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# MEMORANDUM

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Date: October 21, 2014

To: Nicole Fyffe  
Executive Assistant to the  
County Administrator

From: C.H. Huckelberry  
County Administrator 

Suzanne Shields, Director  
Regional Flood Control District

Julia Fonseca, Environmental Planning Manager  
Office of Sustainability and Conservation

Re: **Hudbay's September 26, 2014 Letter to the US Army Corps of Engineers Regarding their Impacts to the Waters of the United States**

Please review the attached letter I received from Hudbay Vice President Patrick Merrin in a recent meeting.

Hudbay indicates they have submitted a package of mitigation they believe meets their obligations, estimated to cost more than \$48 million. As you can see in their details, they specify the additional assets being pledged to meet their mitigation requirements to Waters of the United States.

The letter also seems to leave open the opportunity to develop the Pantano In-Lieu Fee Program in the future. This proposal will require more analysis, but it is in line with the baseline analysis I have requested on the Cienega Basin. Unfortunately, it would appear that none of the proposed expanded mitigation will benefit the Cienega Basin, the basin of greatest impact of the mining proposal.

Attachment

CHH/anc

c: The Honorable Chair and Members, Pima County Board of Supervisors



September 26, 2014

U.S. Army Corps of Engineers  
Los Angeles District  
P.O. Box 532711  
Los Angeles, CA 90053-2325

**Attn: Colonel Colloton**

Dear Colonel Colloton:

Hubbay is pleased to submit a revised *Rosemont Copper Project – Habitat Mitigation and Monitoring Plan* (September 26, 2014) (September HMMP). We appreciate the continued willingness of you and your staff to evaluate opportunities to bridge the mitigation shortfall described in your May 13, 2014 letter.

As we have previously indicated, Hubbay is an integrated mining company with assets in North and South America principally focused on the discovery, production and marketing of base and precious metals. Hubbay and its subsidiaries explore for, mine and produce metals in an environmentally responsible manner, while maintaining a safe and healthy workplace.

Since Hubbay acquired the Rosemont Copper Project (Project), we have focused on significantly expanding the compensatory mitigation to respond to your May 13<sup>th</sup> letter and direction received in our meetings with U.S. Army Corps of Engineers (Corps) staff. We believe this September HMMP exceeds Corps requirements and is a robust proposal. The effort that has gone into revising the September HMMP is significant, particularly given the unfortunate reality that there is no viable in-lieu fee program within the surrounding area of the Project. The attached table highlights the differences between the revised plan and the April 2014 submission. To compensate for the 68.8 acres of impacts to Waters of the United States (WOUS) the September HMMP includes:

- A land package encompassing nearly 4,830 acres on which more than 200 acres of WOUS and more than 900 acres of riparian buffer will be restored, enhanced, established or preserved; and
- An estimated cost of more than \$48,000,000 for the proposed September HMMP. The \$48,000,000 does not include the assets that have been pledged to support an ILF project should a sponsor choose to pursue one. The additional cost associated with that element would be approximately \$4,000,000.

We appreciate that you have agreed to meet with us when your schedule allows in October. In the meantime, the September HMMP is being provided to the entire review team and the Corps Project Manager, Marjorie Blaine. In our view, previous meetings that included L.A. District staff



have produced significant progress in furthering the mitigation package and we hope that additional discussions will assist in ensuring that the requirements of the 2008 Mitigation Rule are met.

### **Our proposal**

The September HMMP submitted includes substantial increases in the type and acreage of compensatory mitigation being provided. We have taken the Sonoita Creek Ranch plan, which offers the most restoration and enhancement credits, and significantly expanded it for this submittal. Specifically, we acquired additional property and expanded our restoration actions further up and downstream so that it now includes an additional 230 acres of Sonoita Creek floodplain that includes 18.8 acres of re-established WOUS. This equates to a 41% increase in WOUS acreage over the prior submittal for this parcel. This expansion also includes additional enhanced WOUS and buffers. We also included the Helvetia Ranch Annex North Parcels in the September HMMP, which include 939 acres of land. These 939 acres include 39 acres of rehabilitated and enhanced WOUS plus 271.5 acres associated riparian buffer.

