

**ADMINISTRATIVE APPEAL DECISION  
CLEAN WATER ACT  
SLR PROPERTIES  
KANSAS CITY DISTRICT  
FILE NUMBER NWK-2006-03338  
DATE:     MAY 11 2011**

**Review Officer (RO):** David W. Gesl, U.S. Army Corps of Engineers, Northwestern Division, Portland, Oregon

**Appellant:** SLR Properties, Inc. represented in the appeal by Terra Technologies (Terra)

**District Project Manager:** Michael McFadden, Kansas City District (NWK)

**Authority:** Clean Water Act (33 USC 1344 et seq.)

**Date Approved Jurisdictional Determination (JD) and Notice of Appeal Rights were provided to the Appellant:** September 27, 2010

**Receipt of Request for Appeal (RFA):** November 24, 2010. Revised submission, acceptable for appeal, received January 7, 2011.

**Date Administrative Record (AR) was received:** February 17, 2011

**Appeal Site Visit:** A site visit was held on May 2, 2011. Attendees included the RO and Christine Austin-Smith from NWD, Michael McFadden, David Hibbs, and Matt Jeppson from NWK, and Loyal Hulme (Counsel for the Appellant), David Flick (Terra), and Craig Gump (Terra) representing the Appellant. The visit consisted of a brief overview of the appeal process, the history of regulatory involvement for the site, and general discussion of the Appellant's and the District's respective positions regarding the factors considered and procedures used in determining jurisdiction on the site. The Appellant's representatives emphasized their desire the appeal lead to clarity of the method(s) the District would be requiring for future JD's; SLR is a major landholder and Terra is an active consultant in the area. David Flick made a point that Terra, has historically relied primarily on Natural Resources Conservation Service (NRCS) crop photos in determining the extent and limits of wetlands, rather than hydrology signatures evident from aerial photography. They indicated they heavily relied on crop (in this case, soybean) success or failure as the primary indicator of wetland boundaries for this site. Their position is that agricultural lands where soybeans are produced do not have the hydrology to be classified as wetlands.

The RO noted that the site visit was occurring within the growing season, and also that there was a reasonably distinct line of demarcation between soils which were obviously saturated to the surface and those that were not at the time of the visit. There was also a reasonably evident line of demarcation where the density of mustard plants distinctly changed.

The RO questioned the District as to whether the current year would be considered wet, dry or normal for precipitation; Mike McFadden indicated normal, though slightly wetter and the Appellant's representatives did not disagree.

**Summary of Decision:** Terra Technologies, acting on behalf of SLR Properties, Inc challenged the District's Clean Water Act JD for wetlands located in Clay County, Missouri. The JD involved several wetland areas located on a parcel of land that was under agricultural production. Some of the Appellant's stated reasons for appeal have merit and the JD is being remanded.

The challenge centered on the District's application of the Midwest Region Supplement to the Corps 1987 Wetland Delineation Manual. The primary challenge was that the District did not use the appropriate method for considering antecedent precipitation while evaluating aerial photography. The appeal also challenged the District's consideration of site conditions and documentation of their decision.

The District exercised considerable professional judgment assessing antecedent precipitation to determine which aerial photography represented normal precipitation. The District's overall approach to the JD was to utilize aerial photography to identify the size and location of "potential wetlands" and then visit the site to verify the actual presence of wetlands. The District did rely, at least to some degree, on aerial photos to determine the boundaries of those wetlands.

The appellant is challenging a deviation from standard practices. Although the District employed a method which it expects to error on the side of conservatively estimating the extent of wetlands present on the site, it is reasonable for the District to verify that the results of the method it utilized are in fact comparable to the results when strictly adhering to the methodology described in the *Midwest Regional Supplement* and the *1997 NRCS Field Handbook*. In this case, the methodology should be strictly adhered to where aerial photography was used to assist in *delineating* wetlands on the site. It is unnecessary to strictly adhere to the methodology for interpreting aerial photos where the wetland/non-wetland boundary was determined by site inspection(s).

