ADMINISTRATIVE APPEAL DECISION
ZACHARY HARTMAN, E&H LAND LTD. PROPERTY
APPROVED JURISDICTIONAL DETERMINATION
SACRAMENTO DISTRICT
SPK-2017-00109

Division Engineer: Colonel James Handura, U.S. Army Corps of Engineers, South Pacific Division (SPD)[1]

Review Officer: Susan L. Baker, U.S. Army Corps of Engineers, Northwestern Division

Appellant/Applicant: Zachary Hartman, E&H Land Ltd. Property

Regulatory Authority: Section 404 of the Clean Water Act (33 USC § 1344 et seq.)

Date Acceptable Request for Appeal Received: February 22, 2023

Date of Appeal Meeting: September 26, 2023

Summary of Appeal Decision: E&H Land Ltd. Property (Appellant) is appealing an approved jurisdictional determination (AJD) completed by the U.S. Army Corps of Engineers (Corps), Sacramento District (District), which concluded that the Corps has Clean Water Act (CWA) jurisdiction over approximately 9.21 acres of aquatic resources including 9.01 acres of wetland and 0.2 acre (655 linear feet) of tributary located within a 54.7-acre parcel in the City of Farmington, Davis County, Utah.[2]

Overall, the Appellant disputes the District's wetland determination and delineation, and therefore, its resultant AJD. The Appellant's reasons for appeal contain contentions that are best organized across five overarching themes consisting of arguments focused on procedural errors; incorrect application of law, regulation or officially promulgated policy; incorrect application of the current regulatory criteria and associated guidance for identifying and delineating wetlands; use of incorrect data; a decision that was not supported by substantial evidence in the administrative record; and a decision that was contrary to the administrative record.[3]

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[1] Pursuant to 33 CFR 331.3(a), the division engineer has the authority and responsibility for administering the administrative appeal process. While the review officer served to assist the division engineer in reaching and documenting the division engineer's decision, the division engineer made the final decision on the merits of this specific appeal. The district engineer retains the final Corps decision-making authority for the approved jurisdictional determination.

[2] An approved jurisdictional determination ("AJD") is a document provided by the Corps stating the presence or absence of "waters of the United States" on a parcel or a written statement and map identifying the limits of "waters of the United States" on a parcel. See 33 CFR 331.2; Regulatory Guidance Letter (RGL) 05-02; RGL 16-01.

[3] Hereafter, the document will refer to the phrases "wetland determination" and "wetland delineation" collectively as "wetland delineation" for ease of reading. A wetland determination addresses the question of whether a given area meets the Corps' definition of a wetland. The phrase wetland "determination" is synonymous with the phrase "wetland identification". A wetland delineation identifies the boundaries of

As explained in this Decision, the following reasons for appeal are found to have merit:

- Reason for Appeal 1: The District's wetland delineation incorrectly applied the current regulatory criteria and associated guidance for identifying and delineating wetlands.
- Reasons for Appeal 2 and 3: The District's wetland delineation lacks sufficient rationale, and the District's wetland delineation contradicts the administrative record (AR).
- Reason for Appeal 4: The District did not properly consider the effects of irrigation on vegetation when conducting its wetland delineation.
- Reasons for Appeal 5 and 6: The District incorrectly applied the B7 (Inundation Visible on Aerial Imagery) wetland hydrology indicator, and the District did not properly consider the effects of irrigation on hydrology when conducting its wetland delineation.
- Reason for Appeal 8: The District improperly applied problematic hydric soil procedures for "Moderately to Very Strongly Alkaline Soils" from Chapter 5 of the AWRS.
- Reason for Appeal 9: The District incorrectly applied the F3 (Depleted Matrix) hydric soil indicator to sampling point (SP) 25
- Reason for Appeal 10: The District improperly applied the S5 (Sandy Redox hydric soil indicator to SP 27.
- Reason for Appeal 11: The District incorrectly identified the ordinary high mark of Shepard Creek.

Conversely, as explained in this Decision, the following RFAs are found to not have merit:

- Reason for Appeal 7: The District improperly applied the F18 (Reduced Vertic) indicator for problematic hydric soils.
- Reason for Appeal 12: The District inaccurately and imprecisely mapped the parcel boundaries.
- Reason for Appeal 13: The District omitted material fact.
- Reason for Appeal 14: The District committed a procedural error by not communicating disagreement or offering an opportunity for the Appellant to respond prior to finalizing the AJD.
- Reason for Appeal 15: The District committed a procedural error by not issuing the AJD in a timely manner.

The AJD is remanded to the Sacramento District Engineer for reconsideration and additional documentation sufficient to support the reconsidered decision, in accordance with the actions identified at the end of each reason for appeal. In general, the District shall identify, delineate, and sufficiently document the aquatic resources within the parcel in accordance with the laws, regulations, Executive Orders, and officially

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areas that have been determined to meet the Corps' wetland definition which first requires one or more wetland determinations.

promulgated Corps policies or guidance described herein. The final decision regarding CWA jurisdiction in this matter will be made by the Sacramento District Engineer.

Background Information: The Appellant, represented by Kagel Environmental, LLC (Agent), requested an aquatic resources delineation verification on April 17, 2021, for an approximately 54.7-acre parcel located immediately north of Utah-225 (Park Lane), City of Farmington, Davis County, Utah (approximate center coordinates: Latitude 40.985608° North, Longitude -111.915438° West).[4] The request was accompanied by the *Aquatic Resources Delineation Report; E&H Land Ltd. Property; May 13, 2021; Job 1201-1*, prepared by Kagel Environmental, LLC (KE Report).[5] The KE Report identified the presence of "a total of 2.13 acres of palustrine emergent wetlands and 0.20 acre of riverine waters".[6] Via the Agent, the Appellant amended its request to the District on September 9, 2021, requesting an AJD instead of an aquatic resources delineation verification.[7]

The District's review of the request included a field visit to the parcel on March 29, 2022.[8] On December 23, 2022, the District issued an AJD concluding that the Corps has regulatory authority over approximately 9.21 acres of aquatic resources within the parcel, including 9.01 acres of wetland and 0.20 acre (655 linear feet) of tributary, pursuant to Section 404 of the Clean Water Act (CWA).[9]

On February 22, 2023, the South Pacific Division (SPD) received a Notification of Administrative Appeal Options and Process and Request for Appeal (NAO/NAP) form that the Agent had completed on behalf of the Appellant, along with a 13-page letter and attachments documenting the reasons for appeal (collectively, RFA). On March 8, 2023, SPD notified the Appellant that the RFA was complete and contained acceptable reasons for appeal. The notification also requested that the District provide identical copies of the administrative record (AR) to SPD and the Appellant. Review of the administrative appeal was transferred from the SPD RO to the NWD RO in July 2023 due to workload constraints.

On September 26, 2023, an informal appeal meeting was held in Salt Lake City, Utah. The Appellant, Agent, District, and RO were in attendance. A field visit was not conducted.

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[4] AR page 221, "Request for Aquatic Resources Delineation Verification or Jurisdictional Determination" dated April 17, 2021.
[5] KE Report, AR Pages 223-413
[6] AR page 228
[7] AR pages 217-218, "Request for Aquatic Resources Delineation Verification or Jurisdictional Determination" dated September 9, 2021.
[8] AR page 006. The District's AJD indicates that the District conducted a field determination on August 24, 2021. However, during the informal appeal meeting the District clarified that this date was an error and the correct date of its field determination with the Agent was March 29, 2022. This is also what consistent with the field visit date presented in the RFA. Hereafter, the corrected field visit date of March 29, 2022, will be referenced.
[9] AR pages 002-060

Information Received and its Disposition During the Appeal

1. The RFA sent by the Agent on behalf of the Appellant, consisting of a completed NAO/NAP form, a 13-page letter, and 10 pages of attachments, was received by SPD on February 22, 2023. The RFA contained comments and analysis of the District's AJD, including an analysis of the methodology by which the District delineated the lateral limits of the wetland and tributary identified in the AJD. The analysis is based upon materials submitted prior to the District's decision and were accepted as clarifying information in accordance with 33 CFR 331.7(f).

2. The District provided an electronic copy of the AR to the RO and the Appellant on March 20, 2023, per the U.S. Army Corps of Engineers Headquarters memorandum dated October 3, 2012, “Guidance for Preparation of the Administrative Record (AR) for the Regulatory Administrative Appeals Process”. The District did not provide a copy of the AR directly to the Agent. The AR is limited to information contained in the record prior to the date of the AJD and NAO/NAP form. In this case, that date is December 23, 2022.

3. In accordance with 33 CFR 331.7, on September 26, 2023, an informal appeal meeting was held in Salt Lake City, Utah, to clarify the Appellant’s reasons for appeal and the District’s rationale for its AJD. That meeting was attended by the RO, the Appellant, the Appellant’s Agent, and two District staff.

4. The informal appeal meeting was summarized and documented by the RO in a draft Memorandum for Record (MFR) that was provided to the Appellant and the District on October 24, 2023.

5. During opening statements of the informal appeal meeting, the District provided a printout of a presentation, which is included in Appendix B. The presentation included six photographs of the parcel taken by the District on May 24, 2023, along with photograph location maps for each photograph, a May 2023 Google Earth Pro aerial photograph of the parcel, and a June 2022 Google Earth Pro aerial photograph of the parcel. The District’s presentation also included three different aquatic resource maps of the parcel (Wetland Delineation Map from the KE Report; Delineation Detail map from Wetland Resources Inc.’s June 2017 Wetland and Waters of the U.S. Delineation, Evans Farmington Parcel, Farmington, Utah; and the aquatic resource map created by the District on December 13, 2022 which accompanied the December 23, 2022 AJD), two aquatic maps related to Department of Army Number SPK-2021-00416, and two aquatic maps related to Department of Army Number SPK-2021-00223. The June 2022 Google Earth Pro aerial photograph and the three aquatic resource maps of the parcel are considered clarifying information and therefore are include in the appeal record. The May 2023 Google Earth Pro aerial photograph of the parcel and the aquatic maps related to Department of Army Numbers SPK-2021-00416 and SPK-2021-00223 are dated after the District's decision; therefore,

these pages of the District's presentation constitute new information and are not considered in the evaluation.[10]

6. The District expressed its agreement with the contents of the MFR via email, dated October 30, 2023. Additionally, the District provided electronic versions of the presentation described in item 6 above and three pages from the AR which were cut off in its original transmittal (AR PDF page 68: Bates Page Number 065; AR PDF Page 69: Bates Page Number 066; and AR PDF Page 416: Bates Page Number 413).

7. The Appellant provided edits to the MFR via email on October 31, 2023.

8. The informal appeal meeting was summarized and documented by the RO in a final Memorandum for Record that was provided to the Appellant, Agent, and the District on November 7, 2023.

Evaluation of the Appellant's Reasons for Appeal, Findings, and Instructions to the District Engineer

REASON FOR APPEAL 1: THE DISTRICT'S WETLAND DELINEATION INCORRECTLY APPLIED THE CURRENT REGULATORY CRITERIA AND ASSOCIATED GUIDANCE FOR IDENTIFYING AND DELINEATING WETLANDS.

Finding: This reason for appeal has merit.

Discussion: In essence, the Appellant asserts that the District incorrectly applied the current regulatory criteria and associated guidance for delineating wetlands. The Appellant's RFA explains that it submitted a wetland delineation according to criteria and methods outlined by Corps' guidance and policy and faulted the District for not following the same guidance and policy.[11] The RFA documents that the Agent's "wetland delineation polygons were derived from field data analysis and linework provided by the licensed surveyor" and that the delineated wetlands were "depicted with as much precision as possible" on the figures submitted to the District.[12] In contrast, the Appellant asserts that the District's wetland delineation was "done using aerial photography" as opposed to the Agent's "collection of physical data at appropriate sampling points and subsequent determination of the true location of the wetland/upland boundary based upon those specific field data."[13] The Appellant maintains that it "is very difficult to do aerial delineations without substantial and corroborative ground-truthing" and says that the District performed no ground-truthing to inform its position that

[10] 33 CFR 331.7(f) states that "[n]either the appellant nor the Corps may present new information not already contained in the administrative record, but both parties may interpret, clarify or explain issues and information contained in the record."
[11] RFA page 13
[12] RFA page 3
[13] RFA page 12

wetlands exist despite contradictory evidence in the AR.[14]

The RFA includes both a visual and written analysis comparing the wetlands delineated by the District to those depicted in the KE Report. The Appellant's analysis indicates that the wetland areas mapped by the District do not include all wetland areas depicted in the KE Report, the District's wetlands are much more extensive than those depicted in the KE Report, several areas determined to be upland in the KE Report are included within the District's delineated wetland areas, and some areas shown as Shepards Creek on the District's map do not overlap the surveyed version of the Creek as depicted in the KE Report.[15] The Appellant concludes in the RFA that the District's "version of the wetland delineation was arbitrary and imprecise" to the extent that it resulted in finding of a more than fourfold increase in onsite wetland acreage by the District.[16] The Appellant also explains that the District's findings were all the more disturbing given that during its March 29, 2022 field visit with the District, the District did not indicate any objections or concerns with the wetland boundaries as presented in the KE Report.[17]

Overall, this reason for appeal is focused on evaluating the overarching wetland delineation methodology employed by the District. While the Appellant did not specifically call into question the overarching methodology by which the District delineated the jurisdictional wetland boundaries within the parcel, analysis of the overarching wetland delineation methodology employed by the District as well as the wetland delineation methodology both employed by and relied on by the District is necessary to properly evaluate the Appellant's overall grievances. Individual elements of the District's wetland determinations and delineation (e.g., the District's assumptions and application of certain wetland indicators) are discussed in later reasons for appeal. The following paragraphs describe the contents of the AR in light of this reason for appeal.

The District documented in its AJD dated December 16, 2022, that, "the aquatic resources within the study area extend past the boundaries described and depicted in the" KE Report.[18] Specifically, the AJD officially determined the presence of 9.01 acres of emergent wetlands within the parcel.[19] The AR indicates that the District created a revised aquatic resource delineation map based on "aquatic resource signatures documented on aerial records between 2011 and 2022", "review of historic remote sensing information, and "the procedure established in Chapter 5 of the Arid West Regional Supplement (AWRS) for problematic or difficult situations."[20] During the informal appeal meeting, the District clarified that it delineated/mapped the boundaries of jurisdictional wetlands within the parcel by digitizing polygons based on its observation of wetland hydrology signatures on aerial photography.

[14] RFA page 12
[15] RFA pages 1-13
[16] RFA page 13
[17] RFA page 2
[18] AR page 013
[19] AR pages 001 and 006
[20] AR page 013

In addition to utilizing remote sensing information, the District documented in its AJD that it conducted a field determination on August 21, 2021.[21] However, during the informal appeal meeting the District clarified that this date was an error and the correct date of its field determination with the Agent was March 29, 2022. The District explained during the informal appeal meeting that that it did not itself collect field-based geospatial, vegetation, soils, or hydrology data during its field determination and that its wetland boundaries were digitally generated in light of available remote sensing information (i.e., aerial photography).

