for comment to comply with NEPA.	<u>Resolution - No change. The Forest Service has determined that a supplemental EIS is not required.</u>
1037	TON	General Comment				The FEIS continues to fail to fully analyze the destruction of cultural resources in terms of scale of the project. A thorough analysis would include comparisons of other recently-approved Forest Service projects so that the public can fully comprehend the scale of destruction that is associated with this project. A full analysis would include how many cultural resource sites have been destroyed by Forest Service projects, on average, in the last five years with a comparison of how many cultural resources will be destroyed by this project. A chart would be helpful to fully inform the public of these impacts.	<u>Response - No change. The Forest disagrees that they have failed to fully analyze impacts to cultural resources.</u>
1038	TON	General comment – Chapter 1				This Chapter does not address the important impact of land being at the center of the Tohono O’odham, as well as other tribes’ belief systems. Tohono O’odham and many other tribes with a history of past use of Ce:wi Duag (Santa Rita Mountains) believe that the land is alive and that it provides for the people by sharing power. As tribal elders say “nobody owns the land, we watch over it, because that is our responsibility, you take care of the land and it cares for you.” This Chapter still fails to fully comprehend the spiritually devastating impact that this Project will have on the Tohono O’odham and other tribes. Along this vein, the FEIS should discuss the impingement upon religious practices (which are protected by the First Amendment) that this Project will have upon tribal members. The FEIS should analyze this project under Executive Orders 13007 and 11593, which apply to all federal agencies. In order to avoid these impacts and comply with federal policy and the agency’s trust responsibility, the Forest Service should choose the “no action” alternative.	<u>Resolution - No change. The concerns stated are addressed in Chapter 3 Cultural Resources and do not belong in Chapter 1 Purpose and Need.</u>

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1039	TON	General comment – Chapter 1				The FEIS fails to address the trust relationship that the Forest Service has with Indian tribes and how that relationship fits with this Project. Additionally, the FEIS fails to address the United Nations Declaration on the Rights of Indigenous People. The United Nations Declaration on the Rights of Indigenous People, which was signed by the United States in 2010, is instructive in this Project. Article 8 provides that indigenous peoples have the right not to be subjected to the destruction of their culture. If this Project is approved, portions of tribal culture will be destroyed. Further, Article 11 provides that “indigenous people have the right to practice and revitalize their cultural traditions and customs - includes the right to maintain, protect and develop the past, present and future manifestations of their cultures such as archaeological and historical sites, artifacts, designs, ceremonies.”	Resolution - No change. The United Nations declaration is addressed in the Socioeconomics and Environmental Justice section. It is not clear what the TON expects within the confines of a NEPA analysis to demonstrate the trust relationship.
1040	TON	General comment – Chapter 1				The FEIS fails to analyze the Project under auspices of the World Archaeological Congress Code of Ethics. The Code of Ethics states that its members agree that they have an obligation to indigenous peoples to acknowledge the importance of indigenous cultural heritage including sites, places, objects, artifacts, and human remains to the survival of indigenous cultures.	Resolution - No change. Chapter 3 Cultural Resources acknowledges the importance of indigenous cultural heritage including sites, places, objects, artifacts, and human remains to the survival of indigenous cultures.
1041	Pima County - Chavez	NA	NA	NA	NA	Conveyance of CAP water to the Cienega basin: Although ADWR statutes address the transfer of groundwater out of the AMA (ARS 45-542), neither ADWR statutes nor rules prohibit the conveyance of CAP water outside the AMA. The Cienega basin is within Pima County which is part of the CAP three-county service area.	Resolution - Statement of fact or opinion. No action needed.
1042	Pima County - Brian Powell	NA- BO (This is not a comment on the BO, but what the FS has not chosen to consult on).	NA	NA	NA	The Forest has chosen not to consult with the USFWS on the yellow-billed cuckoo, northern Mexican gartersnake, or the Coleman’s coralroot. These species are likely to be listed in the near future, and the Mexican gartersnake was proposed for listing on July 10, 2013. The FS should be working with the USFWS to consult on these (currently) unlisted species.	Resolution - No change. The Forest consulted with USFWS on species in compliance with the Endangered Species Act.
1043	USEPA		General			Commend extra work that has been done, but believe the harm caused by this project is still a concern	Response - No change.
1044	Pima County		General			EIS doesn’t take into account indirect effects	Resolution - No change. Comment lacks specificity and cannot be addressed. Indirect effects are addressed in the individual resource sections in Chapter 3.
1045	Pima County		General			EIS analysis relies in some cases on reports done for other alternatives	Resolution - No change. Comment lacks specificity and cannot be addressed.
