RECOMMENDED MINIMUM STANDARDS FOR AQUATIC RESOURCE DELINEATION REPORTS

JULY 2025

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG**

The U.S. Army Corps of Engineers (USACE), through its Regulatory Program, regulates the discharge of dredged or fill material into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA) and structures or work in or affecting “navigable waters of the United States” pursuant to Sections 9 and 10 of the Rivers and Harbors Act of 1899 (RHA). USACE also has authority to regulate the transport of dredged material for purposes of ocean disposal pursuant to Section 103 of the Marine, Protection, Research, and Sanctuaries Act (MPRSA). The term, “waters of the United States” is defined in the Code of Federal Regulations (CFR) at 33 CFR Part 328.3 and the term “navigable waters of the United States” is defined in the CFR at 33 CFR Part 329.

In order to determine the amount and extent of aquatic resources at a site that may be subjected to USACE regulation, aquatic resources must be delineated in accordance with established regulatory standards, guidance, and protocol, such as the 1987 Corps of Engineers Wetlands Delineation Manual (1987 Manual) and the appropriate Regional Supplement to the 1987 Manual (Regional Supplement) for delineation of wetlands, and Regulatory Guidance Letter (RGL) 05-05 for Ordinary High Water Mark (OHWM) delineation of non-tidal waters. Before making most permit decisions, USACE is responsible for conducting or verifying the identification and delineation of aquatic resources at a permit evaluation site and/or for determining which of the aquatic resources are or are presumed to be subject to federal jurisdiction under one or more USACE authorities.

The need to determine the geographic extent of USACE regulatory jurisdiction is a driving factor for the completion of many aquatic resource delineations; however, the delineations are not in themselves jurisdictional inquiries. This document does not establish any recommended standards or criteria for completing a jurisdictional determination. Instead, this document provides recommended minimum standards for documenting aquatic resource delineations in an Aquatic Resource Delineation Report (ARDR). While an ARDR should avoid making conclusions on whether aquatic resources in the review area are jurisdictional, delineators are encouraged to provide information that they determine to be potentially informative for assessing jurisdiction, such as flow regime information for streams and the presence or absence of physical connections between onsite aquatic resources and other waters in the vicinity.

The ARDR recommendations in this document are not mandatory; however, an ARDR that adheres to these recommendations can generally be expected to provide the suite of information that a USACE district will need to efficiently verify the accuracy of an

aquatic resource delineation. These recommendations do not constitute an exhaustive list and not all recommendations herein will be applicable to each aquatic resource delineation. It is recommended that practitioners coordinate with the local USACE district office prior to deviating substantially from one or more of the recommended minimum standards described in this document.

The USACE Regulatory Program is providing these recommendations to enhance national consistency and accuracy in documenting aquatic resource delineations. In the context of a USACE regulatory review, an accurate aquatic resource delineation is fundamental to ensuring assessment of a proposed project's impacts, determining the appropriate level of project review, and evaluating the need for and extent of any required compensatory mitigation.

Entities who are interested in obtaining a USACE-verified aquatic resource delineation for a site may elect to employ the services of a professional environmental consultant to complete the initial aquatic resource delineation and to summarize and document the delineation and its results in a professional ARDR. USACE verification of aquatic resource locations and boundaries on a site can be processed much more quickly when the USACE district is provided with an aquatic resource delineation that has been completed by a trained professional in accordance with established regulatory standards, guidance, and protocol, and where the delineation has been fully documented in a comprehensive ARDR.

In addition to these recommended minimum standards, USACE also is providing an "Aquatic Resource Delineation Report Template" to serve as an example that practitioners may use to ensure that their ARDR provides the suite of information that a USACE district will need to efficiently verify the accuracy of an aquatic resource delineation.

Attachments:

1. Recommended Elements of an ARDR
2. Data Collection Quality Standards for ARDRs
3. Aquatic Resource Delineation Report Template

Recommended Elements of an Aquatic Resource Delineation Report

USACE recommends that an ARDR should generally be structured as follows and include the following informational elements:

☐ Cover letter including the site/project name, purpose for submitting the delineation for USACE review in accordance with Regulatory Guidance Letter No. 16-01 (e.g., delineation concurrence, preliminary or approved jurisdictional determination, etc.), a general description of any proposed project, and any past USACE regulatory actions (e.g., jurisdictional determinations, permits, permit applications) completed for the site, including the USACE reference/file number(s).

Section 1. General Background and Site Information:

☐ Contact information for the applicant(s), property owner(s), and agent/contractor(s) including name(s), physical address(es), phone number(s), and email(s) for each.

☐ Identifying information for field investigator(s) and the ARDR author(s), with qualifications.

☐ Physical address of the review area (if available), the best/preferred access point(s) to the site, and contact information for the site manager/gate keeper if applicable.

☐ Latitude/Longitude in decimal degrees of the center point of the review area.

☐ Total acreage of the review area.

☐ Provide a high-level narrative overview of the site, including its general location, current and historical land use, surrounding land use, and notable features such as access conditions and any significant on-site activities or characteristics.

☐ Right of Entry documentation from the property owner(s) allowing USACE personnel to enter the property and perform field work during normal business hours. Use of form ENG 6294 is recommended and can be downloaded from the USACE Regulatory Request System (RRS). **IMPORTANT:** USACE personnel will not enter private property without explicit written authorization from the property owner.

Section 2: Field Data Collection Methodology:

☐ The date(s) for which any field work was conducted and a brief description of tasks performed on those dates.[1]

> ☐ Note: It is recommended that field work be conducted within the wetter portion of the growing season and under normal hydrologic conditions whenever possible. If field work needed to be conducted outside of the growing season and/or under abnormal hydrologic conditions, provide an explanation of how the delineation accounts for those conditions.[2]

☐ A statement that the identification and delineation of wetlands in the review area was conducted in accordance with the 1987 Manual and the applicable Regional Supplement (specifying which Regional Supplement was used).

☐ Explanation and justification of the method used to delineate (routine vs. comprehensive), per Section IV of the 1987 Manual.

☐ If the wetland delineation was completed using the routine method, indicate whether the level selected for use was Level 1, Level 2, or Level 3 (See 1987 Manual Paragraphs 20-22 and 56-58), and include a statement describing how wetland sampling locations were chosen in accordance with the sampling procedures in Part IV.D. of the 1987 Manual. Include a reference to the applicable sampling transect maps in the ARDR (if applicable).

