



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
3636 N. CENTRAL AVE, SUITE 900
PHOENIX, AZ 85012-1939

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MEMORANDUM FOR THE RECORD

SUBJECT: HudBay Minerals, Inc. Approved Jurisdictional Determination Requests Associated with the Rosemont Copper Mine Project: Evaluation of Data and Basis for Determinations

Prepared By: Michael Langley, Senior Project Manager, Arizona Branch, Regulatory Division

For: Administrative Record for SPL-2008-00816

- 1. Introduction.** The Los Angeles District of the U.S. Army Corps of Engineers (SPL) received two Approved Jurisdictional Determination (AJD) requests from HudBay Minerals, Inc. (requester) in September 2019 seeking a determination of geographic jurisdiction for lands associated with the Rosemont Copper Mine Project, located in unincorporated Pima County, Arizona. One AJD request covers the 8,676-acre project site located on the east side of the Santa Rita Mountains (referred to as the "East area"). The second AJD request covers an additional 757 acres comprising the utility corridor and west side operations located on the west side of the Santa Rita Mountains (referred as the "West area"). These are the first AJDs for the Rosemont Copper Mine site and utility corridor, though preliminary jurisdictional determinations (PJDs) were previously completed. Subsequent to the PJDs, on June 22, 2020, the Navigable Waters Protection Rule (NWPR; 85 FR 22250, April 21, 2020) became effective and redefined geographic jurisdiction under the Clean Water Act. Under the NWPR, ephemeral washes are not jurisdictional. SPL reviewed the AJD requests consistent with the NWPR. Most of the aquatic resources in the review areas consist of ephemeral washes. There are three areas that have intermittent or perennial flows in the East review area, and those areas underwent further evaluation, but ultimately were not found to be jurisdictional because they lack a connection to a downstream traditional navigable water during a typical year. This Memorandum for the Record (MFR) summarizes the review of geographic jurisdiction that was conducted under the NWPR and how the final determinations were made. This MFR also addresses third-party input received during the review and documents consideration of that information.
- 2. Sources of Information.** Numerous sources of information were considered by SPL in making the determinations. All information sources described below are

available in the administrative record for the AJDs. These sources for each review area are provided below:

A. West area

- Previous preliminary jurisdictional determination (PJD) completed for the Rosemont Copper Mine project site in 2012
- AJD submittal by the requester for the West area, including updated mapping of aquatic features
- National Center for Environmental Information's Climate Data Online, accessed November 17, 2020; precipitation data for 2009-2019 for Corona de Tucson station; available: <https://www.ncdc.noaa.gov/cdo-web/>
- Arizona Department of Water Resources online data groundwater data; available: <https://gisweb3.azwater.gov/gwsi/>; accessed November 10, 2020
- U.S. Fish and Wildlife Service National Wetland Inventory online tool, accessed 11-13-2020; available: <https://www.fws.gov/wetlands/data/mapper.html>
- Pima County Sonoran Desert Conservation Plan geographic information system data (accessed November 2020) available: <https://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=159303>
- The Nature Conservancy's Freshwater Assessment for Arizona (KMZ dataset December (2010), available: http://azconservation.org/downloads/arizona_statewide_freshwater_assessment_gis_data_package)
- Arizona Department of Environmental Quality Flow Regime KMZ Map data, July 31, 2020
- USA National Agriculture Imagery Program Imagery 2017, Google Earth (historical aerial photos from December 1985 through May 2019), and ground photos (from several field visits by requester's consultant between 2010 and 2020)
- Corps site visit conducted on June 4, 2019

B. East area

- Previous PJDs completed for the Rosemont Copper Mine project site in 2010, 2012, and 2017
- Corps site visit conducted on June 4, 2019
- AJD submittal by the requester for the East area, including updated mapping of aquatic features
- U.S. Geologic Survey (USGS) stream gage data from the project vicinity (January 23, 2009 through October 29, 2020)