1046	Pima County		General			ANST should be east of Highway 83	Resolution - No change.
1047	Rosemont - Melissa Notes		General			Preferred Alternative language -is it selected Alternative or Environmentally preferred	Resolution - NO change. The term preferred alternative belongs in the FEIS; the terms selected alternative and environmentally preferred alternative belong ONLY in the ROD. We can solve this by adding a definition of preferred alternative to the glossary.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1048	Rosemont - Melissa Notes		General			Figures - Ridgeline isn't the real line	Resolution - No change. Checked this out on topo maps and the figures in the FEIS are correct.
1049	AF&G		Geochemistry	30	8-14	The text states: "Existing and reasonably future use of groundwater in the project area (Davidson Canyon watershed) is limited to domestic wells. None of the individual domestic wells that would occur within the area likely to be affected by tailings or waste rock seepage, as these discharges would be captured by the mine pit lake and do not exceed any water quality standards applicable to these individual wells that would preclude use for domestic purposes". COMMENT: Modeled seepage from the DSTF outside the pit capture zone exceeds SDWA secondary standards for sulfate. An EIS requires a discussion of potential impacts on groundwater wells and drinking water quality, and a discussion of reasonable alternatives to avoid or minimize adverse impacts. 40 CFR 1502.14(f); 1502.16(h); 1508.14. Potential mitigation measures includes the installation of interceptor wells or wellhead treatment. The Freeport-McMoran Sierrita Mine in Sahuarita is pumping a sulfate plume and replacing affected groundwater wells due to tailings sulfate seepage, which is a concern at many other mine sites.	Resolution - A discussion of the risk for tailings seepage daylighting downstream in Barrel Canyon has been added to the GW Quality section
1050	Pima County - Akitsu Kimoto		Golder (2012)	Appendix A		Impervious cover density is 10% for both pre and post mining condition (Run1). The impervious cover for the post-mining condition could be greater. Please explain why the impervious cover density would not be changed by mining activities.	Resolution - This section has been changed to reflect the overarching peer review done on SW issues. Includes a memo for the record.
1051	ADEQ- D. Turner		OR		22	ADEQ's comment about make-up water is repeated: "The Department asks the Coronado to consider requiring replenishment/ make-up water of comparable quality and quantity to offset the predicted water loss resulting from mining during operations and post-closure. The purpose of these measures would be to supplement water sources that provide surface and groundwater flows that maintain the OAW status of Davidson Canyon and Cienega Creek."	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.
1052	Pima County - Chavez		RC-GW-02 Recharging of the aquifer	74		Performance Criteria: Rosemont's accrued storage credits should be extinguished annually to offset the groundwater pumped at the Sahuarita well field.	Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor. However, this particular item is outside the jurisdiction of the Forest to require. The stated intentions of Rosemont to extinguish credits are fully disclosed in the GW Quantity section.

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ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1053	<u>AGFD</u>		Seeps Springs		43 112	A new Table should be added to summarize predicted water quality for DSTF seepage and existing water quality in Barrel Canyon, Davidson Canyon and Cienega Creek OAWs for magnesium, potassium, sulfate, fluoride, total dissolved solids, and molybdenum. AGFD repeats its DEIS comment that that potentially adverse effects of mine-related seepage discharges to surface waters should be analyzed against relevant numeric and narrative water quality standards, wildlife water quality standards and the anti-degradation Tier 3 criteria for the OAWs in the downstream watershed.	Resolution - No change. This is a statement of fact or opinion. No action needed.
1054	ADEQ- D. Turner		Seeps, Springs, and Riparian Areas		24	The Coronado states on p. 36 – 37 (Seeps, etc.) that “there would be an estimated reduction in surface flow of 4.3 to 11.5 percent, depending on the alternative, but a similar effect on recharge is likely to be overpredicted because of the distance downstream of the project area and the high channel transmission losses. This prediction has a high level of uncertainty.” A similar comment is made on p. 42 (Seeps, etc.), lines 7 – 11.	Resolution - Partial comment. Actionable comment elsewhere.
1055	<u>ADGF??</u>		Soils, Geochem	15, 30	6-9; 19-22	The discussion of DSTF stability appears limited, consisting of a single paragraph in the “soils” section and a sentence in Ch. 3, Geochemistry. The FEIS text states that “overall stability of the tailings and waste rock facilities is critical to reclamation success. Structurally, the tailings and waste rock facilities must be designed to prevent mass wasting and collapse in order to provide a stable surface for vegetation growth”. COMMENT: DSTF impoundment failure could have dramatic and unanticipated environmental consequences for downstream canyons, riparian habitat and streams.	Resolution - No change needed. The stability of the DSTF has been analyzed and included in the FEIS.
