Board of Supervisors Memorandum

April 16, 2019

US Army Corps of Engineers Approval of Rosemont Copper Project

Background and Introduction

The US Army Corps of Engineers (Corps) decision to approve the Rosemont Copper Project with no meaningful mitigation comes as a disappointment, after Pima County's many years of effort to encourage all parties to fully compensate for the adverse impacts of a new mine. The mine proposal in no way sets a standard for "modern" or "sustainable" mining, though that was an aspiration of the original mine proponent. The mine approval comes as the product of regulatory backsliding by federal agencies and Hudbay's dismissal of earlier promises, plans and regulations.

Pima County has a long history of mineral extraction, particularly copper mining. The industry remains an important component of our region's economy and heritage. Our populace has more than the usual understanding of the benefits and risks of mining and mining's contributions to the economy. Objections to the Rosemont Copper proposal have never been to mining *per se,* but rooted in the particulars of methods, locations and risks, and aspirations for appropriate protections and mitigations that have been rejected.

After nearly a decade of controversy, it is clear that meaningful mitigation of this mine's impacts has not been achieved. If anything, regulatory agencies and proponents involved appear to be backsliding on their previous and specific commitments. The fundamental administration of national environmental laws is also retrogressing. Increasing levels of surprise, controversy and a sense of unfair treatment and lack of concern for the public interest has resulted in a spate of lawsuits, even as federal and state agencies have issued the requisite permits. There is no community consensus on whether the prospective benefits to the economy would outweigh the known impacts to land and water in both the Santa Cruz and Cienega watersheds.

The Board is yet again, now asked to weigh in and direct staff on how best to safeguard diverse community interests, including health, safety and welfare.

Pima County Participation

Pima County's efforts to seek meaningful mitigation in the event of a federal approval began in 2006, even before the Coronado National Forest accepted Rosemont's plan of operations for review. Augusta Resources, the mine's owners, agreed to meet five performance criteria relating to the mine in a letter dated November 28, 2006.

- Adherence to the County's Conservation Land System Guidelines;
- No impact to water in the Cienega Basin and Cienega Creek;
- Concurrent Reclamation; adequacy including bonding;
- Visual impacts to Scenic Sonoita Highway;
- Environmental Enhancement Endowment.

These conditions were never productively discussed with Augusta Resources. After Hudbay bought Rosemont, I communicated with Mr. Patrick Merrin on August 12, 2014 and listed ten critical issues of County concern. There were:

1. Use Central Arizona Project (CAP) water directly for mine operations.

2. Minimize the footprint of future disturbance in the northern Santa Rita Mountains by renouncing future efforts to mine Copper World, Peach-Elgin, and Broadtop Butte deposits.

3. Replenish the aquifer downstream of the mine.

4. Reclaim the pit through partial backfill.

5. Acquire and protect important natural areas in the Cienega watershed.

6. Redesign stormwater management systems and reduce seepage through waste-tailings to reduce the risk for future water contamination.

7. Properly plan and manage soil resources to ensure reclamation success.

8. Fund additional safety, traffic and road repair improvements on Sahuarita Road and Highway 83.

9. Comply with local Dark Skies Outdoor Lighting Ordinance.

10. Acquire and use Tier 4 engines in all non-road diesel equipment to reduce air pollution.

Most of the items will not be achieved, with possible exception of the last item, and even there, no legally binding commitment exists.

In 2007, the Coronado National Forest (Forest) invited Pima County and the Regional Flood Control District (RFCD) to participate in the preparation of an Environmental Impact Statement (EIS) for the Rosemont Copper Mine. This was logical considering the expertise of various County and District employees with regard to many of the resources that would be impacted by the proposed mine. Pima County has a major role in assuring the public health, safety and welfare, and both entities own and manage conservation and ecosystem sensitive land downstream of the mine. The focus of County staff efforts for more than 12 years has been to ensure an accurate disclosure of impacts of the proposed mine in the Environmental Impact Statement, and to secure as many protective measures as possible to avoid, minimize, and mitigate impacts, should the mine be permitted. Staff critiqued the mine technical work, suggested improvements to monitoring and reclamation, and contributed new technical information.

Staff developed many alternative solutions and mitigation measures that would minimize future impacts of the mine, most of which were ignored, or determined by the agencies to be beyond their jurisdiction to impose. Pima County later decided to appeal the terms of the Aquifer Protection Permit that authorized the heap leach and underground drains; these potentially damaging mine features were later eliminated by the mine owner.

Significance of the Corps Permit

Now, the long-awaited Clean Water Act Section 404 Permit from the Corps has been issued. This has been regarded as the key permit controlling whether the mine will proceed; indeed, the Corps is one of the few regulatory authorities having discretion to deny a permit. The Corps' issuance of the permit allows the process to move to its next steps, including judicial review and additional compliance requirements.

Pima County investment of over a decade of work on this proposed mine has not resulted in the safeguards and meaningful mitigation that Pima County sought. The only substantive mitigation that has been offered is located in Santa Cruz County, in another watershed and far from the mine where the actual mine impacts will not occur.

The Corps permit backslides on the protection of streams by allowing Outstanding Waters designated under the Clean Water Act to be degraded. In the meantime, Pima County and others in the community have had to beat back efforts by Hudbay and others to reduce water quality protections established under State administration of the Clean Water Act.

Reversal of Corps Denial

The Corps approval of the Clean Water Act Section 404 permit marks a distinct reversal of the Los Angeles District Corps 2016 findings. In a letter dated December 28, 2016, a denial of the Section 404 permit seemed imminent. The South Pacific Division's Colonel Helmlinger advised the applicant of his basis for denial:

(1) The proposed action would cause or contribute to violations of state water quality standards;

(2) The proposed action would result in significant degradation of waters of the United States as a result of a substantial reduction of ecological functions and services, and the project would contribute to the degradation of Outstanding Arizona Waters (OAWs);

(3) Proposed minimization and mitigation measures and monitoring efforts are inadequate to ensure that degradation will not occur; and

(4) Implementation of the proposed action would be contrary to the public interest.

What changed Colonel Helmlinger's opinion? First, the Corps undertook an extraordinary review with completely different staff who operated in isolation from the Los Angeles District staff who worked for years on this project. This review was so extraordinary that there were no guidelines or timeframe for the review. The review stemmed from the Arizona Governor's support for the mine and the State of Arizona 401 water quality certification, which was at odds with the Corps' findings listed above. Second, new Corps staff found three new and questionable reasons to approve the permit, which are cited in the decision:

1) Hudbay reduced the proposed discharge of fill material into waters of the United States by proposing to reduce the footprint of the proposed plant site;
2) Hudbay proposed to remove four stock tanks to minimize reductions in downstream flows, and
3) The Corps "refined the scopes of analysis," significantly narrowing the evaluation of effects under the public interest review and the Section 404(b)(1) Guidelines for alternatives.

Pima County reviewed the proposal to remove the stock tanks in 2017 and found the alleged benefits unsupported by the technical data. Various watershed impairments would compromise the effectiveness of the strategy even if the resulting increase in volume was significant and it was not shown to be significant. It is hardly credible that the removal of four stock ponds could be the foundation of such a significant reversal of opinion.

Likewise, we cannot attribute the Corps' dramatic reversal in position for the use of "bottomless arch culverts" cited in the decision. Such is almost laughable from a technical perspective. These and other minor adjustments reduced the overall impacts to Waters of the United States by only about an acre over what was reported in the EIS. It is thus obvious that the change in the "scope of analysis" is what led to the reversal of its 2016 findings.

<u>Scope of analysis is significantly reduced to be almost inconsequential</u>
The public interest review and consideration of alternatives required under the Corps' guidelines has been significantly changed during the course of this extraordinary review. The explanation for the truncated analysis is provided in the Corps' response to all public comments received since the Corps 2011 public notice for the mine.

The explanations in their Attachment A are monotonous by repeated intonation of the phrase: *"outside the scope of analysis"*. Reducing the scope of analysis to only the initial vegetation clearing, grubbing and grading has enabled the South Pacific Division to essentially ignore the very significant adverse impacts from mine development and operations, and grant the permit. Their response to public comments dismisses and marginalizes Pima County concerns.

- The potential for previous mining activities to affect water quality and the need for remediation? *Outside the scope of their analysis*.
- The flaws in the state certification for water quality impacts? *Outside the scope of analysis.*
- Impacts of groundwater drawdown including effects to aquatic resources? *Outside the scope of their analysis.*
- Adequacy of the stormwater features to handle large floods and thus prevent impacts to downstream waters? *Outside the scope of their analysis.*
- Impacts to wildlife beyond the initial discharge of fill? *Outside their scope of analysis*.

Moreover, much of the Corps reasoning is based on this premise: "*The operation of the mine will occur later in time and after all waters of the U.S. on the mine site cease to exist.*

At the time the mine goes into operation, there will be no waters of the U.S. into which fill could be discharged and no basis for the Corps to exert jurisdiction."

Why would there be no waters into which fill could be discharged? Because *".....the placement of excavated material from the mine pit would occur only after the waters of the U.S. have been filled with native material.... For this reason, the operation of the mine is not within the Corps' jurisdiction."*

This is perhaps the most bizarre rationale I have experienced in my forty plus-year career in public service. Figure 1 shows the configuration of proposed fills, which would exist at the end of the construction phase. It is part of the mine Stormwater Pollution Prevention Plan dated January 2015. The figures show that the mine pit excavation begins long before operation begins. Even at the end of the construction phase, the note on the figure indicates that the facility to process the ore would still be under construction.

So is the Corps reasoning just a dodge that enabled them to issue an approval? Or, is there some other logic? Special condition 13 provides additional insight. It prohibits discharge of excavated material from the mine pit into waters of the US *"until all discharges into waters of the US authorized by this permit are completed."* After that, however, the material excavated from the pit may be placed behind and on top of the fill in the ensuing phases of construction, as illustrated in the stormwater pollution prevention plan. The waste rock and tailings placed into the valleys will be available for years of weathering as impounded runoff collects behind the fills.

Essentially, this tortured rationale says that, by placing soil derived from the initial surficial grubbing into the waters of the United States, any additional harm caused to those same waters will not be considered simply because the waters being impacted will no longer be considered waters of the United States and thus Clean Water Act protections will no longer apply. A bizarre and seriously flawed logic. This ignores the obvious relationship between the mining construction and operation and the initial fills into the waters of the United States – discharges that would not occur "but for" the eventual mining operation. This rationale also provides a very large loophole that any 404 permit seeker can drive a truck through – all one has to do is isolate the waters of the United States first, and no additional destruction will be subject to Clean Water Act scrutiny. If this stands up to legal scrutiny I would be surprised.

<u>Overlooking Impacts, Avoiding Mitigation</u>

Regardless of our previous concerns over the validity of the technical reasons the permit was approved, the permit has been issued. It is now appropriate to consider the avoidance, minimization and mitigation measures attached to the Corps permit, as this was a key objective of the County's participation in that process. Pima County and the Regional Flood Control District have worked to protect and conserve natural resources in the Cienega basin since 1986, investing nearly $64 million. We are not an uninterested bystander. Pima County owns three ranches in the watershed that protect vital wildlife linkages identified by State of Arizona Game and Fish Department, and we also supported and advocated for the creation of Las Cienegas National Conservation Area.

We worked closely with the Corps, the Forest Service, and the mine applicant to identify mitigation lands and water rights that they could purchase in the Cienega watershed. Pima County's guidelines for compensatory mitigation of the mine would amount to more than 13,000 acres. As early as 2009, we had provided federal agencies with parcel identifications of lands in the Cienega watershed that could have mitigation value. We also recommended acquiring state and private land in the same watershed to the mine proponents.

Now we see that in issuing the permit, the Corps has completely ignored any responsibility for impacts to the Las Cienegas National Conservation Area, which is a national treasure. This area contains wetlands which are far more ecologically intact than anything else left in southern Arizona, including the San Pedro River and Sonoita Creek.

The principal mitigation being offered is the revegetation of a floodplain in Santa Cruz County, which the Corps will require to offset losses along affected watercourses at the mine, <u>including the decline in water quality</u>. So it is acceptable to pollute water in Pima County if it can be offset in Santa Cruz County? Given that Sonoita Creek is not even in the same watershed as Cienega Creek, this condition has no real benefit to minimizing impacts of the mine. Aside from being located in a different watershed, the amount of land conserved in Santa Cruz County is only 1,580 acres, a mere fraction of what should be required as compensatory mitigation.

We have also been essentially ignored in our concerns, measures we recommended to the Forest Service and Corps that would reduce the groundwater and surface water impacts has been dismissed out of hand. To reduce impacts to Davidson Canyon and the lower Cienega Creek, the Corps will instead require four small stock tank removals near the mine site *to "ensure there is no reduction in surface water quantity"* downstream. However, as noted previously, the technical data we reviewed supporting this measure did not demonstrate that this measure would be effective. Common sense should tell you that four small stock tanks will not offset the watershed diversion from this mine.

The Corps did not acknowledge restoration of flows at the Del Lago dam to Cienega Creek as a mitigation for Waters of the United States, but the Forest Service required it as part of their Record of Decision. A very confusing turn of events, where the Corps, responsible for water, ignores the value of restoring stream flow that has been diverted for over a century, and the Forest Service, who usually cares less about water, requires it. This appears to be one of the few mitigation measures that could actually benefit any portion of Cienega Creek.

<u>Sonoita Creek Mitigation Controversy</u>

In the initial application, the mine's mitigation strategy was primarily preservation of land outside the Cienega watershed, but Hudbay's plans eventually morphed into the current proposal to realign Sonoita Creek in order to maximize the potential credits under the Corps' mitigation guidelines. The massive earthworks project along Sonoita Creek would generate so much excess fill that the valley terraces would be extended into new, longer landforms to accommodate the waste. Mesquite and sacaton grass bottomland would be dug up and destroyed in the name of mitigation, a terrible irony and destructive idea.

Affected parties in Santa Cruz County were late to express their concerns about the downstream impacts of digging up over 200,000 cubic yards of Sonoita Creek floodplain sediment and filling an additional nine acres of Waters of the US, because the Corps failed to issue a public notice for the project. In their Record of Decision, the Corps explains that it was entitled to avoid any public notice or issuance of a Section 404 permit for Sonoita Creek project because the Final EIS identified the mitigation concept in an Appendix. A convenient excuse to avoid controversy.

Sonoita Creek runs south through the Nature Conservancy (Conservancy) Patagonia Preserve and the town of Patagonia. The Conservancy and other downstream landowners have concerns about the potential damage from the realignment of Sonoita Creek. The questions raised by Environmental Protection Agency and experts within the Conservancy, and our own Flood Control District, make us wonder whether it will do more harm than good.

Controversy over Cultural Remains

In 2018, Hudbay proposed an expedited schedule to the Forest Service for the excavation and recovery of cultural remains, including burials of ancient and more recent inhabitants, in advance of construction. The original Historic Properties Treatment Plan took a conservative approach and only required recovery of historic and archeological remains when and where necessary in advance of each stage of ground disturbance, over a multi-year timeframe. Compressing the schedule into just a few months is a significant departure from what was understood and approved by the State Historic Preservation Office, Tribal Nations, and others. Pima County feels this schedule backslides on the commitments made previously and questions the legal validity of the agreement by federal agencies.