The District also is being instructed to eliminate confusion regarding the JD by communicating findings on an aerial photograph that depicts a "normal" precipitation year or on a site map, and to include wetland boundary lines to assist in communicating wetland boundaries.

This decision does not find merit with the appellant's reasons for appeal regarding the District's use of site specific field data or consideration of volunteer plant species to evaluate and determine wetland boundaries.

The JD is being remanded for further consideration. The appellant will be afforded an opportunity to provide additional substantive information during the re-evaluation.

**Background Information:** The project site is located in Section 3, Township 50 North, Range 31 West, Clay County, Missouri.

The overall size of the site in question is approximately 50 acres. The District determined the site contains eight (8) wetland areas that are adjacent to the Missouri River, the Traditionally Navigable Water (TNW). The District's rationale supporting the conclusion that the wetlands are "adjacent" is (See Approved Jurisdictional Determination Form dated August 31, 2010, Section III):

"The wetlands in the AJD area are located on the floodplain of the Missouri. While levees exist to restrict flood hydrology to the wetland sites, flooding has and does occur on the site. Surface runoff and the ecological community is associated with the Missouri River and floodplain."

The AR for this action includes an aerial photograph dated June 15, 2005 showing 11 "visit locations". That photograph is attached for reference. The AR indicates locations A, B, M, N, P, R, V, and Y are wetlands subject to Corps regulatory authority under the Clean Water Act. The District has confirmed locations G, K, and Q shown on that photograph were non-wetlands. Wetlands M, N, and P were eliminated (filled) under a nationwide authorization. Wetland V and portions of R and Y were also eliminated (filled) under a nationwide authorization.

The District's JD cannot be appealed if the applicant started work in those waters authorized by a permit. Therefore, the subject of this Appeal is limited to wetland A (6.22 acres) and wetland B (0.07 acres) and the remaining portions of wetland R and wetland Y.

#### Chronology:

June 29, 2010--The District Office received a Section 404 permit application from George Butler Associates, Inc. (GBA) on behalf of R.L.R. Investments, L.L.C. The application was for the proposed R + L Carriers Site Development project which consisted of two phases. Phase 1 included public street and utility improvements associated with a 40-acre development site. Phase 2 consists of mass grading and developing the same 40-acre site. GBA identified project impacts to jurisdictional waters in their permit application which were based upon a previous JD dated October 25, 2007; the District determined the JD was not accurate and complete after review of available information, including aerial photography of the site.

July 9, 2010--The District visited the site to confirm wetlands it had initially identified from aerial photography.

July 30, 2010--The following occurred:

- GBA requested Nationwide Permit authorization to impact wetland P (0.07 acres), wetland N (0.17 acres), and wetland M (0.19 acres); they proposed purchase of wetland mitigation credits from an approved mitigation bank as compensatory mitigation. The purpose of the project was to construct a new roadway (North Pleasant Avenue) extending south from the existing N.E. 41<sup>st</sup> Street cul-de-sac to serve as an industrial collector within Northland Park. A second purpose of the

project was to construct roadway that will eventually connect N.E. 41<sup>st</sup> Street to State Highway 210.

- GBA requested Nationwide Permit authorization to impact wetland R (0.31 acres), wetland V (0.15 acres), and wetland Y (0.24 acres); they proposed purchase of wetland mitigation credits from an approved mitigation bank as compensatory mitigation. The purpose of the project was to reconstruct a portion of N.E. 41<sup>st</sup> Street.
- The District issued a Preliminary Jurisdictional Determination (PJD) that identified 8 (eight) jurisdictional wetlands on the project area totaling 8.21 acres.
- The District issued two Nationwide Permit for Linear Transportation Projects (NWP-14) for impacts to wetland R (0.31 acres), wetland V (0.15 acres), and wetland Y (0.24 acres) and wetland P (0.07 acres), wetland N (0.17 acres), and wetland M (0.19 acres). The permittee was required to purchase wetland mitigation credits as a condition of these authorizations. The decision was based upon the PJD. The District also indicated that additional wetland resources were located on the property, wetland A (6.22 acres), and wetland B (0.07 acres).