Review of the AR confirms that the District completed the *U.S. Army Corps of Engineers Wetland Determination Data Sheet – Arid West Region* (ADS) for six SPs to support its AJD.[22] A review of the six ADSs indicates that the District's vegetation sampling data and findings were generally consistent with that documented in the KE Report.[23] However, the Districts ADSs differ from the Data Forms contained within the KE Report in the soils and hydrology data and findings sections. The District confirmed during the informal appeal meeting that data presented on its six ADSs included data extracted from the KE Report as well as supplemental information gained from remote resources such as aerial photography and soil survey data from the Natural Resources Conservation Service. The following paragraphs describe the laws, regulations, Executive Orders, and officially promulgated Corps policies or guidance that govern wetland delineation methodologies.

On a case-by case basis, the Corps determines the extent of geographic jurisdiction for the purpose of administering its regulatory program. One such mechanism for the Corps to determine its extent of geographic jurisdiction is with an AJD. An AJD is defined in Corps regulations at 33 CFR 331.2 as:

> …a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. Approved JDs are clearly designated appealable actions and will include a basis of JD with the document.

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[21] AR page 008

[22] AR pages 049-060; The District documented its wetland determinations in part using the automated *U.S. Army Corps of Engineers Wetland Determination Data Sheet – Arid West Region (*ENG Form 6116-1-SG, July 2018) (hereafter, ADS). The Agent documented its wetland determinations using the *WETLAND DETERMINATION DATA FORM – Arid West Region, Version 2.0* (hereafter, Data Form). The ADS automatically populates many of the field indicators of wetland hydrology, hydrophytic vegetation, and hydric soils whereas, the data form requires manual analysis and selection of the field indicators of wetland hydrology, hydrophytic vegetation, and hydric soils. Except for the list of Hydric Soil Indicators and Indicators for Problematic Hydric soils, these documents essentially collect the same information. The ADS provides a more recent list of Hydric Soil Indicators and Indicators for Problematic Hydric soils than the Data Form. For sake of differentiating wetland determination data collected by the District versus that which was collected by the Agent, "ADS" will be used to reference the wetland determination data provided by the District outside of its AJD and "Data Form" will be used to reference wetland determination data provided by the Agent.

[23] AR pages 049-060 and 246-388

The term “waters of the U.S.” as defined by regulations at 33 CFR 328.3(a), includes certain wetlands. Wetlands are defined in 33 CFR 328.3 as:

> …those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions…

For purposes of Section 404 of the Clean Water Act (CWA), the lateral limits of jurisdiction over non-tidal waters of the U.S. are as follows: in the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark; when adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands; or when the water of the United States consists only of wetlands, the jurisdiction extends to the limit of the wetland.[24] When an AJD identifying the limits of waters of the United States on a parcel containing wetlands is furnished to a requestor, a wetland delineation serves as the means for identifying the geographic limits of such wetlands.

To identify and delineate the boundaries of a wetland, Corps policy directs districts to use the *Corps of Engineers Wetlands Delineation Manual* (1987 Manual) and the applicable regional supplement.[25] The regional supplement applicable to this appeal is the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (AWRS).[26] According to these documents, the identification of wetlands is based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology, and requires documentation on a wetland determination data form. In general, in the absence of atypical situations or problem areas, the Section C of the 1987 Manual instructs users to select between two categories of wetland delineation methodologies considering the size and complexity of the area: routine and comprehensive.[27]

The routine wetland delineation methodology category, as described in Part IV, Section D of the 1987 Manual, includes three potential levels of investigation: Level 1 in which onsite inspection is unnecessary, Level 2 in which onsite inspection is necessary, and Level 3 which is a combination of Levels 1 and 2.[28] Where on-site inspection is deemed necessary, the 1987 Manual (Part IV, Section D, Subsection 2) describes one set of procedures for “Areas Equal To or Less Than 5 Acres in Size” and another for “Areas

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[24] 33 CFR 328.4(c)
[25] U.S. Army Corps of Engineers Headquarters. Memorandum: “Implementation of the 1987 Corps Wetland Delineation Manual” August 27, 1991; Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS (1987 Manual); U.S. Army Corps of Engineers. 2007. Jurisdictional Determination Form Instructional Guidebook. (JD Guidebook)
[26] U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. Version 2.0. ERDC/EL TR-08-28. Department of the Army, Vicksburg, MS. (AWRS)
[27] 1987 Manual
[28] 1987 Manual

Greater Than 5 Acres in Size".[29] For routine delineations of areas greater than five acres in size, the establishment of a baseline and transects and collection of data from SPs along each transect within each plant community is required. The wetland/non-wetland boundary is then identified by working along the transect, from a wetland SP toward a non-wetland SP and collecting intermediate SP until the wetland/non-wetland boundary can be delineated. A line is then drawn between transects, along the contour of the landscape, to connect these wetland/non-wetland SPs on each transect. It is not necessary to complete a wetland determination data form for all intermediate points, but a data form should be completed for the wetland/non-wetland boundary points. The 1987 Manual further states that the boundaries of each plant community type, the locations of each SP, and the wetland/non-wetland boundary should be marked on a base map.[30]

In contrast, the comprehensive wetland delineation methodology category, as described in Section E of the 1987 Manual, is used when a project area is very complex and/or when a determination requires rigorous documentation; this methodology may be employed in areas of any size. Section E also requires the establishment of transects and the collection of data at SPs along those transects to establish the wetland/non-wetland boundary. Section E states that the locations of each SP, and the wetland/non-wetland boundary should be marked on a base map, and the distance of the wetland/non-wetland boundary from a known observation point should be recorded. In addition, for comprehensive delineations, when there are significant elevation changes between the transects, the boundary should be surveyed to produce a map that separates the wetlands from non-wetlands.[31]

Part IV of the 1987 Manual states that significant flexibility has been incorporated into the methodology section explaining that "[a]pplication of methods presented in both Section D (Routine Determinations) and Section E (Comprehensive Determinations) may be tailored to meet site-specific requirements, especially with respect to sampling design."[32] It is important to note that the methodologies in Sections D and E were not modified by the AWRS.[33] Additionally, the AWRS does not mention requirements for mapping wetland boundaries or the placement of SPs.

In addition to providing wetland delineation methodologies, Part IV, Section B of the 1987 Manual describes several "potential sources of information that may be helpful in making a wetland determination".[34] One such data source is remote sensing information, including aerial photography. Aerial photography can provide a detailed view of an area such that "recent land use and other features (e.g., general type and areal extent of plant communities and degree of inundation of the area when the photography was taken) can be determined." Additionally, as described in the 1987

[29] 1987 Manual
[30] 1987 Manual
[31] 1987 Manual
[32] 1987 Manual
[33] AWRS
[34] 1987 Manual

Manual and AWRS, aerial photography provides useful information for determining the presence of hydrophytic vegetation, wetland hydrology, and/or hydric soils at specific SPs.[35]

When a District is establishing wetland/non-wetland boundaries, staff must follow an appropriate methodology in the 1987 Manual and relevant Regional Supplement and provide sufficient supporting documentation for the resulting wetland delineation. When confirming or evaluating a wetland delineation that has been provided to the District, District staff are not required to recreate an appellant or agent's delineation in whole. Rather, it is reasonable for staff to begin their review at the locations of SPs collected by the appellant or agent before determining the next steps. A District may reasonably rely on submitted wetland delineation data where the District has otherwise confirmed that the wetland delineation followed the appropriate delineation methodology, that the data provided is accurate, and that any conclusions drawn are sufficiently documented and supported. Regardless of whether a District is relying on, revising an existing, or performing a new wetland delineation, that delineation must be supported by sufficient documentation to demonstrate how the presence or absence of the three wetland criteria was determined and how the wetland/non-wetland boundary was identified, including documentation of the delineation methodology and sufficient data to support a final wetland delineation.

To begin the analysis of the wetland delineation methodology employed by the District, it is important to note that while the 1987 Manual does provide for an off-site wetland delineation methodology, the District's reliance on some of the field-derived data collected by the Agent, as evidenced by the District's own ADSs, supports the conclusion that the District determined that on-site inspection and data collection methods were necessary. Therefore, this analysis is predicated on the fact that wetland delineation methods requiring on-site inspection were determined to be appropriate by the District.

Review of the AR confirms that neither the District nor the Agent identified a specific wetland delineation methodology from the 1987 Manual that was followed when delineating the 54.7-acre parcel (i.e., a routine or comprehensive wetland delineation methodology). To expand, nowhere in the AR is there a description or depiction of established baseline(s) or transects by either the District or the Agent. During the informal appeal meeting, both the District and the Agent verbally confirmed they followed a routine wetland delineation methodology, but both admitted they did not establish a baseline or transects prior to or during the delineation. However, the District's own documentation states that it conducted its wetland delineation by digitizing wetland polygons based on its evaluation of remote data (i.e., LiDAR data and aerial photography).

The District is expected to exercise appropriate judgment and use appropriate information when making wetland determinations.[36] Documentation of the AR should

[35] 1987 Manual and AWRS
[36] Questions and Answers for RGL 16-01, #4.

allow for reasonably accurate replication of the determination at a future date.[37] While the 1987 Manual does allow for some flexibility in terms of tailoring routine and comprehensive delineation methods to meet site-specific requirements, nothing in the AR indicates how or why the District or Agent may have deviated from the typically prescribed sampling design and/or data collection procedures and makes replication of its determination impossible. Given the lack of documentation, the AR does not support the District's deviation from the typical wetland delineation methodologies for sites over five acres in size as described in the 1987 Manual.

Further, whether the District in whole or in part relied on the wetland delineation and supporting data provided by the Agent or whether the District established new wetland boundaries, the District erred as neither the wetland delineation submitted by the Agent, nor the wetland delineation conducted by the District relied on the field collection of data along transects in order to then delineate a wetland boundary between the confirmed wetland SPs along the transects. This conclusion is confirmed by the lack of documentation or depiction of a baseline and transects anywhere in the AR and verbal confirmation from both the District and the Agent during the informal appeal meeting that they did not establish a baseline and transects for delineating their respective wetland boundaries. Specific to the District's delineation of its wetland boundaries by digitizing wetland signatures observed on aerial photography, while the 1987 Manual and AWRS discuss the use of aerial photography for a number of reasons, such as to inform a wetland determination for a particular location, neither document mentions nor prescribes substituting field delineation of wetland boundaries with digitized wetland boundaries based on LiDAR data or wetland hydrology signatures observed on aerial photography.

As discussed above, the District failed to appropriately follow proper protocol to clearly demarcate and document the geographic reach of CWA jurisdiction. The District's wetland mapping and related conclusions were not supported by the AR. Whether the District properly employed routine versus comprehensive wetland delineation methodologies is less a question in this appeal as the District's wetland delineation methodology was not consistent with either. Districts have discretion to select which wetland delineation methodology from the 1987 Manual is most applicable to a particular wetland delineation based on site-specific characteristics; however, the District's failure to follow any methodology was an abuse of its discretion in this instance.

In sum, this reason for appeal has merit as the District did not employ wetland delineation methods for sites greater than five acres in size as described in the 1987 Manual and did not provide any documentation or support for deviating from official methods. Therefore, the District's wetland boundaries were not delineated consistent with the current regulatory criteria and associated guidance for identifying and delineating wetlands.

[37] U.S. Army Corps of Engineers. 2005. RGL 05-02. Expiration of Geographic Jurisdictional Determinations of Waters of the United States.

Action: The AJD is remanded back to the District. The District must ensure that wetland/non-wetland boundaries within the parcel are delineated using field data-collection methodologies for sites greater than five acres in size set forth in the 1987 Manual as well as the AWRS. The District's chosen wetland delineation methodology shall be sufficiently documented and supported in the record; any deviations from methodologies contained within the 1987 Manual and AWRS shall also be documented and supported in the record. Additionally, the basis for the District's AJD was that the 9.01-acres of wetland were adjacent (abutting) a relatively permanent tributary of a "Traditional Navigable Water". Upon remand, the District shall determine whether any of the delineated wetlands in the parcel meet the definition of adjacent wetlands as that term/those terms are currently defined in 33 CFR Part 328.3.

REASONS FOR APPEAL 2 AND 3: THE DISTRICT'S WETLAND DETERMINATION/DELINEATION LACKS SUFFICIENT RATIONALE AND THE DISTRICT'S WETLAND DETERMINATION/DELINEATION CONTRADICTS THE AR.

Finding: These reasons for appeal have merit.

Discussion: In essence, regarding these reasons for appeal, the Appellant claims that the District's wetland determination and delineation lack sufficient rationale and the District's wetland determination and delineation contradict the AR. The RFA states that, "[t]he Corps uncharacteristically dismissed [the Agent's] report, and then hugely expanded the wetland sizes and boundaries detailed within that report without providing [the Appellant] with sufficient rationale or explanation for its rebuke of [its Agent's] delineation."[38] To this point, the Appellant explains in the RFA that the District "totally ignored" the presence of upland vegetation at SPs 10, 11, 35, and 40.[39]

To these points, the Appellant explains in the RFA that the District's delineated wetland boundaries overlapped with four SPs that the Agent documented as upland (SPs 8, 10, 11, and 46); however, the District did not provide any data confirming that all three wetland criteria were met at these SPs.[40] Additionally, the Appellant states in the RFA that the District's wetland boundaries overlapped with seven SPs that the Agent documented as upland (SPs 12, 14, 26, 33, 34, 35, and 40); however, the District provided insufficient documentation and data confirming that all three wetland criteria were met at these SPs.[41] The Appellant also claims in the RFA that the District's wetland boundaries overlapped with six SPs that the Agent documented as upland (SPs 13, 15, 25, 27, 47, and 48); however, the District's inclusion of these areas within its delineated wetland boundaries was based upon erroneous and unsupported conclusions.[42] The Appellant also alleges that the District's wetland boundaries

[38] RFA page 1
[39] RFA page 12
[40] RFA pages 4, 5, and 11
[41] RFA pages 6-11
[42] RFA pages 6-9 and 11-12

excluded one SP that the Agent documented as wetland.[43] The RFA includes both a visual and written analysis comparing the wetlands delineated by the District against those depicted in the KE Report to support these claims. A review of the AR in light of these reasons for appeal follows.

Examination of the AR confirms that the District cited the KE Report in Section IV.A. of its AJD Form and the District also included a copy of the KE Report in the AR.[44] The District included six ADSs in the AR that it completed to support its AJD and wetland delineation.[45] A review of the District's six ADSs indicates that the District's vegetation sampling data and findings were largely consistent with that documented in the KE Report.[46] However, the soils and hydrology data and findings sections of the Districts ADSs differ from those contained within the KE Report.[47] The District confirmed during the informal appeal meeting that the data presented in its six ADSs included data extracted from the KE Report as well as supplemental information gained from remote resources such as aerial photography and soil survey data from the Natural Resources Conservation Service. The District's AJD included additional discussion of how each of its six SPs were determined to meet wetland criteria (i.e., application of problematic hydric soils and wetland hydrology procedures from Chapter 5 of the AWRS and wetland hydrology findings).[48]

The AR also indicates that the District's delineated wetland boundaries overlapped with at least 13 SPs that the Agent documented as upland; the District did not provide any data confirming that all three wetland criteria were met at any of these SPs.[49] Similarly, the AR confirms that the District's delineated wetland boundaries excluded some areas that were delineated as wetland by the Agent; data confirming these areas as upland was not included anywhere in the AR.