☐ If the wetland delineation was completed using the comprehensive approach, include a statement describing how wetland sampling locations were chosen in accordance with the sampling procedures in Part IV.E. of the 1987 Manual. Include a reference to the applicable sampling transect maps in the ARDR.

☐ If site-specific conditions necessitated modification of the field procedures in the 1987 Manual, include a statement documenting the reasons that a different characterization procedure was needed and describe how the field procedures were modified to address those conditions (see 1987 Manual Paragraph 23).

☐ If any atypical situations (see 1987 Manual, Part IV.F) or “difficult wetland situations” (see the applicable Regional Supplement, Chapter 5) were encountered, describe how the procedures in Part IV.F. of the 1987 Manual and/or Chapter 5 of the applicable Regional Supplement were followed and incorporated into the field procedures.

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[1] Where field work was completed on multiple dates, the information should describe the specific date(s) upon which each aquatic resources was evaluated, such that the observed conditions within each aquatic resource can be associated with relevant environmental data (e.g., antecedent precipitation) that are representative of the date that the observations were made.

[2] It is recommended that delineators contact the local USACE Regulatory office to discuss options prior to completing delineation work outside of the growing season.

☐ If the vegetation, soils, and/or hydrology have been altered by recent human activities or natural events, such that “normal circumstances” were not present in any portion of the review area, describe the alteration including its age, extent, purpose, and relative permanence, indicate which areas are affected, and describe the procedures, methods, and information used to determine the vegetation, soils, and hydrology that would be present under normal circumstances.

☐ If any non-tidal, non-wetland waters (e.g., streams, lakes, ponds, etc.) were present in the review area, include a statement confirming that the delineation of non-tidal non-wetland water bodies on the site was completed based on the OHWM as defined in 33 CFR Part 328.3 and 33 CFR Part 329.4 (as applicable) and in accordance with RGL 05-05. The statement should also indicate whether an OHWM field guide (e.g., the National OHWM Field Delineation Manual for Rivers and Streams) was used to assist with the delineation and if so, which field guide was used. USACE recommends that Form ENG 6250 (Rapid Ordinary High Water Mark Field Identification Data Sheet be used to document all OHWM delineations, regardless of whether an OHWM field guide was used.

☐ If any tidal waters were present in the review area, include a statement that the delineation was conducted using the High Tide Line (HTL) and the Mean High Water Line (MHWL) as defined in the CFR at 33 CFR Part 328.3(c) and 33 CFR Part 329.12, respectively. If necessary, include a description of how and/or why the waters were found to be subject to the ebb and flow of the tide.

☐ A description of the Global Navigation Satellite System and/or Geographic Positioning System (GNSS/GPS) and/or survey methods and equipment used to map aquatic resource boundaries, including a statement on the accuracy of the geospatial data.

Section 3: Site Conditions:

☐ A description of existing review area conditions including current land use, grazing or irrigation practices, any physical modifications to review area conditions (e.g., constructed drains, tiling, or drainage ditches), and historical land uses of the review area if available (e.g., agricultural, industrial, residential, cropland, etc.).

☐ A description of the weather conditions at the site during and immediately prior (72 hours) to the date(s) when any field observations were made, including daily rainfall totals from the nearest appropriate weather station.

☐ A description of antecedent precipitation conditions within the 90 days prior to conducting the delineation field work. Provide precipitation records and/or the Antecedent Precipitation Tool (APT) report (available at https://github.com/erdc/Antecedent-Precipitation-Tool/releases/latest) or Natural

Resources Conservation Agency (NRCS) Climate Analysis for Wetlands Tables (WETS Tables) as appropriate for each field observation date.

☐ A description of long-term climatic conditions prior to the delineation field work. Provide flood/drought information and/or the APT report.

☐ A discussion of any available stream and tidal gage data that could further inform hydrologic conditions at the site (e.g., upstream and/or downstream of the site, or within the watershed of the site). If gage data is not available within the watershed where the site is located, then a representative location in a nearby watershed or other available data (e.g., modeled hydrologic conditions) should be used.

Section 4: Aquatic Resources Inventory:

☐ A description of all aquatic resources (e.g., rivers, streams, lakes/ponds, wetlands, vegetated shallows, drainage ditches, mudflats, etc.) within the review area including an explanation for the basis of the mapped boundaries.[3]

- ☐ If any of the aquatic resources extend outside of the review area, indicate as such, and provide an assessment of how the aquatic resource does or does not connect to other offsite aquatic resources in the vicinity using available field observations or remotely sensed data.
- ☐ If any complex transition zones and/or problematic conditions were encountered during mapping, indicate how those conditions were addressed.
- ☐ If the review area contains problematic conditions referenced in Chapter 5 of the applicable Regional Supplement or potential aquatic resources that were assessed and were found to only meet one or two of the three wetland criteria or do not exhibit a clear OHWM, describe those areas and provide the rationale for their inclusion or exclusion from the delineation.

☐ A summary table listing all aquatic resources in the review area. The summary table should include the name of each aquatic resource as shown on the delineation map, its presumed Cowardin classification, its size (generally use acres for wetlands, lakes and ponds, and larger water bodies and use length, average width, and acreage for smaller linear features), and its location (latitude/longitude in decimal degrees at the center point for wetlands and transition and headwaters points for streams and special aquatic sites). This information can be used to populate templates for bulk uploading aquatic

[3] An ARDR may also include a description of one or more features that lacks the characteristics, such as an OHWM, to be considered an aquatic resource (e.g., swales, erosional features, drainage features etc.), but which required evaluation to inform the aquatic resources delineation. It is not expected that an ARDR would identify or document every rill, gully, or erosional feature on the landscape. However, the delineator may elect to document any such feature on a case-specific basis, such as when the feature required more than minimal evaluation to determine that lacks the characteristics to be considered an aquatic resource and/or where documentation of the feature could inform other environmental documents (e.g., requests for jurisdictional determinations).

resources into the RRS and USACE OMBIL Regulatory Module (ORM). The most recent versions of the aquatic resources bulk upload templates can be download from the RRS (https://rrs.usace.army.mil/rrs) or ORM (https://orm.ops.usace.army.mil) websites.

☐ A description of the hydrologic characteristics (e.g., flow regime, flow volume, flow duration, flow frequency, wetland hydropattern, stream flow assessment method results, etc.) of all aquatic resources.