August 24, 2010--Terra submitted additional information regarding the site to the District, on behalf of SLR, the owner of the property. On that same date, Terra and the District met to review the District's July 30, 2010 PJD, a wetland delineation Terra conducted on August 23, 2010, and other data Terra submitted. According to the District, during that meeting they confirmed that an October 25, 2007 wetland delineation for the property was performed in one of the driest times occurring in the period 1972-2010 and without consideration of historical hydrologic data, therefore that wetland delineation was deficient.

August 27, 2010--District and Terra staff met onsite. According to a memo for record accompanying the District's AR, "the primary deficiencies with the Terra Technologies delineation work involved incorrect hydric soil interpretations." The memo also indicated, "Some additional guidance to Terra Technologies staff was provided in regard to atypical site interpretations of hydrology and plants."

**Reasons for Appeal:** According to the RFA, the appellant contends that the determination of jurisdiction and issuance of the 2010 JD should have been based upon a thorough and complete analysis of all the relevant scientific information, rather than what it believes was sole reliance on the analysis of remote sensing to establish wetland hydrology and the limits of jurisdictional wetlands. Based upon what the appellant argues are procedural errors committed by the District in conducting its determination and establishing jurisdiction, the appellant contends that the appeal should result in a determination that (a) the procedures utilized in the 2010 JD were inappropriate; (b) the procedures described in its RFA should be utilized; and (c) the owner shall have the right to re-examine the property and collect the appropriate scientific data to properly determine the extent of any wetland hydrology and wetland areas on the property.

The RFA stated six (6) reasons for appeal which are addressed individually below.

**INFORMATION RECEIVED DURING THE APPEAL REVIEW:** The Division Engineer has the authority to hear the appeal of this JD.<sup>1</sup> However, the Division Engineer does not have authority under the appeal process to make a final decision regarding JDs, because that authority remains with the District Engineer. Upon appeal of the District Engineer's decision, the Division Engineer or his delegate conducts an independent review of the AR to address the reasons for appeal cited by the Appellant. The AR is limited to information contained in the record by the date of the Notification of Administrative Appeal Options and Process (NAP) form. Pursuant to 33 C.F.R. § 331.2, no new information may be submitted on appeal. Neither the Appellant nor the District may present new information. To assist the Division Engineer in making a decision on the appeal, the RO may allow the parties to interpret, clarify, or explain issues and information already contained in the AR. Such interpretation, clarification, or explanation does not become part of the District's AR, because the District Engineer did not consider it in making the decision on the JD. However, in accordance with 33 C.F.R. § 331.7(f), the Division Engineer may use such interpretation, clarification, or explanation in determining whether the AR provides an adequate and reasonable basis to support the District Engineer's decision.

The District made a copy of its AR available to the RO and the Appellant. The District's AR also included a Memo for Record dated February 7, 2011, Subject: NWK-2006-03338, Summary/Rebuttal for Administrative Appeal of Jurisdictional Determination (JD) by John M. Kahl, Terra Technologies, Agent for SLR Properties, Inc (District's MFR). The District's MFR was prepared following issuance of the JD; however it is considered clarifying information.

#### **Brief Description of References Mentioned in this Appeal:**

**1987 Manual**<sup>2</sup>-- This Corps of Engineers manual describes technical guidelines and methods using a multiparameter approach to identify and delineate wetlands for purposes of Section 404 of the Clean Water Act. Use of the 1987 Manual to identify and delineate wetlands potentially subject to regulation under Section 404 is mandatory. The manual requires evaluation of vegetation, soils and hydrology in determining whether a site is wetland. The Manual considers farmed areas atypical because indicators of hydrophytic vegetation may have been destroyed or altered as a result of human disturbance.