1056	ADEQ- D. Turner				####	ADEQ concurs with the second reason that it is problematic to predict whether elevated selenium runoff from the waste rock pile will degrade water quality in Lower Davidson Canyon, given the proposed waste rock segregation plan.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
1057	<u>ADEQ - D. Turner</u>		<u>Would be good to know what section this is referring to - likely SW Quality.</u>		15-18,	The Coronado should exercise precision when using the term “degrade water quality” in any discussion in the FEIS about surface water quality standards associated with an OAW. Antidegradation is also a surface water standard and evaluation against that standard will play a prominent role in ADEQ’s reviews of the CWA 401 and MSGP applications. The regulation requires that a discharge must meet <u>all</u> surface water quality standards (including antidegradation as well as chemical concentrations), so there cannot be a simultaneous exceedance of water quality standards and a conclusion of no degradation.	Resolution - The Surface Water Quality and OAW analyses have been rewritten based in parts on USEPA and ADEQ comments, including a full analysis of available data and detection limits, and revisions to how ADEQ regulatory authorities (401 and 402) would be applied. The Forest specialists have reviewed and approved the section.
1058	Rosemont-Patti					Thinks use of the term “Preferred Alternative” can be confused with “Environmentally Preferred Alternative” which is in the ROD.	Resolution - No change. See earlier response.
1059	Rosemont – “Washington guy”					Describe why Preferred Alternative answers resource issues	Response - No change. DEIS had this statement, and the Region advised us to take it out.
1060	Rosemont - Kathy					Santa Rita Ridgeline is incorrect on all figures	Resolution - No change. Figures are correct.
1061						See also ADEQ’s comment to p. 15-16 of the Seeps section, below.	Resolution - see previous comment and response.

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1062	ADEQ- D. Turner					"A unique waters classification also can affect land use activities within a unique waters watershed. Land use activities that cause nonpoint source [and point source] pollution are not exempt from the provisions of Arizona's Tier 3 antidegradation policy. For example, cattle grazing, mining, timber harvesting, agriculture, and other land uses that result in the nonpoint source [and point source] discharge of pollutants to a surface water could be affected by a unique waters classification. Once a surface water is classified as a unique water, <i>land use activities in the watershed have to be conducted in a way that prevents the degradation of existing water quality in the unique water.</i> While Arizona does not have a regulatory program to directly control nonpoint sources of pollution, the intention of the Tier 3 antidegradation policy is that best management practices be developed and implemented to prevent the degradation of existing water quality in a unique water."	Resolution - No change. This is not a comment - it is a quote from the document.
1063	<u>ADGF??</u>					COMMENT: Although the groundwater flow model constructed by Tetra Tech (2010) indicates "north and northwest" flow from the area of the DSTF, it is clear from the observed water level data that the flows are eastward down Barrel Canyon. RECOMMENDATION: The FEIS should analyze and disclose potential impacts from the DSTF to water quality in Barrel Canyon and Davidson Canyon, including the OAWs.	Resolution - A discussion of the risk for tailings seepage daylighting downstream in Barrel Canyon has been added to the GW Quality section
1064	BLM	3	Geology, Minerals, and		figures 29, 30	Due to metamorphic history of the Rosemont ore body and environs, the BLM agrees with the analysis indicating that the likelihood of cave resources being present within the proposed pit area is very low. Likewise the presence of intact paleontological resources in the pit area is also unlikely. The geologic map and cross-section depict sedimentary host rock units. In order to better support and illustrate the analysis provided in the text, it is recommended that the altered rock body be depicted on the map and cross-section in the form of an outline. The outline would coincide with the body of rock that, due to metamorphism, no longer possesses the hydrogeological properties of the host sedimentary rock. This may or may not coincide with the ore body. Depicting the boundaries of the altered rock body would help the reader understand why the rock in the vicinity of the proposed pit is different from the un-altered host rock.	Resolution - While a different geologic map would be helpful, at this time it would be difficult to produce and insert such a map, and it would be subject to interpretation and disagreement. The thought is a good one, but we are selecting not to add a figure at this time.
1065	BLM	3	Biological Resources		16-18 18	Per BLM Manual 6840, the definition given is for BLM Special Status Species, not sensitive species. From BLM Manual 6840, the definition of special status species is "In Arizona, BLM sensitive species are defined as "collectively, federally listed or proposed and Bureau sensitive species, which include both Federal candidate species and delisted species within 5 years of delisting." Per BLM Manual 6840 "Bureau sensitive species—species that require special management consideration to avoid potential future listing under the ESA and that have been identified in accordance with procedures set forth in this manual"	Resolution - The definition has been changed.