As mentioned, the September HMMP now encompasses nearly 4,830 acres of land on which over 200 acres of WOUS and over 900 acres of riparian buffer will be restored, enhanced, established, or preserved. Per the 2008 Mitigation Rule, more than 90% of this mitigation acreage (both WOUS and riparian buffer) qualifies as restoration or enhancement. Based on the guidance provided in the 2008 Mitigation Rule, and using the mitigation ratios provided by your staff, we find that this package is sufficient to fully offset the direct loss by fill of 40.4 acres of ephemeral dry washes and the indirect effects to 28.4 acres based on a decrease in stormwater flow.

Given discussions with Corps staff during May, it appears there are a number of points where the 2008 Mitigation Rule and the South Pacific Division Mitigation Ratio Setting Checklist allow for mitigation credit but which are not being allowed for this particular Project. We would appreciate further discussion and clarification on these points, because we believe that this package, as submitted, meets or exceeds the requirements for no net loss of function and services for the region's streams under the 2008 Mitigation Rule. We have provided a Compliance Table for your convenience demonstrating compliance with the rule.

Finally, even though we believe this package fully mitigates for Project impacts, if further mitigation is necessary, Hudbay remains committed to purchasing in-lieu fee (ILF) credits, if credits are available. If credits are not available, Hudbay proposes placing funds into escrow at some multiplier of the current expected per acre credit cost to ensure monies are available to purchase credits at some later date. As a note, we are not relying on the Pantano Dam ILF project as discussed in prior correspondence but are continuing to offer the Pantano Dam assets (as described in the September HMMP and shown in the table below) to assist in the



establishment of an ILF. The creation of an ILF in this area would place the mitigation in the closest proximity to the proposed Project as well as placing the mitigation in the location most desired by Pima County.

We appreciate your consideration of this submission and look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick Merrin". The signature is stylized with a large, sweeping initial "P" and "M".

Patrick Merrin  
Vice-President, Arizona Business Unit

Attachments: *Rosemont Copper Project, Revised Habitat Mitigation and Monitoring Plan, Permit No. SPL-2008-00816-MB, September 26, 2014*  
*Rosemont Copper Project, HMMP Cost Supplement*  
*Rosemont Copper Project, September HMMP Summary of Improvements and Points Requiring Additional Clarification, September 26, 2014*  
*Compliance of the Rosemont Copper Project Revised HMMP with Part 332 – Compensatory Mitigation for Losses of Aquatic Resources*



### Summary of Mitigation Offered vs Project impacts

Project Impacts	Total Acres	Waters of US (acres)	Riparian Buffer (acres)	Water Rights (acre-feet/year)
Direct Impact				
Indirect Impact on downstream stormwater flows		40.4		
Temporal Impact from pipeline installation		28.4		
<b>Total Project Impacts</b>	<b>4,454</b>	<b>68.8</b>	<b>585<sup>2</sup></b>	<b>0</b>
Temporary Impact from pipeline installation		1.1 <sup>1</sup>		
		1.1 <sup>3</sup>		
<i>Mitigation offered in April 2014</i>				
Sonoita Creek Ranch	1,350	87.2	379.2	590
Fullerton Ranch	1,763	50.1	262.6	0
Davidson Canyon Parcels	545	16.0	83.0	0
Pantano Dam Parcel	2	1.0	0.0	250
<b>Total</b>	<b>3,660</b>	<b>153.0</b>	<b>787.6</b>	<b>840</b>
<i>Total Mitigation Offered in September 2014<sup>4</sup></i>				
Sonoita Creek Ranch	1,580	103.8	305.6	590
Fullerton Ranch	1,763	50.1	262.6	0
Davidson Canyon Parcels	545	16.0	83.0	0
Helvetia Ranch Parcels	939	39.0	271.5	0
<b>Total</b>	<b>4,827</b>	<b>208.9</b>	<b>922.7</b>	<b>590</b>
September HMMP Increase over April HMMP	31.9%	36.5%	17.1%	
Percentage more than Project Impacts	8.4%	203.6%	57.7%	
<i>Potential Additional Mitigation</i>				
Pantano water rights and land to ILF sponsor	2	1.0	Not measured	400

<sup>1</sup> Temporary impacts are mitigated by restoring the ephemeral washes to preconstruction contours following installation of the utilities (not in total Project impacts).