**2010 Midwest Regional Supplement**<sup>3</sup>--This document is one of a series of Regional Supplements to the Corps of Engineers Wetlands Delineation Manual, which provides technical guidance and procedures for identifying and delineating wetlands that may be subject to Corps regulatory jurisdiction. The development of Regional Supplements is part of a nationwide effort to address regional wetland characteristics and improve the accuracy and efficiency of wetland-delineation procedures. This supplement is applicable to the Midwest Region, which consists of

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<sup>1</sup> 33 C.F.R. § 331.3(a) (2).

<sup>2</sup> Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss

<sup>3</sup> U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

all or portions of 14 states: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, and Wisconsin.

**1997 NRCS Engineering Field Handbook, Chapter 19 (1997 NRCS Field Handbook)<sup>4</sup>---**

This chapter of the NRCS Engineering Field Handbook presents seven tools or procedures to use in evaluating the hydrology of potential wetlands. One of the methods is aerial photograph analysis. The tools are analytical techniques that can be used to supplement the documentation of wetland hydrology. The use of each tool depends on local conditions. The NRCS Field Handbook specifically identifies that knowledge of climate, wetland signatures, and how to interpret rain and runoff data is required, and that knowledge of the local agricultural practices improves the quality of photo interpretation. The procedure to determine whether an aerial photograph represents normal, wet, or dry conditions involves consideration of precipitation in the three months prior to the time a photograph was taken.

**2007 NRCS Kansas Off-Site Wetland Conventions (2007 Kansas Method)<sup>5</sup>—**This is a technical document for off-site wetland determinations/delineations in Kansas. It outlines the procedures and methods the Kansas NRCS uses. The method for assessing hydrology based on remote sensing requires determining “normal” year rainfall based on the most current WETS Table<sup>6</sup>. The method requires at least one “normal” year photograph must have a primary signature (shallow surface water, flooded or drowned-out crops, hydrophytic vegetation, or isolated areas that are not farmed with the rest of the field) and overall at least 50% of the other photographs have either a primary signature or a secondary signature (saturated soil conditions, patches of greener vegetation, crop stress due to wetness, changes in tillage pattern due to replanting or non-tilled spots, or unharvested crop).

**The Technical Standard for Water Table Monitoring (2005)<sup>7</sup>--** This technical note describes national standards for the collection, analysis, interpretation, and reporting of hydrologic data, which may be used to help determine whether wetlands are present on disturbed or problematic sites that may be subject to Clean Water Act regulatory jurisdiction. These standards may be supplemented or superseded by locally or regionally developed standards at the discretion of the appropriate Corps of Engineers District.

**APPEAL EVALUATION, FINDINGS AND INSTRUCTIONS TO THE KANSAS CITY DISTRICT ENGINEER (DE):**

**REASON 1:** Terra contends the District failed “to adhere to Wetland Delineation Manual Midwest Regional Supplement (Version 2) regarding determination of wetland hydrology through remote sensing.”

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<sup>4</sup> Natural Resources Conservation Service. (1997). “Hydrology tools for wetland determination,” Chapter 19, *Engineering field handbook*, Donald E. Woodward, ed., USDA-NRCS, Fort Worth, TX. (<http://www.info.usda.gov/CED/ftp/CED/EFH-Ch19.pdf>)

<sup>5</sup> Natural Resources Conservation Service. (2007). “Kansas off-Site Wetland Conventions”

<sup>6</sup> The USDA-NRCS National Water and Climate Center calculates normal precipitation ranges for each month (defined as between the 30th and 70th percentiles of monthly precipitation totals) for NWS stations throughout the United States. The information is published in WETS tables available on the Internet (<http://www.wcc.nrcs.usda.gov/climate/wetlands.html>)

<sup>7</sup> U. S. Army Corps of Engineers. (2005). “Technical Standard for Water-Table Monitoring of Potential Wetland Sites,” *WRAP Technical Notes Collection* (ERDC TN-WRAP-05-2), U. S. Army Engineer Research and Development Center, Vicksburg, MS.