- National Center for Environmental Information's Climate Data Online, accessed November 17, 2020; precipitation data for 2009-2019 for Corona de Tucson, Vail, Empire, and Sahuarita stations); available: <https://www.ncdc.noaa.gov/cdo-web/>
- Results from Antecedent Precipitation Tool
- Arizona Department of Water Resources online data groundwater data; available: <https://gisweb3.azwater.gov/gwsi>); accessed November 10, 2020
- U.S. Fish and Wildlife Service National Wetland Inventory online tool: accessed 11-13-2020; available: <https://www.fws.gov/wetlands/data/mapper.html>
- Pima County Sonoran Desert Conservation Plan geographic information system data (accessed November 2020) available: <https://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=159303>
- The Nature Conservancy's Freshwater Assessment for Arizona (KMZ dataset December (2010), available: http://azconservation.org/downloads/arizona_statewide_freshwater_assessment_gis_data_package)
- Arizona Department of Environmental Quality Flow Regime KMZ Map data, July 31, 2020
- USA National Agriculture Imagery Program Imagery 2017, Google Earth (historical aerial photos from December 1985 through May 2019, street view photo at Barrel Canyon/State Route 83 bridge dated August 2016), and ground photos (from several field visits by requester's consultant between 2010 and 2020)
- Supplemental analyses (two technical memoranda) of two specific issue areas within the East area review area (lower reach of Barrel Canyon Wash, and four non-ephemeral features) prepared by the requester's consultants in response to data requests from SPL
- Information provided to SPL by EPA, Region 9 including the following:
 - McCleary Canyon Spring Report dated August 8, 2015
 - Pig Spring Site Report dated August 8, 2015
 - Email from Rob Leidy (EPA) to Michael Langley (SPL) dated November 20, 2020 regarding Pima County GIS data
 - Barrel Canyon Spring Claimant form dated January 17, 1989
 - Email from Emmitt McGuire (USGS) to Julia Fonseca (Pima County) regarding observations at Barrel Canyon stream gage.
 - Letter from C.H. Huckelberry (Pima County) to Kerwin Dewberry (Coronado National Forest) and William James (South Pacific Division [SPD] project delivery team [PDT]) regarding stream flows in East area review area dated July 28, 2017

- Letter from C.H. Huckelberry (Pima County) to William James (SPD PDT) on Barrel Canyon flows dated November 6, 2017
- Letter from C.H. Huckelberry (Pima County) to Elizabeth Goldmann (EPA) and William James (SPD PDT) on intermittent and surface water impacts dated October 18, 2018
- USGS Stream gage data analysis by Rob Leidy (EPA) for Barrel Canyon dated November 11, 2020
- Pima County report to the Board of Supervisors on GIS coverages for perennial streams, intermittent streams, and areas of shallow groundwater dated November 26, 2000
- Rebuttal information (with respect to EPA data provided to SPL) provided by WestLand consultants for consideration:
 - Response to Pima County letters (listed above) dated January 24, 2018
 - TetraTech Traditional Navigable Waters Assessment dated December 1, 2016

3. Assessment of Geographic Jurisdiction. There are two primary areas to be considered in making a jurisdictional determination. The first involves deciding on the flow regimes present in aquatic resources (ARs) present in the review areas. The NWPR provides the following definitions for flow regimes:

- Perennial: "...surface water flowing continuously year-round." 33 CFR 328.3(c)(8).
- Intermittent: "...surface water flowing continuously during certain times of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts)." 33 CFR 328.3(c)(5).
- Ephemeral: "...surface water flowing or pooling only in direct response to precipitation, such as rain or snow fall." 33 CFR 328.3(c)(3).

Under the NWPR, ephemeral features are considered non-jurisdictional, 33 CFR 328.3(c)(8), while intermittent and perennial features may be jurisdictional based on other factors. In this situation, intermittent and perennial features may be considered jurisdictional if they contribute flow during a "typical year" to a traditionally navigable waterway (TNW) or territorial sea. Typical year means "when precipitation and other climatic variables are within the normal periodic range of the applicable aquatic resource based on a rolling thirty-year period." 33 CFR 328.3(c)(13). Wetlands jurisdiction depends on the location of the wetlands relative to other ARs (such as adjacency to other ARs). The discussion below focuses first on determining the flow regimes of ARs in the review areas. After determining which

ARs are potentially jurisdictional based on having a non-ephemeral flow regime, those ARs are assessed to determine whether flows from those ARs would reach a TNW during a typical year.

a. *Flow Regime*. The East and West areas have very different placements in the general landscape and exist within separate watersheds; thus, they were considered separately.