In addition, review of the AR reveals that the District included four areas (SPs 7, 30, 31, and 39) within its delineated wetland boundaries that the Agent determined to be wetland based on the presence of only two of three wetland parameters coupled with the application of "best professional judgement" to presume the third wetland criteria.[50] There is no documentation in the AR as to why the District included these areas within its delineated wetland boundaries despite only meeting two of the three required wetland parameters. A review of the relevant laws, regulations, Executive Orders, and

[43] RFA page 4
[44] AR page 012
[45] AR pages 049-060
[46] AR pages 049-060, 282-283, 288-289, 318-319, 324-325, 384-385, and 387-388
[47] AR pages 049-060, 282-283, 288-289, 318-319, 324-325, 384-385, and 387-388
[48] AR pages 13-14
[49] AR pages 267-373; The Agent's upland Data Forms for SPs 8, 10, 14, 19, 26, 28, 29, 32, 33, 34, 35, 40, and 42, from the KE Report, were all clearly included within the District's delineated wetland boundaries. The Agent's upland SPs 11, 12, and 43 from the KE Report are in very close proximity to the District's delineated wetland boundaries; however, given the scale of mapping provided in the AR, it cannot be conclusively determined whether the District included these upland SPs within their delineated wetland boundary.
[50] AR pages 265, 334, 337, and 361

officially promulgated Corps policies and guidance in light of these reasons for appeal follows next.

The Corps regulations at 33 CFR 331.2 state that a basis of a jurisdictional determination, a summary of the indicators that support a Corps AJD:

> …can include, but are not limited to: indicators of wetland hydrology, hydric soils, and hydrophytic plant communities; indicators of ordinary high water marks, high tide lines, or mean high water marks; indicators of adjacency to navigable or interstate waters; indicators that the wetland or waterbody is of part of a tributary system; or indicators of linkages between isolated water bodies and interstate or foreign commerce.

In documenting that a wetland meets the definition of a water of the U.S., the *U.S. Army Corps of Engineers Jurisdictional Form Instructional Guidebook* (JD Guidebook) requires documentation that a wetland meets the three-parameter test contained in the agency's regulatory definition of wetlands; reference is also made to the protocol identified in the 1987 Manual and Regional Supplements.[51] Additional documentation and processing guidance for AJDs is provided in Regulatory Guidance Letter (RGL) 16-01. Importantly, the Questions and Answers for RGL 16-01 explain that districts "should ensure the documentation used to support an AJD addresses any objections from an AJD requestors and/or consultants and that districts should clearly document the reasons for reaching conclusions contrary to that which have been made by an AJD requestor and/or consultant."[52]

The 2008 Corps and EPA guidance memorandum, "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States" (2008 Guidance) further clarifies that:

> Corps districts and EPA regions will ensure that the information in the record adequately supports any jurisdictional determination. The record shall, to the maximum extent practicable, explain the rationale for the determination, disclose the data and information relied upon, and, if applicable, explain what data or information received greater or lesser weight, and what professional judgment or assumptions were used in reaching the determination.[53]

The District's analysis did not comply with the 2008 Guidance because it did not adequately explain the rationale for the determination, disclose the data and information relied upon, nor explain what data or information received greater or lesser weight, and what professional judgment or assumptions were used in reaching the determination.

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[51] U.S. Army Corps of Engineers. 2007.*Jurisdictional Determination Form Instructional Guidebook*.
[52] U.S. Army Corps of Engineers. 2016. *Questions and Answers for RGL 16-01, #8*.
[53] U.S. Environmental Protection Agency, and U.S. Department of the Army. 2008. *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States*. Washington, D.C.

Additionally, the *Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program* recommends that districts, "…include all documents and materials directly or indirectly considered by the decision-maker" within the AR.[54] As explained beneath the first reason for appeal, staff are expected to exercise appropriate judgment and use appropriate information when making wetland determinations.[55] Documentation of the AR should allow for reasonably accurate replication of the determination at a future date.[56] An evaluation of the AR in light of these reasons for appeal and relevant laws, regulations, Executive Orders, and officially promulgated Corps policies and guidance follows next.

While the District did include six ADSs in the AR to support its wetland delineation and its AJD, those six ADSs only addressed six of the 48 Data Forms presented in the KE Report.[57] The District provided no documentation or rationale to support including at least 13 areas that the Agent documented as upland and four areas that the Agent erroneously documented as meeting wetland criteria within its wetland boundary.[58] The District also excluded several areas from its jurisdictional boundaries that the Agent determined to meet wetland criteria without any supporting documentation. This equates to District's wetland delineation and ultimately its AJD contradicting the contents of the AR.

As described in the previous paragraphs, the District failed to explain why it reached conclusions contrary to that which were presented in the KE Report. In accepting some information presented in the KE Report but rejecting other information without any justification, the District neglected to document what data or information received greater or lesser weight in its decision. The District also did not provide sufficient documentation that its jurisdictional wetland met the three-parameter test contained in the Corps' regulatory definition of wetland. To these points, the District did not fully follow the guidance in RGL 16-01, RGL 05-02, the JD Guidebook, and the 2008 Guidance. In the absence of sufficient information to document the District's conclusion and because there is conflicting information provided by the Appellant in the AR, the District's wetland determination related to this reason for appeal was not supported by the contents of the AR and, therefore, this reason for appeal has merit.

Action: The District must reconsider its AJD, ensuring that the wetland/non-wetland boundary is identified and documented consistent with the 1987 Manual and the AWRS. The District shall ensure the documentation used to support its revised wetland

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[54] U.S. Army Corps of Engineers. 2009. *Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program:* Section 2: File Maintenance. The *Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program* provides a summary of current policies and procedures and should be used as day-to-day informal guidance by regulatory project managers as they implement the program.
[55] Questions and Answers for RGL 16-01, #4.
[56] U.S. Army Corps of Engineers. 2005. RGL 05-02. Expiration of Geographic Jurisdictional Determinations of Waters of the United States.
[57] AR pages 049-060
[58] AR pages 265, 334, 337, and 361

delineation and AJD addresses any objections from the Appellant/Agent, explains what data or information received greater or lesser weight, and should clearly document the reasons for reaching any conclusions contrary to that which have been made by Appellant/Agent. The AR should be supplemented accordingly to document the additional factual data considered in this analysis and reflect the rationale of the District's reconsidered decision.

REASON FOR APPEAL 4: The District did not properly consider the effects of irrigation on vegetation when conducting its wetland delineation.

Finding: This reason for appeal has merit.

Discussion: In essence, the Appellant claims in this reason for appeal that the District did not properly consider the effects of irrigation on vegetation when conducting its wetland delineation. The RFA states that in some cases "[t]he presence of upland vegetation was totally ignored".[59] At other SPs, the RFA notes that upland vegetation species are "pioneering into" the area and increasing in frequency due to the cessation of irrigation.[60] Similarly, for other SPs, the RFA explains that wetland vegetation species "are hold-overs from when the site was actively irrigated" and "are likely being reduced in frequency due to the site becoming drier with the cessation of artificial irrigation."[61] At other SPs, the RFA states that "[w]etland species were present, which is common in formerly irrigated areas that have transitioned to uplands" and that certain wetland vegetation species "can persist for decades in uplands after the cessation of artificial irrigation."[62] A review of the AR in light of this reason for appeal follows.

The only mention of irrigation of the parcel in the District's documentation is in its discussion of tributary flow in Section III.B.1.c. of its AJD stating, "Shepard Creek maintains above-surface baseflow throughout the year with punctuated high water levels in response to storm events and artificial irrigation."[63] The six ADSs completed by the District in support of its wetland delineation and AJD indicate that vegetation was not significantly disturbed or naturally problematic.[64] However, the ADSs do state that normal circumstances were not present due to drought and drier than normal conditions.

Contained within the AR was a copy of the District's 2017 AJD for the parcel and the associated June 2017 *Wetland and Waters of the U.S. Delineation, Evans Farmington Parcel, Farmington, Utah* report by Wetland Resources (2017 Report).[65] Neither the District's 2017 AJD nor the 2017 Report make any mention of irrigation. The data

[59] RFA page 12
[60] RFA pages 8, 9
[61] RFA pages 6, 7, 10, and 11
[62] RFA page 5
[63] AR page 008
[64] Some wetlands can be difficult to identify because wetland indicators may be missing due to recent disturbances or natural processes. Methods to assess disturbed conditions are discussed in Section F of the 1987 Manual; methods to assess problematic situations are discussed in Chapter 5 of the AWRS.
[65] AR pages 70-158

sheets contained within the 2017 Report document the presence of normal circumstances and indicate that vegetation was not significantly disturbed or naturally problematic.[66]

The KE Report, also contained within the AR, documented the presence of normal circumstances and stated that vegetation was not significantly disturbed or naturally problematic on all Data Forms. The KE Report stated that the parcel "has historically been irrigated and used for pasture for cattle. Artificial irrigation was turned off beginning around 2019 in preparation for future development."[67] The KE Report also stated that:

> …much of the site's hydrology has been actively manipulated over decades using artificial irrigation. [Shepard] Creek runs through the northern end of the property, and has provided a ready supply of natural hydrology and irrigation water. Irrigation water was kept off most of the site for the month prior to [the Agent's] arrival to facilitate determination of actual wetlands.[68]

In the hydrology remarks on the Data Form for SP 19 in the KE Report, the Agent noted, "[a]ll irrigation withheld > 1 year; bone dry to bottom of soil pit."[69] Additionally, throughout the Data Forms and photograph captions contained in the KE Report are various vegetation remarks including that "[u]pland species are moving in after cessation of irrigation", "upland species were moving into the community", and "[t]he vegetative community is shifting to upland after the cessation of irrigation".[70] In terms of the overall vegetation community on the parcel, the KE Report noted that "[t]hree of the four most commonly appearing species (Table 2) at sample sites were FACW species: Baltic Rush (*Juncus balticus*), Reed Canarygrass (*Phalaris arundinacea*) and Clustered Field Sedge (*Carex praegracilis*), which is not particularly surprising considering the site's history of heavy artificial irrigation for the production of cattle pasture."[71] The following paragraphs describe any laws, regulations, Executive Orders, or officially promulgated Corps policy or guidance documents relevant to this Reason for Appeal.

The 1987 Manual and AWRS both discuss and provide procedures for wetlands determinations and delineations on lands subject to irrigation, which are described further below. In addition to procedures in the 1987 Manual and AWRS, South Pacific Division has established *Wetlands Determination and Delineation Procedures for Irrigated Land* (12510-SPD) for the Regulatory Program. Section 7.1 of 12510-SPD which explains that:

> In accordance with the 1986 preamble to 33 CFR Part 328.3 (51 FR 41217), the Corps generally does not consider artificially irrigated areas which would revert to

[66] AR pages 98-143
[67] AR page 228. There is inconsistency in the KE Report regarding when irrigation of the parcel ceased. This inconsistency is addressed later in this reason for appeal.
[68] AR page 229
[69] AR page 301
[70] AR pages 300, 306, 372, 374
[71] AR page 228

> uplands if the irrigation ceased to be waters of the United States under Section 404 of the Clean Water Act. To determine whether irrigated land, or a portion of irrigation land, is a wetland under 33 CFR 328.3(b), the Corps must first determine whether the irrigated land, under normal circumstances, exhibits the three factors for wetland identification and delineation provided in the 1987 Manual, or the applicable criteria in Chapter 5 of the appropriate regional supplement. Conducting a wetland determination or delineation in accordance with the 1987 manual and the indicators, guidance, and procedures provided in the appropriate regional supplement is critical for determining the extent and location of wetlands on the site. Due to the complexity of these circumstances in irrigated areas, and the need for rigorous documentation, a comprehensive determination, as described in the 1987 Manual, will generally be necessary unless the wetland boundaries are obvious.[72]

Part IV, Section F of the 1987 Manual describes “methods for delineating wetlands in which the vegetation, soils, and/or hydrology have been altered by recent human activities or natural events”.[73] These methods require consideration of whether normal circumstances persist within an area, which is "the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed." A determination of whether normal circumstances exist involves both “an evaluation of the extent and relative permanence of the physical alteration of wetlands hydrology and hydrophytic vegetation and consideration of the purpose and cause of the physical alterations to hydrology and vegetation."[74]

Part IV of the 1987 Manual describes certain atypical situations, including “man-induced wetlands” in Subsection 4 of Section F.[75] This subsection describes a man-induced wetland as an area that has developed at least some characteristics of naturally occurring wetlands due to either intentional or incidental human activities, including irrigated wetlands. Subsection 4 also indicates that some man-induced wetlands may be subject to Section 404 of the Clean Water Act. Subsection 4 states that, in virtually all cases, man-induced wetlands involve a significant change in the hydrologic regime, which may either increase or decrease the wetness of the area. Subsection 4 indicates that delineators should determine whether the area represents a potential man-induced wetland, by considering whether a recent man-induced change in hydrology occurred that caused the area to become significantly wetter and whether the area has been subjected to long-term irrigation practices. In Step 1 of Subsection 4, if an “area represents a potential man-induced wetland” and the area has been “subjected to long-term irrigation practices”, the user is directed to “document the approximate time during which the change in hydrology occurred”.[76] If the user determined that the area does not “represent a potential man-induced wetland”, the user is directed to use either

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[72] U.S. Army Corps of Engineers, South Pacific Division. October 31, 2012. *12510-SPD South Pacific Division Regulatory Program, Wetlands Determination and Delineation for Irrigated Lands.*
[73] 1987 Manual
[74] 1987 Manual
[75] 1987 Manual
[76] 1987 Manual

routine or comprehensive wetland delineation methods. Step 2 of subsection four requires the assessment of whether a permit will be needed if the area is determined to be wetland and if a permit will be needed, the user is directed to Step 3. Step 3 of Subsection 4 directs the user to "[a]pply procedures described in Section D (routine determinations) or Section E (comprehensive determinations) to the area".[77] Step 4 of Subsection 4 provides considerations for making a wetland determination based on the findings in Step 3, stating:

> …[w]hen wetland indicators of all three parameters are found, the area is a wetland. When indicators of hydrophytic vegetation and wetland hydrology are found *and* there is documented evidence that the change in hydrology occurred so recently that soils could not have developed hydric characteristics, the area is a wetland. In such cases, it is assumed that the soils are functioning as hydric soils.[78]

This subsection concludes with a caution that states that if hydrophytic vegetation is being maintained only because of man-induced wetland hydrology that would no longer exist if the activity (e.g., irrigation) were to be terminated, the area should not be considered a wetland.