☐ A description of any observed physical connections (or lack thereof) between onsite aquatic resources and aquatic resources in the vicinity (e.g., Wetland 1A connects to Swift Creek via a 300-foot-long 24-inch diameter culvert which carries flows under Smith Street). Where possible, it is recommended that the description identify the flow path from the aquatic resource to the nearest downstream "blue-line" waterway found on the most recent U.S. Geological Survey (USGS) topographic map or National Hydrography Dataset.

☐ A description of the hydrology in the review area, covering all known surface or subsurface sources, drainage gradients, surface water connections to the nearest downstream waterway, nearby wells, dewatered borrow pits, and any manmade alterations which may influence the site's hydrology (e.g., irrigation, drainage ditches).

☐ A description of the onsite soils, including a discussion of any map units that correspond to hydric soils or hydric inclusions.

- ☐ If any problematic hydric soils (e.g., soils addressed in Chapter 5 of the applicable Regional Supplement or otherwise known to present challenges for aquatic resources delineation) provide information regarding the type and extent of such soils, and the methods that were employed to address any challenges encountered during the delineation.

☐ A description of the mapped and observed vegetation/plant communities and habitat types present in the review area, including a list of the dominant vegetation in each community which provides the scientific name, common name, and wetland indicator status of each dominant species.[4] If any listed (i.e., state-listed or federally-listed endangered, threatened, or species of special concern) plant species are encountered, it is recommended that they be specifically noted, regardless of dominance status.[5]

[4] Where wetland areas exist below the OHWM of a non-tidal water body or below the HTL and/or MHWL of a tidal water body, it is recommended that the full extent of wetlands be delineated in addition to the delineation of the OHWM and/or HTL and MHWL.

[5] It is recommended that delineators consult the U.S. Fish and Wildlife Service's "Information for Planning and Consultation (IPaC), which is available at: https://ipac.ecosphere.fws.gov/, prior to conducting the delineation, to identify any potential listed plant species that could potentially be in the area.

Section 5: Supporting Maps, Figures, and Information[6]:

☐ A Location/Vicinity Map that clearly depicts the review area in relation to its surroundings/larger region which includes recognizable reference points/landmarks such as the nearest intersection of two major highways, street names, and city, county, and state boundary as applicable. The inclusion of section/township/range information is recommended if available.

☐ A USGS topographic map showing the review area as a polygon on a 7.5-minute USGS Quadrangle name and grid boundary.

☐ An elevation map (e.g., USGS 3DEP LiDAR map or better, if available.

☐ Aerial images depicting current and past site conditions. If multiple years of aerial photographs are available, it is recommended that several aerial images be provided to show the review area under a range of hydrologic conditions and during a range of seasonal variation to the maximum extent possible. It is also recommended that color infrared imagery (CIR) be provided when available.

- ☐ Imagery source and data that the imagery was captured should be provided for all aerial images.
- ☐ If any of the images were relied upon to inform the delineation, an evaluation of precipitation normalcy (e.g., a report from the APT) should be provided to inform the normality of precipitation on the date that the photograph was captured.

☐ An Aquatic Resources Delineation Map, preferably overlayed on a recent aerial image, clearly showing the following:

- ☐ Polygon boundary of the review area.
- ☐ Boundaries of all delineated aquatic resources. Use OHWM for non-tidal non-wetland water bodies and use both MHWL and HTL for tidal water bodies and tidal wetlands. Wetland boundaries should be based on application of the 1987 Manual and the applicable Regional Supplement.
- ☐ If boundary flags are collected, the location of each flag should be labeled on the map with a unique identifier detailing the resource ID (e.g., W1 for Wetland 1, S1 for Stream 1, etc.) and a flag number creating a flag sequence (e.g., W1-1, W2-1, S1-1, S2-1, etc.). These labels should match what is written on the boundary flags in the field.[7]
- ☐ Clear, unique, and meaningful labels for each aquatic resource. Labels should begin with the resource type, followed by a sequential number for each aquatic

[6] The maps and figures listed in this section are the recommended minimum information for delineations conducted in all areas of the United States. It is recognized that not all delineations will need each and every map listed in this section.

[7] For larger sites, it may be beneficial to provide the boundary flag information on a separate map to ensure that the main aquatic resources delineation map is not cluttered due to excessive information.

resource within a given type. For example, Stream 1, Stream 2, Pond 1, Pond 2, Open Water 1, Open Water 2, Wetland 1, Wetland 2, etc.). It can also be helpful to include the Cowardin code in the label.

☐ **IMPORTANT: The delineation maps should not include any labeling regarding the jurisdictional status of the delineated aquatic resources.**

☐ The location of all data collection points:

☐ For wetlands, data points (documented on the wetland determination data form) should be provided for a representative location within each plant community type in the review area.

☐ For wetlands, at least one set of paired (i.e., upland/wetland)[8] sampling data points should be provided for each delineated wetland boundary in accordance with the procedures described in the 1987 Manual.[9]

Note: The paired data points should be located in representative locations within each plant community but should also be in close enough proximity to the wetland/upland boundary to inform the delineation of the landward extent of the wetland. Near the wetland boundary, it may be necessary to adjust plot size or shape to avoid overlapping the boundary and extending into an adjacent plant community.

☐ The data point(s) used to delineate the OHWM for each non-tidal, non-wetland water body and the data points used to delineate the HTL and MHW for all tidal water bodies and tidal wetlands.

☐ A sufficient number of maps should be provided to display all aquatic resources on the site, with a general guideline of using a scale not exceeding 1 inch = 400 feet (approximately 1:4800). Multiple maps are acceptable and often necessary to ensure legibility and detail. If multiple maps are used, include an overview map of the delineation and an index map showing the location of each individual sheet. Each sheet should be scaled appropriately to clearly display delineation boundaries.

☐ Nearest USGS, state, or local permanent survey marker or established GPS coordinates.

☐ A cross section depicting the location and elevation of the MHWL and the HTL for each tidal water body and each tidal wetland. Cross sections may also be helpful for OHWM determinations on non-tidal, non-wetland water bodies.

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[8] In the rare instance where a wetland point cannot be paired with an upland point, it can be accepted if there is a clear demarcation of all boundaries of the wetland (i.e. wetland abutting open water on all sides).

[9] The use of transects should be considered for wetland/wetland complexes that exceed 5 acres in size (see Part IV. of the 1987 Manual).