Pima County does not support completing the archaeological excavations before the outcome of litigation associated with the Rosemont Mine. Historic properties and cultural remains cannot be recreated or replaced. Tribal and non-tribal communities value the land and have ancestors buried onsite.

Should pending litigation alter, deter, or halt the Rosemont Mine project, after the cultural heritage embodied in the remains, they will have been destroyed unnecessarily. The ongoing litigation against the Forest Service decision reflects community values and concerns. Even if the Forest Service is not obligated by law to wait until litigation is over, there should be reasonable accommodation regarding ground disturbance, to do otherwise is denying due process. We feel there is an obligation to protect cultural heritage from unwarranted destruction, especially given the legacy left by another mining company disconnected from the community, Anamax's earlier disturbance of approximately 200 human burials at the mine site in an earlier proposed mine effort.

Will the Forest Service allow archeologists to "clear" the entire mine site under the expedited schedule, despite the ongoing litigation? Almost certainly. Allowing this to proceed would in effect destroy the irreplaceable cultural sites. It would only exacerbate the levels of distrust and must not occur.

The Lawsuits Begin

In September 2017, The Center for Biological Diversity filed suit against the US Fish and Wildlife Service, alleging that the agency violated the Endangered Species Act by issuing a Biological Opinion allowing the project to move forward despite finding that it will permanently destroy critical habitat for the endangered jaguar and degrade sensitive aquatic habitat in the Cienega Creek watershed.

In November 2017, the Western Mining Action Project filed a lawsuit on behalf of Save the Scenic Santa Ritas and several other organizations against the US Forest Service, alleging that the agency failed to comply with a dozen different federal laws that govern Forest Service approval of the project, including the National Environmental Policy Act (NEPA), the Federal Land Policy and Management Act, and the Las Cienegas National Conservation Area Act, among others.

In April 2018, Earthjustice filed suit on behalf of the Tohono O'odham Nation, the Pascua Yaqui Tribe and the Hopi Tribe against the Forest Service, alleging that the agency violated NEPA and the National Historic Preservation Act, and unlawfully limited consultation with the tribes despite the irreversible damage to sacred and ancestral sites that will result from the project.

Legal briefings for all three lawsuits began in August 2018 and are expected to continue into spring 2019; hearing dates will soon be finalized. The first lawsuit against the Corps has recently been filed in US District Court, challenging the Corps' decision on the basis of failure to comply with requirements of four federal laws and various implementing regulations and policies. Parties to the suit are Save the Scenic Santa Ritas, Center for Biological Diversity, Arizona Mining Reform Coalition, and Sierra Club Grand Canyon Chapter. Additional lawsuits may still be filed.

The Federal double standard – unfair

The most troubling aspect of this decision lies in the unequal application of standards or requirements imposed or sanctioned and encouraged by the Federal Government on local governments such as counties, cities and towns compared to private mining operations.

County local taxpayers have made significant investments to comply with federal regulation requirements. The County has developed an Endangered Species Act compliance plan that requires compensatory mitigation. In developing this plan, the County has had to accept federal regulatory requirements in order to receive federal plan and permit approval. The County ecosystem protection efforts have been required to conform to a federal performance requirement.

Unfortunately, this same standard imposed on a local government, the County, has been ignored by the federal government when approving the Rosemont mining proposal. From the earliest interaction with Augusta Resources, now Hudbay, the County has been very consistent in requesting ecosystem mitigation consistent to the standards imposed on the County by federal agencies. This double standard is both stark and inexcusable. Why should

a local developer comply with local conservation requirements when a foreign mining company is excused from these requirements by the federal government?

Conclusion

Given our own experience in successfully complying with challenging federal laws, there is obviously grossly preferential and inequitable treatment that the Hudbay Rosemont Mine Project, and mining activities in general, receive under the law. Mining constitutes some of the most environmentally harmful activities allowed on public lands, yet it remains virtually unregulated. Unlike almost all other types of development, is not required to meaningfully mitigate the impacts of its activities or even provide fair value for resources extracted from public lands. Why such a double standard in the application of federal law? And why does the US allow such extraction of a valuable commodity leaving such damage to occur with virtually no compensation?

Despite our best efforts, no meaningful mitigation is being required to offset the very significant and permanent impacts the mine will inflict on our region and our community. The Rosemont Project should serve as a wake-up call for decision-makers to start regulating this industry in a manner commensurate to the threat it poses to communities like Pima County.

Recommendation

I recommend the Board pass and adopt resolution 2019 - _____ and resolution 2019-FC ____ as listed in the four action items in the resolution.

Sincerely,

C.H. Huckelberry
County Administrator

CHH/mp – April 10, 2019

Attachment A: Corps responses to public comment
Attachment B: Letter from the Nature Conservancy
Figure 1: Stormwater Pollution Prevention Plan at end of construction phase
Attachment C: Resolution

c: Carmine DeBonis, Jr., Deputy County Administrator for Public Works
Linda Mayor, Director of Sustainability and Conservation
Julia Fonseca, Environmental Planning Manager for Sustainability and Conservation

ATTACHMENT A

Attachment A

Response to Comments on the December 6, 2011, Public Notice

I. Information/Background: On December 6, 2011, the U.S. Army Corps of Engineers, Los Angeles District (SPL), issued a public notice for the U.S. Forest Service (USFS) Notice of Availability of the Draft Environmental Impact Statement (EIS), and request for comments on the proposal by Rosemont Copper Company (RCC) to discharge dredged and/or fill material into waters of the U.S. for the construction of a proposed copper mine approximately 30 miles southeast of Tucson, Arizona. The public notice comment period was identified as ending on January 5, 2011. As a result of the public notice, SPL received 7,030 letters or emails dated prior to the end of the public comment period. Of these comment letters or emails, 449 were in support of the proposed action, and the remaining 6,581 provided information or expressed concerns with, or opposition to, the proposed action. On January 6, 2011, SPL extended the public notice comment period to January 19, 2011.

Since the close of the public comment letter, 367 letters or emails have been submitted to SPL and the South Pacific Division (SPD) related to the proposed action. Of those, 149 were in support of the proposed action, and the remaining 218 provided information or expressed concerns with or opposition to, the proposed action. Since the public notice was issued in December 2011, a total of 7,397 comment letters/emails have been received, 598 in support of the proposed action, and 6,799 providing information or expressing concerns with, or opposition to, the proposed action. All comments on the proposed action are located in the administrative record. Appendix A of this document contains the December 11, 2011, public notice issued by the Corps. Appendix B of this document contains comment matrixes for all comment letters/emails received during and following the public notice comment period. The comment matrix contains the date(s) the letter/email was received, name of the commenter, agency/organization (if applicable), whether the comment was a form letter, and, the name of the form letter (if applicable).

Of the 594 comment letters/emails supporting the proposed action, 19 (received after the close of the public notice comment period) were form letters that provided the same, or very similar comments and six commenters provided comments on two separate occasions. Comments in the 594 total comment letters/emails supporting the proposed action primarily related to the economic benefits of the proposed action as a result of a direct and indirect increase in employment through the life of the mine and increase in state and local taxes; comments related to future job opportunities for the commenter;

the ability of the proposed action to contribute to the increased need for copper in the United States; a reduction in the need to rely on foreign import of copper; and avoidance and minimization measures incorporated by the applicant, which the commenters believe would allow for a more environmentally sustainable project than previ ous and existing copper mining operations. The comments in support of the proposed action are noted. The environmental effects, both beneficial and detrimental, of the proposed action under the Corps' scope have been fully discussed within the EIS, Supplemental Impact Reports (SIR), and are further identified in the Record of Decision (ROD), and therefore these comments will not be further discussed.

Of the remaining 6,799 comment letters/emails received, 6,347 were one of two form letters (Say No to the Rosemont Mine and Deny Augusta Resources' permit) and emails that provided the same, or very similar comments. Of the form letters, 125 commenters provided the same letter/email twice, seven commenters provided the same letter/email three times, and two commenters provided the same letter/email four times. If a comment was received by an individual with the same name and home address and/or email address, it was assumed to be the same individual. For duplicate form letters, if the name of the commenter was the same but the home address was not provided or was different, or if the email address was different, it was assumed to be a different individual. A number of commenters also provided both versions of the form letter, although these have not been quantified. In addition, 61 of the comments/emails consisting of the same postcard were received in January 2019, requesting denial of the proposed action, with no substantive comments not already received. The remaining 391 comment letters/emails were identified as unique. On February 8, 2012, SPL provided the comment letters/emails received during the public notice comment period to the applicant to solicit their response and additional information. On July 10, 2012, the applicant provided a response to the comments (herein referred to as the applicant's/their response to comments), which is located in the record. In addition, the applicant has provided a number of responses to subsequent comments received by agencies or organizations since the public notice, which are also located in the administrative record.

All comments of concern or opposition from form letters and unique comment letters, including those received both during and following the public notice comment period, fall within 32 topic areas, as identified in Table 1.

On January 5, 2012, the U.S. Environmental Protection Agency, Region 9 (USEPA), submitted a letter identifying that per Part IV, paragraph 3(a) of the August 11, 1992, Clean Water Act Section 404(q), *Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army* (USEPA-DA 404(q) MOA), the proposed action may result in substantial and unacceptable effects to aquatic resources of national importance (ARNIs). On February 13, 2012, USEPA submitted a letter identifying that per Part IV, paragraph 3(b) of the USEPA-DA 404(q) MOA, the proposed action will result in the significant degradation of waters of the U.S., including substantial and unacceptable effects to ARNIs. Because the February 13, 2012, letter

from USEPA was submitted within the timeframe identified in Part IV, paragraph 3(b) of the USEPA-DA 404(q) MOA (i.e. 25 days after the close of the public notice or extended public notice comment period), if the decision of the Corps is to issue a permit for the proposed action, the Corps will follow Part IV, paragraph 3(c) of the USEPA-DA 404(q) MOA. In addition, since the close of the public comment period, USEPA has submitted a number of additional comments letters related to the proposed action as well as the proposed compensatory mitigation. Responses to all of the comment letters submitted by USEPA fall within the topic areas identified above, and are fully addressed below.

On January 19, 2012, the U.S. Fish and Wildlife Service (USFWS), Arizona Ecological Services Office, submitted a letter identifying that per Part IV, paragraph 3(a) of the December 21, 1992, Clean Water Act Section 404(q), *Memorandum of Agreement Between the Department of the Interior and the Department of the Army* (USDOI-DA 404(q) MOA), the proposed action may result in significant and unacceptable effects to ARNIs. On February 17, 2012, the USFWS, Southwest Region submitted a letter identifying that per part IV, paragraph 3(b) of the USDOI-DA 404(q) MOA, the proposed action will have substantial and unacceptable effects on ARNIs. Because the February 17, 2012, letter from USFWS was not submitted within the timeframe identified in Part IV, paragraph 3(b) of the USDOI-DA 404(q) MOA (i.e. 25 days after the close of the public notice of extended public notice comment period, which should have been no later than February 13, 2012), the Corps has determined that the USDOI-DA 404(q) MOA is not applicable, and therefore, if the decision of the Corps is to issue a permit for the proposed action, the Corps will not follow Part IV, paragraph 3(c) of the USDOI-DA 404(q) MOA. However, the Corps has reviewed the letter submitted by USFWS, and determined the specific comments fall within the topic areas identified in Table 1, and are fully addressed below.

This response to comments document responds to all comments received before and after the close of the public notice comment period, all of which fall into the topic areas identified above. However, comments and their responses received from federally-recognized Native American tribes or their representatives as part of the government-to-government consultation conducted by the Corps are not included in this response to comment document. The attorney for the tribes raised non-tribal issues during the government-to-government consultation. The Corps has reviewed those comments and determined they fall within the topics identified in Table 1, and have been addressed. See Section VI.i of the ROD for information related to the government-to-government consultation conducted with Native American tribes.

The following is a summary of the general concerns for each of the topic areas identified above, and the Corps' response to those comments.

II. Response to Comments: Table 1 identifies the 32 topic areas relevant to the comments submitted since the December 11, 2011, public notice issued by SPL.

Table 1

Topic #	Subject
1	Comments Related to the Environmental Impact Statement
2	General Concerns Regarding the Proposed Action
3	Groundwater Quality and Quantity
4	Surface Water Quality and Quantity
5	Outstanding Arizona Waters (OAWs) and Special Aquatic Sites
6	Extent of waters of the U.S.
7	Riparian Vegetation
8	Springs and Seeps
9	Characterization of the Barrel Alternative
10	Stormwater sizing
11	Method used to assess sediment yield
12	Flow-through Drains
13	Stormwater Chutes
14	Dry Stack Tailings
15	404(b)(1) Alternatives Information
16	Pit Backfill Alternative
17	Reduced Pit Size Configuration
18	Threatened and/or Endangered Species
19	Wildlife
20	Visual effects on State Route 83
21	Traffic
22	Historic and Cultural Properties
23	Economics
24	Light Pollution
25	Noise
26	Wildfire Hazards
27	Hazardous Materials
28	Public Health and Welfare
29	Air Quality
30	Mitigation
31	Significant Degradation
32	Corps' Review Process

1. Concerns Related to the Environmental Impact Statement:

a. **Comments:** A number of commenters indicated the Final EIS prepared by the USFS is inadequate.

b. **Corps Response:** The USFS is the lead federal agency for preparation of the EIS for compliance with NEPA. The Corps was a cooperating agency on the preparation of the EIS. Following release of the Final EIS, the USFS released two SIRs responding to new information that had been received. As identified in Section III of the ROD, the Corps' scope of analysis under the CWA is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. The Corps, as a cooperating agency on the EIS, provided review and assistance to the USFS during the completion of the EIS, and has reviewed the two SIRs prepared by the USFS. The Corps has determined the Final EIS sufficiently describes the effects of the proposed action within the Corps' scope of analysis. The effects of the proposed action under the Corps scope are substantially smaller than the effects under the scope of the USFS, as the Corps does not have control or responsibility over the proposed mining operations. While commenters have provided additional information related to the effects of the proposed action, these comments relate primarily to activities outside of the Corps' scope (e.g. groundwater drawdown and downstream effects to Outstanding Arizona Waters (OAWs) as a result of the operations of the proposed mine), or would not result in new potentially significant effects not already analyzed in the EIS.

2. General concerns regarding the proposed action and concerns regarding the public interest review:

a. **Comments:** A number of commenters expressed concern that the economic and community benefits of the proposed action do not outweigh the potential environmental effects. A number of commenters also stated they believe the project is not in the public interest or contrary to the public interest.

b. **Corps Response:** In making a determination on whether to issue a permit for the proposed action, the Corps must make two fundamental determinations: (1) whether or not the proposed action is contrary to the public interest; and (2) whether or not the proposed action complies with the USEPA's *Section 404(b)(1) Guidelines for the Specification of Disposal Sites* (Guidelines). The Corps must also ensure the proposed action is in compliance with NEPA and other Federal laws, regulations, guidance, and executive orders (e.g. Section 7 of the Endangered Species Act (ESA), Section 106 of the National Historic Preservation Act (NHPA)).