The Section 1 of the AWRS describes irrigated wetlands in the introduction stating:

> Irrigation has been practiced in some portions of the Arid West for more than 125 years and has changed the natural hydrologic regime over large areas. When practiced over many years, the application of irrigation water can alter soil characteristics (e.g., color, redox features, and salt content) and vegetation of affected areas. Long-term irrigation has created new wetlands and altered existing wetlands throughout the region.
>
> Common types of irrigation include flood, sprinkler, and drip. Flood irrigation is the most common form in the Arid West and is often practiced on a very large scale. Streams are diverted by means of dams, weirs, or other structures into man-made delivery channels that convey the water by gravity to where it is needed. Excess water flows off the irrigated area and collects in a series of drainage or wastewater ditches to be used by down- stream irrigators or returned to a tributary. Sprinkler and drip systems produce considerably less runoff than flood irrigation systems.
>
> Irrigation augments the natural hydrology of the affected areas in both intended and unintended ways, through leakage of water from delivery channels and ditches, direct application of irrigation water to pastures and fields, and overflow of unused or excess irrigation water into other areas down gradient. The added water, over time, may create new wetlands or augment and enlarge previously existing wetlands. For example, seep wet-

[77] 1987 Manual
[78] 1987 Manual

> lands may develop in former uplands due to leakage from irrigation canals and ditches; prolonged flooding and soil saturation may induce the formation of redoximorphic features and establishment of hydrophytic vegetation in irrigated pastures; and the accumulation of excess irrigation water in basins and swales may augment previously existing wetlands, raising their water tables and expanding their margins. On the other hand, groundwater withdrawal for irrigation purposes may also depress water tables in the vicinity of a well. Indicators given in this Regional Supplement can be used to identify all wetlands, whether natural or created artificially by human activity. The appropriate Corps of Engineers District Regulatory Office should be consulted when it is necessary to distinguish between naturally occurring and irrigation-induced wetlands for Clean Water Act regulatory purposes.[79]

Chapter 5 of the AWRS describes a number of "Difficult Wetland Situations in the Arid West" in which "[s]ome wetlands can be difficult to identify because wetland indicators may be missing due to natural processes or recent disturbances."[80] One such difficult wetland situation addressed in Chapter 5 of the AWRS is "problematic hydrophytic vegetation" resulting from plant community management; irrigated pastures are listed as an example of managed plant communities.[81]

Where indicators of hydric soil and wetland hydrology are present, but no indicators of hydrophytic vegetation are evident, Chapter 5 of the AWRS recommends "a combination of observations made in the field and/or supplemental information from the scientific literature and other sources."[82] Within the procedures for problematic hydrophytic vegetation, are procedures specific to managed plant communities, including irrigated pasturelands. Management of plant communities "can result in elimination of certain species and their replacement with other species, changes in abundance of certain plants, and shifts in dominant species, possibly influencing a hydrophytic vegetation determination." [83] Where "the natural vegetation has been altered through management to such an extent that a hydrophytic vegetation determination may be unreliable", Chapter 5 of the AWRS recommends specific procedures.[84]

In addition to the procedures for identifying and delineation wetlands on lands subject to irrigation in the 1987 Manual and AWRS, 12510-SPD provides "guidance for determining whether, and to what extent, wetlands occurring on irrigated land would persist in the absence of irrigation and meet the definition of wetlands".[85] 12510-SPD explains that "discontinuing the application of irrigation water is usually the best method for determining whether or not wetland hydrology would be present under normal

[79] AWRS
[80] AWRS
[81] AWRS
[82] AWRS
[83] AWRS
[84] AWRS
[85] 12510-SPD

circumstances" as "[s]ome of the technical methods typically employed for wetland delineations may not be useful for irrigated lands."[86] Specific to vegetation communities, 12510-SPD explains that "[h]ydrophytic plant species inhabiting a site that was recently irrigated may be present because of opportunistic conditions for establishment and growth, not because they are indicative of current wetland conditions, under normal circumstances."[87]

In general, 12510-SPD discusses two approaches- the cessation of irrigation "for a sufficient period of time" or the continuation of irrigation. To provide "the most direct and conclusive approach to determining if irrigated lands meet the definition of a wetland under the 1987 Manual and appropriate regional supplement", "cessation of irrigation for at least two growing seasons" may be required, "depending on whether precipitation during those growing seasons falls within normal ranges according to information derived from WETS tables".[88] Under this option to cease irrigation in 12510-SPD, "data is gathered by conducting an on-site wetland determination and delineation of the property, in accordance with the 1987 Manual, the appropriate regional supplement, and local delineation guidance or standards after irrigation has ceased for at least two growing seasons, and the site, including vegetation, has not been recently manipulated (e.g., ditched, disced, plowed, or planted). Naturally occurring vegetation (not planted vegetation) must be used and documented in the wetland determination or delineation as it more accurately represents the normal circumstances in the area absent irrigation."[89] If irrigation is continued on the parcel, 12510-SPD explains that "[c]ontinuing irrigation increases the likelihood of making a wetland determination based on a false positive for wetland hydrology due to effects of irrigation" and that "District Regulatory personnel will conduct and/or verify a wetland determination or delineation of the property in accordance with the comprehensive determination method described in the 1987 Manual, and appropriate regional supplement, and local delineation guidance or standards."[90] The following paragraphs describe the contents of the AR in light of this Reason for Appeal as well as the laws, regulations, Executive Orders, or officially promulgated Corps policy or guidance documents relevant to this Reason for Appeal.

Overall, the Districts AJD and associated ADSs make no mention of irrigation in relation to its wetland determination and delineation. The six ADSs that accompanied the District AJD all indicate that vegetation was not significantly disturbed or naturally problematic. Additionally, the ADSs all indicate that normal circumstances were not present; however, the remarks on the ADSs clarified that the lack of normal circumstances was due to drought and climatic conditions being drier than normal. In sum, there is no evidence in the AR that suggests or confirms that the District considered the effects of irrigation on vegetation when completing its wetland determination and delineation. During the informal appeal meeting, both the Agent and

[86] 12510-SPD
[87] 12510-SPD
[88] 12510-SPD, Sections 7.2.1.1 and 7.2.1.2
[89] 12510-SPD, Section 7.2.1.2
[90] 12510-SPD, Section 7.2.2.1

the District confirmed that when conducting their respective wetland determinations/ delineations, the effects of irrigation on vegetation communities were not considered as irrigation had ceased within the parcel several years prior.

There is some contradictory information in the KE Report regarding when irrigation of the parcel ceased (i.e., one section says irrigation "was turned off beginning around 2019", a second section says that "[i]rrigation water was kept off most of the site for the month prior to KE's arrival", and one Data Form remarks "[a]ll irrigation withheld > 1 year".[91] During the informal appeal meeting, the Appellant clarified that irrigation of the parcel ceased in 2018; however, this date was not presented anywhere in the AR. In light of the information contained in the AR, the information that was available to the District at the time it identified and delineated the wetlands on the parcel, and the most consistent dates presented in the KE Report, this analysis will be predicated on the fact that irrigation of the parcel ceased sometime in 2019, despite information to the contrary being presented during the informal appeal meeting.

Based on information contained in the AR, at least two years/growing seasons had lapsed between the time the parcel was last irrigated (2019), when the District performed its field visit to the parcel on March 29, 2022, and when the District issued its AJD on December 23, 2022. As discussed in other reasons for appeal, the District relied entirely on vegetation data presented in the KE Report; the District itself did not collect any vegetation data. The vegetation data presented in the KE Report was collected in October and November of 2020, one year/growing season after the cessation of irrigation on the parcel.

Neither the 1987 Manual nor the AWRS provide a post-irrigation timeframe after which alternate wetland delineation procedures no longer apply. Rather, the 1987 Manual offers an alternate wetland delineation methodology when "wetland indicators of one or more parameters are absent" and when a determination has already been made using routine or comprehensive procedures "that positive indicators of hydrophytic vegetation, hydric soils, and/or wetland hydrology could not be found due to effects of recent human activities or natural events determination/delineation procedures".[92] The AWRS offers a recommended procedure "if the natural vegetation has been altered through management to such an extent that a hydrophytic vegetation determination may be unreliable."[93] If the District did not determine that wetland parameters were absent; found that positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology were present; and if the District did not find that the hydrophytic vegetation determination was unreliable, the District not considering the effects of irrigation on vegetation communities was not unreasonable in light of the 1987 Manual and AWRS. In this case, the District reached the same conclusion as the Appellant's own Agent and did not consider the effects of irrigation on the vegetation communities on the parcel. Accordingly, in light of considerations set forth in the 1987 Manual and AWRS, the District's lack of consideration the effects of irrigation on vegetation communities may

[91] AR pages 228, 229, and 301
[92] 1987 Manual, Section F(71) p 74 and Section F(71)(c) p74
[93] AWRS, Chapter 5, Problematic hydrophytic vegetation

have been a reasonable conclusion. However, given the history of irrigation of the parcel, it would have been both appropriate and good practice for the District to document how and why it reached its conclusion not to consider the effects of irrigation on its wetland determination and delineation. This is particularly important since the KE Report, which mentioned the history of irrigation of the parcel in several places, was partially relied upon by the District in making its wetland determination, wetland delineation, and its AJD, and because the District itself acknowledged that the parcel was irrigated by mentioning irrigation water contributing to the flow of Shepard Creek in its AJD.

In contrast, the District did not follow the procedures set for delineating irrigated wetlands set forth in 12510-SPD. As irrigation of the parcel ceased prior the District receiving the request for an AJD for the parcel, procedures from 12510-SPD related to wetland determinations/delineations with continued irrigation are not considered herein. Section 7.2.1.2 of 12510-SPD states that a wetland determination or delineation:

> …may require the cessation of irrigation for at least two growing seasons, depending on whether precipitation during those growing seasons falls within normal ranges according to information derived from WETS tables. If normal precipitation does not occur during the initial evaluation period because of drought or extraordinarily wet weather conditions, longer non-irrigated hydrology monitoring periods will be necessary.[94]

The District largely relied on field data supplied by the Agent in the KE Report which was collected during a severe drought as per the Palmer Drought Severity index, during the wet season as per the WebWIMP H2O Balance, and during drier than normal antecedent precipitation conditions as per the Corps' Antecedent Precipitation Tool (APT).[95] As required by Section 7.2.1.3 of 12510-SPD, the data provided in the KE Report was not "gathered by conducting an on-site wetland determination and delineation of the property, in accordance with the 1987 Manual, the appropriate regional supplement, and local delineation guidance or standards after irrigation ha[d] ceased for at least two growing seasons".[96] Additionally, Section 7.2.1.2 of 12510-SPD states "[i]f normal precipitation does not occur during the initial evaluation period because of drought or extraordinarily wet weather conditions, longer non-irrigated hydrology monitoring periods will be necessary."[97] Acknowledging that the District did supplement some of the data provided in the KE Report, specific to this Reason for Appeal, it entirely relied on the vegetation data provided in the KE Report to make its determination of whether a hydrophytic wetland vegetation community was present at each of its six SPs. That the District relied on vegetation data that was collected during a severe drought, during drier than normal antecedent precipitation conditions, and that was also collected only one growing season/year after the cessation of irrigation was not in conformance with or in the spirit of 12510-SPD. Similarly, the District's field visit to

[94] 12510-SPD, Section 7.2.1.2
[95] AR page 066
[96] 12510-SPD
[97] 12510-SPD

the parcel on March 29, 2022, occurred during a mild drought as per the Palmer Drought Severity Index, during the wet season as per the WebWIMPH2O Balance, and during drier than normal conditions as per the Corps' APT.[98] Any data or observations made by the District during its field visit were made during drier-than-normal antecedent precipitation conditions. Additionally, consistent with the evaluation in the preceding paragraph, the District also failed to provide any, let alone "rigorous documentation", generally necessary "[d]ue to the complexity of these circumstances in irrigated areas".[99]

As described in the previous paragraphs, the District did not properly consider the effects of irrigation, or other relevant factors, on vegetation when conducting its wetland delineation. The District accepted some information presented in the KE Report but rejected other information without any justification. The District failed to explain why it reached conclusions contrary to that which were presented in the KE Report. In the absence of sufficient information to document the District's conclusion and because there is conflicting information provided by the Appellant in the AR, the District's wetland determination is unfounded. Therefore, this reason for appeal has merit.

Action: The AJD is remanded back to the District for reconsideration. The District shall reconsider the effects of irrigation on vegetation communities on the parcel and provide sufficient documentation regarding any facts, assumptions made, and resulting conclusions. Specifically, the District should reconsider and document whether and why the procedures related to Man-Induced Wetlands in the 1987 Manual, procedures related to Managed Plant Communities in Chapter 5 of the AWRS, and procedures set forth in 12510-SPD apply. Should the District apply any of the aforementioned procedures upon remand, the District should document how and why it applied said procedures, any conclusions drawn therefrom, and the rationale for reaching any conclusions contrary to that which was presented by the Appellant or its Agent.

REASONS FOR APPEAL 5 AND 6: THE DISTRICT INCORRECTLY APPLIED THE B7 INUNDATION VISIBLE ON AERIAL IMAGERY WETLAND HYDROLOGY INDICATOR AND THE DISTRICT DID NOT PROPERLY CONSIDER THE EFFECTS OF IRRIGATION ON HYDROLOGY WHEN CONDUCTING ITS WETLAND DELINEATION.

Finding: These reasons for Appeal have merit.

Discussion: The Appellant asserts in the RFA that the District incorrectly applied the B7 Inundation Visible on Aerial Imagery wetland hydrology indicator (B7 Indicator) to SPs 12, 13, 14, 25, 26, 33, 34, 35, 40, 47, and 48.[100] More broadly, the Appellant claims that the District did not properly consider the effects of irrigation on hydrology when conducting its wetland determination and delineation.

[98] RFA pages
[99] 12510-SPD
[100] RFA pages 6-12

The RFA states that the District's "liberal and unfounded interpretation of hydrology using aerial photographs was not careful and evidently relied on guessing the locations of sample points."[101] To support the RFA, the Agent performed "analysis of the appearance of inundation/obvious saturation at each point" using "all the available photographs over nine years on Google Earth Pro".[102] The RFA notes that a series of aerial photographs must be utilized:

> [s]ince the wetland hydrology standard requires a minimum of 14 or more consecutive days of flooding, surface saturation or ponding, or a water table 12 in. (30 cm) or less below the soil surface during the growing season at a minimum frequency of 5 years in 10 (50 percent or higher probability).[103]

Additionally, the Appellant cautions in the RFA that:

> [c]are must be taken that abundant, growing vegetation is not mistaken for wetness. Saturation below the surface, even if it is shallow, simply cannot be seen on aerial photography, much less be reliably informative about the level of saturation for a minimum of 14 consecutive days during the growing season.[104]

The Agent identified "[p]*ossible* surface saturation or ponding/surface water… from aerial photographs by comparing colors and textures immediately around a sample point with adjacent areas as well as the entire study site including surrounding areas."[105] Where "potential surface saturation or ponding was" questionable, the RFA notes that the Agent "*leaned toward it being present*".[106] The RFA included two tables titled, "Table 1. Hydrological Appearance by Date of Individual Sampling Points Using Google Earth Aerial Imagery" and "Table 2. Hydrological Conditions at Time of Google Earth Aerial Photograph."[107]

Specific to SP 13, the RFA states that there are cautions and user notes in the AWRS regarding the B7 indicator "because surface water may be present on a non-wetland due to unusual precipitation and river stages, etc." noting that "[c]learly, irrigation should also be a consideration." For SP 13, the RFA explained there was "*probable* saturation or inundation" on "three out of nine years of available photography" which is less than the 50% or higher probability required for the B7 Indicator. However, the RFA attributed "much of the inundation appearing in those photographs [a]s likely due to artificial irrigation."[108] The RFA concluded that the B7 Indicator was not met for SP 13. Similarly, the RFA concluded that for SPs 47 and 48, "*possible* surface saturation or inundation on

[101] RFA page 12
[102] RFA page 4
[103] RFA page 4
[104] RFA page 4
[105] RFA page 4
[106] RFA page 4
[107] RFA pages 20-23
[108] RFA page 7

aerial imagery" was observed in only two of nine years which does not satisfy the B7 Indicator.[109]