☐ A map including the location of any wetland delineation sampling design transects, if applicable. (See 1987 Manual Part IV.D and Part IV.E).

☐ A map including the location and direction of any photographs taken.

☐ A U.S. Fish and Wildlife Service National Wetland Inventory (NWI) map.

☐ A Federal Emergency Management Agency (FEMA) National Flood Hazard Insurance Rate floodplain map.

☐ A U.S. Department of Agriculture NRCS Soil Survey map of the review area including a table listing the map unit symbols and map unit/soil series names. The NRCS soil map should include information depicting the hydric rating of individual soils in a color-coded figure (e.g., the Hydric Rating by Map Unit feature).

☐ Color photographs depicting each aquatic resource in the review area, each data point location sampled, each soil profile examined at a data point (include a tape measure in the foreground to show soil profile measurement), hydrology indicators used to inform the wetland delineation, and each vegetation community type that exists within the review area.

☐ Completed USACE wetland determination data forms[10] for all areas that were sampled to identify the presence or absence of wetlands and/or to delineate wetland and upland boundaries.[11] The forms should specify the exact location of data collected in decimal degrees and the date(s) data was collected.

- ☐ At least one data point should be provided for a representative location within each plant community type in the review area.
- ☐ At least one pair of upland/wetland data points should be provided for each delineated wetland boundary. Data forms should be complete and legible and reflect the current review area conditions and vegetative communities.
- ☐ For Atypical situations[12], Data Form 3 Atypical Situations should also be completed.
- ☐ For “difficult wetland situations”[13], describe in the remarks section of the data form and in the delineation report text how the procedures in Chapter 5 of the applicable Regional Supplement were followed.

[10] USACE’s Automated Wetland Determination Data Sheets (ADS) are recommended since they improve accuracy and efficiency of data collection. The ADS and the ADS User Guide can be found under “General Information” at: https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/reg_supp/

[11] Sampling locations must be chosen in accordance with the sampling procedures in Part IV.D. of the 1987 Manual.

[12] See 1987 Manual, Part IV.F.

[13] See Chapter 5 of the applicable Regional Supplement.

☐ Completed OHWM data forms[14] that document the landward extent of non-tidal waterbodies (when needed).

☐ If the USDA-NRCS has completed a wetland delineation or Food Security Act (e.g., prior converted cropland) determination on the site, it is recommended that the information be provided along with the ARDR.

Standards for Maps and Figures:

The intent of these standards is to improve the quality and consistency of maps and drawings, which will support more effective review by the USACE Regulatory Project Managers and faster response times to requests from the public.

☐ On all maps, the location of the review area should be shown clearly and consistently. Except for the Location/Vicinity Map, all maps should accurately show the location and extent of the review area as a polygon. To the extent practicable, maps that depict environmental data to characterize the review area (e.g., NWI, soils, elevation, aerial photographs, etc.) should use the same map scale to facilitate comparison.

☐ All maps included in the report should have a reference block that includes title, figure number, revision number, review area/project name, name of the map's creator and any revisors, creation date, dates of any revisions, and map source and source citations (where applicable). Maps should also include a north arrow, graphic scale, legend, and a geographic reference point with latitude and longitude labeled in decimal degrees.

☐ All maps should generally be submitted using the same orientation, typically with the north arrow pointing upwards.

☐ Where specific elevations are shown, and for all cross sections included in the report, the reference elevation datum (e.g., North American Vertical Datum of 1988, National Geodetic Vertical Datum of 1929, etc.) should be indicated.

☐ Photographs should be clearly labeled with captions that include a title of what the photograph is intended to depict, the date and time the photograph was collected, collection source, direction of view (azimuth degrees or upstream/downstream), and geographic coordinates.

☐ All aerial imagery should be orthorectified, date-stamped, and with the imagery source identified on the map. Since Google Earth imagery often consists of a mosaic of satellite images, the displayed dates can be incorrect or misleading. If Google Earth

[14] Note: Use of the OHWM data form (ENG 6250) is optional, but we anticipate that many practitioners will use the form as an efficiency tool to collect relevant OHWM information rapidly and in a standardized format.

imagery is used, it is recommended to include an explanation of how the time of year of the imagery was determined and how it influenced the delineation.

Section 6: References:

☐ Citations for all references used (e.g., aerial photographs, local experts, maps, surveys, plant lists, previous site documents, scientific literature, local ordinances, etc.).

Data Collection Quality Standards for ARDRs

USACE recommends that the following quality standards for data collection and report preparation be followed to the maximum extent practical.

☐ GNSS/GPS data collection should follow the USACE Guide to Recording Aquatic Resource Boundaries using Global Navigation Satellite Systems which can be downloaded from the RRS website. If boundaries will be used in a CAD or GIS system for the computation of impacts to aquatic resources, the aquatic resource boundary locations should be collected by a surveyor and/or in accordance with the USACE GNSS/GPS standards document.

☐ When using GNSS/GPS to collect boundary data, it is recommended that delineators utilize the latest version of the RRS aquatic resources bulk upload geodatabase, available for download on the RRS website (https://rrs.usace.army.mil/rrs). This geodatabase is designed for seamless integration with Environmental Systems Research Institute, Incorporated (ESRI)-based mobile field data collection applications. It includes all necessary fields for directly transferring aquatic resource data into the RRS and USACE ORM databases. Additionally, it features GPS/GNSS metadata fields that, when paired with an ESRI feature service, automatically capture metadata to document data collection quality.

☐ GIS data files (geodatabase, shapefiles, etc.) for the review area, data points, and aquatic resources boundaries and lines should be provided, ideally in a format that can be directly uploaded into the RRS.

☐ If aquatic resources are delineated in the field using physical flags, the flags should be spaced along the boundary of each aquatic resources in the field such that no area of the aquatic resource is omitted between consecutive flags.

- ☐ Each flag/data point should be marked with a unique identifier detailing the resource ID (e.g., W1 for Wetland 1, S1 for Stream 1, etc.) and a flag number creating a flag sequence (e.g., W1-1, W2-1, S1-1, S2-1, etc.).

AQUATIC RESOURCE DELINEATION REPORT TEMPLATE

Project Name:

Date:

Purpose for Delineation: (e.g., delineation concurrence, preliminary or approved jurisdictional determination, pre-application consultation, etc.)