The Corps regulations at 33 C.F.R. 320.4 identify that “The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case.” The Corps regulations further identify that “all factors which may be relevant to the proposal must be considered including the cumulative effects thereof,” and includes, but is not limited to, 20 potential resource areas where direct, indirect, and cumulative effects should be considered and evaluated, if applicable. When weighing the effects of the action for the public interest review, the Corps must determine the importance and relevance of a factor to the particular proposal, and must give full consideration and appropriate weight to all comments. While considered, effects that are more “attenuated” (i.e. would occur further away in distance or later in time), are given less weight than those effects that are near the project site and would occur in the near future. Only those effects that would occur as a result of the proposed action requiring a permit from the Corps (i.e. the discharge of dredged and/or fill material into waters of the U.S.), are considered in conducting the public interest review (See Section III.b of the ROD, as well as Regulatory Guidance Letter 88-13, *Subject: National Environmental Policy Act (NEPA) Scope of Analysis and Alternatives*). As further described in Corps regulations at 33 C.F.R. 320.4, provided an activity subject to Section 404 of the CWA complies with the Guidelines, and any other applicable guidelines and criteria, a permit will be granted unless the Corps determines that the proposed action would be contrary to the public interest.

As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the effects associated with the discharge of dredged/fill material into waters of the U.S. as a result of clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope.

In conducting the public interest review, the Corps utilized the June 2011 Draft EIS, December 2013 Final EIS, May 22, 2015, SIR, the July 20, 2016, Second SIR, comments submitted by the public, agencies, and other organizations, as well as other information submitted by the applicant. See Section VIII and IX of the ROD for the Corps’ public interest review. The Corps' final decision on whether or not the proposed action is contrary to the public interest is located in Section IX of the ROD.

3. Groundwater Quality and Quantity:

a. **Comments:** The majority of comments submitted related to effects to water, from potential groundwater drawdown to seepage effects on groundwater, to effects to specific aquatic resources. A number of comments received were regarding potential effects to groundwater quantity and quality, including: future availability of Central Arizona Project (CAP) water as a source for aquifer recharge; effects to private and public wells from drawdown and contamination; creation of a hydraulic "sink" from the proposed pit lake; effects from population growth; potential for contamination from tailings, waste rock, and heap leach pad facilities; treatment of seepage post-mine closure; potential for leaching of contaminated pit lake water into the aquifer; the ability for liners to prevent leaks; the validity of the groundwater models used to characterize water quality; the potential for exceeding Arizona Aquifer Water Quality Standards; and potential effects to cave resources as a result of seepage. Comments were also received after the close of the public notice comment period, identifying the reasons the commenters believed the effects from groundwater drawdown should be within the Corps' scope of analysis.

b. Corps Response: As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the effects associated with the discharge of dredged/fill material into waters of the U.S. as a result of clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction.

Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. The evaluation of the effects of the proposed action on groundwater, including those effects outside of the Corps scope associated with mining operations, has been analyzed in Chapter 3, *Groundwater Quantity* and *Groundwater Quality and Geochemistry*, of the Draft EIS and Final EIS. The Corps, as a cooperating agency on the EIS, was involved in the preparation and review of the Draft and Final EIS. In addition, the Corps has reviewed the SIR and Second SIR, and believes these documents incorporate the best available information on the effects of the proposed action on groundwater.

See Section VIII and IX of the ROD, for a discussion of the effects of the proposed action on the physical, chemical, biological, and human use characteristics of the aquatic environment and the effects on the public interest, as it relates to the Corps' scope of analysis. The final decision on whether or not the proposed action complies

with the Guidelines is located in Section VIII of the ROD; the Corps' final decision on whether or not the proposed action is contrary to the public interest is located in Section IX of the ROD.

With regards to comments identifying reasons the commenters believe the effects from groundwater drawdown should be within the Corps' scope of analysis under the CWA, the Corps disagrees with these commenters as described in Section III and Section VIII of the ROD. Commenters identified that because the groundwater is hydrologically connected to surface waters, the Corps must analyze the effects to groundwater. Section 404 of the Clean Water Act (33 U.S.C. 1344) authorizes the Secretary of the Army, operating through the Chief of Engineers, to issue permits, "after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites." The Corps' 1986 regulations at 33 C.F.R. 328.3, which are currently being utilized in Arizona, define waters of the U.S., which does not include groundwater. Therefore, groundwater is not a water of the U.S. The Corps acknowledges that under the Section 404(b)(1) Guidelines, the Corps must evaluate the direct, secondary, and cumulative effects of the proposed discharge on the aquatic ecosystem. The aquatic ecosystem is defined in 40 C.F.R. 230.3(c) to mean waters of the U.S., including wetlands, that serve as habitat for interrelated and interacting communities and populations of plants and animals. As identified previously, waters of the U.S. do not include groundwater, and therefore groundwater is not considered to be part of the aquatic ecosystem. Secondary effects of the proposed discharge on the aquatic ecosystem have been fully considered as described in Section VIII of the ROD. To the extent there are impacts to groundwater, they are the result of activities that do not require a permit under Section 404 of the CWA, including the operation of the mine. Commenters suggested that a secondary effect of the discharge is the operation of the mine, which will result in groundwater drawdown, which in turn could have a secondary effect on waters of the U.S. Simply put, this is too attenuated a connection. The Guidelines require the analysis of secondary impacts of the discharge on the aquatic ecosystem, not an analysis of the possible third, fourth or fifth order effects. Moreover, the fact that surface water may drain into ground water does not render groundwater jurisdictional. Additionally, any effects of the groundwater drawdown on hydrologically connected waters are the effects of the removal of the groundwater for the operation of the mine, not of regulated discharges into the groundwater. Suggestions that the Corps must consider whether groundwater drawdown adversely affects hydrologically connected surface waters miss the point that groundwater impacts are not due to discharges regulated under the CWA. They are due to the operation of the mine. Therefore, regardless of whether recent studies have shown that the groundwater is hydrologically connected to the surface waters, the effects caused by groundwater drawdown associated with operations of the mine are not within the Corps' scope of analysis under the CWA.

4. Surface Water Quality and Quantity:

a. **Comments:** A number of commenters, including commenting agencies, tribes, and organizations, expressed concerns related to surface water effects, including changes in surface flow related to drought, projected climate change and flooding, alteration of surface flows, potential for acid rock drainage, and general water quality concerns. Many comments also related to the effects to surface water quality and quantity as a result of groundwater drawdown from operations of the proposed mine. Following the end of the public comment period, Pima County provided a comment letter identifying previous mining activities in the area may have already adversely affected water quality of the region, and stated the applicant should be held accountable for investigating and remediating areas where previous mining activities have occurred.

Comments were also provided on the Section 401 Water Quality Certification (WQC) issued by the Arizona Department of Environmental Quality (ADEQ), with USEPA commenting regarding other water quality concerns related to the proposed action, and Pima County commenting that ADEQ did not follow proper procedures when issuing the 401 WQC. Following the end of the public comment period, Pima County provided comments that ADEQ has not correctly identified livestock watering as designated uses in many of the ephemeral drainages in Pima County. Within their letter, Pima County identified that as a result of not identifying the correct uses of ephemeral drainages, a less stringent standard to evaluate the Rosemont mine was used than what is required (1.3 mg/L used instead of 0.5 mg/L).

b. **Corps Response:** As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine, including those related to surface water quality and quantity as a result of groundwater drawdown, are outside of the Corps' scope and jurisdiction. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. However, the evaluation of the effects of the proposed action on surface water and climate change, including those effects outside of the Corps scope related to mining operations, has been analyzed in Chapter 3, *Air Quality and Climate Change, Surface Water Quantity*, and *Surface Water Quality* of the Draft EIS and Final EIS, and is further discussed in the SIR and Second SIR. The Corps, as a cooperating agency on the EIS, was involved in the preparation and review of the Draft and Final EIS. In addition, the Corps has reviewed the SIR and Second SIR, and believes these documents incorporate the best available information on the effects of the proposed action. The Corps does not believe it is appropriate to

analyze changes in surface flow related to drought, as these effects would not be caused by the proposed action, and are therefore outside of the scope of the regulatory program. See Section VIII and IX of the ROD, for a discussion of the effects of the proposed action on the physical, chemical, biological, and human use characteristics of the aquatic environment and the effects on the public interest, as it relates to the Corps' scope of analysis. The final decision on whether or not the proposed action complies with the Guidelines is located in Section VIII of the ROD; the Corps' final decision on whether or not the proposed action is contrary to the public interest is located in Section IX of the ROD.

With regards to the comments related to previous mining activities on the project site, these comments are noted. Any water quality effects as a result of previous mining activities are not within the Corps' scope of analysis, and the Corps does not have the authority to require the applicant to undertake any clean-up or remediation for previous mining activities that did not require a Corps permit and for which the applicant did not undertake.

With regards to USEPA's comments advising of other water quality aspects to be taken into consideration, Corps regulations at 33 C.F.R. 320.4(d) identifies the Section 401 WQC will be considered conclusive with respect to water quality considerations unless the Regional Administrator, USEPA, advises of other water quality aspects to be taken into consideration. Section VIII of the ROD includes the Corps final determination on the USEPA's other water quality aspects to be considered, and whether or not the proposed action will violate state water quality standards. The USEPA Regional Administrator did not advise of other water quality aspects associated with the proposed compensatory mitigation site, and therefore in accordance with 33 C.F.R. 320.4(d), the Section 401 WQC is considered conclusive for water quality considerations, including maintenance of designated uses under the authority of the state. With regards to Pima County's comments related to the process by which ADEQ issued their Section 401 WQC, the Corps is not the responsible agency to determine whether or not ADEQ followed appropriate procedures in issuance of the Section 401 WQC. Therefore, this comment is outside of the scope of the Corps' Regulatory Program.

With regards to comments related to designated uses for livestock watering, these uses for the purpose of water quality standards are determined by the state, not the Corps. However, even if water quality standards for agricultural livestock watering were used as the standard in the Final EIS, as identified in Table 105 of the Final EIS (pg. 475), the predicted water quality of runoff for copper is far less than the 0.50 mg/L Pima County identified should have been used as the standard, as the maximum predicted runoff for copper would be 0.0085 mg/L, occurring from waste rock. Therefore, even if agricultural livestock watering and their subsequent water quality standards were utilized, runoff would not exceed those standards, and this comment does not change the analysis.

5. Outstanding Arizona Waters and Special Aquatic Sites

a. **Comments:** Commenters expressed concern about downstream effects to Davidson Canyon and Cienega Creek related to surface water quantity and quality, and groundwater drawdown. Some specific concerns included reduction of sediment delivery to Davidson Canyon Wash and Cienega Creek; potential increases in suspended sediments due to channel scouring; reduction of surface flow in Davidson Canyon; groundwater drawdown reducing stream flow and affecting surface water quality; alteration of the geomorphic characteristics of the channels; and overall reduction in groundwater recharge functions in Davidson Canyon. Following the end of the public notice comment period, Pima County also provided a comment indicating the applicant has requested the State remove the designation of Davidson Canyon as an OAW. USEPA also commented that the proposed action would adversely affect three special aquatic sites (wetlands, sanctuaries and refuges, and riffle and pool complexes).

b. **Corps Response:** As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. The evaluation of the effects of the proposed action on OAWs, including those effects outside of the Corps scope related to mining operations, has been analyzed in Chapter 3, *Surface Water Quantity*; *Surface Water Quality*; and *Seeps, Springs, and Riparian Areas* in the Draft and Final EIS, and is further discussed in the SIR and Second SIR prepared by USFS. The Corps, as a cooperating agency on the EIS, was involved in the preparation and review of the Draft and Final EIS. In addition, the Corps has reviewed the SIR and Second SIR, and believes these documents incorporate the best available information on the effects of the proposed action on OAWs. The Corps has also reviewed and evaluated information submitted in the comments received, including those submitted by the USEPA regarding other water quality considerations, the Section 401 WQC issued by the Arizona Department of Environmental Quality (ADEQ), responses by ADEQ to USEPA, and information submitted by the applicant to determine whether significant degradation to the aquatic environment would occur from potential effects to surface water quality or quantity. See Section VIII and IX of the ROD, for a discussion of the effects of the proposed action on the physical, chemical, biological, and human use characteristics of the aquatic environment and the effects on the public interest, as it relates to the Corps' scope of analysis. The final decision on whether or not the proposed action complies with the Guidelines is located in Section VIII of the ROD; the Corps' final decision on

whether or not the proposed action is contrary to the public interest is located in Section IX of the ROD.

With regards to the comment related to attempts by the applicant to remove the OAW designation for Davidson Canyon, this comment is outside of the scope of the Corps' regulatory program. The designation of OAWs is made by the State and any changes to that designation will be made by the State.

With regards to comments related to the project adversely affecting special aquatic sites, the Corps has conducted an analysis of the potential direct and secondary affects to special aquatic sites as a result of the proposed action on the mine site, as described in Section VIII.a.4 of the ROD. As described in Section VIII.a.4 of the ROD, the proposed action would not adversely affect special aquatic sites. Any indirect effects to waters of the U.S., as a result of activities outside of the Corps' scope have been evaluated in the EIS prepared by USFS.

6. Extent of waters of the U.S.:

a. **Comments:** Pima County and USEPA expressed concern that the extent of waters of the U.S. within the project area may have been under-mapped, and the extent of waters of the U.S. may be greater than was identified in the Corps preliminary jurisdictional determination (PJD). Comments from Pima County included the following: (1) method for identifying the ordinary high water mark (OHWM) was not provided in the PJD; (2) extent of headwaters streams was underestimated based on a review of stereo-paired aerial photographs; and (3) the width of the OHWM was not reflective of the 10-year flood event. USEPA's comments were similar to those by Pima County, and added a concern that the PJD has not been verified by the Corps. It was also suggested that an approved jurisdictional determination (AJD) be completed because of a perceived limitation to the PJD. Following the end of the public comment period, Pima County submitted comment letters asserting that Barrel Canyon and Davidson Canyons are not ephemeral, and have intermittent flow reaches.

b. **Corps Response:** On November 1, 2010, SPL issued a PJD for the proposed Rosemont open pit copper mine site, Sycamore Canyon, and the proposed Santa Rita Road waterline alignment. The PJD conducted by the Corps included multiple field visits between 2006 and 2009, and review of information sources, including maps prepared by the applicant, U.S. Geological Survey Maps, ground photographs, and aerial photographs.

The determination of ordinary high water mark for potential waters of the U.S. is made utilizing Corps regulations at 33 C.F.R. 328.3. The August 2008, *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*, prepared by the Corps Engineer Research and Development Center – Cold Regions Research and Engineering Laboratory (ERDC-CRREL), provides additional guidance for the determination of the OHWM in the arid

west. The Corps understands that Pima County utilized stereo-photographs to identify over 100 miles of streams that would be affected on the Rosemont Copper site. However, aquatic resources that would be identified as potential waters of the U.S. by the Corps include only those features that meet the criteria as wetlands (as identified in the 1987 *Corps of Engineers Wetlands Delineation Manual* and September 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2)*), or would be other waters (e.g. ponds, lakes, rivers, streams, etc.) that contain an OHWM. Unless a potential feature is considered a wetland, or contains an OHWM, the feature will not be identified by the Corps as a potential water of the U.S. In many cases, especially in mountainous areas in the arid west, topographical linear depressions occur, which may be erosional features, or features with a steep gradient where an OHWM is not present. While these may be considered aquatic resources by other agencies, these are not considered by the Corps to be aquatic resources, and therefore would not be identified as potential waters of the U.S. subject to Section 404 of the Clean Water Act. No information has been received by the Corps to support a determination that the 100+ miles of streams identified by Pima County contain an OHWM and are considered to be aquatic resources that are potential waters of the U.S. Therefore, the Corps does not believe it appropriate to revise the PJD based on the comments.