- i. West Area. The review area had been studied in 2012 for the potential presence of waters of the U.S. in the form of a preliminary jurisdictional determination (PJD). Under the 2012 PJD, ordinary high water mark (OHWM) indicators were mapped within the review area. No potential wetlands were assessed. All potential waters of the U.S. were classified as “riverine ephemeral.”

Under the current AJD request, in 2019, the requester submitted revised OHWM mapping to update the previous mapping work. This remapping work was conducted to account for normal shifts in stream locations from 2012 to 2019.

The review area consists of a utility corridor and several small parcels that would be used in support of the Rosemont mining operation. The watercourses within the review area are in a broad bajada (a broad slope of alluvial material at the foot of a mountain) area between the Santa Rita Mountains and the Santa Cruz River to the west containing deep well-drained alluvial soils. The drainages flow in a generally parallel fashion and tend to move laterally during flow events as they cross this area, combining with other drainages and reestablishing themselves during successive storm events. The drainages consist of desert washes with sandy, unvegetated beds and banks containing xeroriparian plant communities typical of ephemeral drainages in this region. Some of the plant species observed along the washes in the review area include desert broom, mesquite, burrobush, prickly pear cactus, and acacia; these plants are all classified as either upland obligates or facultative upland species in the National Wetlands Plant List. No wetlands, as defined in the three-parameter test (hydrology, hydric soils, hydrophytic vegetation) in 33 CFR 328.3(c)(16), are in the review area. No relevant USGS or Pima County stream gages are in or near the review area.

The Corps' Los Angeles District (SPL) noted the following:

1. Streams with wetter flow regimes (intermittent and perennial) have different field indicators compared to ephemeral streams. The physical characteristics of the streams in the review area lack any physical indications, such as the presence of wetland obligate or facultative-wet plants, pooled water, algae growth, that would suggest the streams are anything other than ephemeral. The location of these drainages within a broader landscape context are also consistent with ephemeral washes that drain desert alluvial fans and bajadas.
2. Data reviewed for this request does not support a determination that these washes are non-ephemeral. The washes do not appear as non-ephemeral on any dataset listed above that maps streams by flow regime. Groundwater data for this area does not indicate any areas of near surface groundwater elevations that could support a wetter flow regime.

Conclusion. The ARs located in the review area have ephemeral flow regimes. For this reason, the West area does not contain any ARs that are considered jurisdictional under the NWPR. No further analysis of these ARs was conducted.

ii. East Area

The review area has been studied in 2010, 2012, and 2017 for the potential presence of waters of the U.S. in the form of PJDs. Under the previous PJDs, OHWM indicators were mapped for the review area and potential wetlands assessed. Under the current AJD request, in 2019, the requester has submitted revised OHWM mapping to update the previous mapping work. This remapping work was conducted to account for normal shifts in stream locations from the date of each PJD to 2019. In addition, the requester reassessed seeps and springs located in the review area to determine whether any of the features meet the three-parameter test for being classified as wetlands.

The review area is located on the east side of the watershed break for the Santa Rita Mountains at this location and drains via a series of streams to Barrel Canyon Wash. All site drainage within the review area exits the site via Barrel Canyon Wash at the northeast corner of the site. The ARs in the review area drain a hilly area, with physical characteristics that primarily consist of unvegetated sandy to rocky beds with xeroriparian vegetation along almost all the stream banks. These ARs contain vegetation such as desert broom, mesquite, burrobush, prickly pear cactus, acacia, juniper, netleaf hackberry, and agave, which are either upland obligate or facultative upland species. These ARs have similar features consistent with the ephemeral desert washes found in this region. Within the review area, these ARs differ only in their dimensions as they coalesce from headwater areas in the drainage shed to Barrel Canyon, the largest feature that ultimately drains the entire review area. Except as discussed further below, based on these physical indicators these ARs have ephemeral flow regimes.

The lowest reach of Barrel Canyon Wash was mapped by SPL as an ephemeral feature under PJDs previously completed for the review area but it has also been mapped by Pima County as having an intermittent flow regime along an approximately 1,200-foot reach upstream from the State Route 83 (SR83) bridge at the site boundary. It appears this designation is based on anecdotal accounts of pooled water found in the vicinity of a USGS stream gage located near the highway bridge and the presence of algae.