Description of the proposed project (if applicable) and any past actions taken: (e.g., jurisdictional determinations, permits, permit applications) with the USACE reference number(s).

Prepared by:

Applicant's Name, Title (Owner, Property Manager, etc.); if applicant is not property owner, specify who the property owners are.
Consulting Company/Region/Cooperating Agency (if applicable)
Address
Phone Number
Email

Prepared For:

Name (Role)
Company
Address
Phone Number
Email

Table of Contents

Appendices

1. General Background and Site Information

- Identify the physical address of the review area (if available), the best/preferred access point(s) to the site, and contact information for any site managers/gate keepers.

- Provide identifying information for field investigators and the ARDR author(s), with professional qualifications.

- Identify the latitude/longitude in decimal degrees of the center point of the review area.

- Identify total acreage of review area.

- Provide a high-level narrative overview of the site, including its general location, current and historical land use, surrounding land use, and notable features such as access conditions and any significant on-site activities or characteristics.

Contact information for the applicant(s), property owner(s), and agent/contractor(s) including name, physical address(es), phone number(s), and email(s) for each should be attached in **Appendix A** alongside Right of Entry Documentation.

2. Field Data Collection Methodology

- Provide the date(s) for which field work was conducted and a brief description of tasks performed on those dates.
  - Where field work was completed on multiple dates, the information should describe the specific date(s) upon which each aquatic resources was evaluated, such that the observed conditions within each aquatic resource can be associated with relevant environmental data (e.g., antecedent precipitation) that are representative of the date that the observations were made.

- A statement that the delineation has been conducted in accordance with
  - The 1987 Corps of Engineers Wetland Delineation Manual
  - The applicable Regional Supplement and indication of which supplement was used (if applicable)
  - In accordance with the definition of “Ordinary High Water Mark” found at 33 CFR 328 and 329, RGL 05-05 for OHWM delineations, and any OHWM field guide that was used.
  - The High Tide Line (HTL) and the Mean High Water Line (MHWL) (for tidal water bodies and tidal wetlands)

- Explain and justify the method used to delineate (routine vs. comprehensive) per Section IV of the 1987 Manual.
  - If the wetland delineation was completed using the routine method, indicate whether the level selected for use was Level 1, Level 2, or Level 3 (See 1987 Manual Paragraphs 20-22 and 56-58), and include a statement describing how wetland sampling locations were chosen in accordance with the sampling procedures in Part IV.D. of the 1987 Manual. Include a reference to the applicable sampling transect maps in the ARDR (if applicable).
  - If the wetland delineation was completed using the comprehensive approach, include a statement describing how wetland sampling locations were chosen in accordance with the sampling procedures in Part IV.E. of the 1987 Manual. Include a reference to the applicable sampling transect maps in the ARDR.

- If site-specific conditions necessitated modification of the field procedures in the 1987 Manual, include a statement documenting the reasons that a different characterization procedure was needed and describe how the field procedures were modified to address those conditions (see 1987 Manual Paragraph 23).

- If any atypical situations (see 1987 Manual, Part IV.F) or “difficult wetland situations” (see the applicable Regional Supplement, Chapter 5) were encountered, describe how the procedures in Part IV.F. of the 1987 Manual and/or Chapter 5 of the applicable Regional Supplement were followed and incorporated into the field procedures.

- If the vegetation, soils, and/or hydrology have been altered by recent human activities or natural events, such that “normal circumstances” were not present in any portion of the review area, describe the alteration including its age, extent, purpose, and relative permanence, indicate which areas are affected, and describe the procedures, methods, and information used to determine the vegetation, soils, and hydrology that would be present under normal circumstances.

- If any non-tidal, non-wetland waters (e.g., streams, lakes, ponds, etc.) were present in the review area, include a statement confirming that the delineation of non-tidal, non-wetland water bodies on the site was completed based on the ordinary high water mark (OHWM) as defined in 33 CFR Part 328.3 and 33 CFR Part 329.4 (as applicable) and in accordance with RGL 05-05. The statement should also indicate whether an OHWM field guide (e.g., the National OHWM Field Delineation Manual for Rivers and Streams) was used to assist with the delineation and if so, which field guide was used. USACE recommends that Form ENG 6250 (Rapid Ordinary High Water Mark Field Identification Data Sheet be used to document all OHWM delineations, regardless of whether an OHWM field guide was used.

- If any tidal waters were present in the review area, include a statement that the delineation was conducted using the HTL and the MHWL as defined in the CFR at 33 CFR Part 328.3(c) and 33 CFR Part 329.12, respectively. If necessary, include a description of how and/or why the waters were found to be subject to the ebb and flow of the tide.

- A description of the GNSS/GPS and/or survey methods and equipment used to map aquatic resource boundaries, including a statement on the accuracy of the geospatial data.

3. Site Conditions

Provide:

- A description of existing review area conditions including current land use, grazing or irrigation practices, any physical modifications to review area conditions (e.g., constructed drains, tiling, or drainage ditches), and historical land uses of the review area if available (e.g., agricultural, industrial, residential, cropland, etc.).

- A description of the weather conditions at the site during and immediately prior (72 hours) to the date(s) when any field observations were made, including daily rainfall totals from the nearest appropriate weather station.

- A description of antecedent precipitation conditions within the 90 days prior to conducting the delineation field work. Provide precipitation records and/or the Antecedent Precipitation Tool (APT) report (available at https://github.com/erdc/Antecedent-Precipitation-Tool/releases/latest) or Natural Resources Conservation Agency (NRCS) Climate Analysis for Wetlands Tables (WETS Tables) as appropriate for each field observation date.

- A description of long-term climatic conditions prior to the delineation field work. Provide flood/drought information and/or the APT report.

- A discussion of any available stream and tidal gage data that could further inform hydrologic conditions at the site (e.g., upstream and/or downstream of the site, or within the watershed of the site). If gauge data is not available within the watershed where the site is located, then a representative location in a nearby watershed or other available data (e.g., modeled hydrologic conditions) should be used.