With regards to the width of the OHWM, the Corps does not have standards or guidance that the OHWM is equal to a 10-year flood event. As identified above, the OHWM is identified in the Corps regulations at 33 C.F.R. 328.3, which defines the OHWM as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” The Corps Engineer Research and Development Center - Cold Regions Research and Engineering Laboratory (ERDC-CRREL), has developed the August 2008, *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*, a delineation manual used by the Corps in delineating the OHWM of intermittent and ephemeral streams in the Arid West. The Corps disagrees that the OHWM, as defined by regulation, necessarily corresponds to any particular flood event.

With regards to the comment that an AJD should have been conducted instead of a PJD, the determination of the location and extent of aquatic resources does not differ between an AJD and a PJD. The difference between an AJD and a PJD is that with an AJD, the Corps makes a determination on whether the aquatic resources within the review area are or are not waters of the U.S., and under a PJD, the Corps determines only that the identified aquatic resources are potentially waters of the U.S. Therefore, conducting an AJD for the proposed mine site would not result in a different determination regarding the location or extent of aquatic resources within the review area.

With regards to the assertions by Pima County that portions of Barrel and Davidson Canyons are intermittent, the PJD issued by the Corps in 2010 identifies that the project area contains only ephemeral drainages and springs, with two of the springs being wetlands. Within their comments, Pima County did not specify the exact locations for the portions of Barrel Canyon they asserted are intermittent, although the comments indicated these areas were east (downstream) of State Route (SR) 83, which is not located on the proposed project site, and is not included in the review area of the PJD issued by the Corps. Because the Corps has not reviewed an aquatic resources delineation for any portions of Barrel or Davidson Canyons off of the proposed mine site, the Corps is unable to make a final determination on whether there are portions of Barrel Canyon that contain intermittent flow downstream of the proposed mine site. As identified on Figure 67 and Table 106 of the Final EIS, Barrel Canyon and three reaches of Davidson Canyon are considered ephemeral. On the project site, the Corps utilized the definition for ephemeral and intermittent streams as used by the Corps for the Nationwide Permit (NWP) program since 2000. While the proposed action is not being evaluated under a Nationwide Permit, the Corps has determined this definition is appropriate for use in reviewing and verifying aquatic resource delineations. These definitions were also utilized in the Final EIS, as identified on page 491. As defined in Section F on page 2006 of the Federal Register (FR) notice for the 2017 NWPs (82 FR 1860), an ephemeral stream "has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for streamflow." An intermittent stream, as defined in the NWPs, "has flowing water during certain times of the year, when groundwater provides water for streamflow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow."

Between 2013 and 2015, the applicant installed a groundwater well in Barrel Canyon, at a stream gage approximately 0.28 miles upstream from the SR 83 bridge. Data from that well, when compared with streamflow data from the stream gage, indicates the water table is more than 40 feet below the surface of the Barrel Canyon. In addition, stream gage data between January and November 2017 also indicates flows within Barrel Canyon upstream of SR 83 only occur in response to rain events (see *Response to Pima County (2017 a & b)), New Information: Rosemont Copper Mine, Section 404 Clean Water Act,* prepared by Westland Resources and Water & Earth Technologies, dated January 24, 2018, located in the administrative record). The comments from Pima County did not provide evidence that the PJD issued by the Corps in 2010 is incorrect or that intermittent drainages exist within the project area.

7. Riparian Vegetation

a. **Comments:** A number of commenters expressed concern about effects to riparian vegetation downstream of the proposed Rosemont copper mine site, particularly those effects caused by groundwater drawdown.

b. **Corps Response:** As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. Based on available information, the discharge of fill material into the ephemeral drainages and springs as a result of clearing and grubbing activities will result in direct, and potentially indirect, effects to riparian vegetation on the project site. The evaluation of the effects of the proposed action on riparian areas, including those effects outside of the Corps scope related to mining operations, has been analyzed in Chapter 3, *Seeps, Springs, and Riparian Areas* in the Draft and Final EIS. The Corps, as a cooperating agency on the EIS, was involved in the preparation and review of the Draft and Final EIS. In addition, the Corps has reviewed the SIR and Second SIR, and believes these documents incorporate the best available information on the effects of the proposed action on riparian vegetation.

The direct and indirect effects to riparian vegetation from the proposed discharge of dredged/fill material into waters of the U.S. would be less than those discussed in the Final EIS, as the Final EIS also identified the effects as a result of mining operations outside of the Corps scope.

8. Springs and Seeps

a. **Comments:** Several commenters expressed concern regarding effects to springs and seeps within and near the proposed Rosemont copper mine site, primarily as a result of groundwater drawdown. The comments ranged from those regarding the value of these features as aquatic resources, important habitat for native (and sensitive) species, and as cultural resources important to local tribal communities.

b. **Corps Response:** As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the

loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope.

As identified on Figure 2 in the ROD and Attachment B to the ROD, three springs would be directly affected as a result of the proposed discharge of fill material into waters of the US. The evaluation of the effects of the proposed action on springs and seeps, including those effects outside of the Corps scope related to mining operations, has been analyzed in Chapter 3, *Seeps, Springs, and Riparian Areas* in the Draft and Final EIS. The Corps, as a cooperating agency on the EIS, was involved in the preparation and review of the Draft and Final EIS. In addition, the Corps has reviewed the SIR and Second SIR, and believes these documents incorporate the best available information on the effects of the proposed action on springs and seeps. See Section VIII.a.4, for a discussion of the effects of the proposed action under the Corps' scope on springs. The final decision on whether or not the proposed action complies with the Guidelines is located in Section VIII of the ROD; the Corps' final decision on whether or not the proposed action is contrary to the public interest is located in Section IX of the ROD.

9. Characterization of the Barrel Alternative

a. **Comments:** Pima County commented they believe that the Barrel Alternative (Alternative 4 in the DEIS and proposed action in the Corps public notice was incompletely characterized and that an adequate evaluation could not be completed. Pima County recommended that additional plans (e.g. grading and drainage plan, and stormwater management plan) be completed before the 404 permit decision is made.

b. **Corps Response:** This comment is noted. Since the public notice, the applicant has modified the proposed design to remove the proposed heap leach pads and flow-through drains, and has prepared revised figures, a revised stacking plan, stormwater management plan, and reclamation plan. The revised figures are located in Attachment B of the ROD, and the updated description of the proposed action is located in Section IV of the ROD. The Final EIS provided a full description of the Barrel Alternative. The proposed action evaluated in the ROD is fully described in Section IV.c.2 of the ROD, and includes a reduction in the proposed discharge of fill material into waters of the U.S. as compared to the Barrel Alternative evaluated in the Final EIS.

10. Stormwater Sizing:

a. **Comments:** Several commenters expressed concern regarding the sizing of stormwater features, and whether they are sufficient, with a number of commenters indicating they believe sizing to the 100-year, 24-hour storm event is inadequate.

b. **Corps Response:** The comments provided relate to how stormwater would be handled during operations of the proposed mine, which, as identified in Section III of the ROD, is outside of the Corps' scope of analysis. However, as identified in the Final EIS (pg. 45-46), stormwater from the mine pit, ore processing facilities, and mine maintenance plant areas would be prevented from surface discharge. Other stormwater would be routed to sediment control structures where discharge would be monitored for chemical and sediment content in accordance with the ADEQ mining stormwater general permit. In their response to comments, the applicant has identified that their design of the stormwater conveyance structures considered a combination of the 100- year, 500-year, 1000-year, and Local and General PMP storms in addition to the nature of the structure (i.e. permanent or temporary). In their response to comments, the applicant also identified that supporting analysis documents state that the selection of the design flood is based on a number of factors such as size of the contributing watershed, whether the structure will be used for temporary or permanent containment. In their response to comments, the applicant also stated that, while design of permanent conveyance structures will use a 500-year, 24-hour storm temporary or sediment-control structures may be designed using smaller storm events. According to the applicant in their response to comments, sizing of the structures is covered under Rosemont's Site Water Management Plan. Final review and approval of the design of the structures rests with the USFS as part of the overall approval of the MPO. .

11. Method to Assess Sediment Yield:

a. **Comments:** A number of commenters, including Pima County, BLM, and Save the Scenic Santa Ritas, expressed concern about the use of the 1968 Pacific Southwest Inter-Agency Committee (PSIAC) method to assess sediment yield, including concerns with the date of development of this method, and application of this method in watersheds smaller than 10 square miles in size.

b. **Corps Response:** As described in Section 3 of the Final EIS, the analysis of changes in surface water quality as a result of the proposed action included expected changes in sediment yield. These changes in sediment yield were estimated using the 1968 PSIAC method. The potential for downstream scour or aggradation cause by changes to upstream sediment yield was assessed qualitatively, based on two independent analyses and field observations (Final EIS, pp. 446). According to the Final EIS, these studies were used in conjunction with modeling to analyze impacts on surface water quality. The Final EIS also identifies that USFS investigated using other models, but determined that given the type of system that exists in Barrel Canyon and the difficulty of applying sediment transport models to ephemeral systems, running these other models would not further inform the decision. The Corps has not received any information from the commenters to indicate that utilizing other models would have revealed additional impacts not already discussed in the EIS. Based on our review of the applicant's response to comments, and the Final EIS, the Corps believes this issue

has been satisfactorily considered and addressed and no further analysis by the Corps is warranted. In addition, the effects to water quality as a result of suspended sediments are primarily under the purview of the ADEQ. However, because the USEPA advised the Corps of "other water quality aspects," to be considered (See Section VIII of the ROD), the Corps did not consider the Section 401 WQC to be conclusive for the evaluation of compliance with the Guidelines or public interest review, and instead conducted an independent review to determine whether the proposed action would violate state water quality standards, as described in Section VIII of the ROD. The final decision on whether or not the proposed action complies with the Guidelines is located in Section VIII of the ROD; the Corps' final decision on whether or not the proposed action is contrary to the public interest is located in Section IX of the ROD.

12. Flow-Through Drains:

a. **Comments:** Pima County expressed concern about the long-term functionality of the flow-through drains beneath the tailings impoundment, expressing concern that the stormwater attenuation ponds associated with the flow-through drains are undersized, and that the flow-through drains will clog and require long-term maintenance.

b. **Corps Response:** Since the public notice for the proposed action, the applicant has revised the proposed action to eliminate the flow-through drains. Therefore, this comment is no longer applicable.

13. Stormwater Chutes:

a. **Comments:** Pima County commented that the design for the proposed stormwater chutes is inadequate and therefore the proposed chutes may not be stable. The specific comment provided by Pima County expressed concern regarding the use of Agricultural Research Station (ARS) methods using rocks greater than the 0.6 to 11 inch diameter used in the ARS methods study, and commented that the applicant should provide qualitative analysis to show the proposed riprap protection will not fail.

b. **Corps Response:** The proposed stormwater chutes are proposed to be installed following all proposed discharges of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading of waters of the U.S. on the proposed mine site. No discharge of dredged/fill material into waters of the U.S. would occur as a result of the construction of the stormwater chutes. Therefore, comments related to the stormwater chutes are outside of the Corps jurisdiction and scope.

However, the applicant has identified that, in proposing the size of proposed rock-slope protection using rip-rap for stormwater chutes, they utilized the ARS methods, incorporating a factor of safety for the proposed size. Pima County did not provide an alternative method for calculating the appropriate size of rip-rap.

14. Dry Stack Tailings:

a. **Comments:** A number of comments, including one comment in a form letter suggested that the proposed dry-stack tailings method was untested in the arid south-west.

b. **Corps Response:** As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including comments related to dry-stack tailings. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines, are within the Corps scope.

While comments related to dry-stack tailings are outside of the Corps' scope and jurisdiction, in their response to comments, the applicant has identified that the creation of dry-stack tailing involves dewatering mining tailings using large-capacity pressure filters to remove the majority of water from the tailings to create a dry cake with a moisture content to 12 to 18 percent. The filtered tailings are then conveyed to, and placed in the dry-stack tailings disposal facility, while the water would be recycled (FEIS, Chapter 2). While this is a relatively new process, it has been used for other mine sites, including those in Chile, Alaska, Canada and Mexico. As identified in Chapter 2 of the Draft and Final EIS, dry-stack tailings have advantages over traditional slurry tailings, including, but not limited to the following: eliminating the need for an engineered embankment and seepage containment system; increasing water conservation; reducing the footprint and associated effect to resources; and allow concurrent reclamation and covering for dust control.

15. 404(b)(1) Alternatives Information:

a. **Comments:** Several commenters, including Pima County, and the USEPA, commented on the 404(b)(1) alternatives information including in Appendix B of the Draft EIS. The comments mainly concerned the identification of the least environmentally damaging practicable alternative (LEDPA), and comments that

additional information is needed regarding off-site alternatives in order to complete the determination of the LEDPA. The comments also identified the Corps should examine other on-site and off-site alternatives not previously evaluated in the EIS or the applicant's 404(b)(1) Alternatives Information, including alternatives based on the financial standing of the current applicant.

b. **Corps Response:** These comments are noted. Appendix B of the Draft EIS, contained the September 2011 *CWA Section 404(b)(1) Alternatives Analysis (SPL-2008-00816-MB, Draft Deliberative Work Product, Rosemont Copper Project*, prepared by WestLand Resources, Inc., for the applicant, which contains information regarding alternatives to the proposed action, including those that would reduce effects to the aquatic environment. Based on comments received on the public notice and from the Corps, the applicant revised the alternatives information, and submitted the September 2013, *Rosemont Copper Project, CWA Section 404(b)(1) Alternatives Analysis (SPL-2008-00816-MB)*, prepared by WestLand Resources, Inc., which was included as Appendix B of the Final EIS. It is important to note that, despite the name, the document prepared by the applicant is not a final alternatives analysis for compliance with the Guidelines, but is only a document containing information on the practicability of alternatives. Information from the September 2013, alternatives information has been utilized by the Corps in developing the Section 404(b)(1) Alternatives Analysis, located in Section VIII of the ROD. While information submitted by the applicant is utilized by the Corps, the Section 404(b)(1) Alternatives Analysis is an independent evaluation made by the Corps of the proposed action's compliance with the Guidelines.