<sup>2</sup> Based on FEIS determination of impacts for Rosemont Project, Volume 3, Table 122 page 666

<sup>3</sup> Temporary impacts are mitigated by restoring the ephemeral washes to preconstruction contours following installation of the utilities and are not counted in total Project impacts.

<sup>4</sup> The mitigation offered specifically has over 90% of the Waters of the US and Riparian Buffer specifically being counted as restoration or enhancement. Only the Davidson Canyon Parcels have a preservation element.

**Rosemont Copper Project  
Habitat Mitigation and Monitoring Plan (September 26, 2014) (September HMMP)  
Summary of Improvements and Points Requiring Additional Clarification  
September 26, 2014**

Rosemont Copper Company (Rosemont), a wholly owned subsidiary of Hudbay Minerals, proposes to develop an open pit copper mining and processing facility known as the Rosemont Copper Project (Project). In response to Colonel Colloton's letter of May 13, 2014 regarding a shortfall in mitigation for the Project, Rosemont has prepared a revised *Rosemont Copper Project – Habitat Mitigation and Monitoring Plan* (dated September 26, 2014) (September HMMP). The September HMMP was compiled by WestLand Resources, Inc. with technical and process support provided by WRA, Inc. (Mike Josselyn, Principal) and ERM (Steve Koster, Principal) on application of the 2008 Mitigation Rule and South Pacific Division Mitigation Ratio Setting Checklist (MRSC). Water and Earth Technologies (Richard Spotts, Principal) is primarily responsible for the channel design at Sonoita Creek Ranch.

The September HMMP presents a substantial expansion of prior submittals to the U.S Army Corps of Engineers (Corps) on the Project, and consolidates the information into a single document to facilitate a review of the multiple mitigation elements that have been proposed. The September HMMP is responsive to Corps input about the types of mitigation that are being required by significantly expanding restored and enhanced waters. This summary highlights the additional mitigation elements that have been incorporated since the April 2014 submittal. The table attached to the transmittal letter for the HMMP provides a quick view of the overarching changes made between the April 2014 submittal and the September submittal as compared against Project impacts. It is the collective view of the Rosemont technical team that the HMMP as proposed meets or exceeds the compensatory mitigation for both the direct and indirect Rosemont Project impacts. Also included with the revised HMMP package is a table showing how the HMMP complies with the 2008 Mitigation Rule (33 C.F.R. Part 331).

This summary also identifies key points of interpretation that will require clarification by the Los Angeles District. The 2008 Mitigation Rule provides an overarching framework for needed mitigation but does not provide a step-by-step roadmap. As such, some interpretation on the part of applicants and Corps field staff is required. Those points of interpretation that Rosemont has identified, and on which clarification is sought, are outlined below.

## **1. KEY ADDITIONS TO THE MITIGATION PACKAGE SINCE THE APRIL 2014 HMMP SUBMITTALS**

The May 13, 2014 letter from the Corps indicated that the April 2014 HMMP *"would not fully compensate for the unavoidable adverse impacts that would remain after all appropriate and practicable avoidance and minimization measures have been achieved... The shortfall in compensation derives from an assessment of the risks to success associated with your proposed compensatory mitigation, limited environmental lift from the compensatory mitigation, and the limited amount of restoration and enhancement of actual waters of the United States."* Subsequent discussions with Corps staff indicated that the April 2014 HMMP appeared to provide for an estimated 23.2 acres of credit for direct impacts associated with the Project and 47.4 acres of credit for indirect impacts. In response, Rosemont added restoration and enhancement opportunities to the proposal, as described herein.