For SP 25, the RFA explains that the B7 Indicator was not met but concedes that the C9 "Saturation Visible on Aerial Imagery" wetland hydrology indicator has been met. However, SP 25 is located in "a concave, lower elevation bowl that has collected irrigation water over the year" and "[t]he most recent (6/20/2022) photograph does not show Sample Point #25 as being "wet", probably due to the cessation of irrigation". Ultimately, the RFA concludes that SP 25 "is an upland due to a lack of hydric soils" and notes the expectation that the vegetative community will "change drastically in the coming years due to a lack of water."[110]

Lastly, in reference to this Reason or Appeal, the RFA notes that the District did not provide any assessment of the data provided in the KE Report for SPs 12, 14, 26, 33, 34, 35, and 40, beyond stating that these SPs met the B7 Indicator on the District's ADS for SP 13. The re-evaluation in the RFA of whether SPs 12, 14, 26, 33, 34, 35, and 40, met the B7 Indicator concluded that none of these SPs met the B7 wetland hydrology indicator.[111]

Overall, the Districts AJD and associated ADSs make no mention of irrigation in relation to its wetland determination and delineation. The six ADSs that accompanied the District AJD all indicate that hydrology was not significantly disturbed or naturally problematic. Additionally, the six ADSs all indicate that normal circumstances were not present; however, the remarks on the ADSs clarified that the lack of normal circumstances was due to drought and climatic conditions being drier than normal.[112]

In Section IV.B of the District's AJD, the District stated it reevaluated the presence of hydrology indicators for sample points 11, 12, 13, 14, 25, 26, 31, 33, 34, 35, 46, 47, and 48.[113] As a result of this reevaluation, the District stated that, "the hydrology parameter was met in sample points 13, 25, 47, and 48 based on a review of historic aerial photographs of the site showing that the B7 [I]ndicator (inundation visible on aerial imagery) was met."[114] Similarly, the District's ADSs for SP 13, 25, 47, and 48 all concluded that the B7 Indicator was met, remarking:

> [t]he hydrology parameter was [reevaluated] by Corps staff for sample points 11, 12, 13, 14, 25, 26, 31, 33, 34, 35, 46, 47, and 48. Of these sample points, the hydrology parameter was met in sample points 13, 25, 47, and 48 based on aerial review of the site that shows that the B7 indicator (inundation visible on aerial imagery).[115]

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[109] RFA pages 11-12
[110] RFA pages 8-9
[111] RFA pages 6-11
[112] AR pages 049-060
[113] AR page 013
[114] AR page 013
[115] AR pages 050, 053, 057, 059

Section IV.A. of the Districts AJD cites the aerial photographs it relied on as follows, “GoogleEarth 7.3.3.7692. (Historic Aerial Imagery). Davis County, Utah. Latitude 40.985986°, Longitude [-]111.915329°, Retrieved December 12, 2022.” Within the AR, the District included copies of 32 Google Earth aerial photographs it consulted which ranged in date from April 13, 1993, to June 20, 2022.[116]

As described in Reason for Appeal 1, when an AJD identifying the limits of waters of the United States on a parcel containing wetlands is furnished to a requestor, a wetland delineation serves as the means for identifying the geographic limits of such wetlands. To identify and delineate the boundaries of a wetland, Corps policy directs districts to use the 1987 Manual and applicable regional supplement, in this case, the AWRS.[117] According to these documents, the identification of wetlands is based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology.

Additionally, in accordance with the 1986 preamble to 33 CFR Part 328.3, the Corps generally does not consider artificially irrigated areas which would revert to uplands if the irrigation ceased to be waters of the United States under Section 404 of the Clean Water Act. To determine whether irrigated land, or a portion of irrigation land, is a wetland under 33 CFR 328.3(b), the Corps must first determine whether the irrigated land, under normal circumstances, exhibits the three factors for wetland identification and delineation provided in the 1987 Manual and appropriate regional supplement.[118] As per the 1987 Manual, normal circumstances means, "the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed.”[119] The 1987 Manual further explains that:

> The determination of whether normal circumstances exist in a disturbed area "involves an evaluation of the extent and relative permanence of the physical alteration of wetlands hydrology and hydrophytic vegetation" and consideration of the "purpose and cause of the physical alterations to hydrology and vegetation.[120]

Section 7.1.3 of 12510-SPD explains that the normal circumstances for irrigated lands are “the vegetation and hydrology that would occur on the site during a normal rainfall year in the absence of irrigation and the absence of a planted crop, in its current physical condition.”[121] Section 7.1.4 of 12510-SPD also explains that application of the three factor wetland identification and delineation methodology in irrigated pastures and other irrigated lands is problematic.[122] Section 7.1.4 of 12510-SPD states that “caution must be exercised when assessing hydrology in these areas”, and that as the effects of irrigation may persist for some time, it is important to ensure that sufficient time has

[116] AR pages 015-046
[117] 1987 Manual; JD Guidebook
[118] 12510-SPD, Section 7.1
[119] 1987 Manual
[120] 1987 Manual
[121] 12510-SPD
[122] 12510-SPD

passed after the cessation of irrigation such that the observed hydrology is simply an artifact of irrigation.[123]

As per the AWRS, "[we]tland hydrology indicators provide evidence that the site has a *continuing* wetland hydrologic regime and that hydric soils and hydrophytic vegetation are not relicts of a past hydrologic regime."[124] One such indicator of hydrology in the AWRS is the B7 Indicator, a primary hydrology indicator which requires, "[o]ne or more recent aerial photographs or satellite images show the site to be inundated."[125] The AWRS cautions users that:

> Care must be used in applying this indicator because surface water may be present on a non-wetland site immediately after a heavy rain or during periods of unusually high precipitation, runoff, tides, or river stages. See Chapter 5 for procedures to evaluate the normality of precipitation prior to the photo date. Surface water observed during the non-growing season may be an acceptable indicator if experience and professional judgment suggest that wet conditions normally extend into the growing season for sufficient duration in most years. Surface water may be absent from a wetland during the normal dry season or during extended periods of drought. Even under normal rainfall conditions, some wetlands do not become inundated or saturated every year (i.e., wetlands are inundated or saturated at least 5 out of 10 years, or 50 percent or higher probability). If available, it is recommended that multiple years of photography be evaluated. If 5 or more years of aerial photography are available, the procedure described by the USDA Natural Resources Conservation Service (1997, section 650.1903) is recommended.[126]

Contrary to the assertion in the RFA, a review of the AR reveals that the District did not conclude that the B7 Indicator was met for SPs 12, 14, 26, 33, 34, 35, or 40. Rather, the AR indicates that the District only concluded that the B7 "Inundation Visible on Aerial Imagery" wetland hydrology indicator was met for SPs 13, 25, 47, and 48.[127] For SPs 13, 25, 47, and 48, the District's documentation included a conclusory statement that the B7 Indicator was met as well as 32 Google Earth aerial photographs ranging from April 13, 1993, to June 20, 2022.[128] The District's documentation did not include any details regarding what observations were made in relation to each SP from each of the aerial photographs, what the antecedent precipitation conditions were for each aerial photograph, whether the aerial photograph was taken during the growing season, or ultimately how and why it determined that the B7 Indicator was met at each SP. Additionally, the District did not document or confirm that the wetlands were inundated or saturated in at least 5 out of 10 years (or 50 percent or higher probability) or that it followed the recommended USDA NRCS procedures in Section 650.1903 of its

[123] 12510-SPD
[124] AWRS page 58
[125] AWRS page 68
[126] AWRS
[127] AR pages 049-060
[128] AR pages 049-060 and 015-046

Engineering Handbook. Therefore, the District's application of the B7 Indicator was not supported by evidence in the AR.

The District also did not consider the effects of irrigation in making its wetland determination and delineation, which it also acknowledged during the informal appeal meeting. To establish the presence of wetland hydrology for SPs 13, 25, 47, and 48, the District relied entirely on the presence of inundation on aerial photography, much of which was taken during years where the parcel was irrigated. The District therefore relied on evidence that was not indicative of the normal hydrologic circumstances of the parcel and did not properly consider the effects of irrigation in making its wetland determination and delineation. These reasons for appeal have merit as this equates to an incorrect application of officially promulgated policy.

As described in the previous paragraphs, the District failed to explain why it reached conclusions contrary to that which were presented in the KE Report. The District has not put forth specific facts to rebut the Appellant's showing and has created a genuine factual dispute as to whether or not areas identified as wetland met the three-parameter test contained in the Corps' regulatory definition of wetland. In addition, the District did not fully comply with RGL 16-01, the JD Guidebook, and the 2008 Guidance. In the absence of sufficient information to document the District's conclusion and because there is conflicting information provided by the Appellant in the AR, the District's determination of CWA jurisdiction is at this time unfounded. Therefore, this reason for appeal has merit.

Action: The AJD is remanded back to the District. During reconsideration, the District shall consider and document the effects of irrigation on the hydrology in its wetland delineation. Additionally, the District shall reconsider the application of the B7 Indicator to any areas of the parcel. In doing so, the District shall document its observations for each SP, the antecedent precipitation conditions for each of aerial photograph, whether each aerial photograph was taken during the growing season, whether the aerial photograph represents normal circumstances, and ultimately how and why it determined that the B7 Indicator was met.

REASON FOR APPEAL 7: THE DISTRICT IMPROPERLY APPLIED THE F18 REDUCED VERTIC INDICATOR FOR PROBLEMATIC HYDRIC SOILS.

Finding This reason for appeal does not has merit.

Discussion: The Appellant asserts in the RFA that the District incorrectly applied the F18 Reduced Vertic hydric soil indicator for problematic hydric soils (F18 Indicator) to SPs 13, 25, 27, 47, and 48.[129] The Appellant explains that the F18 Indicator is "applicable only in MLRA's along the gulf coast" and "requires that the soil be a Vertisol or Vertic intergrade and the use of alpha-alpha-dipyridyl over at least 7 consecutive

[129] RFA pages 6, 8, 9, 12

days."[130] The RFA details that the soils within the parcel "could hardly be described as "clay-rich"" and the "USDA map of Vertisol distribution in the United States does not show any for Utah, indicating that if they appear in the state, they are exceedingly rare."[131] A review of the AR in light of this reason for appeal follows.

A review of the AR indicates that the District documented its decision regarding SPs 13, 25, 27, 47, and 48 using five ADSs and an Approved Jurisdictional Determination Form (AJD Form).[132] The ADSs for the SPs 13, 25, 27, 47, and 48 included question marks in the cells associated with the F18 Indicator and those cell backgrounds were yellow. Neither the ADS nor the AJD Form otherwise mentioned application of the F18 Indicator. When questioned about the cells associated with the F18 Indicator during the informal appeal meeting, the District indicated it failed to delete the question marks and remove the yellow cell backgrounds. The District explained that a question mark and a yellow cell background on the ADS does not confirm that the F18 Indicator was met. The District also stated that it did not employ the use of alpha, alpha-Dipyridyl.

The *User Guide for Automated Wetland Determination Data Sheets* clarifies that a "yellow background identifies cells that contain important information required for the ADS to perform calculations."[133] A question mark in a cell "[d]enotes that an indicator may be present, that "[u]sers should read the comment contained in the cell to verify if the indicator is present", and "[i]f present the indicator is confirmed by double-clicking the cell."[134] Further the ADS also generates a question mark "if an indicator for problematic hydric soils is present in sample areas with disturbed or problematic soils that display indicators of hydrophytic vegetation and wetland hydrology (or multiple factors are disturbed or problematic)".[135] An "X" within a cell represents an "[a]ffirmative response to yes/no questions" and "documents the presence indicators of hydrophytic vegetation, hydric soils, or wetland hydrology."[136]

Given that a question mark rather than a check mark was used in relation to the F18 Indicator in the District's ADSs for SPs 13, 25, 27, 47, and 48, it can be concluded that the District did not confirm that the F18 Indicator was applicable to these SPs. Therefore, the District did not rely on the F18 Indicator when determining whether hydric soils were present at SPs 13, 25, 27, 47, and 48. Had the District affirmed the F18 Indicator at SPs 13, 25, 27, 47, and 48 by placing an "X" instead of a question mark in the cells on the ADSs, further assessment of the merits of the appropriateness of the F18 Indicator to each SP would be necessary. However, while the District should have

[130] RFA page 6
[131] RFA page 6
[132] AR pages 006-014, 049-050, and 053-060
[133] Wetlands Regulatory Assistance Program ERDC/TN WRAP-17-1 July 2017 User Guide for Automated Wetland Determination Data Sheets by Nathan T. Schulz and Jacob F. Berkowitz.
[134] Wetlands Regulatory Assistance Program ERDC/TN WRAP-17-1 July 2017 User Guide for Automated Wetland Determination Data Sheets by Nathan T. Schulz and Jacob F. Berkowitz.
[135] Wetlands Regulatory Assistance Program ERDC/TN WRAP-17-1 July 2017 User Guide for Automated Wetland Determination Data Sheets by Nathan T. Schulz and Jacob F. Berkowitz.
[136] Wetlands Regulatory Assistance Program ERDC/TN WRAP-17-1 July 2017 User Guide for Automated Wetland Determination Data Sheets by Nathan T. Schulz and Jacob F. Berkowitz.

deleted the question marks and yellow cell backgrounds associated with the F18 Indicator cells on the ADSs for SPs 13, 25, 27, 47, and 48, failure to do so ultimately equates to a harmless administrative error. Resultantly, this reason for appeal does not have merit.

Action: While this reason for appeal is found to not have merit, upon remand pursuant to other reasons for appeal found to have merit, the District can correct this administrative error.

REASON FOR APPEAL 8: THE DISTRICT IMPROPERLY APPLIED PROBLEMATIC HYDRIC SOIL PROCEDURES FOR "MODERATELY TO VERY STRONGLY ALKALINE SOILS" FROM CHAPTER 5 OF THE AWRS.

Finding: This reason for appeal has merit.

Discussion: The Appellant asserts in the RFA that the District improperly applied problematic hydric soil procedures for "Moderately to Very Strongly Alkaline Soils" from Chapter 5 of the AWRS to confirm the presence of hydric soils at SPs 13, 14, 25, 26, 33, 34, 40, 46, 47, and 48.[137] The Appellant expounds that a "high pH does not allow the automatic assumption that a soil is hydric," it:

> …is categorically incorrect to assume that any and every suspected saline soil (soils with free salts more soluble than CaCO3, whether a neutral salt like gypsum [CaSO4], or alkaline salt [like Na2CO3], or a soil with free calcium carbonate that is buffered at pH 8.2, or a soil with suspected but unproven alkaline conditions (exchangeable sodium on the cation exchange complex dominant enough to create soil pH equal to or greater than 7.9) is automatically a hydric soil, even when its drainage properties and moisture regime keep it from actually being considered hydric…

and that "[c]learly, the soils on the site can form redoximorphic features under the proper conditions".[138]

The Appellant describes the Ironton soil series as having "non hydric drainage qualities", a "[x]eric moisture regime that borders on aridic", typically "strongly calcic" conditions, and groundwater reaching "an upper boundary between 24 and 36 inches at certain times during normal years".[139] The Appellant explains that the qualities of the Ironton Series are not "particularly consistent with being a hydric soil" and also acknowledges that the soils in the Ironton Series "are alkaline soils, but…in truly wetland areas they do exhibit redoximorphic feature requirements of various hydric soil

[137] RFA pages 2-3 and 6-12
[138] RFA page 6-7
[139] RFA page 2

indicators."[140] The RFA also states that "the soil profiles [the Agent] observed primarily fit the Ironton series description."[141]

In contrast, the Appellant describes the Draper Series as having "non-hydric drainage qualities" with "very dark matrices (moist colors of values 2 and 3 with chromas of 1 and 2) throughout the A, B and C horizons as well as pH values close to neutral."[142] The Appellant notes that neither the Ironton series not the Draper Series "are listed as being comprised of more than 26% clay."[143] A review of the AR in light of this reason for appeal follows.