At SPL's request, the requester submitted a technical memorandum describing conditions within this reach and addressing any other available documentation on field conditions in the lowest reach of Barrel Canyon Wash. The memorandum addressed conditions under the SR83 bridge, stream gage condition, identifiable plants within the OHWMs, as defined as 33 CFR 328.3(c)(7), for Barrel Canyon Wash, and any observations within the wash with respect to standing/flowing water and evidence of algal growth within the wash channel. The presence of algae or algal mats is a field indicator of wetter flow regimes. The memorandum confirms that the bridge structure and associated concrete aprons beneath the bridge tend to slow down flow within the wash and that erosion along the edges of the concrete structures serve to potentially allow retention/ponding of water during and after flow events in the immediate vicinity of the bridge and the stream gage, which is located near the bridge. Dried

algal mats were observed in small patches in this area; however, the total coverage of algal mats within the channel is estimated at a fraction of 1%. No evidence of facultative-wetland or wetland obligate plants was noted.

Review of this technical memorandum and other sources of information noted above in Part 2 regarding the lowest reach of Barrel Canyon Wash demonstrates that this reach has an ephemeral flow regime. Anecdotal information about algae growth and pools of water observed by others is limited to a small area just upstream of the bridge structure, which appears to serve as just enough of a barrier to surface flow that water is retained upstream for periods of time, creating saturated conditions and associated algae growth during periods of time following precipitation events. These conditions appear to be due to the influence of the bridge structure within the channel rather than a groundwater influence/contribution to the stream. This is further supported by ground photos of the upstream and downstream reaches of this wash, taken on the same day, which show a saturated substrate on the upstream side of the bridge and dry conditions downstream from the bridge.

The review area also contains several stock tanks that were constructed along some of the drainages that retain water for periods of time following rain events. Except for the East Dam complex (discussed below), the stock tanks are located on ephemeral drainages and only retain water for limited periods of time following rainfall events. The vegetation present along the stock tanks is consistent with vegetation found along ephemeral drainages on this site.

As part of the September 2019 AJD request, the requestor provided documentation on 19 potential wetland sites, consisting of seeps and springs, in the East area review area. Only the Scholefield Spring meets wetlands parameters. This determination was based on SPL's independent review of the information submitted by the requester. This spring is located several hundred feet from the nearest drainage. This is an isolated feature and not adjacent [defined at 33 CFR 328.3(c)(1)] to other jurisdictional waters; it does not abut an a(1), (2) or (3) water, is not inundated by flooding from an a(1), (2), or (3) water in a typical year, is not physically separated from an a(1), (2), or (3) water by a natural berm, bank, dune, or similar natural

feature, is not physically separated from an a(1), (2), or (3) water by an artificial dike, barrier, or similar artificial structure.

At the request of SPL, the requester provided data on four locations in the review area where previous PJDs indicated that non-ephemeral ARs may exist. Rosemont provided a technical memorandum that reviewed available data for the East Dam complex, Rosemont Spring, an unnamed spring in Wasp Canyon, and MC-2. The East Dam complex, Rosemont Spring, and MC-2 have sufficient measurable and regular flow to create non-ephemeral reaches within ARs that convey drainage from these features. These reaches are relatively small in length and area but clearly defined by measurable flow that suggests a groundwater connection exists to the surface drainage. The Wasp Canyon feature was found to have a very minor, poorly defined connection to groundwater based on field observations and the feature does not support a non-ephemeral AR. A typical year analysis (discussed below) is required for the three non-ephemeral features.

SPL noted the following:

1. Streams with wetter flow regimes (intermittent and perennial) have very different field indicators compared to ephemeral streams. The physical characteristics of most of the ARs in the review area lack any physical indicators, such as the presence of wetland obligate or facultative-wet plants, pooled waters, algae growth, that would suggest the ARs are anything other than ephemeral. For the reasons stated above, further investigation of field indicators for Barrel Canyon indicate that signs of wetter conditions near the SR83 bridge are not due to groundwater/surface water connection; rather, they are due to the influence of the in-channel highway bridge structures. The three locations within the review area described above (Rosemont Spring, MC-2, and East Dam complex) have field indicators of wetter intermittent flows that required a typical year assessment.

2. Data reviewed for this request does not support a determination that the ARs are non-ephemeral, with the three exceptions noted. The washes do not appear as non-ephemeral on any dataset listed above that maps stream by flow regime, except for GIS data maintained by Pima County showing an intermittent reach. However, further investigation for this request does not support this mapping.