The September HMMP now encompasses nearly 4,830 acres of land on which over 200 acres of waters of the U.S. (WOUS) and over 900 acres of riparian buffer will be restored, enhanced, or preserved. Over 90% of this mitigation acreage (both WOUS and riparian buffer) should qualify as restoration or enhancement based on the 2008 Mitigation Rule and the scientific literature on the ecology of southwestern ephemeral stream systems. Based on guidance provided by the South Pacific Division, and the Corps' calculation of mitigation ratios, this amount and type of mitigation should be more than sufficient to offset the direct and indirect impacts to 68.8 acres of ephemeral WOUS resulting from the Project. The details of the additions are below.

## **1.1. ADDITIONAL AREA ADDED TO SONOITA CREEK RANCH**

Restoration and enhancement of the Sonoita Creek floodplain, which includes re-establishment of ephemeral channels through what is now a channelized and farmed floodplain, is a major component of the September HMMP, and received favorable feedback from Corps staff. For this Project, Corps staff has accepted channel re-establishment and buffer re-establishment as mitigation for direct impacts of WOUS. This component has been substantially expanded:

- Additional 230 acres of land (17% increase compared to Sonoita Creek Ranch in the April 2014 HMMP). Virtually all added land is within the Sonoita Creek floodplain.
- Additional 18.8 acres of re-established WOUS (41% increase compared to the April 2014 proposal).
- Rehabilitation of 22.4 acres of the Sonoita Creek main channel.
- Additional 4.9 acres of existing WOUS (18% increase).

## **1.2. NEW PROPERTY - HELVETIA RANCH ANNEX NORTH PARCELS**

The Helvetia Ranch Annex North Parcels are located on the west side of the Santa Rita Mountains and connect Coronado National Forest lands with the Santa Rita Experimental Range. Washes on the site are adversely impacted by grazing and poorly maintained dirt roads, which will be improved or reclaimed to reduce onsite erosion. Specifically, this includes:

- 939 total acres of land
- 39.0 acres of rehabilitated/enhanced WOUS
- 271.5 acres of enhanced riparian buffer (assumes 50-foot buffer)

## **2. POINTS OF CLARIFICATION**

There are a number of points that if clarified would further confirm that the package presented here today fully compensates for loss of waters of the U.S. associated with the Project. The package now includes 208.9 acres of WOUS restored, enhanced, established, or preserved – a 3:1 ratio of total project impacts (68.8 acres) to WOUS-only mitigation. Of the 208.9 acres, 192.9 are associated with restoration, enhancement, or establishment activities, a ratio of 4.8:1 for direct impacts (40.4 acres). Augmenting this is over 900 acres of riparian buffer restoration, enhancement, establishment, and preservation.

Key points of clarification involve:

- (1) how Rosemont's mitigation actions are defined in terms of restoration or enhancement activities;
- (2) the application of buffer credits to direct impacts;
- (3) the extent of credit available for buffer habitat;
- (4) the benefits of livestock exclusion to improvement and restoration of stream functions and values; and
- (5) the amount of credit for dedication of currently diverted stream flow at Pantano Dam to stream bed restoration.

With the exception of Pantano Dam (which is not proposed for credit here), the September HMMP reflects Rosemont's interpretation of how the 2008 Mitigation Rule and the scientific literature support the application of mitigation credit from Rosemont's proposed actions.

These points of clarification are set against the backdrop of the 2008 Mitigation Rule, which recognizes the difficulty in mitigating for impacts to "streams" and recommends that such mitigation be accomplished through "in-kind rehabilitation, enhancement, or preservation" (33 C.F.R. §332.3(e)(3)), and encourages the use of buffers in mitigation (33 C.F.R. §332.3(i)).