The District's AJD states that the Data Forms:

> for sample points 13, 25, 47, and 48 prepared by [the Agent] indicates the soil series mapped for these sample points is Ironton-Draper complex. According to the Web Soil Survey, https://soilseries.sc.egov.usda.gov/OSD_Docs/I/IRONTON.html (AJD Attachment 4), this soil is considered moderately alkaline (7.9 pH or higher). Although the soil in sample points 13, 25, 47, and 48 did not exhibit any of the soil indicators, these sites were determined problematic to support hydric soils due to the high pH that would not allow for the formation of redoximorphic features. Based on this analysis, the Corps has determined that sample points 13, 25, 47, and 48 meet the vegetation, soils, and hydrology parameters and are considered wetlands.[144]

Similar language is also included in the remarks of the District's ADSs for SPs 13, 25, 47, and 48.[145] No non-problematic soil hydric soil indicators were met for SPs 13, 47, or 48 as per the District's ADSs. However, the District's ADS for SP 25 identified the soil profile as meeting the A11 Depleted Below Dark Surface and F3 Depleted Matrix hydric soil indicators. The District also included a copy of the United States Department of Agriculture's "Official Series Description – IRONTON Series."[146] The District did not provide any soils-related data or discussion relative to SPs 14, 26, 33, 34, 40, or 46 in the AR and also did not include SP 46 within its area of delineated jurisdictional wetland.

In addition to the Districts AJD and supporting documentation, the AR contained a copy of the 2017 Report. Regarding the wetlands identified in the 2017 Report, the 2017 Report notes that the soils in these wetlands "are moderately alkaline, which inhibits the formation of hydric soil characteristics such as redox features."[147] The 2017 Report did,

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[140] RFA pages 2-3
[141] RFA page 3
[142] RFA page 3
[143] RFA page 3
[144] AR page 013
[145] AR pages 050, 053, 057, and 059
[146] AR pages 061-063
[147] AR pages 082-083

however, not document the application of problematic hydric soil procedures for "Moderately to Very Strongly Alkaline Soils".

Data Forms in the KE Report for SPs 3, 4, 5, 9, 12, 15, 16, 28, 31, 32, 34, 35, and 46 all documented the presence of carbonates and/or salts in the observed soil.[148] The Data Form for SP 25 in the KE Report states that, "[s]oils throughout the site are very high base, i.e., calcic; in such soils there must be redoximorphic features associated with high value and high chromas in order to be considered hydric (depleted below dark surface)."[149] The Data Forms for SPs 12, 25, 28, 36, 28, and 45 in the KE Report all note the presence of calcic soils either directly or indirectly though implication by noting that the soil profile doesn't meet a hydric indicator due to certain additional requirements for calcic soils that have not been met.[150] A review of the laws, regulations, Executive Orders, or officially promulgated Corps policy or guidance documents relevant to this reason for appeal follows.

Chapter 5 of the AWRS describes several problematic soil situations in the Arid West Region that, despite not meeting a hydric soil indicator, may be considered to be hydric soils if additional requirements are met .[151] One such problematic hydric soil situation in the Arid West Region occurs in moderately to very strong alkaline soils.[152] The AWRS explains that "[i]in the Arid West, salt content is a common cause of high soil pH."[153] The high pH (7.9 or higher) of these soils inhibits the development of redoximorphic features despite prolonged soil saturation and anoxia, resulting in these soils not meeting a hydric soil indicator.[154]

In the absence of an approved hydric soil indicator and in the presence of a problematic hydric soil situation, Chapter 5 of the AWRS directs the user to first document the presence of hydrophytic vegetation and wetland hydrology, document the soil profile, and "[v]erify that the area is in a landscape position that is likely to collect or concentrate water."[155] Next, the AWRS directs the user to use one or more of the listed approaches to determine whether the soil is hydric and "[i]n the remarks section of the data form or in the delineation report, explain why it is believed that the soil lacks any of the NTCHS hydric soil indicators described in Chapter 3 and why it is believed that the soil meets the definition of a hydric soil."[156] One such listed approach, the subject of this reason for appeal, is related to moderately to very strongly alkaline soils. Where the user finds that that this problematic hydric soil situation is present, the AWRS directs the user to consider the soil to be hydric.[157] Specific to this problematic hydric soil situation, the user is directed to "thoroughly document soil conditions, including pH, in addition to the

[148] AR pages 253, 256, 259, 271, 280, 289, 292, 328, 337, 340, 346, 349, and 382
[149] AR page 319
[150] AR pages 280, 319, 328, 352, 328, and 379
[151] AWRS
[152] AWRS
[153] AWRS
[154] AWRS
[155] AWRS pages 98-99
[156] AWRS page 99
[157] AWRS page 99

rationale for identifying the soil as hydric (e.g., landscape position, vegetation, evidence of hydrology, etc.)."[158]

The District documented in the AR that the soils mapped within the vicinity of SPs 13, 25, 47, and 48 are characterized as being moderately alkaline as per the Natural Resources Conservation Services (NRCS) Web Soil Survey and Ironton Official Soil Series Description.[159] However, this level of documentation alone is not sufficient to demonstrate that the soils at SPs 13, 25, 47, and 48 warranted the application of problematic hydric soil procedures for moderately to very strongly alkaline soils. While providing evidence of the presence of moderately to very strongly alkaline soils by directly testing the pH of soil would suffice, the District could also have utilized a weight-of-evidence approach and considered indirect indicators of moderately to very strongly alkaline soil conditions including but not limited to the presence of salt-adapted vegetation, the presence of salt crusts, and/or the presence of salt in the soil profile. At a minimum, the District should have documented that it corroborated the observed soil profile characteristics with those of the official soil series description. First, this is important as soil characteristics at a given location may differ from that which was mapped by NRCS based on several factors including but not limited to the coarseness of soil survey, changes in surrounding and on-site land uses, land alterations, and changes in climatic conditions. Secondly, the mapped soils in this area, the Ironton-Draper Complex, includes two soil series with dissimilar characteristics. The Ironton series is documented as being moderately alkaline to a depth of 60 inches whereas, the Draper series is noted to vary between slightly alkaline to neutral to a depth of 53 inches. Therefore, applying problematic hydric soil procedures for moderately to very strongly alkaline soils to soils that are consistent with the Ironton series may be appropriate; the same may not be true for soils consistent with the Draper series absent additional evidence regarding the alkalinity of the soil. Admittedly, the District did include a copy of the Ironton series and not the Draper series in the AR but its rationale for doing so was missing. The KE Report itself noted the presence of calcic horizons, calcium carbonates/salt, and "very high base" soils throughout the parcel which are indicative of the potential for moderately to very strongly alkaline soil conditions. To the extent these characteristics were applicable to SPs 13, 25, 47, and 48, the District could also have substantiated, leveraged, and documented this information in its decision to apply problematic hydric soil procedures for moderately to very strongly alkaline soils.

Additionally, the District did not provide any discussion of SPs 14, 26, 33, 34, or 40 in the AR so it cannot be determined if the District determined that problematic hydric soils were present at these SPs, or whether it followed the correct methodology by doing so. Further assessment of the District's decision-making regarding SPs 14, 26, 33, 34, and 40 is provided in other reasons for appeal.

Lastly, a review of the AR confirms that the District did not include SP 46 within its area of jurisdictional wetland which is consistent with the conclusion included in the KE

[158] AWRS page 96
[159] AR pages 013, 050, 053, 057, 059, and 061

Report that SP 46 is not within a wetland.[160] The District did not provide any information in its AJD or associated documentation about the presence or absence of hydric soils at SP 46. Therefore, there is no evidence to support that the District concluded that problematic hydric soils were present at SP 46 or that it erred in doing so.

In sum, the District's decision related to this reason for appeal was not supported by the administrative record and, therefore, this reason for appeal has merit.

Action: The AJD is remanded to the District. Upon remand, the District shall reconsider its application of problematic hydric soil procedures for moderately to very strongly alkaline soils in accordance with Chapter 5 of the AWRS. Where the District determines the application of problematic hydric soil procedures for moderately to very strongly alkaline soils apply, the District must substantiate the presence of moderately to very strongly alkaline soils and thoroughly document how and why it applied problematic hydric soil procedures for moderately to very strongly alkaline soils in accordance with Chapter 5 of the AWRS.

REASON FOR APPEAL 9: THE DISTRICT INCORRECTLY APPLIED THE F3 DEPLETED MATRIX HYDRIC SOIL INDICATOR TO SP 25

Finding: This reason for appeal has merit.

Discussion: The Appellant asserts in the RFA that the District incorrectly applied the F3 Depleted Matrix hydric soil indicator (F3 indicator) to SP 25.[161] The RFA explains that the B horizon of the SP 25 soil profile met the color and depth criteria for hydric soil indicator F3.[162] However, the definition of a depleted matrix has a caveat that excludes SP 25 from ultimately meeting the F3 indicator stating that the "A, E, and calcic horizons may have low chromas and high values and may therefore be mistaken for a depleted matrix; however, they are excluded from the concept of depleted matrix unless the soil has common or many distinct or prominent redox concentrations occurring as soft masses or pore linings."[163] To this caveat, the RFA notes that "[t]here were no redoximorphic features anywhere in the observed soil profile."[164] A review of the contents of the AR in light of this reason for appeal follows.

The District's AJD states that:

> The datasheet for sample points 13, 25, 47, and 48 prepared by [the Agent] indicates the soil series mapped for these sample points is Ironton-Draper complex. According to the Web Soil Survey,

[160] RFA page 18: "FIGURE 5. LOCATIONS OF KE SAMPLE POINTS RELATIVE TO FCM WETLANDS";AR pages 47-48 and 321-323
[161] RFA page 8
[162] RFA page 8
[163] RFA page 8
[164] RFA page 8

> https://soilseries.sc.egov.usda.gov/OSD_Docs/I/IRONTON.html (AJD Attachment 4), this soil is considered moderately alkaline (7.9 pH or higher). Although the soil in sample points 13, 25, 47, and 48 did not exhibit any of the soil indicators, these sites were determined problematic to support hydric soils due to the high pH that would not allow for the formation of redoximorphic features. Based on this analysis, the Corps has determined that sample points 13, 25, 47, and 48 meet the vegetation, soils, and hydrology parameters and are considered wetlands.[165]

Similar language is also included in the remarks of the District's ADS for SPs 25.[166]

Despite the remarks on the ADS, District identified the SP 25 soil profile as meeting the A11 (Depleted Below Dark Surface) and F3 (Depleted Matrix) hydric soil indicators.[167] The District documented the soil profile at SP 25 as follows: a loamy/clayey (silty clay loam) textured soil layer from the surface to 6 inches depth with a 10YR 2/1 color, a loamy/clayey (silt) textured soil layer from 6-19 inches in depth with a 10YR 7/2 color; and a loamy/clayey (silt) textured soil layer from the 19-35 inches in depth with 2.5Y 5/2 color.[168]

The soil profile data presented for SP 25 in the KE Report was substantially the same as that which was provided by the District in its SP 25 ADS except the KE Report data form did not identify a "loamy/clayey" texture as the District did.[169] The data form for SP 25 in the KE Report remarked that:

> Soils throughout the site are very high base, i.e., calcic; in such soils there must be redoximorphic features associated with high value and high chromas in order to be considered hydric (depleted below dark surface).[170]

While a number of data forms in the KE Report documented the presence of carbonates and/or salts in the observed soil profile (e.g., data forms for SPs 3, 4, 5, 9, 12, 15, 16, 28, 31, 32, 34, 35, and 46), no such observations were reported in the SP 25 soil profile.[171] A review of the relevant law, regulation, Executive Order, or officially promulgated Corps policy or guidance related to this reason for appeal follows.

The Field Indicators of Hydric Soils describes the F3 indicator as follows:

> A layer with a depleted or gleyed matrix that has 60 percent or more chroma of 2 or less, starting at a depth ≤30 cm (12 inches) from the soil surface, and having a minimum thickness of either:
> a. 15 cm (6 inches), or
> b. 5 cm (2 inches) if the 5 cm consists of fragmental soil material.

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[165] AR page 013
[166] AR page 053
[167] AR page 053
[168] AR page 053
[169] AR page 319
[170] AR page 319
[171] AR pages 253, 256, 259, 271, 280, 289, 292, 328, 337, 340, 346, 349, and 382

> Organic, loamy, or clayey layer(s) above the depleted or gleyed matrix must have value of 3 or less and chroma of 2 or less starting at a depth <15 cm (6 inches) from the soil surface and extend to the depleted or gleyed matrix. Any sandy material above the depleted or gleyed matrix must have value of 3 or less and chroma of 1 or less starting at a depth ≤15 cm (6 inches) from the soil surface and extend to the depleted or gleyed matrix. Viewed through a 10x or 15x hand lens, at least 70 percent of the visible sand particles must be masked with organic material. Observed without a hand lens, the sand particles appear to be close to 100 percent masked.[172]

The User Notes pertaining to F3 indicator in the Field Indicators of Hydric Soils include the following language:

> A depleted matrix requires value of 4 or more and chroma of 2 or less. Redox concentrations, including soft iron-manganese masses and/or pore linings, are required in soils with matrix colors of 4/1, 4/2, or 5/2. A, E, and calcic horizons may have low chromas and high values and may therefore be mistaken for a depleted matrix; however, they are excluded from the concept of depleted matrix unless the soil has common or many distinct or prominent redox concentrations occurring as soft masses or pore linings.[173]

An evaluation of this Reason for Appeal in light of the contents of the AR and the relevant law, regulation, Executive Order, or officially promulgated Corps policy or guidance follows.

The RFA makes the argument that SP 25 does not meet the requirements of the F3 indicator due to the presence of a "calcic B horizon which matches the Ironton Series description well". The Field Indicators of Hydric Soils states that a calcic horizon is an, "illuvial horizon in which carbonates have accumulated to a significant extent."[174] The United States Department of Agriculture, Natural Resources Conservation Service 2022 Keys to Soil Taxonomy, 13th Edition identifies the diagnostic characteristics of a calcic horizon, which starts with the presence of a certain percentage of $CaCO_3$.[175] Neither the District's SP 25 ADS nor the SP 25 data form in the KE Report identify or report carbonates within the SP 25 soil profile despite documenting the presence of carbonates at a number of other SPs within the parcel.

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[172] United States Department of Agriculture, Natural Resources Conservation Service. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
[173] United States Department of Agriculture, Natural Resources Conservation Service. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
[174] United States Department of Agriculture, Natural Resources Conservation Service. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
[175] Soil Survey Staff. 2022. Keys to Soil Taxonomy, 13th ed. USDA-Natural Resources Conservation Service.