With regards to comments related to analyzing additional alternatives not identified in the EIS, the EIS evaluated a number of alternatives to the proposed action, including alternatives that would reduce the proposed discharge of dredged and/or fill material into waters of the U.S. The EIS also considered but rejected a number of on-site and off-site alternatives that would further reduce effects to waters of the U.S., as described in Section IV of the ROD. In total, 11 off-site alternatives, 3 alternatives owned by Rosemont Copper Company, and 9 on-site alternatives were evaluated. The on-site alternatives also considered various configurations of dry stack tailings, waste rock dumps, and heap leach pads. The Corps has evaluated the practicability of the alternatives in the Final EIS, utilizing information provided in the applicant's September 2013, *Rosemont Copper Project, CWA Section 404(B)(1) Alternatives Analysis (SPL-2008-00816-MB)* and determined there are no practicable alternatives that would have fewer adverse effects to the aquatic environment and would meet the overall project purpose, as described in Section IV of the ROD. The Corps has determined the alternatives considered and considered but rejected from further analysis in the EIS are sufficient to ensure an evaluation of a reasonable range of alternatives, as required by NEPA, and are sufficient to ensure evaluation of practicable alternatives, as required by the Guidelines. The Corps has also determined it is not reasonable or practicable to identify multiple alternatives throughout the review process, as this places an unreasonable burden on the applicant, and is not necessary to meet the requirement of either NEPA or the Guidelines. With regards to comments suggesting the Corps should

analyze alternatives based on the applicant's current financial standing, as the current applicant has a higher market capitalization than the previous owner of Rosemont Copper Company (Augusta Resources), the preamble to the Guidelines identifies (45 FR 85339) the evaluation of practicable alternatives is based on cost, not economics, stating "Our intent is to consider those alternatives which are reasonable in terms of the overall scope/cost of the proposed project. The term economic might be construed to include consideration of the applicant's financial standing, or investment, or market share, a cumbersome inquiry which is not necessarily material to the objectives of the Guidelines." Therefore, the Corps has determined it is not appropriate to take into consideration the applicant's financial standing.

16. Pit Backfill Alternative:

a. **Comments:** Several commenters, including Pima County and the USEPA, suggested that an additional alternative be considered that included the backfill, or partial backfill, of the mining pit with waste rock, tailings, heap leach material, or a combination thereof.

b. **Corps Response:**

As described in Chapter 2 of the Draft and Final EIS, an alternative consisting of configuring the mine pit to allow “continuous” back fill was considered but rejected from further analysis as this would require a substantially larger pit, which would result in greater effects, while reducing the economic feasibility of the proposed action. As also described in Chapter 2 of the Draft EIS, an alternative of complete backfill of the mining pit, without changing the configuration of the mining pit by changing the footprint of the facilities to reduce effects and placing the waste rock and tailings near the pit and away from sensitive resources was also considered but rejected from further analysis, due to concerns regarding extending adverse environmental effects by an additional 16 years (or more), financial effects, and safety concerns. Chapter 2 of the Draft EIS also identified that an evaluation of partial pit backfill was currently being investigated by the USFS. As a result of the further investigation and comments on the Draft EIS, Chapter 2 of the Final EIS discussed two methods of partial backfill of the mining pit: (1) downhill haulage into the pit with loaded trucks, and (2) dumping over the pit rim. Due to safety concerns that would be caused by extended partial backfill of the mining pit (e.g. lack of safety pullouts, ramps, and redesign of switchback turns, risk of overturning equipment, rock avalanches, and burial by unstable material), partial backfill of the mining pit using these methods was eliminated from further consideration in the Final EIS. Because these alternatives were evaluated in the Draft and Final EIS, and would not result in a reduction in the direct or indirect adverse effects as a result of the placement of fill material into waters of the U.S., the Corps has determined that further evaluation of complete or partial backfill of the mining pit is not necessary or appropriate.

17. Reduced Pit Configuration

a. **Comments:** Pima County and the Arizona Game and Fish Department recommended that additional evaluation be completed on a smaller mining pit alternative, or an alternative that combines a smaller mining pit with an underground operation in later mine stages.

b. **Corps Response:** Appropriate alternatives to reduce the size of the mining pit have been evaluated by the Corps, as described in Section IV of the ROD. As described in Response to Comment 15, the Corps has determined additional analysis of alternatives is not necessary or appropriate.

18. Threatened and/or Endangered Species:

a. **Comments:** A number of commenters expressed concern regarding the direct and indirect effects to Federally-listed threatened and/or endangered species, stating that a biological assessment had not yet been conducted; that not all species present in Davidson Canyon had been thoroughly considered; that the most current information regarding some species was not considered; and an overall concern regarding effects to habitat supporting these species. Following the end of the public comment period, commenters identified the Corps should reiniitate consultation for effects to federally-listed threatened and/or endangered species as a result of the proposed permittee-responsible compensatory mitigation.

b. **Corps Response:** Concerns regarding the effects of the proposed action on Federally-listed threatened and/or endangered species are noted. The proposed action is in compliance with Section 7 of the ESA, and would not jeopardize the continued existence of federally-listed threatened and/or endangered species. See Section VI.c of the ROD for a complete discussion of compliance with Section 7 of the ESA.

19. Wildlife:

a. **Comments:** Commenters expressed concerns regarding the potential adverse effects to wildlife and wildlife habitat associated with the proposed action. Specific concerns related to the identification of Davidson Canyon as a Biological Core area, and, along with Cienega Creek, as an Important Riparian Area, by Pima County's Sonoran Desert Conservation Plan. Commenters also expressed concern that the effects of the proposed action will disrupt wildlife movement corridors connecting the Empire, Santa Rita, and Rincon mountain Ranges, and the potential increase in wildlife fatalities from increased traffic on SR 83. Further comments suggested that changes and disruption to life stages of fish and wildlife may occur as a result of affects to groundwater and surface water quantity and quality and riparian habitat. Concerns

were also raised regarding effects to migratory birds, lack of detail regarding mitigation measures to protect wildlife from construction and operations, lack of mitigation related to wildlife mortalities, and concern for specific, non-listed species that may occur in the project area.

b. **Corps Response:** Comments and concerns regarding the effects of the proposed action on wildlife are noted. As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including those effects related to wildlife and wildlife habitat. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope.

However, effects to wildlife, including those effects outside the Corps' scope of analysis, have been fully evaluated in Chapter 3, *Biological Resources* of the Draft and Final EIS. See Section VIII and IX of the ROD, for a discussion of the effects of the proposed action on the physical, chemical, biological, and human use characteristics of the aquatic environment and the effects on the public interest, as it relates to the Corps' scope of analysis, including an analysis of the effects to fish and wildlife. The final decision on whether or not the proposed action complies with the Guidelines is located in Section VIII of the ROD; the Corps' final decision on whether or not the proposed action is contrary to the public interest is located in Section IX of the ROD. The comments provided do not provide additional detail or information that has not been evaluated.

20. Visual Effects on SR 83:

a. **Comments:** Several commenters expressed the opinion that the proposed action would result in unacceptable visual effects along SR 83, which has been designated by the Arizona Department of Transportation as a scenic corridor.

b. **Corps Response:** The comments and concerns regarding effects to aesthetics along SR 83 are noted. As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with

construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including visual effects. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope.

However, effects to aesthetics, including those associated with mining operations outside of the Corps scope, have been fully evaluated in Chapter 3, *Visual Resources* of the Draft and Final EIS. See Section VIII and IX of the ROD, for a discussion of the effects of the proposed action on the physical, chemical, biological, and human use characteristics of the aquatic environment and the effects on the public interest, as it relates to the Corps' scope of analysis, including those effects to aesthetics. The final decision on whether or not the proposed action complies with the Guidelines is located in Section VIII of the ROD; the Corps' final decision on whether or not the proposed action is contrary to the public interest is located in Section IX of the ROD. The comments provided do not provide additional detail or information that has not been evaluated.

21. Traffic

a. **Comments:** A number of comments expressed concern that increases in traffic during construction and operations, and the subsequent potential effects to safety, increased drive time, and/or degradation to SR 83.

b. **Corps Response:** The comments and concerns regarding effects to traffic along SR 83 are noted. As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including comments related to traffic.

Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. Effects to traffic, including those related to mining operations outside of the Corps scope, have been fully evaluated in Chapter 3,

Transportation/Access of the Draft and Final EIS. It is anticipated that construction activities as a result of the discharge of dredged/fill material into waters of the U.S. would result in temporary traffic effects from equipment accessing the project site. Effects to traffic are not a specific evaluation factor for compliance with the Guidelines, but have been evaluated as part of the Corps public interest review evaluation (see Section IX of the ROD). The comments provided do not provide additional detail or information that has not been evaluated.

22. Historic and Cultural Properties

a. **Comments:** Comments, including those from Pima County and the Tohono O'odham Nation, expressed concern regarding effects of the proposed action on historic and prehistoric cultural resources. These comments focused primarily on effects to identified cultural resources determined eligible for listing on the National Register of Historic Place, as well as the proximity of the proposed action site within and near Ce:wi Duag.

b. **Corps Response:** These comments are noted. The Corps' evaluation of the proposed action complies with Section 106 of the NHPA. See Section VI.f of the ROD for a full description of compliance with Section 106 of the NHPA. See also Section IX.c.6 of the ROD for the Corps' analysis of the effects of the proposed action on historic properties related to the public interest review.

23. Economics

a. **Comments:** A number of commenters expressed concern that the proposed action may have adverse economic effects, including a reduction in property values, economic effects from a loss of recreation and tourism, and the sustainability of jobs created by construction and operations of the proposed mine.

b. **Corps Response:** As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including comments related to economics. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. Temporary and beneficial effects to economics would be expected during construction activities, as a result of increased employment

and sales. Effects to economics, including effects related to mining operations outside of the Corps scope, have been fully evaluated in Chapter 3, *Socioeconomics and Environmental Justice* of the Draft and Final EIS.

Effects to economics are not a specific evaluation factor for compliance with the Guidelines, but have been evaluated as part of the Corps public interest review evaluation (see Section IX of the ROD). The comments provided do not provide additional detail or information that has not been evaluated.

24. Light Pollution

a. **Comments:** Several commenters expressed concern that an increase in lighting associated with the proposed mine has the potential to adversely affect the astronomy industry in the Santa Rita Mountains. Other commenters noted that the light may affect wildlife species in the Area.

b. **Corps Response:** These comments are noted. As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including comments related to light pollution. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. Effects to wildlife from lighting and effects to dark skies, including effects related to mining operations outside of the Corps scope have been fully evaluated in Chapter 3, *Biological Resources*, and Chapter 3, *Dark Skies* of the Draft and Final EIS. Effects from light pollution are not a specific evaluation factor for compliance with the Guidelines, but have been evaluated as part of the Corps public interest review evaluation (see Section IX of the ROD). The comments provided do not provide additional detail or information that has not been evaluated.

25. Noise

a. **Comments:** Commenters expressed concern regarding potential noise effects and the effect on nearby property owners.

b. **Corps Response:** These comments are noted. As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with

clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including comments related to noise. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. Effects from increased noise, including effects associated with mining operations outside of the Corps scope, have been fully evaluated in Chapter 3, *Noise* of the Draft and Final EIS and the Corps' public interest review evaluation (see Section IX of the ROD). Temporary effects from noise would be expected during construction activities within the Corps scope. The comments provided do not provide additional detail or information that has not been evaluated.

26. Wildfire Hazards:

a. **Comments:** Several commenters expressed concern that the proposed action would result in an increase in wildfire hazards.

b. **Corps Response:** These comments are noted. As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including comments related to wildfire hazards. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope.

Effects from increases in wildfire hazards, including effects related to mining operations outside the Corps scope, have been fully evaluated in Chapter 3, *Fuels and Fire Management* of the Draft and Final EIS. The comments provided do not provide additional detail or information that has not been evaluated.

27. Hazardous Materials:

a. **Comments:** A number of comments expressed concern regarding the safety of the public and mine employees as a result of increase in the potential for release of hazardous materials.

b. **Corps Response:** These comments are noted. As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including comments related to hazardous materials. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. Effects associated with hazardous materials, including effects related to mining operations outside the Corps scope, have been fully evaluated in Chapter 3, *Hazardous Materials* of the Draft and Final EIS. The comments provided do not provide additional detail or information that has not been evaluated.

28. Public Health and Welfare

a. **Comments:** Several commenters expressed concern regarding effects to public health, including exposure to radioactive elements in the mined ore and other potential cancer causing agents; increased health risks related to the disturbance of amphibole materials (asbestos); and effects related to potential contamination of public drinking water.

b. **Corps Response:** These comments are noted. As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including comments related to public health and welfare. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of

the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. Effects to public health, including those related to mining operations outside the Corps scope, have been fully evaluated in Chapter 3, *Human Health and Safety* of the Draft and Final EIS. Effects to water quality, including those related to mining operations outside the Corps scope, have been fully evaluated in Chapter 3, *Groundwater Quality and Geochemistry*, and *Surface Water Quality* of the Draft and Final EIS.

Based on the applicant's response to comments, although uranium is a naturally occurring radioactive element in bedrock material throughout Arizona, it is not characteristic of the geologic host formations at the proposed action site. A technical report published by the USEPA, titled *Technologically Enhanced Naturally Occurring Radioactive Materials in the Southwestern Copper Belt of Arizona* (EPA 402-R-99-002), identified the leaching and solvent extraction-electrowinning processes at copper mines as potentially concentrating the radionuclides that occur naturally at some mines. The applicant has removed the leaching circuit from the proposed Barrel Alternative, so this potential source of technologically enhanced naturally occurring radioative material will not be a part of the proposed action. In addition, with regards to the potential for amphibole material, the applicant and their consultants have conducted studies to characterize the mineralogy of the deposit at the proposed action site. Tremolite-actinolite was observed in very minor and locally limited occurrences. Silky fibers or aggregate mats characteristic of asbestiform materials have not been observed in any of the drill cores evaluated to date, and tremolite-actinolite was only found to occur as local disseminations near a contact in acicular crystals (non-asbestiform). Minerals classified as nonfibrous or nonasbestiform do not fall within Mine Safety and Health Administration (MSHA) or Occupational Safety and Health Administration (OSHA), or USEPA regulatory definitions for asbestos (see 30 C.F.R. Parts 56, 57, and 71, 19 C.F.R. Part 1910.1001, and 40 C.F.R. Part 61). See Section IX of the ROD for the Corps' evaluation of the effects of the proposed action on safety.

29. Air Quality

a. **Comments:** Comments were received expressing concern regarding the ability of the proposed action to comply with applicable air quality regulations; potential increase in dust and overall particulate matter emissions; absence of air quality monitors in residential areas closest to the proposed mine; effects to the air quality in Tucson; and effects to climate change and greenhouse gasses. Pima County provided a later comment letter identifying additional rock would be mined, potentially increasing air quality impacts, and requested the Corps conduct an independent review of air quality impacts.

b. **Corps Response:** These comments are noted. As identified in Section III of the ROD, the Corps' scope of analysis for the public interest review and Guidelines is limited to the discharge of dredged/fill material into waters of the U.S. associated with

clearing, grubbing, and grading prior to the operations associated with extraction of copper and other material, as well as the discharge of fill material into waters of the U.S. associated with construction of off-site infrastructure. The Corps' scope of analysis also includes any permittee-responsible compensatory mitigation actions required to compensate for the loss of waters of the U.S. Therefore, comments related to impacts associated with operations of the mine are outside of the Corps' scope and jurisdiction, including comments related to air quality. Any direct, indirect, and cumulative effects associated with the discharge of dredged or fill material into waters of the U.S. and adjacent upland areas, including those to any applicable resource areas identified within the EIS, or required for the Corps public interest review or determination on compliance with the Guidelines are within the Corps scope. Effects associated with air quality and climate change, including those effects related to mining operations outside of the Corps scope, have been evaluated in Chapter 3, *Air Quality and Climate Change* of the Draft and Final EIS. Effects associated with air quality and climate change are not a specific evaluation factor for compliance with the Guidelines, but are further evaluated as general environmental concerns, and where they affect other resources being evaluated, as described in Section IX of the ROD.