1066	BLM	3	Biological Resources		27; 87; 89; 90	Hydroriparian habitats are generally associated with perennial watercourses and/or springs. Plant communities are dominated by obligate or preferential wetland plant species such as Goodding's willow (<i>Salix gooddingii</i>) and Fremont cottonwood (<i>Populus fremontii</i>) and also include velvet ash (<i>Fraxinus velutina</i>), seep willow (<i>Baccharis salicifolia</i>), Arizona walnut (<i>Juglans major</i>), tamarisk (<i>Tamarisk</i> spp.), and mesquite. The cottonwood/willow forest is a typical example of this habitat type. The following drainages and associated riparian habitat contain stretches that are mapped as hydroriparian: Cienega Creek, Gardner Canyon, Empire Gulch, Davidson Canyon, and Barrel Canyon. Both hydroriparian and xeroriparian habitat are present in Empire Gulch, and if drawdown of this magnitude were to occur, hydroriparian habitat would be impacted. These areas include the hydroriparian habitat along Empire Gulch, as well as the spring areas that support riparian habitat and that could experience reduced water availability. Vegetation Type Forest Service BLM Hydroriparian 106 to 185 0 ---These statements are in the FEIS about hydroriparian habitat in Empire Gulch, yet Table 121 has no acres noted for hydroriparian vegetation on BLM land. Cienega Creek also has hydroriparian habitat	Resolution - No change. The BLM has misunderstood the contents of table 121 – it only includes acreage of direct impacts to vegetation types. Table 117 includes vegetation type by landowner in the analysis area.

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1067	BLM	3	Biological Resources	86	5; 31-36	If Empire Gulch is impacted as stated in comment above and below (i.e. Empire Gulch is mapped as hydriparian, hydriparian habitat in Empire Gulch would be impacted if drawdown of this magnitude were to occur, etc.) then Cienega Creek will be impacted because Empire Gulch is a tributary to Cienega Creek, which is not speculative. Even very small levels of groundwater drawdown, which has been supported by modeling as stated, may have impacts to water depth, stream flow and vegetation. See comments immediately below.; Any drawdown, even less than 100 feet, would be significant to Empire Gulch and Cienega Creek, and BLM's existing water rights. BLM does not relinquish existing BLM surface and groundwater rights.;	<u>Resolution - The assessment of impacts to riparian areas has been modified, based in part on comments from EPA. This includes the tributary of Empire Gulch to Cienega Creek. In addition, BLM water rights have now been explicitly called out and analyzed in the Surface Water Quantity section.</u>
1068	BLM	3	Biological Resources	86	35-40	Impacts to perennial stream flow and riparian habitat along Cienega Creek are not expected to occur. No change in riparian habitat along Cienega Creek is expected to occur as a result of the proposed mine. ---These are contradictory to above	<u>Resolution - The assessment of impacts to riparian areas has been modified, based in part on comments from EPA.</u>
1069	BLM	3	Biological Resources	86	43	BLM does not relinquish existing BLM surface and groundwater rights.	<u>Resolution - BLM water rights have now been explicitly called out and analyzed in the Surface Water Quantity section.</u>
1070	BLM	3	Biological Resources	86	39-40	If there are impacts to Empire Gulch then impacts to Cienega Creek are expected because Empire Gulch is a tributary to Cienega Creek. BLM does not relinquish existing BLM surface and groundwater rights.	<u>Resolution - The assessment of impacts to riparian areas has been modified, based in part on comments from EPA. This includes the tributary of Empire Gulch to Cienega Creek. In addition, BLM water rights have now been explicitly called out and analyzed in the Surface Water Quantity section.</u>
1071	BLM	3	Biological Resources	88	8_11	This statement is contradictory to statements above that there are no impacts to Empire Gulch or Cienega Creek. If there are impacts "because of the downgradient impacts on the surface water and groundwater" then it follows that if there are impacts to Empire Gulch then there are impacts to Cienega Creek. BLM does not relinquish existing BLM surface and groundwater rights. In addition, the Congressional Act which designated Las Cienegas National Conservation Area states "In order to conserve, protect, and enhance for the benefit and enjoyment of present and future generations the unique and nationally important aquatic, wildlife, vegetative, archaeological, paleontological, scientific, cave, cultural, historical, recreational, educational, scenic, rangeland, and riparian resources and values of the public lands..." (Section 4.a), and "The Secretary shall manage the Conservation Area in a manner that conserves, protects, and enhances its resources and values, including the resources and values specified in section 4(a), pursuant to the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) and other applicable law, including this Act" (Section 5.a), and "The Secretary shall allow only such uses of the Conservation Area as the Secretary finds will further the purposes for which the Conservation Area is	<u>Resolution - The assessment of impacts to riparian areas has been modified, based in part on comments from EPA. This includes the tributary of Empire Gulch to Cienega Creek. In addition, BLM water rights have now been explicitly called out and analyzed in the Surface Water Quantity section. Also note that consistency with the management goals for LCNCA is discussed in the Required Disclosures section of Chapter 3; this text was reviewed and approved by BLM.</u>
1072	BLM	3	Biological Resources	Perennial Stream F		Statements are again contradictory to statements listed above. The FEIS states that there are concerns with impacts from groundwater-level changes at Cienega Creek near the confluence with Gardner Canyon (page 32), and that all three groundwater flow models predict changes in groundwater levels in the vicinity of Upper Empire Gulch springs. BLM does not relinquish existing BLM surface and groundwater rights.	<u>Resolution - The assessment of impacts to riparian areas has been modified, based in part on comments from EPA. This includes the tributary of Empire Gulch to Cienega Creek. In addition, BLM water rights have now been explicitly called out and analyzed in the Surface Water Quantity section.</u>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1073	BLM	3	Biological Resources			These statements are again contradictory to statements listed above. The FEIS states "Upper Cienega Creek also receives surface water flow from Empire Gulch, and the potential for reduction in Empire Gulch stream flow could therefore also result in reductions in Cienega Creek's stream flow as well. The percent contribution of Empire Gulch to Upper Cienega Creek has not been determined by fieldwork." BLM does not relinquish existing BLM surface and groundwater rights.	Resolution - The assessment of impacts to riparian areas has been modified, based in part on comments from EPA. This includes the tributary of Empire Gulch to Cienega Creek. In addition, BLM water rights have now been explicitly called out and analyzed in the Surface Water Quantity section.