4. Aquatic Resources Inventory

Provide/include:

- A description of all aquatic resources (e.g., rivers, streams, lakes/ponds, wetlands, vegetated shallows, drainage ditches, mudflats, etc.) within the review area including an explanation for the basis of the mapped boundaries.
  - If any of the aquatic resources extend outside of the review area, indicate as such, and provide an assessment of how the aquatic resource does or does not connect to other offsite aquatic resources in the vicinity using available field observations or remotely sensed data.
  - If any complex transition zones and/or problematic conditions were encountered during mapping, indicate how those conditions were addressed.
  - If the review area contains problematic conditions referenced in Chapter 5 of the applicable Regional Supplement or potential aquatic resources that were assessed and were found to only meet one or two of the three wetland criteria or do not exhibit a clear OHWM, describe those areas and provide the rationale for their inclusion or exclusion from the delineation.

- A summary table listing all aquatic resources in the review area. The summary table should include the name of each aquatic resource as shown on the delineation map, its presumed Cowardin classification, its size (generally use acres for wetlands, lakes and ponds, and larger water bodies and use length, average width, and acreage for smaller linear features), and its location (latitude/longitude in decimal degrees at the center point for wetlands and transition and headwaters points for streams and special aquatic sites). This information can be used to populate templates for bulk uploading aquatic resources into the RRS and USACE OMBIL Regulatory Module (ORM). The most recent versions of the aquatic resources bulk upload templates can be download from the RRS (https://rrs.usace.army.mil/rrs) or ORM (https://orm.ops.usace.army.mil) websites.

- A description of the hydrologic characteristics (e.g., flow regime, flow volume, flow duration, flow frequency, wetland hydropattern, stream flow assessment method results, etc.) of all aquatic resources.

- A description of any observed physical connections (or lack thereof) between onsite aquatic resources and aquatic resources in the vicinity (e.g., Wetland 1A connects to Swift Creek via a 300-foot-long 24-inch diameter culvert which carries flows under Smith Street). Where possible, it is recommended that the description identify the flow path from the aquatic resource to the nearest downstream “blue-line” waterway found on the most recent U.S. Geological Survey (USGS) topographic map or National Hydrography Dataset.

- A description of the hydrology in the review area, covering all known surface or subsurface sources, drainage gradients, surface water connections to the nearest downstream waterway, nearby wells, dewatered borrow pits, and any manmade alterations which may influence the site's hydrology (e.g., irrigation, drainage ditches).

- A description of the onsite soils, including a discussion of any map units that correspond to hydric soils or hydric inclusions.
  - If any problematic hydric soils (e.g., soils addressed in Chapter 5 of the applicable Regional Supplement or otherwise known to present challenges for aquatic resources delineation) provide information regarding the type and extent of such soils, and the methods that were employed to address any challenges encountered during the delineation.

- A description of the mapped and observed vegetation/plant communities and habitat types present in the review area, including a list of the dominant vegetation in each community which provides the scientific name, common name, and wetland indicator status of each dominant species. If any listed (i.e., state-listed or federally-listed endangered, threatened, or species of special concern) plant species are encountered, it is recommended that they be specifically noted, regardless of dominance status.
  - It is recommended that delineators consult the U.S. Fish and Wildlife Service's "Information for Planning and Consultation (IPaC), which is available at: https://ipac.ecosphere.fws.gov/, prior to conducting the delineation, to identify any potential listed plant species that could potentially be in the area.

5. References

Citations for all references used (e.g., aerial photographs, local experts, maps, surveys, plant lists, previous site documents, scientific literature, local ordinances, etc.).

- Books, Journal Articles, Reports: [Author(s). YEAR Title. Publisher/Source. Volume: Page begin-Page end].

- Correspondence: [Author(s). Date. Subject. Agency/Company. Pp (pages)]

- Phone: [Contact Name. Date. Subject. Agency/Company. Phone Number. Result/Action].

- E-mail: [Contact Name. Date. Subject. Agency/Company. E-mail address. Result/Action].

Appendix A – Contact Information and Signed Right of Entry

Contact information for the applicant(s), property owner(s), and agent/contractor(s) including name, physical address(es), phone number(s), and email(s) for each alongside Right of Entry Documentation

Contact Information Example:
Property Owner: *(if there are multiple property owners, please attach additional pages)*
Name: _____Company Name (*if applicable*):_____
Address: _____

Phone: _____Email:
_____

Check one: ☐I currently own this property ☐I plan to purchase this property ☐Other:_____

Name: _____Company Name (*if applicable*):_____
Address: _____
Phone: _____Email: _____
Check one: ☐I currently own this property ☐I plan to purchase this property ☐Other:_____

Requestor of Jurisdictional Determination/Delineation *(if different than the property owner)*
Name: _____Company Name (*if applicable*):_____
Address: _____
Phone: _____Email: _____
Check one: ☐I currently own this property ☐I plan to purchase this property ☐Other:_____

Agent/Environmental Consultant Acting on Behalf of the Requestor *(if applicable)***:**
Consultant/Agent Name:_____
Company Name:_____
Address: _____
Phone:_____ Email: _____

The official USACE right-of-entry form (ENG 6294) can be downloaded from the RRS website.

Appendix B – Vicinity Map

A Location/Vicinity Map that clearly depicts the review area in relation to its surroundings/larger region which includes recognizable reference points/landmarks such as the nearest intersection of two major highways, adjacent parcels, street names, and city, county, and state boundary as applicable. The inclusion of section/township/range information is recommended if available.

- Should have a reference block that includes title, figure number, revision number, review area/project name, name of the map's creator and any revisors, creation date, dates of any revisions, and map source and source citations (where applicable).
- Maps should also include a north arrow, graphic scale, legend, and a geographic reference point, with latitude and longitude labeled in decimal degrees.
- All maps should generally be submitted in the same orientation, typically with the North arrow pointing upwards.

Example Vicinity Map:

Appendix C – Aquatic Resources Delineation Map

An Aquatic Resources Delineation Map, preferably overlayed on a recent aerial image, clearly showing the following:

- Nearest USGS state or local permanent survey marker or established GPS coordinates.

- Polygon boundary of the review area.

- Boundaries of all delineated aquatic resources. Use OHWM for non-tidal, non-wetland water bodies and use both MHWL and HTL for tidal water bodies and tidal wetlands. Wetland boundaries should be based on application of the 1987 Manual and the applicable Regional Supplement.