**FINDING:** This reason for appeal has merit.

**ACTION:** The District must conduct wetland delineation by strictly adhering to the methodology described in the *Midwest Regional Supplement* and *1997 NRCS Field Handbook*. If the results of that delineation differ from the JD under appeal, the District must either revise the JD under appeal or specifically document the reasoning why revision is not appropriate. The District should afford the appellant an opportunity to supply additional substantive information for consideration. It is not the intent of this decision to require that future JD's strictly adhere to the standard methodology prescribed in the *Midwest Regional Supplement* and *1997 NRCS Field Handbook* without exercising reasonable professional judgment that improves efficiency or effectiveness; rather it is the intent that the District's findings in this case be substantiated or unsubstantiated by strict adherence to those methods.

This review need only be applied to wetland A, wetland B, and those remaining, intact, portions of wetlands that were reduced in size as a result of the issuance of Nationwide permit authorizations. The mitigation requirements of previously issued permits cannot be reduced by any changes in jurisdictional area that may result from the District's re-evaluation of the JD under appeal.

**DISCUSSION:** Terra posits the District failed to utilize the procedure specified in the *2010 Midwest Regional Supplement* to determine the extent of wetland hydrology. They argue that the specified procedure is described in the *1997 NRCS Field Handbook*, rather than the *2007 Kansas Method*, which the District followed. They argue the *1997 NRCS Field Handbook* requires consideration of precipitation in the three months prior to a photograph. The *2007 Kansas Method* requires determining "normal" year rainfall based on the most current WETS Table.

The District's overall approach to the JD was to utilize aerial photography to identify hydrologic signatures to estimate the size and location of "potential wetlands". The District then visited the site to examine soil, vegetation, and hydrologic conditions to verify the actual presence of wetlands. Based on the AR, as well as clarification offered by the District, conditions observed during the site visit received substantial weight in the determining that wetlands existed and their locations. Indications are that the District did rely, at least to some degree, on aerial photo interpretation to determine the boundaries of those wetlands.

The District exercised professional judgment in not strictly following the approach prescribed in the *1997 NRCS Field Handbook*. The District corrected for potential discrepancies resulting from aerial photo interpretation by on-site verification. Due to the District's on site verification, the method (and deviations) used to identify potential wetlands should not have had a material impact on its decision regarding the *presence of wetlands on the site and their general location*. It is unclear from the record how much weight the District gave aerial photograph interpretation in deciding the *actual boundaries (and sizes)* of individual wetlands, however.

The District's AR contains notations indicating that year to date precipitation and month to date precipitation, as well as precipitation events preceding the date of aerial photos were considered. According to the District's MFR, the Field Inspector/Project Manager considered daily precipitation in the two week period before the image to be important for accurately interpreting

remote sensing signatures of wetness. The District indicated that a weakness with the established remote sensing interpretation method(s) is that if there is a recent rainfall before the image date, moist soil or flooded crop indications may not be representative of wetness of a sufficient duration. According to the District, “this higher standard of analysis is actually more beneficial to the applicant who may desire less wetlands identified.”

In general, wetland determinations on difficult or problematic sites, which include agricultural lands, must be based on the best information available to the field inspector and interpreted in light of his or her professional experience and knowledge of the ecology of wetlands in the region. Both the *Midwest Regional Supplement* and the *1997 NRCS Field Handbook* were intended for application in a relatively wide geographic area. It is within a District’s discretion to supplement or even supersede requirements with locally or regionally developed standards and practices; reasons for deviations should be thoroughly documented, however. There is some latitude available to modify or adapt procedures required by the *1987 Manual* and/or the *Midwest Regional Supplement* based on best professional judgment. Consideration of daily precipitation immediately prior to the date of aerial images is clearly within the District’s discretion.

The appellant is challenging a deviation from standard practices. Although the District employed a method which it expects to error on the side of conservatively estimating the extent of wetlands present on the site, it is reasonable for the District to verify that the results of the method it utilized are in fact comparable to the results when strictly adhering to the methodology described in the *Midwest Regional Supplement* and the *1997 NRCS Field Handbook*. In this case, the methodology should be strictly adhered to where aerial photography was used to assist in *delineating* wetlands on the site. It is unnecessary to strictly adhere to the methodology for interpreting aerial photos where the wetland/non-wetland boundary was determined by site inspection(s).