## **2.1. RESTORATION AND ENHANCEMENT**

In the February 28, 2014 letter from Col. Colloton (Corps) to Rod Pace (Rosemont), the Colonel notes that "...it is imperative Rosemont focus on **restoration/enhancement** of WOUS to offset the direct loss of 40 acres of WOUS, and [Ms. Blaine] has suggested other potential mitigation opportunities for Rosemont to investigate." (Emphasis added.) Similarly, the March 13, 2014 letter from Col. Colloton to Rod Pace notes that the mitigation package is inadequate due in part to "the limited amount of **restoration and enhancement** of actual waters of the U.S." (Emphasis added.)

As required by the Corps, the vast majority of the September mitigation package features restoration and/or enhancement of WOUS as well as the adjacent buffer habitat. Rosemont believes that the mitigation actions taken on these properties qualify as enhancement and/or restoration and have provided technical support for this assertion. As a consequence, the September HMMP has been prepared with the understanding that both restoration and enhancement efforts may be applied against both direct and indirect impacts to WOUS and that the actions we are undertaking qualify as enhancement and/or restoration.

## **2.2. DIRECT VS. INDIRECT IMPACT**

The distinction between mitigation for direct and indirect impacts has been a focus of Corps communications. For example, in the February 28, 2014 letter from Col. Colloton (Corps) to Rod Pace (Rosemont), the Colonel notes that "...it is imperative Rosemont focus on restoration/enhancement of WOUS to offset the **direct loss** of 40 acres of WOUS, and [Ms. Blaine] has suggested other potential mitigation opportunities for Rosemont to investigate." (Emphasis added.) Corps staff later clarified that other forms of mitigation (i.e., enhancement and preservation, and buffer mitigation) would be applied against the indirect impacts to 28.4 acres of WOUS (email from Marjorie Blaine (Corps) to Jamie Sturgess (Rosemont) dated March 14, 2014). What is not clear is how or why the impacts are separated for purposes of determining compensatory mitigation. This distinction does not appear in either the MRSC or the 2008 Mitigation Rule. The distinction is only relevant if the proposed restoration and enhancement of actual waters of the U.S. is insufficient to offset the loss of waters through direct impacts. If that is the case, then the substantial amount of restored and enhanced buffers provided here should provide enough credit to make up any shortfall.

The September HMMP has been prepared with the understanding that while all Project impacts must be mitigated, there is no special class of mitigation for varying impacts. All mitigation proposed is eligible for consideration against the Project impacts authorized by the Corps.

## **2.3. CREDIT FOR BUFFER HABITAT**

In the experience of Rosemont and its mitigation team, the most common form of compensatory mitigation for the loss of ephemeral washes in the arid Southwest is through the preservation, enhancement, or restoration of riparian buffers, in association to WOUS. As noted above, the 2008 Mitigation Rule recognizes the difficulty in mitigating for "streams" and suggests that mitigation credit be provided for buffers that are required to support WOUS that are being offered for mitigation.

### **2.3.1. Extent of Buffer Habitat**

Corps staff indicated (verbally) that mitigation credit would be provided (against the 28.4 acres of indirect impacts only) for riparian buffer extending 50 feet from the ordinary high water mark (OHWM) of WOUS. No documentation was provided for this finding. The Rosemont mitigation team has found that the scientific literature supports wider buffers and has included a full discussion on this point in the September HMMP. Fry, et al (1994) for example found that buffer widths between 75 and 100 feet (which

includes some uplands) provide for the protection of high functioning streams, the maintenance of mildly disturbed streams, and the enhancement of more severely disturbed streams. In addition, to promote flood attenuation, Fischer and Fischer (2000) recommend riparian buffers from 60 to 500 feet to intercept overland flow and increase flood travel time, thus reducing flood peaks.

Based on the guidance and precedent noted above, the September HMMP has been developed using a conservative buffer width of 75 feet for Sonoita Creek, and 50 feet for smaller drainages.