Groundwater data for this review area does not indicate any areas of near-surface groundwater elevations that could support a wetter flow regime. Stream gage data for Barrel Canyon also does not support a determination that this wash is non-ephemeral.

3. A typical year assessment is required for the three intermittent ARs in the review area.

4. Scholefield Spring, although meeting Corps wetland parameters, is not adjacent to an a(1) water (territorial sea or traditional navigable water (TNW)), an a(2) water (tributary to an a(1) water), or an a(3) water (lake, pond, impoundment of jurisdictional waters).

Conclusion. Almost all the ARs located in the review area have ephemeral flow regimes, including the lower reach of Barrel Canyon Wash. There are three exceptions: stream reaches immediately downstream from Rosemont Spring, MC-2, and the East Dam complex, where non-ephemeral (intermittent or perennial) flow regimes are present. Typical year flow analysis for these three locations is required to determine whether these ARs are jurisdictional under the NWPR (see below). Scholefield Spring, although meeting Corps wetland parameters, is not considered jurisdictional because it is not adjacent to an a(1) water (territorial sea or traditional navigable water (TNW)), an a(2) water (tributary to an a(1) water), or an a(3) water (lake, pond, impoundment of jurisdictional waters).

- b. *Typical Year Flows.* Based on the flow regime analysis described above, three ARs in the East area review area required additional analysis to determine whether flows from these features would reach a TNW or territorial sea during a typical year, as defined above.

Rosemont Spring, MC-2, and the East Dam complex were evaluated for typical year flows under the NWPR. Information provided by the requester indicates that these three ARs support a sufficient amount and frequency of regular surface flow to support intermittent reaches downstream from the water source. In the case of Rosemont Spring and MC-2, there is sufficient flow from a seep/spring feature to support the intermittent reach. In the case of East Dam complex, the detention dam captures sufficient surface flow that subsequent metered drain-off of this flow is adequate to support an intermittent reach.

The Antecedent Precipitation Tool (APT) was used to assess precipitation conditions at these locations to determine the nature of precipitation in the review area and correlate it to the conditions observed at the three locations in question. This tool was developed by the Corps to analyze typical year conditions as defined in the NWPR. A central representative point between the features was used as the location in the assessment. The tool was run for December 2, 2020. This date was used because two of three locations were observed to have surface water present on that specific date. The third site, East Dam complex, was dry on that date. Based on the available information in Part 2B, there was no date available when all three sites were observed to have surface water. The results of the assessment indicated the most recent rain event in the area occurred about three weeks prior to the field visit. The Palmer Drought Severity Index for December 2, 2020 was “extreme drought”, and precipitation conditions prior to the observation date were considered drier than normal. The information from the APT indicates that conditions were considered to be generally drier than in a typical year. Thus, even though relatively dry conditions were occurring leading up to the field observation date, wet conditions were still observed at two of three locations (Rosemont Spring and MC-2). The third location (East Dam complex) was dry, but documentation has been provided indicating the feature contains evidence of flowing water during wetter times of the year. This further supports a finding that these ARs have an intermittent flow regime.

The final question to be answered regarding jurisdiction under the NWPR is whether flow from these ARs during a typical year would reach an a(1) water (territorial sea or TNW), an a(2) water (tributary to an a[1] water), or an a(3) water (lake, pond, impoundment of jurisdictional waters). The closest applicable water downstream from the review area is the Santa Cruz River (Reach B) TNW, which is 56.1 river miles downstream from the review area. Based on review of previous PJDs and information provided by the requester for these three ARs, it is very unlikely that flows from these ARs would reach the Santa Cruz River (Reach B) during a typical year. Field observations conducted by the requester during the seasonal monsoon period (June through September - wettest time period of the year) indicate the wetted channels persist for an average distance downstream of between 17 and 116 meters downstream from the source. This indicates the downstream flows are only locally relevant within a very small portion of the watershed and would have no meaningful connection to the distant TNW because of the small amount of flow and the large distance between the feature and the TNW. These intermittent features connect with an ephemeral wash network

with a high infiltration rate from the substrate in these washes, resulting in a rapid loss of flow, and provide a minimal contribution to downstream flows.

Conclusion: The three non-ephemeral features, Rosemont Spring, MC-2, and East Dam complex, are not considered jurisdictional under the NWPR because they lack a connection to a downstream TNW during a typical year.