Similar to the argument presented in the RFA regarding the applicability of problematic hydric soil procedures for moderately to very strongly alkaline soils, a SPs situation within a given mapped soil series unit is not itself diagnostic that a particular soil condition/characteristic is present. Rather, this assumption must be substantiated with evidence and documented. In this case, to dismiss the applicability of hydric soils indicators A11 and F3 to SP 25 based on the presence of a calcic horizon, information confirming that a calcic horizon was indeed present at SP 25 would be needed. Other than a statement on the SP 25 data form in the KE Report, no such substantiating information was presented in the AR.

Overall, the District failed to properly support and document its decision. First, the District provided contradictory soils information in its AJD, SP 25 ADS soils remarks, and its SP 25 ADS hydric soil indicator selections.[176] Second, the District reached a conclusion to the contrary of that which was presented by the Agent without explaining why it reached such conclusion (i.e., the District did not refute the statement that the soils at SP 25 contained a calcic horizon). Therefore, this reason for appeal has merit as the District's decision related to this reason for appeal was not supported by sufficient documentation in the AR.

Action: The AJD is remanded back to the District. The District shall reconsider the applicability of the F3 indicator to SP 25 in light of the potential presence of calcic conditions. If the District reaches a conclusion contrary to that which was presented by the Appellant in the RFA or the KE Report regarding the applicability of hydric soil indicator F3, the District will document how and why it reach such conclusion.

REASON FOR APPEAL 10: THE DISTRICT IMPROPERLY APPLIED THE S5 SANDY REDOX HYDRIC SOIL INDICATOR TO SP 27.

Finding: This reason for appeal has merit.

Discussion: The Appellant asserts in the that the District incorrectly determined that the soils at SP 27 met the S5 Sandy Redox hydric soil indicator" (S5 indicator)[177] The Appellant notes that "the S indicators only apply to soils with textures of loamy fine sand and coarser." Additionally, the RFA states that "[t]he only horizon that meets that texture is the layer between 7" and 15" of depth" and"[t]he chroma of that horizon is 3, and not 2 or less as required by S5" therefore, "[t]he soil does not meet S5."[178] A review of the contents of the AR in light of this reason for appeal follows.

In the District's SP 27 ADS, the first soil layer was documented as having a loamy/clayey texture at a depth of 0-3 inches, consisting 100% of matrix color 10YR 2/2, and remarks of "Fibric-Loam (Root Duff)". The second soil layer was documented as having a sandy soil texture at a depth of 3-7 inches, consisting 98% of matrix color

[176] AR pages 013 and 053
[177] RFA page 9
[178] RFA page 9

7.5YR 2.5/2, with 2% redoximorphic concentrations in the matrix with a 10YR5/8 color, and remarks of “Sandy Loam”. The third soil layer was documented as having a sandy soil texture at a depth of 7-15 inches, consisting 93% of matrix color 10YR 5/3, with 7% redoximorphic concentrations in the matrix with a color of 2.5YR 4/8, and remarks of “Loamy Fine Sand”. The fourth soil layer was documented as having a loamy/clayey texture at a depth of 15-33 inches, consisting 100% of matrix color 10YR 2/1, and remarks of “Silt Loam”.[179] The District’s SP 27 ADS documented that the S5 indicator applied and that hydric soils were determined to be present.[180]
Contrastingly, the SP 27 data form in the KE Report documented a soil profile with soil textures descending from the surface as follows: fibric-loam (root duff), sandy loam, loamy fine sand, and silt loam.[181]

The Field Indicators of Hydric Soils state that “Sandy Soils” “have a USDA texture of loamy fine sand and coarser.”[182] The S5 indicator is described as having:

> A layer starting at a depth ≤15 cm (6 inches) from the soil surface that is at least 10 cm (4 inches) thick and has a matrix with 60 percent or more chroma of 2 or less and 2 percent or more distinct or prominent redox concentrations occurring as soft masses and/or pore linings.[183]

A review of the relevant law, regulation, Executive Order, or officially promulgated Corps policy or guidance related to this reason for appeal follows.

The District’s ADS for SP 27 documented a soil profile with sandy textured soils in the second and third layers.[184] The second soil layer should, however, have not been categorized as a sandy soil as the remarks on the ADS clarified that the second soil layer had a sandy loam texture. A sandy loam texture is too coarse to qualify as a sandy soil as per the Field Indicators of Hydric Soils. Reconsideration of the District’s SP 27 soil profile with the second soil layer correctly classified as having a loamy/clayey texture for purposes of identifying a hydric soil results in SP 27 not meeting any of the associated indicators. This conclusion is also consistent with the soils documented at SP 27 in the KE Report, which the District relied on instead of collecting its own soil profile data in the field. As the District’s hydric soils determination for SP 27 relied on an incorrect soil texture classification resulting in a false positive for a hydric soil indicator, this reason for appeal has merit.

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[179] AR page 056
[180] AR page 056
[181] AR page 325
[182] United States Department of Agriculture, Natural Resources Conservation Service. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
[183] United States Department of Agriculture, Natural Resources Conservation Service. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
[184] AR page 056

Action: The AJD is remanded back to the District. The District shall document the soil profile of SP 27 including accurate soil texture, reevaluate SP 27 for a hydric soil indicator, and reassess its wetland delineation accordingly.

REASON FOR APPEAL 11: THE DISTRICT INCORRECTLY IDENTIFIED THE ORDINARY HIGH WATER MARK OF SHEPARD CREEK.

Finding: This reason for appeal has merit.

Discussion: The RFA includes both a written and visual comparison of the aquatic resources (i.e., a wetland and a tributary) delineated by the District versus those that were delineated by the Agent.[185] The Appellant explains that the Agent surveyed the ordinary high water mark (OHWM) of the on-site tributary, Shepard Creek, in order to create their aquatic resource delineation map.[186] Of specific concern to the Appellant is the fact that the OHWM of Shepard Creek, as shown on the District's aquatic resource delineation map, differs from that which the Agent surveyed.[187] During the informal appeal meeting, the Agent clarified that they did not record GPS points along the OHWM of the channel but rather, estimated cross-sections of Shepard Creek. The RFA did not challenge the overall jurisdictional status of Shepard Creek as a water of the U.S., only the Districts identification of the lateral limits of jurisdiction of the Creek. A review of the contents of the AR in light of this reason for appeal follows.

The District's AJD identified that the limits of jurisdiction of Shepard Creek within the parcel were based on the OHWM of the Creek but did not note an elevation of an established OHWM.[188] In documenting the flow characteristics in its AJD, the District documented that the flow of the Creek is discrete and confined, mostly confined to the channel, the Creek has bed and banks, and the Creek has an OHWM.[189] Specifically, the District identified the following physical OHWM indicators: clear, natural line impressed on the bank; the presence of litter and debris; changes in the character of soil; destruction of terrestrial vegetation; shelving; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; sediment deposition; and an abrupt change in plant community.[190] The District's AJD determined that Shepard Creek extends 655 linear feet through the parcel and covers an area of 0.2-acre, which is also consistent with that which was documented by the Agent in the KE Report.[191] A review of the relevant law, regulation, Executive Order, or officially promulgated Corps policy or guidance related to this Reason for Appeal follows.

On a case-by case basis, the Corps determines the extent of geographic jurisdiction for the purpose of administering its Regulatory Program. One such mechanism for the

[185] RFA pages 3, 4 and 14-18
[186] RFA pages 3, 4 and 14-18
[187] RFA pages 3, 4 and 14-18
[188] AR page 006
[189] AR page 008
[190] AR page 008
[191] AR pages 001, 006, 011, 226, and 229

Corps to determine its extent of geographic jurisdiction is with an AJD. An AJD is defined in Corps regulations at 33 CFR 331.2 as:

> …a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. Approved JDs are clearly designated appealable actions and will include a basis of JD with the document.[192]

At the time the District finalized its AJD, the term "waters of the U.S.", defined by regulations at 33 CFR 328.3(a), included tributaries of waters identified in paragraphs (a)(1) through (a)(4) of the same section (33 CFR 328.3(a)(5)). Tributaries can include, "natural, man-altered, or man-made water bodies that carry flow directly or indirectly into a traditional navigable water."[193] For purposes of Section 404 of the Clean Water Act (CWA), the lateral limits of jurisdiction over non-tidal waters of the U.S. are as follows: in the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark (OHWM); when adjacent wetlands are present, the jurisdiction extends beyond the OHWM to the limit of the adjacent wetlands; or when the water of the United States consists only of wetlands, the jurisdiction extends to the limit of the wetland.[194] Corps regulations define the term "ordinary high water mark" for purposes of the CWA lateral jurisdiction as:

> …that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a 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.[195]

In making OHWM determinations, Regulatory Guidance Letter 05-05 (RGL 05-05) states that Corps districts will:

> …generally rely on physical evidence to ascertain the lateral limits of jurisdiction, to whatever extent physical evidence can be found and such evidence is deemed reasonably reliable. Physical indicators include the features listed in the definitions at 33 CFR Sections 328.3(e) and 329.11(a)(1) and other appropriate means that consider the characteristics of the surrounding areas. In addition, districts use other methods for estimating the line on the shore established by the fluctuations of water, including, but not limited to, lake and stream gage data, flood predictions, historic records of water flow, and statistical evidence. To the

[192] 33 CFR 331.2
[193] U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. 2008. Memorandum: Subject: *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States and Carabell v. United States*.
[194] 33 CFR 328.4(c)
[195] 33 CFR 328.3(e)

maximum extent practicable, districts generally use more than one physical indicator or other means for determining the OHWM.[196]

However, RGL 05-05 also describes that districts may use other reliable means for identifying the OHWM "[w]here the physical characteristics are inconclusive, misleading, unreliable, or otherwise not evident".[197] When completing an AJD, RGL 05-05 further explains that Corps districts "will have complete and accurate documentation that substantiates the Corps decision" and that "[d]ocumentation will allow for a reasonably accurate replication of the determination at a future date. In this regard, documentation will normally include information such as data sheets, site visit memoranda, maps, sketches, and, in some cases, surveys and photographs documenting the OHWM."[198] Further, the Corps' Regulatory Guidance Letter 16-01 (RGL 16-01) explains that districts should ensure the documentation used to support an AJD addresses any objections from an AJD requestors and/or consultants and that districts should clearly document the reasons for reaching conclusions contrary to that which have been made by an AJD requestor and/or consultant.[199]

In addition to RGL 05-05, two manuals are available to aide in the identification of an OHWM: the 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 (Arid West OHWM Field Guide) and the National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams Interim Version (National OHWM Manual).[200] It is important to note that though the Arid West OHWM Field Guide and National OHWM Manual are not required to be used in OHWM identification and delineation, they provide valuable insight into and methodologies for identifying and delineating the OHWM of non-wetland waters. An evaluation of this reason for appeal in light of the contents of the AR and the relevant law, regulation, Executive Order, or officially promulgated Corps policy or guidance follows.

In accordance with RGL 05-05, the District did provide documentation regarding the OHWM of Shepard Creek "using the standardized jurisdictional determination information sheet established" by Corps Headquarters, the Approved Jurisdictional

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[196] U.S. Army Corps of Engineers. 2005. *Regulatory Guidance Letter, Subject: Ordinary High Water Mark*. RGL 05-05. Department of the Army, Washington, D.C.
[197] U.S. Army Corps of Engineers. 2005. *Regulatory Guidance Letter, Subject: Ordinary High Water Mark*. RGL 05-05. Department of the Army, Washington, D.C.
[198] U.S. Army Corps of Engineers. 2005. *Regulatory Guidance Letter, Subject: Ordinary High Water Mark*. RGL 05-05. Department of the Army, Washington, D.C.
[199] U.S. Army Corps of Engineers. 2016. Regulatory Guidance Letter, SUBJECT: Jurisdictional Determinations. RGL 16-01. Department of the Army, Washington, D.C.
[199] U.S. Army Corps of Engineers. 2016. Regulatory Guidance Letter, SUBJECT: Jurisdictional Determinations. RGL 16-01. Department of the Army, Washington, D.C.
[200] Lichvar, R.W., and S.M. McColley. 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.* ERDC/CRREL TR-08-12. U.S. Army Engineer Research and Development Center, Hanover, NH. http://hdl.handle.net/11681/5308.; U.S. Army Corps of engineers, Engineer Research and Development Center. 2022. National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams, Interim Version.

Determination Form.[201] Where the District's documentation falls short is it does not substantiate the decision and does not "allow for a reasonably accurate replication of the determination at a future date" as required by RGL 05-05.[202] While RGL 05-05 allows for flexibility in identifying and delineating the OHWM of non-wetland waters, the AR does not contain any specific documentation regarding how the District identified, delineated, or mapped the OHWM of Shepard Creek.[203] Additionally, the District's mapping of the OHWM of Shepard Creek was contrary to that which was depicted in the KE Report; however, it did not provide any explanation or documenting as to why it reached a contrary conclusion, as required by RGL 16-01.[204] For example, it is not clear in the AR whether the District collected and relied on field data, geospatial data, and/or remote data such as aerial photography or LiDAR. Therefore, while it cannot be conclusively determined whether the District identified, delineated, and mapped the OHWM of Shepard Creek in accordance with relevant law, regulation, Executive Order, or officially promulgated Corps policy or guidance, this reason for appeal has merit as the documentation provided by the District does not comply with RGL 05-05 or RGL 16-01 and is not supported by substantial evidence in the AR.

Action: The AJD is remanded back to the District for reconsideration. The District shall identify, delineate, and map the OHWM of Shepard Creek in accordance with RGL 05-05. Additionally, the District shall provide documentation that allows "for a reasonably accurate replication of the determination at a future date" including elements such as the methodology employed, the rationale for the methodology employed, identification of any data relied on, the source(s) of any data relied on, any assumptions or caveats associated with any data relied on, and any conclusions reached in identifying, delineating, and mapping the OHWM of Shepard Creek.[205] If in its reconsideration the District offers a conclusion contrary to that which was presented in the KE Report, the District shall substantiate why it reached such a conclusion. As a note, while the Arid West OHWM Field Guide and National OHWM Manual are not required to be followed when identifying and delineating an OHWM, it would be appropriate for the District to refer to and follow these documents to aid its reconsideration.

REASON FOR APPEAL 12: THE DISTRICT INACCURATELY AND IMPRECISELY MAPPED THE PARCEL BOUNDARY.

Finding: This reason for appeal does not have merit.

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[201] U.S. Army Corps of Engineers. 2005. *Regulatory Guidance Letter, Subject: Ordinary High Water Mark*. RGL 05-05. Department of the Army, Washington, D.C.
[202] U.S. Army Corps of Engineers. 2005. *Regulatory Guidance Letter, Subject: Ordinary High Water Mark*. RGL 05-05. Department of the Army, Washington, D.C.
[203] U.S. Army Corps of Engineers. 2005. *Regulatory Guidance Letter, Subject: Ordinary High Water Mark*. RGL 05-05. Department of the Army, Washington, D.C.
[204] Regulatory Guidance Letter 16-01, SUBJECT: Jurisdictional Determinations. October 2016.
[205] U.S. Army Corps of Engineers. 2005. *Regulatory Guidance Letter, Subject: Ordinary High Water Mark*. RGL 05-05. Department of the Army, Washington, D.C.