- Clear, unique, and meaningful labels to each aquatic resource. Labels should begin with the resource type, followed by a sequential number for each aquatic resource within a given type. For example, Stream 1, Stream 2, Pond 1, Pond 2, Open Water 1, Open Water 2, Wetland 1, Wetland 2, etc.). It can also be helpful to include the Cowardin code in the label.
    - **IMPORTANT**: **The delineation maps should not include any labeling regarding the jurisdictional status of the delineated aquatic resources.**

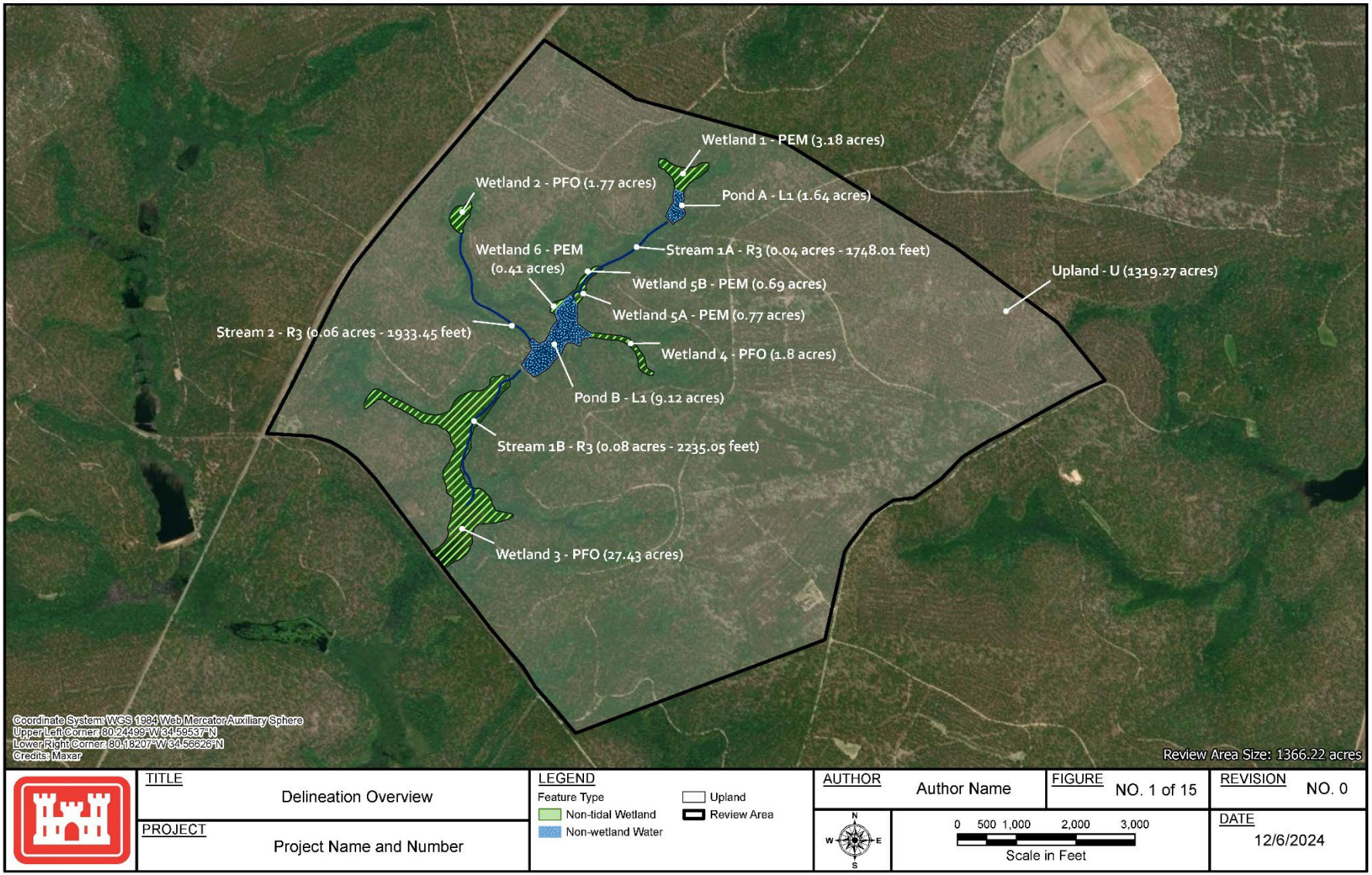
- The size of each individual aquatic resources (acres for non-linear features and acres and linear feet for linear features).