4. Assessment of Third-Party Input

- a. *EPA, Region 9.* During the review, SPL was contacted by Rob Leidy, PhD. from EPA, Region 9 who expressed a desire to provide information relevant to our AJD decisions. The Memorandum Between the Department of the Army, Corps of Engineers and the U.S. Environmental Protection Agency, dated August 5, 2020, requires interagency coordination in situations where one of the following situations exist:
- Draft approved JDs where a negative jurisdictional decision based solely on a finding that a non-jurisdictional feature (e.g., ephemeral stream) or artificial structure (e.g., dam, spillway) does not convey surface water flow to a downstream jurisdictional water in a typical year and thus severs jurisdiction of the subject water and potentially implicates upstream aquatic resources.
 - Draft approved JDs where an affirmative jurisdictional decision is based solely on a finding that a particular wetland, lake, pond, or impoundment of a jurisdictional water is inundated by flooding from a jurisdictional water in a typical year.

Formal coordination of the AJD decisions with EPA is not required because neither AJD is a negative determination that severs upstream ARs nor affirmative AJDs. However, SPL coordinated with EPA on an informal basis after EPA staff expressed interest in these AJDs.

Dr. Leidy (EPA Region 9) submitted several emails on November 30 and December 1, 2020, containing information he asked SPL to consider in our decision on jurisdiction of ARs for the review areas. Much of this information was developed during the Corps' review of the Department of the Army permit associated with the Rosemont Mine. Data points/information submitted by EPA Region 9 are presented below with a discussion of SPL's consideration of the relevance of the information to the AJDs.

- i. Huckelberry letter (September 28, 2017). This letter comments on water quality data and stream flow information associated with the Rosemont Copper Mine project. The letter also provides information supporting their position that reaches of Barrel Canyon Wash should be considered to have an intermittent flow regime, including photos of conditions at the stream gage (showing presence of algae).

Conclusion: Issues regarding the flow regime from the lower reach of Barrel Canyon Wash have been addressed earlier in this MFR. Even though there is anecdotal evidence of wetter conditions in the portion of this stream immediately upstream from the SR83 bridge, this is not supportive of a determination the flow regime is non-ephemeral with a connection to groundwater. The wetter conditions appear to be caused by the disruption of flow within this stream from the bridge structures.

- ii. Huckelberry Letter (November 6, 2017), including Bogan 2017 article. This letter asserts evidence of a recent period of drought that affected review area (East area) aquatic features at that time. The letter includes a journal article documenting observations of stoneflies in Barrel Canyon, suggesting there is a long enough duration of wet conditions in this stream to support all life stages of this insect. In a rebuttal response dated January 24, 2018 from WestLand Resources (representing the requester), this observation was noted as occurring at Barrel Springs, which is approximately one mile downstream and off-site from the East area review area, based on coordinates provided in the Huckelberry letter..

Conclusion: This information supports the position that some portion(s) of Barrel Canyon further downstream from the East area review area have an intermittent flow regime and is not relevant to the review area.

- iii. Huckelberry Letter (October 18, 2018). This letter comments on information provided by Water and Earth Technologies, a consultant for the requester, with respect to stream flows in the East area review area. The letter also augments some of the information provided under separate cover related to the Bogan 2017 article attached to the October 18, 2018 Huckelberry letter.

Conclusion: This letter is a specific rebuttal of data provided by the requester regarding analysis of flows in Barrel Canyon Wash and contains additional information related to the stonefly documentation contained in the Bogan 2017 article. This information was not provided in the context of the NWPR and its requirements regarding determination of flow

regimes and typical year flow assessments. Rather, it was provided to look at broader project issues being evaluated at the time related to perceived potential degradation of water quality and flows within the larger watershed. These issues are not relevant to the current AJD actions. SPL has reviewed stream flows and jurisdiction in paragraph 3a of this MFR consistent with the NWPR.

- iv. Claimant Form regarding Stock Tank near Barrel Spring. This was submitted to demonstrate regular water use occurring in Barrel Canyon in the vicinity of the spring (downstream and off-site from the review area).

Conclusion: This supports an assertion of the intermittent nature of this reach of Barrel Canyon but is not relevant to the upstream portion of the stream in the East area review area.

- v. Email (September 21, 2017) from Emmet McGuire (USGS) to Julia Fonseca (Pima County). This email provides information from the Barrel Canyon gage and observation notes about the presence of algae in the stream channel near the gage.