This reason for appeal has merit.

**REASON 2:** Terra contends the District failed “to select proper historic and present-day aerial photographs from which to base an assessment of the potential presence and determination of wetland hydrology.”

**FINDING:** This reason for appeal has merit.

**ACTION:** The District must eliminate confusion regarding the JD by communicating findings on an aerial photograph that depicts a “normal” precipitation year or on a site map. Wetland boundary lines should be added to the area photo/map to eliminate uncertainty and to assist the untrained eye in understanding the location and extent of wetlands on the site.

**DISCUSSION:** Terra pointed out that the Approved Jurisdictional Determination Form (JD Form), which was used to communicate the District’s decision contained an aerial photograph that was dated June 15, 2005<sup>8</sup> (the AR indicates this photo represented a “wet” year)<sup>9</sup>, whereas

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<sup>8</sup> See the JD Form p8

<sup>9</sup> See Remote Sensing Procedure Worksheet p1-2

the District stated it relied on normal year photographs dated June 15, 2007 and May 4, 2005 for its JD.

The District's use of what appears to be an aerial photograph from a "wet" year to communicate the extent of wetlands it determined based primarily on "normal" year photographs has created uncertainty regarding its findings.

This reason for appeal has merit.

**REASON 3:** Terra contends the District failed "to use official federal government QA/QC precipitation data to determine the normalcy of climatic conditions."

**FINDING:** This reason for appeal has merit.

**ACTION:** The District should utilize precipitation data from the recommended source to re-evaluate the JD, or document the reason(s) for deviating from this requirement.

**DISCUSSION:** Terra points out the District used the Weather Underground website, which is not an "official federal Government site" for precipitation data. They posit that it is inappropriate to use data from this source to assess hydrology indicators from aerial photos because the *1997 NRCS Field Handbook* identifies the NRCS National Water and Climate Center as the information source for precipitation data used for interpretation of wetland remote sensing.

Terra indicated they provided "official monthly precipitation data" obtained from the National Water and Climate Center, but the District did not utilize it. Terra states the two data sources have inconsistencies in the monthly totals that are reported. As an example, they point out the NOAA data reports its station received 2.18 inches of rain in March 2010, whereas the Weather Underground Website reports 2.41 inches of rain. They also argue the site of the weather station, the Kansas City Airport (KCI), is not the closest weather station to the project site.

The *1997 NRCS Field Handbook* indicates, "precipitation data *can* be obtained from the NRCS National Water and Climate Center" (emphasis added). This language does not exclude use of other data sources. It is preferable that precipitation data be obtained from the National Water and Climate Center, the National Climate Data Center, a Regional Climate Center, or from the state climatologist because of the credibility and reliability of those sources.

There are many sources of variability associated with utilizing precipitation data for wetland determinations. This includes differences between sources of precipitation data, as well as spatial differences in a single and/or a series of precipitation events. It appears variability was managed by utilizing multiple photos and by on-site verification of potential wetlands. In this case, the District relied on experienced staff for that process; considerable deference to that staff is warranted. Additionally, the District's practice of considering short term, preceding precipitation is an additional step that should improve the accuracy of its determinations.

Although Terra is challenging the District's deviation from the recommended source of precipitation data, it has not shown that use of the recommended source would materially change the results of the District's JD. Although deference to the professional judgment of the District's staff may be warranted in this case, in the interest of resolving this dispute, the District should utilize precipitation data from the recommended source to re-evaluate the JD, or document why alternate source(s) are used.

As stated under previous reasons for appeal above, the appellant is challenging a deviation from standard practices. Although the District employed a method and utilized a data source which it expected to error on the side of conservatively estimating the extent of wetlands present on the site, it is reasonable for the District to verify its findings by consideration of precipitation data from the NRCS National Water and Climate Center. Consideration of this data should occur where aerial photography was used to materially assist in *delineating* wetlands on the site. It is unnecessary to consider this data where the *delineation* was verified by site inspection(s).