With regards to potential changes to air quality identified by Pima County, as identified above, indirect effects to air quality associated with mining operations are outside of the Corps' control and responsibility. Therefore, an independent review and determination on these air quality effects by the Corps is not appropriate.

30. Mitigation:

a. **Comments:** A number of comments related to concern that conservation and mitigation measures were not described in the public notice, and therefore the commenter was not able to provide a comment. In addition, many of the commenters urged that the USFS and Corps must ensure that adequate bonding and/or financial assurances be established prior to permitting the proposed action. Commenters providing comments after the Final HMMP was submitted to the Corps provided discussion on the adequacy of the plan to offset impacts to waters of the U.S., the appropriateness of the Sonoita Creek channel design, whether the mitigation would require further evaluation under NEPA and the ESA, and requesting water quality monitoring at the downstream end of the mitigation project.

b. **Corps Response:** These comments are noted. The Corps regulations at 33 C.F.R. Part 332 establishes standards and criteria for compensatory mitigation, including on-site and off-site permittee-responsible mitigation, mitigation banks, and in-lieu fee compensatory mitigation to offset unavoidable effects to waters of the U.S. authorized through the issuance of a Department of the Army (DA) permit pursuant to Section 404 of the Clean Water Act and/or Section 9 or 10 of the Rivers and Harbors Act of 1899. The Corps has utilized these regulations, including those at 33 C.F.R. 332.3(n), related to sufficient financial assurances. In order to determine the amount of compensatory mitigation required, the Corps has completed the *South Pacific Division*

Mitigation Ratio Setting Checklist. A discussion of the required compensatory mitigation including information responding to the comments provided on the Final HMMP can be found in Section VII of the ROD, with additional information located in the Supplemental EA completed for the proposed compensatory mitigation, which is located in Attachment G of the ROD. The Corps' response to comments related to the Corps' review process, including the need for additional evaluation under NEPA and the Section Guidelines can be found in Response to Comment 32, below. As identified in Section VI.c of the ROD, the proposed action is in compliance with Section 7 of the ESA.

31. Significant Degradation:

a. **Comments:** During and following the end of the public comment period, the USEPA commented the proposed discharge would result in significant degradation of waters of the U.S. Several other commenters referenced USEPA's comments within their comment letters.

b. **Corps Response:** The Guidelines contain a number of restrictions on discharge, one of which is related to significant degradation as a result of a proposed discharge of dredged and/or fill material into waters of the U.S. Specifically, the Guidelines identify no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the U.S. The determination on whether or not a proposed discharge would result in significant degradation to the waters of the U.S. is based upon appropriate factual determinations, evaluations, and tests. The evaluations include a determination on the potential short-term or long-term direct, secondary (indirect), and cumulative effects to the physical, chemical and biological components of the aquatic environment. In making a determination on whether or not a proposed discharge into waters of the U.S. would result in significant degradation, the Corps takes into account any minimization and compensatory mitigation. As discussed in Section III of the ROD, the evaluation of significant degradation to waters of the U.S. includes only the effects of the proposed discharge of dredged and/or fill material into waters of the U.S. For the proposed action, the operations of the mine, including construction of the mine pit and discharge of waste rock and mine tailings, would not result in a discharge of dredged and/or fill material into waters of the U.S. Therefore, the effects of mine operations are outside of the Corps scope under Section 404 of the Clean Water Act and not relevant to the determination of whether or not there would be significant degradation of waters of the U.S.

See Section VIII of the ROD, for a discussion of the effects of the proposed action on the physical, chemical, biological, and human use characteristics of the aquatic environment, which was used by the Corps in making the factual determinations required for a determination on whether the proposed discharge into waters of the U.S. would result in significant degradation. The final decision on whether or not the proposed action complies with the Guidelines is located in Section VIII of the ROD; the

Corps' final decision on whether or not the proposed action is contrary to the public interest is located in Section IX of the ROD.

32. Corps' Review Process:

a. **Comments:** Following the end of the public notice comment period, several commenters expressed concerns regarding the Corps permit review process, specifically identifying that the Corps should prepare a supplemental EIS and issue a new public notice. The commenter's stated new information regarding the proposed action, specifically, related to the submittal of the Final Habitat Mitigation and Monitoring Plan (HMMP) by the applicant, as well as new information related to the proposed mine site. With regards to the HMMP, commenters stated the 859-page Final HMMP represents substantial new information that requires the issuance of a new public notice as well as preparation of a supplemental EIS. Other commenters identified the proposed compensatory mitigation requires authorization under Section 404 CWA from the Corps. Comments were also received identifying that the Corps should evaluate alternatives to the proposed compensatory mitigation, for compliance with the Guidelines at 40 C.F.R. 230.10.

With regards to the mine site, commenters identified their belief the Corps needs to prepare a supplemental EIS due to either additional effects not previously identified, or an inadequate analysis in the EIS prepared by the USFS. The alleged deficiencies identified in the EIS prepared by the USFS were primarily related to what the commenters thought was an inadequate analysis of effects, inadequate mitigation measures to minimize adverse effects, and, other than alternatives, failure to incorporate the requirements of the Guidelines into the analysis.

b. **Corps Response:**

Mitigation Site: With regards to comments stating the Final HMMP requires the Corps to issue a public notice and Supplemental EIS, the Corps disagrees. Corps' regulations at 33 C.F.R. 332.4(b)(1) require the public notice for a standard permit address, to the extent that such information is provided in the mitigation statement required by 33 C.F.R. 325.1(d)(7), the proposed avoidance and minimization and amount, type, and location of any proposed compensatory mitigation, or indicate an intention to use an approved mitigation bank or in-lieu fee program. The regulations at 33 C.F.R. 332.4(b)(1) further identify the public notice shall not include information that the district engineer and the permittee believe should be kept confidential for business purposes, such as the exact location of a proposed mitigation site that has not yet been secured. Corps' regulations at 33 C.F.R. 325.1(d)(7) state the application must include a statement describing how impacts to waters of the U.S. are to be avoided and minimized, and must include either a statement describing how impacts to waters of the U.S. are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts.

Within the December 6, 2011, public notice for the proposed action, the Corps identified the applicant's proposed compensatory mitigation. In addition, Appendix B of the Final EIS, which was made available to the public for review and comment by the USFS, contained a conceptual mitigation and monitoring plan proposed by the applicant. The conceptual mitigation plan included transfer of water rights secured at the Pantano Dam parcel to a Corps-approved ILF sponsor for use in the development of an ILF project downstream of the Pantano Dam, for which the applicant anticipated receiving mitigation credits; potential compensatory mitigation at the Sonoita Creek Ranch parcel; and, if additional compensatory mitigation is required, preservation at the Mullberry parcel. Since the publishing of the Final EIS, the proposed compensatory mitigation at the Pantano Dam parcel was determined to be not feasible. To address concerns by the Corps that the proposed compensatory mitigation was not adequate, the applicant has modified the proposed compensatory mitigation to that described in Section VII of the ROD. Contrary to the comments provided, the Corps and USEPA 2008 Compensatory Mitigation Rule (33 C.F.R. 332) does not require a public notice for a final mitigation and monitoring plan, nor does it require a public notice for any changes to the proposed compensatory mitigation. The preamble to the 2008 Compensatory Mitigation Rule (73 FR 19640) states:

> *We have clarified in the final rule that the mitigation statement in the public notice is to be based on the information submitted by the applicant, in accordance with the new requirement at 33 C.F.R. 325.1(d)(7). As discussed in the section of this preamble that addresses § 325.1(d)(7), this should be a brief statement because this occurs in the early stages of the evaluation process, and the evaluation of mitigation options is an iterative process. As district engineers conduct their evaluations in accordance with applicable Corps regulations, the* 404(b)(1) Guidelines, *and regulations governing other applicable laws (e.g., section 7 of the Endangered Species Act), additional avoidance and minimization may be required, and compensatory mitigation requirements will be determined in greater detail to offset the permitted impacts to the extent appropriate and practicable...We do not believe it is necessary to reword this subsection to clarify that the mitigation statement contains preliminary mitigation measures proposed by the permit applicant. It is understood that these preliminary measures may be revised in response to public comment and other input to the permit process.*

In addition, as identified in the Corps' 2009 Standard Operating Procedures (pp. 13-14), "if the applicant substantially modifies the project so that either the project or its reasonably foreseeable impacts to the aquatic environment are substantially different from those described in the original public notice, then a new public notice may be appropriate or necessary for proper evaluation of the proposal....If project impacts are similar to or less than the original submittal (e.g. if expected impacts are reduced as a result of modifications to the project through efforts to avoid and minimize a proposed actions' adverse effects), as a general rule the district should proceed with a decision

without issuing another public notice." Proposed permittee-responsible compensatory mitigation at Sonoita Creek Ranch was identified within the Final EIS issued by the USFS, and was available for public review and comment (see Section 1.f of the Supplemental EA for a discussion of the history of the proposed compensatory mitigation). Because proposed permittee-responsible compensatory mitigation was identified in the original public notice and there was not a substantial change in the reasonably foreseeable impacts associated with the proposed action requiring the issuance of a public notice (i.e. the proposed Rosemont Copper project), the Corps has determined a new public notice is not necessary. NEPA regulations require an agency prepare a supplement to a draft or final EIS if (1) the agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (2) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. Other than additional avoidance of waters of the U.S., the only changes to the proposed action after the publishing of the Final EIS are modifications to the proposed compensatory mitigation to include refinement of the proposed activities at Sonoita Creek Ranch, and the removal of four stock tanks. In order to ensure compliance with NEPA, the Section 404(b)(1) Guidelines, and public interest review, the Corps has prepared a supplemental Environmental Assessment, 404(b)(1) Guidelines Analysis, and public interest review (Supplemental EA), which is located in Attachment G to the ROD, to determine whether the proposed compensatory mitigation will result in significant adverse effects that require the preparation of a supplemental environmental impact statement. Although the proposed compensatory mitigation at the Sonoita Creek Ranch property and removal of the Gunsight Pass and McCleary Canyon stock tanks were identified in the Final EIS, in order to ensure a full evaluation of the potential environmental effects associated with the compensatory mitigation, the Corps has included all proposed compensatory mitigation in the Supplemental EA. It should be noted, also, that although the Corps has determined a new public notice is not necessary for the final proposed compensatory mitigation, a number of comments have been received regarding the proposed compensatory mitigation, which have been evaluated and considered by the Corps within this response to comments document as well as the Supplemental EA located in Attachment G of the ROD.

The Corps agrees with commenters that identified the proposed compensatory mitigation requires authorization under Section 404 CWA for the proposed discharge of fill material into waters of the U.S. The Corps also agrees with the commenters that the loss of 8.93 acres of Sonoita Creek channel and tributaries should be accounted for in determining whether the compensatory mitigation is sufficient and appropriate. The Corps has incorporated the loss of 8.93 acres of Sonoita Creek channel and tributaries into the total acreage of waters of the U.S. requiring compensatory mitigation, as shown in the SPD Mitigation Ratio Setting Checklist located in Attachment C of the ROD. The Corps also determined the construction of the new Sonoita Creek channel, identified by the applicant as re-establishment in the Final HMMP, is more appropriately classified as rehabilitation, given Sonoita Creek currently exists on the site and the construction of the new channel would not result in an increase in aquatic resource area (although

there would be an increase in aquatic resource functions and services), as further described in the Supplemental EA located in Appendix G of the ROD. As described in the ROD and Supplemental EA located in Attachment G of the ROD, the proposed compensatory mitigation would result in a permanent discharge of fill material into 9.15 acres, and a temporary discharge of fill material into 0.33 acres of waters of the U.S. associated with the proposed compensatory mitigation, as follows:

(1) Permanent discharge of fill material into 8.90 acres of waters of the U.S. associated with rehabilitation and enhancement of Sonoita Creek and ponds on the Sonoita Creek Ranch site.

(2) Permanent discharge of fill material into 0.25 acre of ephemeral drainages for the removal of the Gunsight Pass stock tank.

(3) Temporary discharge of fill material into 0.33 acre of ephemeral drainages for the removal of the Barrel Canyon East stock tank (0.13 acre), McCleary Canyon stock tank (0.16 acre), and Rosemont Crest stock tank (0.05 acre)

The proposed discharge of fill material into waters of the U.S. associated with the proposed compensatory mitigation is included in the Corp's final decision on whether or not to issue a permit for the proposed action, with an analysis of the effects of the proposed compensatory mitigation under NEPA, the Guidelines, and public interest review, located in the Supplemental EA prepared and located in Attachment G of the ROD.

With regard to comments identifying that the Corps must evaluate alternatives to the proposed discharge associated with the required compensatory mitigation for compliance with 40 C.F.R. 230.10(a), alternatives to the proposed compensatory mitigation have been evaluated, as identified in the Supplemental EA located in Attachment G, through evaluation of the type and location options in the order presented in 33 C.F.R. 332.3(b)(1) through (b)(6). During the evaluation of the proposed action, the Corps considered the availability of the appropriate type and amount of mitigation bank credits and in-lieu fee credits as the preferred compensatory mitigation option. Because there are not available mitigation banks with the amount and type of credits necessary to compensate for the proposed loss of waters of the U.S., the Corps determined permittee-responsible compensatory mitigation (PRM) is necessary. In the evaluation of the proposed PRM, the Corps utilized the requirements of 33 C.F.R. 332, as well as the South Pacific Division Mitigation and Monitoring Guidelines, to determine whether the proposed compensatory mitigation is appropriate and sufficient to compensate for the loss of waters of the U.S. In addition, on-site alternatives to the proposed compensatory mitigation were evaluated, and resulted in modifications to the proposed design for the compensatory mitigation. The Guidelines at 40 C.F.R. 230.10(a) state "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant

adverse environmental consequences." In addition, the Guidelines state, at 40 C.F.R. 230.6(b), that "The Guidelines user, including the agency or agencies responsible for implementing the Guidelines, must recognize the different levels of effort that should be associated with varying degrees of impact and require or prepare commensurate documentation. The level of documentation should reflect the significance and complexity of the discharge activity." The proposed compensatory mitigation would result in long-term, beneficial effects to the aquatic environment. The only proposed compensatory mitigation that would result in a discharge of fill material into a special aquatic site is the proposed enhancement of fringe wetlands associated with the ponds. Given the flexibility afforded by the Guidelines, and the long-term beneficial effects that would occur as a result of the proposed compensatory mitigation, the Corps has determined that, with the exception of an evaluation of the no action alternative, and evaluation of the compensatory mitigation hierarchy, an evaluation of additional alternatives to the proposed compensatory mitigation is not required or necessary.