1074	BLM	3	Biological Resources	Table 123, page 97		Table 123 states special status species, however, these appear to be sensitive species because ESA species are not listed. Special status species would include "collectively, federally listed or proposed and Bureau sensitive species, which include both Federal candidate species and delisted species within 5 years of delisting." See comment above.	Resolution - This is just a disagreement over terminology. We have analyzed BLM "sensitive species" but all species analyzed in the EIS are lumped together as "special status species" and this was spelled out and/or explained more than once.
1075	BLM	3	Biological Resources	101		See comments above. The FEIS states "Upper Cienega Creek also receives surface water flow from Empire Gulch, and the potential for reduction in Empire Gulch stream flow could therefore also result in reductions in Cienega Creek's stream flow as well." Therefore, Huachuca water umbel in Cienega Creek could be affected. Include recent transplant of Huachuca water umbel to Cieneguita Wetland (lower Empire Gulch).	Resolution - No change regarding impacts required. We state no direct impacts will occur, but we do disclose impacts that could occur to the species in Empire Gulch and Cienega Creek. Sentence has been added regarding transplants.
1076	BLM	3	Biological Resources	104		Known localities of Chiricahua leopard frogs for the LCNCA (Empire Cienega Management Unit) not in table: Maternity Wildlife Pond (adults, juveniles) population product of natural dispersal Cottonwood Wildlife Pond – stocked in 2013 Cinco Pond #1 – stocked in 2011 Road Canyon Tank – stocked in 2011 Empire Wildlife Pond – stocked in 2013 Cinco Canyon Wildlife Pond – stocked in 2013 Spring Water Wetland Pond – stocked in 2013 Cienega Creek at juncture with Cold Spring wetland – Stocked in 2012 The draft BO states "As a result of groundwater drawdown after the life of the mine, the amount or volume of water within regional perennial pools could decrease, which could result in indirect effects on Chiricahua leopard frogs through long-term habitat alteration, which could cause die-back in aquatic and some riparian vegetation. Chiricahua leopard frogs have been documented within the action area in four locations that are fed by groundwater and where groundwater drawdown is possible after closure of the mine: Empire Gulch, Box Canyon–Dam Structure, Well in Ophir Gulch, and South Sycamore Canyon." If Empire Gulch is drawn down, so must Cienega Creek since Empire Gulch has surface and ground water that flows into Cienega Creek. Empire Gulch also has 3 restored wetlands that will receive CLF this year. <u>These wetlands will be at risk of drying</u>	Resolution - The potential impact on BLM wetlands due to groundwater drawdown is explicitly identified in the Seeps, Springs & Riparian section of the FEIS. There is no table on page 104--it is not clear what is being referred to with these waters. No changes made.
1077	BLM	3	Biological Resources	130		Cumulative effects do not include any management (e.g. mesquite control, prescribed fire, road maintenance, grazing) that has occurred by BLM on LCNCA.	Resolution - The Forest met with BLM on 9/17/13 to discuss possible specific RFAs to include. No input has been received.