**REASON 4:** Terra contends the District "incorrectly interpret(ed) excessive antecedent rainfall conditions to evaluate hydrologic conditions and the normal presence and sources of wetland hydrology."

**FINDING:** This reason does not have merit

**ACTION:** No further action, beyond that prescribed under previous reasons for appeal above, is required.

**DISCUSSION:** Terra reiterated its position stated under the previous reason for appeal that the District was incorrect in utilizing precipitation data from the Weather Underground website rather than from "an appropriate federal government source." Additionally, they point out that according to the *1997 NRCS Field Handbook*, the validity of aerial photography should be evaluated by considering precipitation for the previous 2-3 month period and also utilize NRCS WETS data.

Terra also reiterated the June 15, 2005 photo it believes the District utilized in determining wetland limits was representative of a wetter than normal year so the actual wetland hydrology limits are likely less than shown on that photograph.

The points raised by the appellant under this reason are either directly related to or have been addressed under previous reasons for appeal.

This reason for appeal does not have merit.

**REASON 5:** Terra contends the District failed to use site specific field data to evaluate and determine wetland boundaries."

**FINDING:** This reason for appeal does not merit

**ACTION:** Although this reason for appeal does not have merit, the appellant will have an opportunity to provide additional information to the District which can be considered during the remand.

**DISCUSSION:** Terra challenged that the District relied upon a single observation point in each potential wetland site, and that not all potential wetland areas were field sampled, which they argue is contrary to Corps delineation procedures. They maintain the Corps should have selected “a representative observation point in each community type” when determining a wetland/non-wetland boundary. Terra also argued the District did not utilize data sheets that they supplied prior to issuance of the JD, or sample adjacent cropped areas to determine the boundary. Terra also maintains the District determined wetland hydrology limits from aerial photography and failed to also evaluate soils and vegetation.

The RFA states, “the applicant requires that it be allowed to revisit the site and provide the District with a Jurisdictional Assessment based on additional field information in order to revise the wetland boundaries consistent with the required standards and resources.”

The District MFR indicates that, in accordance with the *87 Manual*, it gave considerable weight to hydrologic signatures determined from aerial photos, and then site confirmed the presence of hydric soils, hydrology indicators, and plants on-site or at a reference community. It also indicated that it relied on crop plant moisture stress, mortality, and unplanted field locations in drawing its conclusions.

The District also indicated that during an August 27, 2010 site visit, the appellant’s data sheets were determined to be “mostly incorrect” and that Terra staff was not certain of some of their sample locations which the District was disputing. The AR does not contain any indication that the District communicated that the data Terra provided was incorrect or inadequate.

According to the District’s July 12, 2010 Field Investigation Report, “Potential Wetland sites” were identified for field verification. The report indicates soil sample cores were taken at most candidate sites, with sites not showing plant stress due to wetlands not being sampled. The July 12, 2010 field report describes and summarizes the overall findings, but does not contain documentation of site specific observations. However, the AR does contain Wetland Determination Data Forms from an August 27, 2010 site visit that do record the District’s on-site soil, hydrology, and vegetation observations for wetland A and wetland B, as well as for wetland R, wetland V, and wetland Y. It is not evident from the AR whether those forms were provided to the appellant prior to the appeal.

District staff expertise warrants significant deference, particularly in determining representative sample locations and how many samples are adequate to verify wetland boundaries. The size of a wetland, presence or absence of readily discernable topographic or other physical or biological breaks, and reliability of aerial photography are among the factors field staff should consider in determining how many sample points are adequate to reasonably support a JD.

This reason for appeal does not have merit. However, remand of the JD per other stated reasons for appeal will afford the appellant an opportunity to provide additional site specific information which the District should consider while addressing the remand.

**REASON 6:** Terra contends the District failed “to analyze the volunteer vegetative communities to determine the presence of hydrophytic plant communities in potential wetland areas situated in a farmed soybean field.”