Mine Site: With regards to the comments stating the Corps must prepare a supplemental EIS for the proposed mine site, the Corps disagrees with the commenters that the Final EIS does not fully analyze the direct, indirect, and cumulative effects of the construction and operations of the proposed mine. The USFS continued to evaluate new information and comments following publishing of the Final EIS, within the SIR and Second SIR prepared, affirming that the new information did not change the analysis provided in the EIS. Additional comments received by the Corps after the publishing of the Final EIS did not provide new information necessitating the preparation of a supplemental EIS. Disagreement among experts does not invalidate an EIS. In addition, the effects associated with the proposed mine under the Corps' scope of analysis for the public interest review and Guidelines, as described in Section III of the ROD, are limited to direct, indirect, and cumulative effects to the environment as a result of the discharge of dredged/fill material within the project footprint and off-site infrastructure area. Therefore, the effects under consideration by the Corps are substantially less than the effects evaluated in the Final EIS, as the USFS also evaluated the effects of operations of the mine associated with excavation of the mine pit, discharge of waste rock and mine tailings, and processing of ore.

The review area for the analysis of effects identified by the USFS in the EIS for each resource area of concern extended to those areas where direct, indirect, or cumulative effects would occur. For biological resources and seeps, springs and riparian areas, the review area extended upstream to the west, and more than 20 miles downstream, to Pantano Dam. One commenter indicated the review of indirect effects should extend further downstream of Pantano Dam, however, no information was submitted to support a determination that any effects, let alone significant effects, below Pantano Dam would occur as a result of the proposed action. Other comments indicated the Corps should prepare a supplemental EIS to analyze effects outside of the Corps scope and authority, such as effects to water rights, decisions made by other agencies regarding antidegradation standards, dewatering of the regional aquifer and groundwater drawdown associated with operations of the mine. Another comment

identified a supplemental EIS was required as, in a technical report, the applicant has disclosed that an additional 591 million tons of rock-bearing copper could be economically mined in the future. The Corps does not have any jurisdiction over the amount of material mined during operations of the proposed action, therefore, a supplemental EIS would not be required by the Corps to evaluate additional mining, even if this were being proposed by the applicant, which it is not. If, however, future proposed activities result in a modification that would change the effects under the Corps' scope as evaluated, additional evaluation, including a supplemental EIS may be required.

Comments received also indicated the belief that the Corps should prepare a supplemental EIS that includes an inventory of all waters of the U.S. that may be within the analysis area. The Corps disagrees that it is reasonable or possible to conduct an inventory of all waters of the U.S. within the analysis area. While it may be possible to complete remote sensing (e.g. aerial/satellite imagery, light detection and ranging (LiDAR)) to identify potential aquatic resources within the 146,163 acre (Final EIS, page 573) analysis area for biological resources, the costs of such an endeavor would be exorbitant and inaccurate. In addition, even if remote sensing were conducted in order to attempt identification of aquatic resources, a determination of whether or not an aquatic resource is a water of the U.S. is conducted by the Corps only within an approved jurisdictional determination. The Corps does not conduct jurisdictional determinations or aquatic resource verifications without a request from an interested party, nor can the Corps conduct an approved jurisdictional determination without site-specific information, which cannot be obtained through remote sensing.

With regards to comments that the mitigation measures identified in the Final EIS are insufficient to reduce impacts to less than significant, this comment is noted. Under NEPA, a Federal agency is not required to identify that effects of a proposed action have been minimized to a less than significant level in an EIS. The EIS is intended to identify potentially significant impacts, as well as identify mitigation measures that will avoid, minimize, rectify, reduce or compensate for adverse effects occurring as a result of the proposed action. The USFS acknowledges that, despite a number of mitigation measures being imposed, there is a potential for significant impacts to the quality of the human environment from the proposed construction and operation of the mine. As identified above and in Section X of the ROD, the Corps' scope and jurisdiction over the proposed action does not extend to mining operations, and therefore, in general, the effects would be less than those identified within the EIS.

With regards to comments that the Final EIS does not incorporate the requirements of the Guidelines, with the exception of the discussion on alternatives, this comment is noted. When the Corps is the lead Federal agency on the preparation of an EIS, the Corps strives, to the extent possible, to integrate the requirements of the public interest review and Guidelines into the EIS, in particular the discussion of alternatives, as well as an analysis of direct, indirect, and cumulative effects on the public interest review Factors and physical, chemical, biological, and human use characteristics in the

Guidelines. However, the final decision on whether a project is contrary to the public interest or is in compliance with the Guidelines, is not made until the ROD. The EIS is intended only to disclose potentially significant impacts and mitigation, and is not the appropriate location for a final permit decision. As a cooperating agency on the EIS, the Corps provided substantial review and comment on the EIS. The Corps has also reviewed the two SIRs prepared by the USFS. After review of all information, the Corps has determined the analysis of effects in the Final EIS is sufficient to conduct the public interest review and make a final determination on compliance with the Guidelines within the ROD, for the proposed action on the mine site, even though the Final EIS did not specifically identify all of the components of the Corps public interest review or Guidelines. See above for the Corps' response to comments stating a supplemental EIS for the proposed compensatory mitigation is needed.

III. Appendices:

Appendix A: Public Notices
- Appendix A-1: December 6, 2011, Public Notice
- Appendix A-2: January 6, 2011, Public Notice Time Extension

Appendix 2: Comments Matrix

ATTACHMENT B

The Nature Conservancy
Protecting nature. Preserving life.

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July 18, 2018

Brig. General D. Peter Helmlinger
Commander, South Pacific Division
U.S. Army Corps of Engineer
1455 Market Street
San Francisco, CA 94103-1398

RE: Final Habitat Mitigation and Monitoring Plan (HMMP) Permit NO. SPL-2008-00816-MB
Rosemont Copper Project dated September 12, 2017

Dear General Helmlinger,

The Nature Conservancy respectfully submits the comments below concerning the mitigation actions proposed by Rosemont Copper Company along Sonoita Creek, Arizona. The founding of our Arizona Chapter was marked by the establishment of the Patagonia-Sonoita Creek Preserve in 1966, and this 890-acre nature preserve hosted the 50th year anniversary celebration of our conservation work in the State of Arizona in 2016. The mission of our global organization is to conserve the lands and waters on which all life depends. Each year, several thousand visitors come to the Patagonia-Sonoita Creek Preserve to enjoy this spectacular Southwestern oasis and its abundant wildlife.

However, we are concerned about the restoration methods and approaches included in the proposed mitigation plan. Further, we believe that certain aspects of this proposal could likely result in property damage to our long-term conservation investments just downstream within our Patagonia-Sonoita Creek Preserve. Our specific concerns, identified subsequently, are related to our review of the September 12, 2017, "*Final Habitat Mitigation and Monitoring Plan for the Rosemont Copper Project*" (HMMP), and the Environmental Protection Agency's (EPA) analysis of that plan, dated November 30, 2017.

First, we are extremely concerned that our name and planning documents were cited and interpreted in the HMMP without our consent or consultation. The HMMP (pages 7, 13-14) suggests that its proposed activities would positively address the Conservancy's goals and activities, and we do not agree with this statement. We have met twice with the applicant in recent months to make them aware of the Conservancy's concerns, and while the applicant has been willing to engage in discussions, we have been unable to reach any resolution. We hope to continue to discuss our concerns with the applicant throughout this process.

Based on very fundamental principles of geomorphology and stream hydraulics, we share the opinion of the Environmental Protection Agency (EPA) that **excavating a new channel with an unnaturally high degree of sinuosity, given the context within which it is located, would likely result in subsequent erosion, channel straightening, and sediment delivery to downstream locations**, including our nature preserve. This outcome is also predicted by the applicant in the HMMP: "The first rainfall-runoff event, and subsequent events, will result in changes to the channel geometry and bed composition as well as to the vegetative composition" (HMMP, p. 39). The proposed channel alignment appears excessively tortuous and the tight channel radii may promote bank erosion that increases the transport of fine

sediment, in particular, further downstream. Aside from predicting stream bed mobilization during even minor design flow events, the HMMP present no quantitative assessment of the sediment transport characteristics of Sonoita Creek in its existing or proposed design conditions. This proposed design would accelerate the transport of coarse and fine sediment downstream for many years, likely decades, until a new equilibrium is reached in the channel, depending upon the timing, duration and magnitude of future flood events.

The accelerated transport of fine sediments, in particular, would negatively affect the conservation values of our property, including the aquatic and riparian communities that support rare, threatened, and endangered species, along three miles of Sonoita Creek for which our property has been managed for over half a century as a nature preserve. The Patagonia-Sonoita Creek Preserve has an intact, fully-functioning riparian corridor which reduces flood velocities, enabling depositional processes that in an undisturbed system, promote conditions essential for riparian recruitment. However, a large increase in fine sediment delivery, due to the size of the proposed mitigation project upstream, has the potential to result in unprecedented volumes of deposition, potentially filling the active stream channel, and reducing the presence of surface water, as well as eliminating aquatic habitat required for fish. The preserve currently supports three native fish species: Speckled Dace (*Rhinichthys osculus*), Longfin Dace, (*Agosia chrysogaster*), and Desert Sucker (*Catastomus clarki*). Deposition of fine sediments can eliminate the specific habitat needs for several fish species present on our preserve, including Speckled Dace, which require gravel stream beds for spawning and use riffle habitat throughout their life cycle (Minckley and Marsh 2009).

We are also concerned about the potential impacts of the proposed mitigation project on the Huachuca Water Umbel, *Lilaeopsis schaffneriana* ssp. *recurva*, an Endangered plant species. It has designated Critical Habitat which includes 1.25 mi of Sonoita Creek in the vicinity of Cottonwood Spring near the town of Sonoita, upstream from the mitigation project site. A historic population from Monkey Spring, 7.5 mi NNE of Patagonia, appears to be extirpated. Our staff have recently confirmed two populations of Huachuca Water Umbel on our Patagonia-Sonoita Creek Preserve. As with fish, the predicted bed and bank mobilization of the overly-sinuous new channel on Sonoita Creek Ranch will lead to substantial deposition of fine sediment on the preserve which could bury these populations of small statured plants.

Lastly, the proposed channel design is based on the estimated 10-year discharge which is bracketed by other hydrologic estimates, however the HMMP lacks detailed analysis of the 100-year flood conditions, as required by the Santa Cruz County Floodplain and Erosion Hazard Management Ordinance (https://www.santacruzcountyaz.gov/DocumentCenter/View/5141/Floodplain-and-Erosion-Hazard-Management-Ordinace-2001). The Conservancy is keenly interested in the results of such an analysis, in terms of assessing the potential future impacts to our downstream preserve as a result of the inevitable larger magnitude flood events that will occur.

The Conservancy also share EPA's concern about potential **loss of the existing sacaton riparian grasslands**. Research by our science staff shows that community type is rare in the ecoregion, has been reduced to less than 5% of its original distribution, and is largely unprotected (Enquist and Gori 2008, Tiller et al. 2012).

The Vegetation Characterization Report (HMMP p. 499, Appendix F2 p. 13) reached the conclusion that "there is a well-developed and diverse community present along the current channel..." It noted significant cover of sacaton (*Sporobolus airoides* or *Sporobolus wrightii*) in every reach and terrace

sampled. The proposed mitigation project would place large volumes of excavated soil associated with new channel construction on top of existing high quality sacaton grassland and mesquite woodland riparian/floodplain habitat, causing a net loss of these very valuable, existing plant and wildlife communities.

We encourage the project applicant to both minimize disturbance to existing plant communities and commit to a more intensive revegetation effort with sacaton, both for its wildlife habitat value and its floodplain stabilization benefits. Sacaton restoration efforts have been the subject of significant conservation efforts, most notably on the nearby Las Cienegas National Conservation Area, managed by the Bureau of Land Management. Our experience with the restoration of sacaton grasslands in the Santa Cruz and San Pedro watersheds has proven that the establishment of new stands, especially by seeding, can be difficult. However, the salvage and replanting of existing plant material from the areas slated for disturbance may be far more effective in stabilizing disturbed floodplain soils, much more quickly.

Conclusion:
The Conservancy appreciates the need to protect Sonoita Creek Ranch from future development, both to maintain riparian and aquatic functions in the creek and to maintain wildlife connectivity between adjacent mountains. However, fundamentally, **the proposed mitigation plan does not benefit the conservation values in Sonoita Creek watershed, many of which the Conservancy, and partners, have been stewarding for more than 50 years. For this reason, we do not support the applicant's permit request.**

Finally, If the Army Corp of Engineers (ACE) issue the permit requested by the applicant the Conservancy respectfully requests that the permit require, at a minimum, the applicant to:

1. Commence monitoring for suspended sediment immediately upstream and downstream of the area where earthwork will occur within the floodplain, such that pre- and post-construction sediment load comparisons can be made over the coming decade. Discharge sampling will need to be made at these locations for analyses to determine what changes may have occurred in sediment transport; similar measurements will also be required at our preserve downstream.

2. Specify the sacaton planting density of 1.5 to 2 meters on center, based on the structure of mature sacaton stands. The monitoring of plant density and percent cover within sacaton stands before and after disturbance is also strongly encouraged.

Sincerely,

Daniel Stellar
Deputy State Director

Cc: Deanna Cummings, U.S. Army Corps of Engineers
Elizabeth Goldmann, Environmental Protection Agency
William James, U.S. Army Corps of Engineers
Kathy Ann Arnold, Rosemont Copper Company

References

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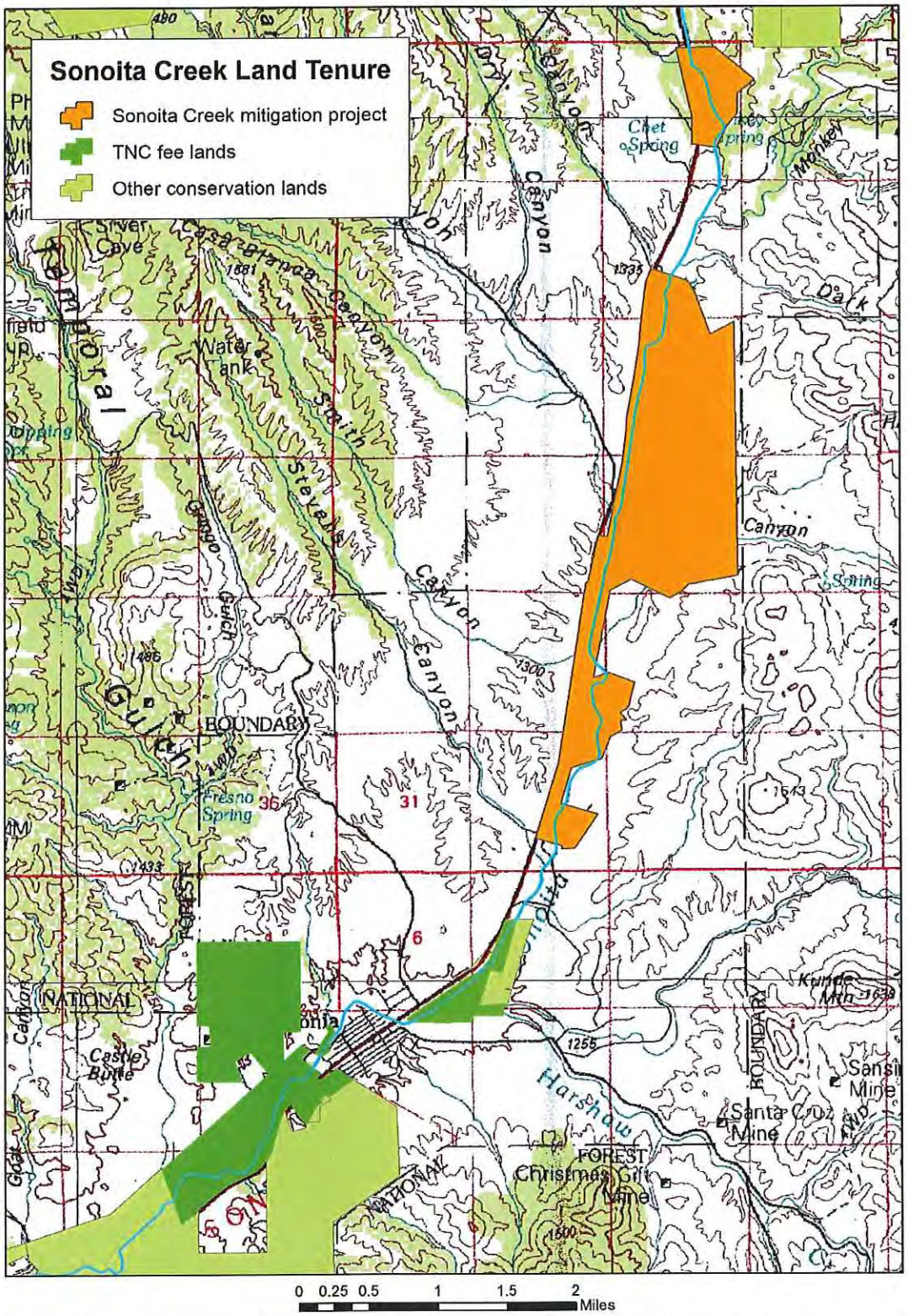
Minckley, W.L., and P.C. Marsh. 2009. Inland fishes of the greater Southwest: chronicle of a vanishing biota. University of Arizona Press, Tucson. 426 pp.