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1078	BLM	3	Biological Resources	130		<p>From BLM comments on Draft EIS: Cumulative effects do not adequately explain possible additive, countervailing, or synergistic effects to Empire Gulch or Cienega Creek. See BLM H 1790-1/6.3: "Describe the interaction among the effects of the proposed action and these various past, present, and reasonably foreseeable actions. This interaction may be: additive...countervailing...synergistic." From BLM comments on draft BA: There is no analysis of cumulative, interacting or synergistic effects at Empire Gulch and Cienega Creek of drawdown, reduction in flow, and lost stream length (see above comments) and potential effects this would have to water quality (e.g. from concentration) of what water would still be available to listed species (e.g. lesser long-nosed bat, southwestern willow flycatcher, Chiricahua leopard frog, Gila chub, Gila topminnow, Huachuca water umbel), critical habitat (e.g. Gila chub and Chiricahua leopard from and proposed for southwestern willow flycatcher), and primary constituent elements of critical habitat.</p>	<p>Resolution - It seems that "cumulative effects" in this comment is being used in a different context than that under NEPA. This comment seems to be referring instead to the Environmental Consequences discussion of impacts. We feel that the additive and synergistic effects have been considered when assessing each species.</p>
1079	BLM	3	Biological Resources	130		<p>The Cumulative Effects section in the PAFEIS does not appear to meet the minimum requirements of NEPA and CEQ. For example, the effects for the following subjects are not analyzed :temporal scope, reasonably foreseeable actions (e.g. additional pit mines), resource issues, condition of the environment, thresholds, residual effects after mitigation.</p>	<p>Resolution - We disagree with this characterization. Reasonably foreseeable actions have been identified using very specific criteria. Under those criteria the additional pit mines are NOT reasonably foreseeable. We assess those RFAs that overlap in time and space with each resource, and we assess the combined effects on each resource.</p>
1080	BLM	3	Seeps Springs	23-28	table 109	<p>This section does not mention the presence of interior marshland (= Cienega) (Minckley and Brown 1982, Hendrickson and Minckley 1984); the LCNCA is well known for its wetlands. The Cienega Basin within the LCNCA has over 30 jurisdictional wetlands, both perennial and seasonal. Most of these wetlands occur on the Cienega Creek floodplain between Cinco Canyon and Oak Tree Canyon. Named wetland complexes include Cieneguita Wetland, Spring Water Wetland, Cinco Ponds Wetland. Another set occurs upstream of the Mattie Canyon confluence on Cienega Creek (Cold Spring Wetland). These wetlands cover tens of acres. An inventory of wetlands has been completed by the Arizona Botanical Garden with a report forthcoming in September.</p>	<p>Resolution - The EIS discusses BLM-administered wetlands in LCNCA. The EIS uses Brown 1994 and Pima County riparian for vegetation mapping and describes how the LCNCA wetlands fall within the hydroriparian areas. Added a paragraph about wetlands in LCNCA in the Affected Environment section and added impacts to aquatic vegetation in the environmental consequences section.</p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution																								
1081	BLM	3	Seeps Springs	No Action Alternative, entire section, including Impacts Common to All Action Alternatives (page 32), Effect on Perennial Stream Flow (page 32), Indirect		This entire section addresses impacts from action alternatives, rather than the no action alternative. BLM does not relinquish BLM's surface and groundwater rights.	Resolution - Do not understand comment. These sections indeed only address impacts from action alternatives. The No Action alternative is addressed prior to these sections. No changes made.																								
1082	BLM	3	Seeps Springs	51	table 114	<p>Several BLM surface waters are not listed in the EIS. BLM does not relinquish BLM's surface and groundwater rights.</p> <p>Additional surface waters not mentioned in the draft BO include:</p> <table border="0"> <tr> <td>Cold Water Spring</td> <td>Large spring located upstream of Mattie Cyn confluence</td> <td>Perennial</td> </tr> <tr> <td>Mattie Canyon</td> <td>Tributary to Cienega Creek</td> <td>Interrupted perennial</td> </tr> <tr> <td>Cinco Wetlands</td> <td>Located on Cienega Cr floodplain east of Gardner Cyn</td> <td>Perennial interior marshland</td> </tr> <tr> <td>Cold Water Wetland</td> <td>Large wetland associated with Cold Water Spring</td> <td>Perennial</td> </tr> <tr> <td>Cieneguita Wetland Complex</td> <td>Floodplain in lower Empire Gulch</td> <td>Perennial interior marshland</td> </tr> <tr> <td>Cienega Ranch Wetland</td> <td>Cienega Cr floodplain west of E of Empire Ranch</td> <td>Perennial interior marshland</td> </tr> <tr> <td>Spring Water Wetland</td> <td>Cienega Cr floodplain S of Spring Water Cyn confl.</td> <td>Perennial interior marshland</td> </tr> <tr> <td>Multiple Unnamed Wetlands</td> <td>Cienega Cr floodplain between Spring Water & Gardner Cyn</td> <td>Perennial and seasonal interior marshland</td> </tr> </table>	Cold Water Spring	Large spring located upstream of Mattie Cyn confluence	Perennial	Mattie Canyon	Tributary to Cienega Creek	Interrupted perennial	Cinco Wetlands	Located on Cienega Cr floodplain east of Gardner Cyn	Perennial interior marshland	Cold Water Wetland	Large wetland associated with Cold Water Spring	Perennial	Cieneguita Wetland Complex	Floodplain in lower Empire Gulch	Perennial interior marshland	Cienega Ranch Wetland	Cienega Cr floodplain west of E of Empire Ranch	Perennial interior marshland	Spring Water Wetland	Cienega Cr floodplain S of Spring Water Cyn confl.	Perennial interior marshland	Multiple Unnamed Wetlands	Cienega Cr floodplain between Spring Water & Gardner Cyn	Perennial and seasonal interior marshland	Resolution - These waters have been added to the Seeps, Springs, & Riparian Area section as well as the Biological Resources section. However, it has also been pointed out that these areas fall within the hydroriparian mapping conducted by Pima County, and the analysis of impacts remains applicable to them, whether they are called out by name or not.