Conclusion: These are anecdotal observations that have been addressed in paragraph 3a of this MFR.

- vi. Email from Rob Leidy to Michael Langley (November 30, 2020). This email contains a link to Pima County's online GIS information and comments on Barrel Spring.

Conclusion: Pima County's GIS data for the Sonoran Desert Conservation Plan (SDCP) contains some mapping work that is relevant to the East area review area and was considered for this AJD. The data provides the County's mapping of intermittent and perennial streams and wetlands. Each of the mapped resources from their dataset was reviewed and compared to other data described in this MFR to verify the location and type of resource and determine whether that resources should be considered jurisdictional under the NWPR.

- vii. Email from Rob Leidy to Michael Langley (November 30, 2020). This email provides a link to a relevant report prepared for the SDCP that provides GIS coverage for perennial and intermittent streams and areas of shallow groundwater in Pima County. This report maps Barrel Canyon as an intermittent stream for reaches near SR83 and downstream from the highway, based on the presence of surface water pools. The report also

documents field work by the Coronado National Forest that stated that upstream reaches within the East area review area didn't not have any similar evidence of intermittent flow.

Conclusion: This information was considered for the East area AJD. The report provides similar information as described for the SDCP (see above) and was evaluated in the same manner.

- viii. Typical Year Stream Gage Analysis. This analysis was provided to support a position that on-site drainages have a typical year connection with a TNW.

Conclusion: Based on the analysis of flow regimes in the review areas, a typical year assessment is only needed for the three non-ephemeral features in the East area review area. This is addressed in paragraph 3 of this MFR.

- ix. Report and Photos from Sky Island Project Field Trip (August 8, 2015) to McCleary Canyon Spring. This report documents the results of a field trip to McCleary Canyon. Field observations at an on-site spring, apparently labeled as McCleary Canyon #2 (MC-2) by WestLand Resources, is documented.

Conclusion: This report was considered for the East area AJD. This information was reviewed and compared to previous PJDs and the AJD submittal by the requester. Refer to paragraph 3.a.ii. of this MFR.

- x. Report and Photos from Sky Island Project Field Trip (August 8, 2015) to Pig Spring. This report documents the results of a field trip to Pig Spring in McCleary Canyon.

Conclusion: This report was considered for the East area AJD. This information was reviewed and compared to previous PJDs and the AJD submittal by the requester. This AR does not appear in any previous jurisdictional determinations or other relevant documentation for the East area. The feature appears to representative of a number of small seeps and springs that occur throughout the review area, especially following periods of wet weather. However, this spring site, like many other small ones in the review area, is not persistent enough to warrant further analysis under the NWPR.

b. *Earthjustice Letter of December 8, 2020.* Earthjustice, representing three federally recognized tribes in Arizona, submitted a letter to the Corps regarding the AJDs. The letter objects to the Corps acting on the AJD requests and asserts a range of issues with respect to the merits of the NWPR, the Rosemont Mine project in general, and the AJD review process. The following summarizes the consideration given to the points raised in this letter:

- i. Ephemeral and intermittent streams in the Rosemont Mine project site. This comment addresses the importance of the streams on the Rosemont Mine project site and restates Pima County data regarding the flow regime for lower Barrel Canyon Wash within the East area. The letter also refers to information in USGS's National Hydrology Dataset indicating this wash is intermittent. This comment also reviews available documentation on the importance of ephemeral streams and the effects of the proposed Rosemont Copper Mine project on downstream waters. There has been a rule change since the PJDs. Under the NWPR, ephemeral washes are no longer considered jurisdictional. Ephemeral streams can be important even if not jurisdictional, but the focus of the AJDs is on what is jurisdictional under the current rule. Comments regarding Pima County and USGS mapping of Barrel Canyon Wash were considered for this AJD; however, site-specific observations of the on-site lower reach of Barrel Canyon Wash indicate there is insufficient evidence of a non-ephemeral flow regime within this reach for the reasons indicated elsewhere in this MFR.
- ii. Request for notification on impending AJDs. SPL has provided a written response to the Earthjustice letter that summarizes the AJD requests submitted for the East area and West area review areas. The two AJD requests and other documentation provided by the requester in support of SPL's review were provided to Earthjustice and the Tribes (December 17, 2020).
- iii. Request for a public hearing. There are no provisions in the NWPR or Corps regulations for establishing public review periods or public hearings for AJDs. Public review periods are only conducted for permit applications where SPL is seeking input concerning the placement of dredged or fill materials into waters of the U.S. Determinations on the extent of geographic jurisdiction are not subject to these requirements. The results of AJDs are made publicly available once a decision has been rendered.
- iv. Government-to-government consultation on AJDs. On January 4, 2021, the Assistant Secretary of the Army for Civil Works issued a memorandum that specifically provided a directive that the Corps shall not initiate tribal