Tiller, R., Hughes, M. and Bodner, G. 2012. *Sacaton Riparian Grasslands: Mapping Distribution and Ecological Condition* using *State-and-Transition Models in Upper Cienega Creek Watershed.* In: Gottfried, Gerald J.; Folliott, Peter F.; Gebow, Brooke S.; Eskew, Lane G.; Collins, Loa C. Merging science and management in a rapidly changing world: Biodiversity and management of the Madrean Archipelago III and 7th Conference on Research and Resource Management in the Southwestern Deserts; 2012 May 1-5; Tucson, AZ. Proceedings. RMRS-P-67. Fort Collins, CO: US Department of Agriculture, Forest Service, Rocky Mountain Research Station. p. 410-424.



The Nature Conservancy (TNC) private lands include 3 miles of Sonoita Creek near Patagonia, Arizona, all downstream of the proposed mitigation project. The Conservancy also holds conservation easements on additional lands in the area, as does the Arizona Land and Water Trust, all with the purpose of maintaining and restoring natural habitat conditions along the creek and adjacent uplands.

Figure 1

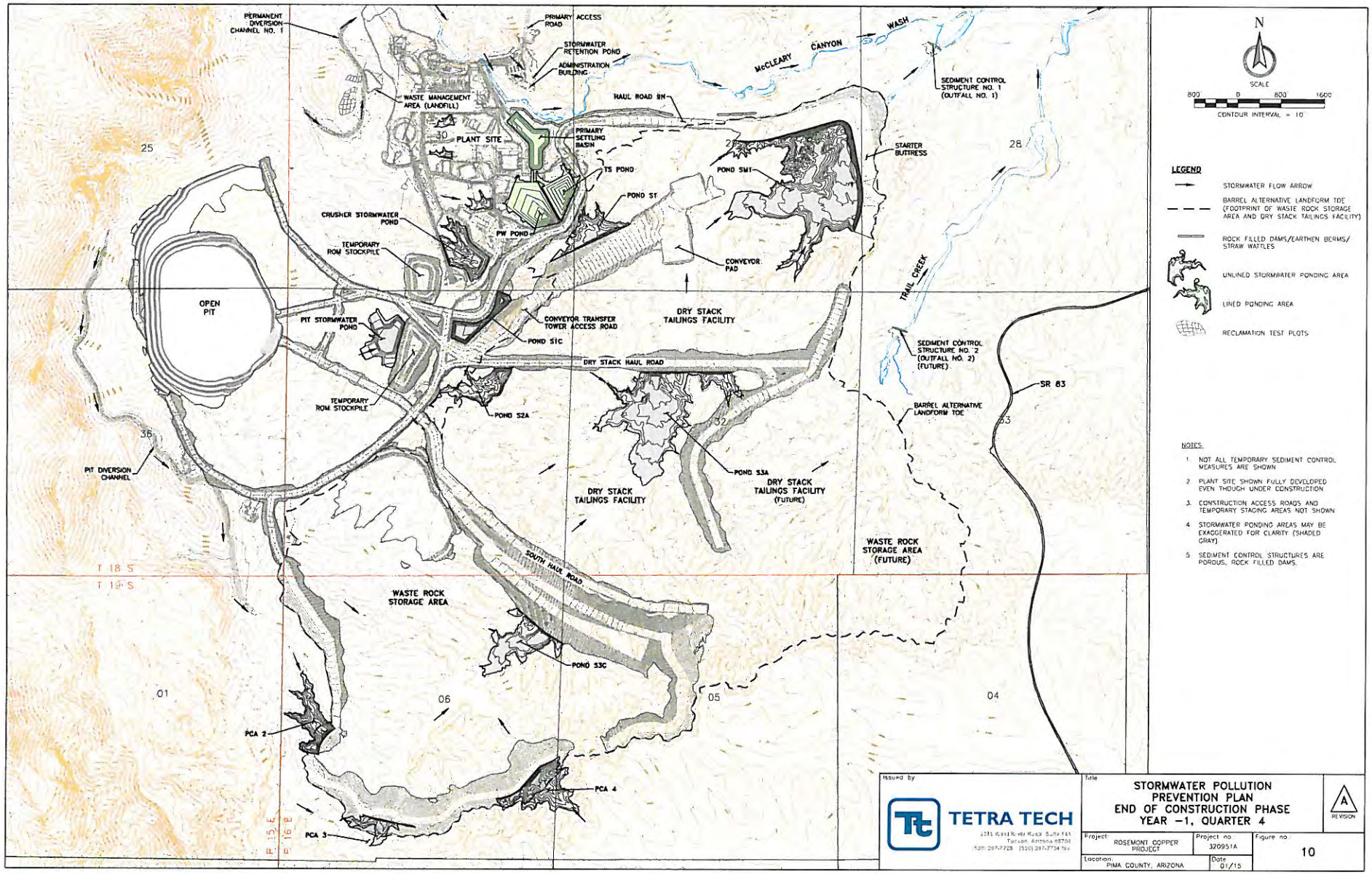

PERMANENT DIVERSION CHANNEL NO. 1
PRIMARY ACCESS ROAD
STORMWATER RETENTION POND
ADMINISTRATION BUILDING
WASTE MANAGEMENT AREA (LANDFILL)
HAUL ROAD SN
McCLEARY CANYON WASH
SEDIMENT CONTROL STRUCTURE NO. 1 (OUTFALL NO. 1)
PLANT SITE
PRIMARY SETTLING BASIN
TS POND
POND SW1
STARTER BUTTRESS
POND ST
CRUSHER STORMWATER POND
PW POND
TEMPORARY ROM STOCKPILE
CONVEYOR PAD
TRAIL CREEK
OPEN PIT
PIT STORMWATER POND
CONVEYOR TRANSFER TOWER ACCESS ROAD
DRY STACK TAILINGS FACILITY
POND S1C
DRY STACK HAUL ROAD
SEDIMENT CONTROL STRUCTURE NO. 2 (OUTFALL NO. 2) (FUTURE)
SR 83
TEMPORARY ROM STOCKPILE
POND S2A
BARREL ALTERNATIVE LANDFORM TOE
PIT DIVERSION CHANNEL
POND S3A
DRY STACK TAILINGS FACILITY
DRY STACK TAILINGS FACILITY (FUTURE)
WASTE ROCK STORAGE AREA (FUTURE)
SOUTH HAUL ROAD
WASTE ROCK STORAGE AREA
POND S3C
PCA 2
PCA 4
PCA 3
T 18 S
T 19 S
R 15 E
R 16 E
25
30
29
28
36
32
33
01
06
05
04
N
SCALE
800 0 800 1600
CONTOUR INTERVAL = 10'
LEGEND
STORMWATER FLOW ARROW
BARREL ALTERNATIVE LANDFORM TOE (FOOTPRINT OF WASTE ROCK STORAGE AREA AND DRY STACK TAILINGS FACILITY)
ROCK FILLED DAMS/EARTHEN BERMS/ STRAW WATTLES
UNLINED STORMWATER PONDING AREA
LINED PONDING AREA
RECLAMATION TEST PLOTS
NOTES:
1. NOT ALL TEMPORARY SEDIMENT CONTROL MEASURES ARE SHOWN
2. PLANT SITE SHOWN FULLY DEVELOPED EVEN THOUGH UNDER CONSTRUCTION
3. CONSTRUCTION ACCESS ROADS AND TEMPORARY STAGING AREAS NOT SHOWN
4. STORMWATER PONDING AREAS MAY BE EXAGGERATED FOR CLARITY (SHADED GRAY)
5. SEDIMENT CONTROL STRUCTURES ARE POROUS, ROCK FILLED DAMS.
Issued by
TETRA TECH
Title
STORMWATER POLLUTION PREVENTION PLAN
END OF CONSTRUCTION PHASE
YEAR -1, QUARTER 4
A
REVISION
Project: ROSEMONT COPPER PROJECT
Project no: 320951A
Figure no: 10
Location: PIMA COUNTY, ARIZONA
Date: 01/15

Figure 1

ATTACHMENT C

RESOLUTION NO. 2019-_____

RESOLUTION NO 2019-FC_____

RESOLUTION OF THE PIMA COUNTY BOARD OF SUPERVISORS and THE PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT BOARD OF DIRECTORS OPPOSING THE PROPOSED ROSEMONT MINE AND ITS IMPACTS

WHEREAS, Pima County provided comments on the July 31, 2006 Rosemont mine plan of operations to the U.S. Forest Service and to Augusta Mining Corp. stating five performance criteria that should be met by any mining or development project proposed for such a location; and

WHEREAS, these five performance criteria address concerns in the areas of conformance to the County's Conservation Lands System guidelines, water resource impacts, reclamation, visual impacts, and an environmental enhancement endowment; and

WHEREAS, the mine proponent has not complied with the Conservation Lands System guidelines for even their direct impacts, let alone indirect impacts; and

WHEREAS, water resource impacts in the Cienega Basin, including Las Cienegas National Conservation Area, would be detrimental and largely unmitigated; and

WHEREAS, water quality impacts to Davidson Canyon and Cienega Creek would be detrimental to rare riparian habitat along the creeks, the endangered species within the creeks, and the high quality water supply to the Tucson Basin; and

WHEREAS, the reclamation plans cited in the Final Environmental Impact Statement significantly underestimate soil needed for reclamation, without which reclamation cannot be effective; and

WHEREAS, an estimated 264,795 acres of land will be adversely affected by impacts to viewsheds; and

WHEREAS, the Barrel Alternative selected in the Final Environmental Impact Statement increased the visual impacts to scenic highway 83; and

WHEREAS, the environmental enhancement funds available to mitigate for impacts of the mine in the Cienega watershed are far too limited; and

WHEREAS, the Pima County's five performance criteria will not be met for the Rosemont Mine as approved;

WHEREAS, public access and recreation to 6,990 acres of public land would become unavailable; and

WHEREAS, mine construction and operations will destroy, remove, or damage historic properties, including traditional cultural properties, archaeological sites, historical structures and sites, and cultural landscapes; and

WHEREAS, an estimated 146,153 acres of land mostly located in Pima County will be affected by noise, vibration and light emitted from the mine site; and

WHEREAS, Pima County and the Regional Flood Control District comply with and enforce local standards, ordinances, and policies to comply with federal requirements; and

WHEREAS, Pima County and the Regional Flood Control District avoid and minimize impacts and provide meaningful mitigation commensurate with the impacts of their activities; and

WHEREAS, the proponent and the federal agencies have backslid on protecting the environment and the community in specific ways that resulted in more risk and less safety; and

WHEREAS, the proposed mine places undue costs and adverse impacts on the taxpayers of Pima County with few local tax benefits, and is therefore unacceptable;

NOW, THEREFORE, UPON MOTION DULY MADE, SECONDED AND CARRIED, BE IT RESOLVED THAT:

1. The Pima County Board of Supervisors reaffirms its 2007-15 resolution opposing the Rosemont mine;

2. The Board of Supervisors and Regional Flood Control District Board of the Directors (the Boards) direct the County Administrator and staff to:

a. Provide information as needed to document the County and District's continuing concerns about the impacts of the Rosemont mine as the project evolves;

b. Take all necessary measures to protect the health, safety and welfare of southern Arizonans using or enjoying County or District infrastructure affected by the mine;

c. Take all necessary measures to protect the health, safety and welfare of people using the air and water resources affected by the mine;

d. Take all necessary measures to protect the County and District conservation and Multi-species Conservation Plan mitigation lands that are affected by the mine.

3. The Board of Supervisors and Regional Flood Control District Board of the Directors (the Boards) request that the southern Arizona Congressional delegation including Representative Grijalva and Representative Kirkpatrick, as well as Senator McSally and Senator Sinema:

a. Introduce legislation that requires federal agencies to comply with local standards, ordinances, and policies that are necessary for the local government's compliance with federal laws, particularly when those local standards have been developed to comply with the requirements of existing federal laws.

b. Take all necessary measures to impose further mitigation requirements on the Rosemont mine proponent Hudbay to acquire and protect 10,000 acres of land, including State Trust Lands, and water rights adjacent to Cienega Creek and Las Cienegas National Conservation Area as compensatory mitigation to offset the massive impacts this mine will cause to southern Arizona.

c. Reform grossly antiquated mining laws and regulations to protect public health, safety and welfare as well as the Nation's air, water and lands.

d. Impose a federal severance tax on metal mining occurring on federal lands.

4. Request Hudbay convey acquired water rights in the Cienega Basin to Pima County or the Regional Flood Control District, including conveyance of the real property and the pertinent improvements of the Pantano Dam site.

PASSED AND ADOPTED by the Board of Supervisors of Pima County, Arizona, this 16th day of April 2019.

_____
Chairman, Pima County Board of Supervisors

ATTEST:

_____
Clerk of the Board

APPROVED AS TO FORM

_____
Civil Deputy County Attorney
REGINA NASSEN

PASSED AND ADOPTED by the Board of Directors of the Pima County Regional Flood Control District, this 16th day of April 2019.

_____
Chairman, Pima County Regional Flood Control District Board of Directors

ATTEST:

_____
Clerk of the Board

APPROVED AS TO FORM

_____
Civil Deputy County Attorney
REGINA NASSEN