Discussion: In addition to disagreeing with the District's mapping of the onsite wetland and tributary limits of jurisdiction, the Appellant also notes the lack of accuracy in the District's mapping of the parcel boundary on the aquatic resource delineation map attached to the District's AJD.[206] Specifically, the Appellant describes in the RFA that the District's mapping of the extent of parcel as being "somewhat different" from that which was surveyed with precision by the Agent. [207] Figures 3 and 4 attached to the RFA depict the discrepancy between the District's mapped parcel boundary and the surveyed parcel boundary provided in the KE Report.[208]

The 1987 Manual prescribes the following method for identifying parcel boundaries where on-site inspection has been determined to be necessary: "[d]etermine the spatial boundaries of the project area using information from a USGS quadrangle map or other appropriate map, aerial photography, and/or the project survey plan (when available)."[209] There is, however, no law, regulation, Executive Order, or officially promulgated Corps policy or guidance that sets forth standards dictating how those parcel boundaries must be mapped or the level of accuracy or precision required to be employed.[210]

The method by which the District mapped the parcel boundaries as depicted in its AJD is not discussed in the AR. Based upon the images provided in Figures 3 and 4 of the RFA, it does appear that the District's identified parcel differs somewhat from that which was depicted in the KE Report.[211] Specifically, the wetland and tributary boundaries as mapped by the District extend outside of the western extent of the parcel that was surveyed and mapped in the KE Report.[212]

While it is not clear how the District mapped the parcel boundaries, it does not appear that the District's mapping was contrary to any law, regulation, Executive Order, or officially promulgated Corps policy or guidance, particularly given that the discrepancy between the parcel boundaries mapped by the District versus those which were mapped by the Agent was minimal in nature. Nothing in the AR indicates that the District acted in contradiction to the methodologies set forth in the 1987 Manual regarding the identification of parcel boundaries. It would not be appropriate to find that the District erred simply due to the fact that it did not produce an exact replica of the

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[206] RFA page 3; AR page 005
[207] RFA page 3
[208] RFA pages 16 and 17
[209] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
[210] The U.S. Army Corps of Engineers, South Pacific Division has "Updated Map and Drawing Standards", dated February 10, 2016, that establish standards and guidelines for maps and drawings submitted as part of delineations and applications for U.S. Army permits and jurisdictional determinations. This document does not specifically state it applies to products created by the Corps Districts within the South Pacific Division. This document also allows for modification or waiver of the standards at a District's discretion. Therefore, while this document is acknowledged herein, it is not being used as a standard for application in this reason for appeal.
[211] RFA pages 16-17; AR pages 005 and 413
[212] RFA pages 16-17; AR pages 005 and 413

parcel boundaries that were presented in the KE Report. Therefore, this reason for appeal is found to not have merit.

Action: While this reason for appeal does not have merit, the District can resolve this reason for appeal by ensuring that, to the maximum extent practicable, the parcel boundaries are mapped accurately on any figures that may be generated during reconsideration upon remand for other reasons for appeal that were found to have merit.

REASONS FOR APPEAL 13: THE DISTRICT OMITTED MATERIAL FACT.

Finding: This reason for appeal does not have merit.

Discussion: In essence, in this reason for appeal the Appellant claims that the District omitted material fact. The RFA states that, “[t]he Corps uncharacteristically dismissed [the Agent’s] report, and then hugely expanded the wetland sizes and boundaries detailed within that report without providing [the Appellant] with sufficient rationale or explanation for its rebuke of [it’s Agent’s] delineation.”[213]

Review of the AR confirms that the District cited the KE Report in Section IV.A. of its AJD and the District also included a copy of the KE Report in the AR.[214] Additionally, the District referred to the KE Report several times within its AJD.[215]

The 2008 Corps and EPA guidance memorandum, “Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States” (2008 Guidance) explains that “Corps districts and EPA regions will ensure that the information in the record adequately supports any jurisdictional determination. The record shall, to the maximum extent practicable, explain the rationale for the determination, disclose the data and information relied upon, and, if applicable, explain what data or information received greater or lesser weight, and what professional judgment or assumptions were used in reaching the determination.”[216] Similarly, the Guidebook states supporting "information should be referenced in the file".[217] In regard to the sources of information, the Guidebook states, "[a]ll reviewed information that contributed to an Approved JD should be adequately reflected in the administrative file," and identify “the sources of data used to support the determination."[218] Additionally, the *Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program* recommends that districts, "…include all

[213] RFA page 1
[214] AR pages 012, and 223-413
[215] AR pages 013-014
[216] EPA & Corps Memorandum: Subject: *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v United States and Carabell v. United States*. December 2, 2008.
[217] U.S. Army Corps of Engineers. 2007.Jurisdictional Determination Form Instructional Guidebook.
[218] U.S. Army Corps of Engineers. 2007.Jurisdictional Determination Form Instructional Guidebook.

documents and materials directly or indirectly considered by the decision-maker" within the AR.[219]

Although inclusion of material in the AR that is inconsistent with a decision does not individually or in combination supplant the District's technical determination, it is important to note that the question of whether the District properly considered and weighted said information when making its AJD is addressed in other reasons for appeal. In fact, if the District has determined the relevance of information, it has considered it in its decision. Whether the District omitted material fact involves the question of whether the District properly cited and included all information it relied on when making its decision within its AR.

A review of the AR confirms that the District properly cited the KE Report in its AJD and included a copy of the KE Report in the AR.[220] In other words, the District properly disclosed the data and information relied upon to supports its decision and included all documents and materials directly or indirectly considered in its AR, specifically the KE Report which was the subject of this particular reason for appeal. Accordingly, this reason for appeal does not have merit. In connection with findings of merit in other reasons for appeal, the District has been asked, upon reconsideration, to document the reasons that its conclusions differ from those found in the KE Report and those presented in the RFA.

Action: No action is required.

REASON FOR APPEAL 14: THE DISTRICT COMMITTED A PROCEDURAL ERROR BY NOT COMMUNICATING DISAGREEMENT OR OFFERING AN OPPORTUNITY FOR THE APPELLANT TO RESPOND PRIOR TO FINALIZING THE AJD.

Finding: This reason for appeal does not have merit.

Discussion: The Appellant asserts in the RFA that the District committed a procedural error by not communicating disagreement or offering an opportunity for the Appellant to respond prior to finalizing the AJD.[221] The RFA states that prior to the issuance of its AJD, the District did not contact the Appellant or Agent regarding the District's disagreement with the KE Report nor did the District notify the Appellant that it determined that 9.01-acres of jurisdictional wetlands were present within the parcel as opposed to the 2.13-acres of wetland identified in the KE Report.

There is no law, regulation, Executive Order, or officially promulgated Corps policy guidance requiring a District to proffer a draft AJD to a requestor or otherwise offer an

[219] July 1, 2009. *Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program:* Section 2: File Maintenance. The *Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program* provides a summary of current policies and procedures and should be used as day-to-day informal guidance by regulatory project managers as they implement the program.
[220] AR pages 012, and 223-413
[221] RFA pages 1, 2, and 13

opportunity for a requestor to disagree with a draft AJD prior to issuance. To the contrary, recipients of approved jurisdictional determinations have the opportunity to administratively appeal AJDs through the administrative appeal process prescribed in 33 CFR 331. AJDs are also subject to judicial review (U.S. Army Corps of Engineers v. Hawkes Co., 136 S. Ct. 1807 (2016)). Additionally, the question eight in the Questions and Answers for RGL 16-01 explains that "[i]f the requestor submits materials with which the districts do not agree or do not concur (e.g., wetland delineation report), the districts should clearly document the reasons for reaching a contrary conclusion."[222] To this point, a District is not required to convey to or resolve contrary conclusions with a requestor prior to issuance of an AJD though, open communication and collaboration may lead to more mutually agreeable decision-making. This reason for appeal is without merit as the District did not commit a procedural error prescribed by law, regulation, Executive Order, or officially promulgated Corps policy guidance.

Action: No action is required.

REASON FOR APPEAL 15: THE DISTRICT COMMITTED A PROCEDURAL ERROR BY NOT ISSUING THE AJD IN A TIMELY MANNER.

Finding: This reason for appeal does not have merit.

Discussion: The Appellant asserts in the RFA that the District committed a procedural error by not issuing the AJD in a timely manner.[223]

A review of the AR indicates that the District received the KE Report on April 17, 2021, along with a request for an aquatic resource delineation verification.[224] On September 1, 2021, the District notified the Appellant and Agent that fulfillment of the request would be paused at the direction of Corps Headquarters because of litigation and a resulting change in implementing regulations.[225] The District contacted the Appellant and Agent via email on September 8, 2021, and updated them that the Corps had "resumed conducting approved jurisdictional determinations (AJD), consistent with the pre-2015 regulatory regime" and presented the Appellant with three options including an AJD, a preliminary jurisdictional determination, or an aquatic resources delineation verification.[226] The Agent responded to the District via email on September 9, 2021, and requested an AJD for the subject parcel.[227] The District conducted a site visit to the

[222] U.S. Army Corps of Engineers. Questions and Answers for RGL 16-01. October 2016.
[223] RFA pages 2 and 13
[224] AR page 221
[225] AR page 220
[226] AR page 219
[227] AR pages 217-218

subject parcel on March 29, 2022.[228] The District finalized and provided the AJD to the Appellant and Agent on December 23, 2022.[229]

The Appellant asserts in the RFA that the District did not issue the AJD in a timely manner. The *Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program*[230] (SOP) states that "to the maximum extent practicable and consistent with district completion of other regulatory program responsibilities, the Corps should make every effort to complete that JD in a timely manner.

Per RGL 08-02, it is the Corps' goal to process both preliminary JDs and approved JDs within 60 days. The Corps should strive to provide a timely JD regardless of whether or not the JD request accompanies a permit application or is submitted as an independent action." In relevant part, RGL 08-02 provides that the "Regulatory Project Managers will notify their supervisors and develop a schedule for completion of the JD if it is not practicable to meet this 60 day goal." However, RGL 08-02 has been superseded by RGL 16-01 (Jurisdictional Determinations).[231] RGL 16-01 does not specify a temporal requirement for the issuance of AJDs but rather explains that, "[t]he district engineer should set reasonable priorities based on the district's workload and available regulatory resources. For example, it may be reasonable to give higher priority to a JD request when it accompanies a permit request."[232] The guidance in the above-referenced RGLs clearly suggests that districts work with applicants to complete requests for jurisdictional determinations as quickly as practicable in light of workload priorities and other factors.

While a number of factors may influence a District's timeframes for providing an AJD (e.g., District workload, availability of regulatory resources to the District, weather/seasonal conditions, and changes to implementing regulations), there is no law, regulation, Executive Order, or officially promulgated Corps policy guidance that dictates the timeframes a District must adhere to when providing an AJD. There is no evidence to suggest that the District's action with regard to the timeliness of the AJD was an abuse of discretion. Accordingly, the District did not commit a procedural error in relation to the time that lapsed between receipt of the AJD request (September 9, 2021) and the issuance of the AJD (December 23, 2022). Therefore, this reason for appeal does not have merit.

Action: No action is required.

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[228] AR page 006. The District's AJD indicates that the District conducted a field determination on August 24, 2021. However, during the informal appeal meeting the District clarified that this date was an error and the correct date of its field determination with the Agent was March 29, 2022.
[229] RFA page 001
[230] July 1, 2009. *Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program:* Section 2: File Maintenance.
[231] Regulatory Guidance Letter 16-01, SUBJECT: Jurisdictional Determinations. October 2016.
[232] October 2016. Regulatory Guidance Letter 16-01, SUBJECT: Jurisdictional Determinations.

Conclusion: As explained above in this Decision, the following reasons for appeal are found to not have merit:

- Reason for Appeal 7: The District improperly applied the F18 (Reduced Vertic) indicator for problematic hydric soils.
- Reason for Appeal 12: The District inaccurately and imprecisely mapped the parcel boundaries.
- Reason for Appeal 13: The District omitted material fact.
- Reason for Appeal 14: The District committed a procedural error by not communicating disagreement or offering an opportunity for the Appellant to respond prior to finalizing the AJD.
- Reason for Appeal 15: The District committed a procedural error by not issuing the AJD in a timely manner.

Conversely, the following reasons for appeal are found to have merit:

- Reason for Appeal 1: The District's wetland delineation incorrectly applied the current regulatory criteria and associated guidance for identifying and delineating wetlands.
- Reasons for Appeal 2 and 3: The District's wetland delineation lacks sufficient rationale, and the District's wetland delineation contradicts the administrative record (AR).
- Reason for Appeal 4: The District did not properly consider the effects of irrigation on vegetation when conducting its wetland delineation.
- Reasons for Appeal 5 and 6: The District incorrectly applied the B7 (Inundation Visible on Aerial Imagery) wetland hydrology indicator, and the District did not properly consider the effects of irrigation on hydrology when conducting its wetland delineation.
- Reason for Appeal 8: The District improperly applied problematic hydric soil procedures for "Moderately to Very Strongly Alkaline Soils" from Chapter 5 of the AWRS.
- Reason for Appeal 9: The District incorrectly applied the F3 (Depleted Matrix) hydric soil indicator to sampling point (SP) 25
- Reason for Appeal 10: The District improperly applied the S5 (Sandy Redox hydric soil indicator to SP 27.
- Reason for Appeal 11: The District incorrectly identified the ordinary high water mark of Shepard Creek.

In accordance with 33 CFR Section 331.9(b), the AJD is remanded to the Sacramento District Engineer for reconsideration, additional analysis, evaluation, and documentation sufficient to support the decision in accordance with the actions outlined in each reason for appeal above. In summary, the District must ensure that wetland/non-wetland boundaries within the parcel are identified and delineated using field data-collection methodologies for sites greater than five acres in size set forth in the 1987 Manual as well as the AWRS. The District shall consider the effects of irrigation when identifying and delineating wetlands within the parcel. Indicators of wetland vegetation, hydrology,

and soils shall be considered and applied in accordance with the 1987 Manual and AWRS, and in light of normal circumstances. The District's wetland delineation shall be supported by sufficient documentation in the record. Any deviations from methodologies contained within the 1987 Manual and AWRS shall also be documented and supported in the record. The District shall identify, delineate, and map the OHWM of Shepard Creek in accordance with RGL 05-05. To this requirement, the District shall provide documentation that allows "for a reasonably accurate replication of the determination at a future date" including elements such as the methodology employed, the rationale for the methodology employed, identification of any data relied on, the source(s) of any data relied on, any assumptions or caveats associated with any data relied on, and any conclusions reached in identifying, delineating, and mapping the OHWM of Shepard Creek. Lastly, the District shall ensure the documentation used to support its revised AJD addresses any objections from the Appellant/Agent, explains what data or information received greater or lesser weight, and clearly documents the reason(s) for reaching any conclusions contrary to that which have been made by Appellant/Agent.

This is the final decision of the Division Engineer on the merits of the appeal and concludes the administrative appeal process. Authority to make the final Corps decision on the jurisdictional determination resides with the Sacramento District Engineer pursuant to this remand. The District Engineer shall, upon reconsideration of this appeal as indicated, provide the final Corps decision to the Division Engineer and Appellant. This concludes the administrative appeal process.

4 June 2024
DATE

James J. Handura
Colonel, U.S. Army
Commanding