**FINDING:** This reason for appeal does not have merit

**ACTION:** None required.

**DISCUSSION:** Terra challenges that the District did not follow the *Midwest Regional Supplement* which instructs that weedy species that become established within cropped fields should be examined as they may help to identify parts of an agricultural field that would support hydrophytic vegetation (see page 101 of the *Midwest Regional Supplement*). The RFA alleges the District disregarded this criterion during the August 27, 2010 site visit.

Terra also posits that the District failed to document stunted growth or other impacts to the soy bean crop on the property that would indicate prolonged inundation or soil saturation during the growing season. Soybeans are intolerant of prolonged inundation or soil saturation. Terra also indicates they observed several non-wetland weed species in areas of crop stress that the District determined were wetlands; they did not observe a dominance of wetland indicator species. Terra indicates they concluded there was sufficient wetness to stress the soybean crop, but it was insufficient for the establishment of weed species often found in wetlands.

The *Midwest Regional Supplement* indicates, “weedy species *may* help to identify parts of the field that would support hydrophytic vegetation (emphasis added).” Difficult wetland situations such as agricultural fields provide a challenge for determining wetlands. Consideration of weedy species is one of several factors that should be considered, but they alone are not a determining factor and should be considered in combination with other factors and observations. It is a matter of professional judgment on the part of District staff to determine the weight given observations of weedy species in wetland areas, and considerable deference to the local expertise of that staff is warranted.

The District’s MFR clarifies that the District did consider weedy species or volunteer plant species in its decision. It explained the District’s project manager weighed his knowledge of weedy species or volunteer plant species, along with his knowledge of herbicide resistance, and on-site observations in making the wetland delineation. Considerable deference to professional judgment is warranted in this case.

The District’s July 12, 2010 field investigation report contains photos showing areas described as “exhibiting evidence of Willow tree removal, root fragments and cut trunks” (wetland A), “predominance of pigweed and barnyard grass” (wetland Y), “depression and crop impairment” (wetland V), and “depression and dominance of Barnyard grass *Echinochloa crusgalli* (FACW)” and “depression, Barnyard grass, some willows” (wetland R). The report also discusses

observations of replanted or late planted areas along with observations of hydric soil characteristics and saturated soil conditions. These observations are indications that the District considered weedy species and crop condition in its JD.

The AR also contains the District's Wetland Determination Data Forms dated August 27, 2010. A location map was not provided, but latitude and longitude coordinates were identified for each observation point. Those Data Forms included vegetation (weed) observations for all sampled sites except wetland N.

The RFA indicates Terra documented volunteer vegetation consistent with non-wetlands at many of the potential wetland sites that they feel were disregarded by the District. Terra's August 24, 2010 submission included Wetland Determination Data Forms representing single point samples. As stated previously, according to the District there was uncertainty as to the exact location of Terra's observation points when they visited the site with representatives from Terra. That being the case, the data forms provided by Terra were of limited utility for determining the location and boundaries of wetlands on the site.

Terra indicated a desire to resolve differences of opinions with the District as to what factors and process are required for JDs, during the site visit. Specifically, Terra advocated heavy reliance on crop (in this case, soybean) success or failure as the primary indicator of wetland limits for this and future actions. While crop conditions are a legitimate consideration, they are one of a number of factors that should be considered; there is no basis in law, policy, or wetland determination related technical guidance for reliance on crop condition alone. In fact, a narrow scope of consideration would be contrary to standard practice and generally accepted professional opinion. In many cases, crops sensitive to high soil moisture (including soybeans) can be successfully planted well into the actual growing season after seasonally flooded and/or saturated soils have sufficiently drained.

This reason for appeal does not have merit.

**OVERALL CONCLUSION:** After reviewing and evaluating the RFA, the District's AR, and the recommendation of the RO, I find that the RFA has merit, and the JD is remanded to the District for further evaluation, documentation and reconsideration, in those areas identified as having merit herein.

**FOR THE COMMANDER:**

  
*for* **LORELYNN M. RUX**  
Chief, Program Support Division

ATTACHMENT- Wetland location map