consultation on AJDs. It should also be noted that substantial tribal consultation on the Rosemont permit occurred during SPL/South Pacific Division review of the permit application.

- v. Overstepping of EPA's authority. Completing a determination for the two AJDs does not overstep EPA's authority regarding geographic jurisdiction. The "Memorandum of Agreement between the Department of the Army and the Environmental Protection Agency Concerning the Determination of Geographic Jurisdiction of the Section 404 Program and the Application of the Exemptions under Section 404(f) of the Clean Water Act," dated January 19, 1989 (amended on January 4, 1993) provides for "special cases" where the EPA makes the final determination on geographic jurisdiction after EPA invokes this authority. EPA has not invoked this authority and has not made a special case determination for these AJDs. However, EPA and SPL have engaged in informal coordination.
- vi. Undermining other agencies and leaving regulatory void. SPL's action on the AJDs is not a reversal of previous PJDs. As defined in Regulatory Guidance Letter 16-01:
 - PJDs: "A PJD is defined in Corps regulations at 33 CFR 331.2. When the Corps provides a PJD, or authorizes an activity through a general or individual permit relying on an issued PJD, the Corps is making no legally binding determination of any type regarding whether jurisdiction exists over the particular aquatic resource in question." For PJDs, geographic jurisdiction is presumed to exist based on the presence of OHWMs and wetland parameters and the extent of jurisdiction is agreed to by the Corps and the requester.
 - AJDs: "An AJD is defined in Corps regulations at 33 CFR 331.2. A definitive, official determination that there are, or that there are not, jurisdictional aquatic resources on a parcel and the identification of the geographic limits of jurisdictional aquatic resources on a parcel can only be made by means of an AJD. AJDs may be either "stand-alone" AJDs or AJDs associated with permit actions."

The current AJD actions are not a reversal of the previous PJDs. It is the requester's prerogative to request a formal determination on the extent of geographic jurisdiction in the review areas.

The AJD decisions do not revoke, reinstate or modify the currently suspended March 8, 2019 Department of the Army permit associated with

the Rosemont Copper Mine project (SPL-2008-0816-MB). The permit decision was made at the division level after elevation of the permit decision to the South Pacific Division. Any further action on the permit would be taken at the division level.

The two sister agency decisions mentioned by Earthjustice concerning the U.S. Forest Service's final Environmental Impact Statement and the U.S. Fish and Wildlife Service's biological opinion have been successfully challenged in court. There is no requirement that the Corps consult with other federal agencies on prior decisions by those agencies that have been invalidated by a court. Regardless, SPL cannot claim jurisdiction where none exists.

- vii. Public hearing required by the Clean Water Act, National Environmental Policy Act, and National Historic Preservation Act and providing new analysis to the Tribes. AJDs are not subject to the National Environmental Policy Act or the National Historic Preservation Act. The Clean Water Act and related rules and regulations do not require a public review or a public hearing for AJDs. AJD decisions are posted for public viewing. SPL has provided Earthjustice and the Tribes with copies of the two AJD requests and supplemental information provided by the requester to SPL.

- 5. Summary Conclusions.** After considering all relevant information and data sources available for the review areas; input received from EPA, Region 9; and the Earthjustice letter submitted on behalf of three federally recognized tribes in Arizona, SPL has determined that only three locations in the East area review area have non-ephemeral flow regimes: Rosemont Spring, East Dam complex, and MC-2. Rosemont Spring, East Dam complex, and MC-2 support limited intermittent drainage reaches and were further evaluated under a typical year assessment. That assessment concluded that flows from these features would not reach a TNW or territorial sea during a typical year, as defined under the NWPR. Scholefield Spring meets Corps criteria for wetlands but is not adjacent to any AR that is considered waters of the U.S.

Michael W. Langley
Senior Project Manager, Arizona
Branch