Cold Water Spring	Large spring located upstream of Mattie Cyn confluence	Perennial																													
Mattie Canyon	Tributary to Cienega Creek	Interrupted perennial																													
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Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1083	BLM	3	Seeps Springs	6	table 106	Per the definitions of ephemeral, intermittent, and perennial for Table 106, Cienega Creek is not ephemeral as stated, but perennial as are significant portions of Empire Gulch (in addition to the ~1000ft at Empire Spring), Mattie Canyon, Cold Spring, and approximately 30 perennial jurisdictional wetlands.	<u>Resolution - Based on cooperator input, designations for some reaches have been changed.</u>
1084	BLM	3	Seeps Springs	29	Table 110	Reach: Cienega Creek 1 is perennial, not ephemeral.	<u>Resolution - Based on cooperator input, designations for some reaches have been changed.</u>
1085	BLM	3	Seeps Springs	29	Table 110	Table R-1 and SWF-1 lists "acacia, desert willow, ironwood, paloverde, mesquite, soapberry" yet there is no acacia, ironwood, or paloverde in Empire Gulch. Has any vegetation inventory occurred in Empire Gulch to validate this claim and for analysis of impacts?	<u>Resolution - As noted in the table footnotes, these descriptions came from the generic Pima County descriptions for xeroriparian habitat. No vegetation inventory was conducted in Empire Gulch. These have been modified based on these comments.</u>
1086	BLM	App B		22		<p>BLM waters should be added to the monitoring list e.g. Empire Gulch, Cienega Creek, and the wetlands that border Empire Gulch and Cienega Creek.</p> <p>Additional surface waters not mentioned in the draft BO include:</p> <p>Cold Water Spring Large spring located upstream of Mattie Cyn confluence Perennial</p> <p>Mattie Canyon Tributary to Cienega Creek Interrupted perennial</p> <p>Cinco Wetlands Located on Cienega Cr floodplain east of Gardner Cyn Perennial interior marshland</p> <p>Cold Water Wetland Large wetland associated with Cold Water Spring Perennial</p> <p>Cieneguita Wetland Complex Floodplain in lower Empire Gulch Perennial interior marshland</p> <p>Cienega Ranch Wetland Cienega Cr floodplain west of E of Empire Ranch Perennial interior marshland</p> <p>Spring Water Wetland Cienega Cr floodplain S of Spring Water Cyn confl. Perennial interior marshland</p> <p>Multiple Unnamed Wetlands Cienega Cr floodplain between Spring Water & Gardner Cyn Perennial and seasonal interior marshland</p>	<u>Resolution - The EIS discusses BLM-administered wetlands in LCNCA. The EIS uses Brown 1994 and Pima County riparian for vegetation mapping and describes how the LCNCA wetlands fall within the hydroriparian areas. Added a paragraph about wetlands in LCNCA in the Affected Environment section and added impacts to aquatic vegetation in the environmental consequences section.</u>
1087	BLM	App B		28		<p>A Conservation Fund of \$200,000 for ten years will likely not provide enough funding for preservation, enhancement, protection, and maintenance of aquatic and riparian ecosystems in the watershed. An endowment fund where only interest is used from an initial larger amount (more than \$2,000,000) for projects would be a perpetual source of funding. A Conservation Fund of \$200,000 for ten years also will not provide funding for impacts that are ongoing after mine closure. The Conservation Fund should be much larger and guaranteed in perpetuity in order to mitigate long-term impacts after mine closure.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1088	BLM	App B	FS-BR-05			Additional water features should be proposed in order to mitigate for impacts to Empire Gulch and Cienega Creek.	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
1089	BLM	App B	FS-BR-11			Rosemont should provide for annual surveys for Chiricahua leopard frog, Gila chub, Gila topminnow, and Huachuca water umbel with the Empire Gulch and Cienega Creek watershed annually beginning at the first year of operation and indefinitely for years after closure (for a large enough sample size for statistical analysis). Rosemont should provide funding for data analysis and completion reports.	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
1090	BLM	App B	FS-BR-14			Rosemont should also provide for annual surveys for YBCU within the Empire Gulch and Cienega Creek watershed annually beginning at the first year of operation and indefinitely for years after closure (for a large enough sample size for statistical analysis). Rosemont should provide for data analysis and completion reports.	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1091	BLM	App B	FS-BR-16			<p>If monitoring shows that the Cienega Creek Watershed is being impacted, the Conservation Fund of \$200,000 for ten years will likely not provide enough funding for preservation, enhancement, protection, and maintenance of aquatic and riparian ecosystems in the watershed. An endowment fund where only interest is used from an initial larger amount (more than \$2,000,000) for projects would be a perpetual source of funding. Any funding should be large enough to mitigate impacts that occur after mine closure.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