### **2.3.2. Re-establishment of Buffer Habitat on the Sonoita Creek Floodplain**

In the May 21, 2014 meeting between Corps staff and Rosemont, Corps staff indicated (verbally) that mitigation credit would be provided for a portion of the re-established riparian buffer within the Sonoita Creek floodplain, and that this credit would be applied against the 40.4 acres of direct impacts to WOUS. Rosemont fully agrees with and supports this approach, as the Sonoita Creek floodplain should be considered as a complete, functioning system. As such, the function of the constructed ephemeral channels is difficult to segregate from the adjoining riparian buffer.

However, Rosemont understands (based on verbal communication from Corps staff in the May 21, 2014 meeting) that only buffer habitat re-established within the 115-acre agricultural field is being provided such credit. The distinction between the re-established buffer in the field versus the re-established buffer in the remainder of the floodplain is unclear. The return of Sonoita Creek flood flows to its currently isolated floodplain will restore function to a substantial floodplain resource that is over 4.8 miles in length. Xeroriparian habitat and flood functions will be re-established within the entirety of the re-established buffer, not simply in the agricultural field.

The September HMMP has been prepared under the assumption that mitigation credit will be provided for all of the re-established buffer habitat on the Sonoita Creek floodplain.

### **2.4. EXCLUSION OF DOMESTIC LIVESTOCK GRAZING AS REHABILITATION/ENHANCEMENT**

Corps staff has indicated (verbally) that removal of domestic livestock grazing as described in the April 2014 HMMP does not result in enough environmental lift to qualify as rehabilitation or enhancement and therefore does not provide mitigation credit against the direct loss of 40.4 acres of WOUS. Rosemont's September HMMP provides additional documentation of the environmental lift that can be achieved through the exclusion of domestic livestock grazing; these grazing exclusion benefits are recognized by the Corps. For instance, the Willits Bypass Project proposed by the California Department of Transportation (Caltrans) in the Corps San Francisco District initially faced many of the same challenges as the Rosemont Project in identifying suitable mitigation for impacts to wetlands and other waters. The mitigation package generally lacked uplands suitable for establishment and rehabilitation of wetlands and other waters, and the original draft HMMP was rejected as incomplete by the Corps. However, in fall 2010 the Corps approached Caltrans with a plan for a directed assessment to identify the best available mitigation actions for the Project. During this process the Corps identified removal of grazing as the primary tool available to achieve lifts in wetland functions and services. In collaboration with the Corps, Caltrans then developed an HMMP that relied largely on wetland rehabilitation via the removal of grazing (i.e., passive restoration) to meet its compensatory mitigation obligation. Similarly, in the southwestern U.S., considerable scientific data supports the conclusion that removal of grazing can significantly benefit these systems, and practical experience in the Las Cienegas Natural Conservation Area has found such benefits to be substantial.

The September HMMP has been prepared under the assumption that mitigation credit will be provided for the removal of grazing from mitigation sites.

### **2.5. PANTANO DAM WATER**

Rosemont sought to receive compensatory mitigation credit for the release of 400 acre-feet per year of base flow below Pantano Dam in Cienega Creek. Perennial surface flows in the Cienega Creek

watershed are incredibly rare and Rosemont assumed that returning this water to the natural system (it is currently used to provide water to an approximately 400-acre golf course) would have significant aquatic resource benefits. Rosemont previously identified a legal structure in which it could release water below Pantano Dam, which would not require Pima County approval as such releases are allowed under state law given the fact that the wash is a watercourse which accepts natural flows originating above the dam. Mitigation credit could be granted based on expected flow and adjusted through adaptive management. Any shortfall could be made up with later-approved in-lieu fee projects (ILFs). Also, this measure could be considered a minimization effort that informs the level of compensatory mitigation required. Staff ultimately concluded that this approach could not receive mitigation credit.

The September HMMP offers these water rights up as part of a future ILF, offers to purchase advance credits at this or another other ILF, and offers the development of an escrow account holding monies in reserve for this purchase but does not rely on ILF credits for current mitigation credit.