1092	BLM	App B	FS-BR-23			<p>Rosemont should also provide for annual surveys for Chiricahua leopard frog, Gila chub, Gila topminnow, and Huachuca water umbel within the Empire Gulch and Cienega Creek watershed annually beginning at the first year of operation and indefinitely for years after closure (for a large enough sample size for statistical analysis). Rosemont should provide funding for data analysis and completion reports.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
1093	BLM	App B	FS-BR-24			<p>Rosemont should also provide for additional piezometers east of the mine pit in order to monitor effects of the mine pit on Empire Gulch, Cienega Creek, and other wetlands.</p> <p>The Mitigation and Monitoring Plan includes provisions for monitoring the hydrologic system in the vicinity of the proposed Rosemont Mine including monitoring of mine dewatering efforts. The purpose of this hydrologic monitoring is to collect information necessary to complete periodic groundwater model re-validation. The plan does not state how this information will be used beyond model validation. The Mitigation and Monitoring Plan should include actions that will be taken in the contingency that mine dewatering removes significantly more water from the aquifer than has been analyzed in the FEIS.</p>	<p><u>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</u></p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1094	BLM	App B	RC-SW-01			Rosemont should provide for the operation, maintenance, and monitoring of existing and additional flow gages within the Empire Gulch and Cienega Creek watershed.	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
1095	BLM	App B	RC-CP-01			The trust should be guaranteed in perpetuity in order to mitigate long-term impacts after mine closure.	<p>Resolution - All mitigation and monitoring comments have been reviewed and considered by the Forest Supervisor. Some modifications have been made to Appendix B based on cooperator input and decisions from the Forest Supervisor.</p> <p><u>This includes comments requesting detailed contingency plans or management actions to be tied to mitigation or monitoring measures. In most cases, it is not appropriate to presuppose a remedy before having monitoring data that defines the issue or problem to be addressed.</u></p>
1096	BLM	General				<p>From BLM comments on Draft EIS: Impacts to Empire Gulch and Cienega Creek, as stated in the FEIS, may conflict with the approved Las Cienegas Resource Management Plan and Record of Decision (LCNCA RMP and ROD; 2003). From the LCNCA RMP and ROD, page 8-9, refer to the riparian vegetation objectives a-d, and Fish and Wildlife Management Objective 1. From the LCNCA RMP and ROD, page 33-38, refer to the Fish and Wildlife Management Actions (including those for listed species). From the LCNCA RMP and ROD, page 72, refer to the Riparian and Aquatic Habitat Objectives. Conflicts with land use plans have been identified in past agency comments regarding the inclusion of Cienega Creek and Empire Gulch into the "analysis area." See also: http://www.blm.gov/wo/st/en/prog/planning/nepa/webguide/40_most_asked_questions/questions_20-29.html 23a. Conflicts of Federal Proposal With Land Use Plans, Policies or Controls. How should an agency handle potential conflicts between a proposal and the objectives of Federal, state or local land use plans, policies and controls for the area concerned? See Sec. 1502.16(c). A. The agency should first inquire of other agencies whether there are any potential conflicts. If there would be immediate conflicts, or if conflicts could arise in the future when the plans are finished (see Question 23(b) below), the FIS must acknowledge and describe the extent of those conflicts. If there are any</p>	<p>Resolution - Conflicts with management direction on the LCNCA are described in the Required Disclosures section. This language was reviewed and approved by the BLM.</p>

Summary of Cooperator to Date

ID	Commenter	Chapter	Section	Page	Line	Comment	Resolution
1097	BLM					<p>Actions that are yet not proposed may still need to be analyzed in cumulative effects analysis if they are reasonably foreseeable (BLM H-1790-1, Section 6.5.2.1). Actions are connected if they automatically trigger other actions that may require an EIS; cannot or will not proceed unless other actions are taken previously or simultaneously; or if the actions are interdependent parts of a larger action and depend upon the larger action for their justification (40CFR 1508.25 (a) (i,ii,iii)). If any planned future pits would rely on the infrastructure in place from the current proposed pit, future pits may be a connected action under NEPA and have not been analyzed in this EIS.</p>	<p>Resolution - We disagree with this characterization. Reasonably foreseeable actions have been identified using very specific criteria. Under those criteria the additional pit mines are NOT reasonably foreseeable. We assess those RFAs that overlap in time and space with each resource, and we assess the combined effects on each resource.</p>