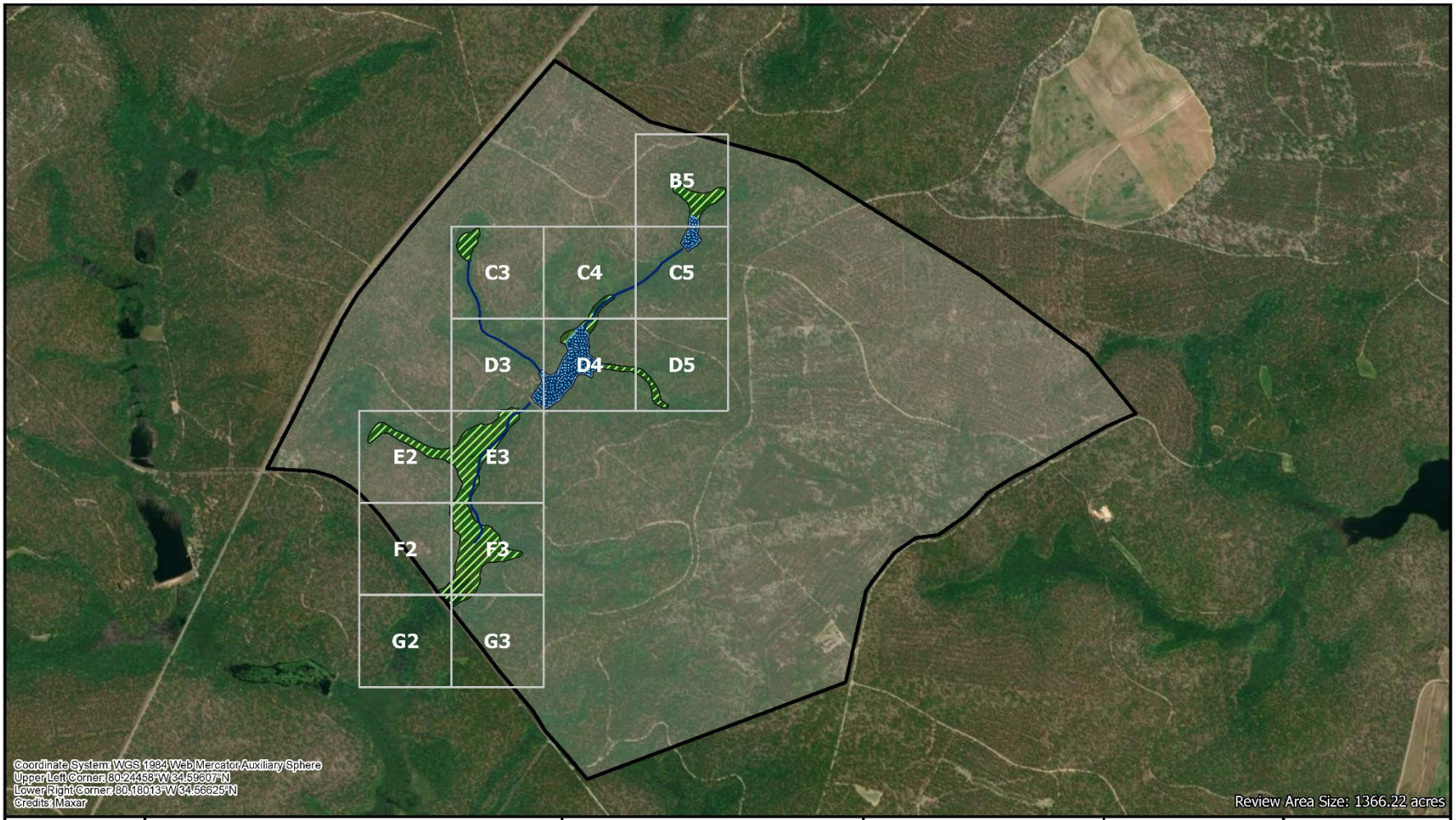
- The location of all data collection points:
    - For wetlands, data points (documented on the wetland determination data form) should be provided for a representative location within each plant community type in the review area.
    - For wetlands, at least one set of paired (i.e., upland/wetland) sampling data points should be provided for each delineated wetland boundary in accordance with the procedures described in the 1987 Manual.
        - Note: The paired data points should be located in representative locations within each plant community but should also be in close enough proximity to the wetland/upland boundary to inform the delineation of the landward extent of the wetland. Near the wetland boundary, it may be necessary to adjust plot size or shape to avoid overlapping the boundary and extending into an adjacent plant community.

- The data point(s) used to delineate the OHWM for each non-tidal water body and the data points used to delineate the HTL and MHW for all tidal water bodies and tidal wetlands.

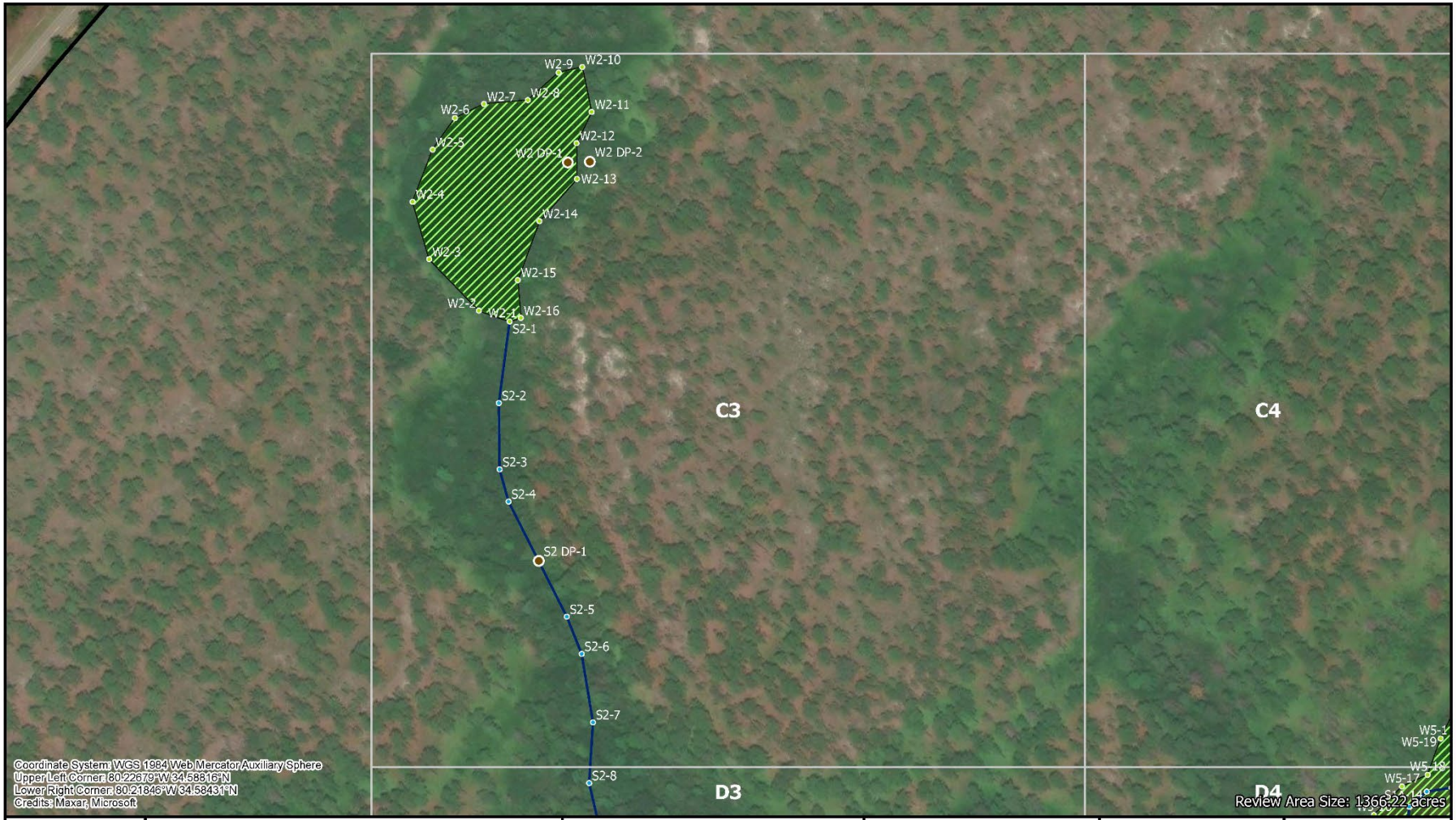
A sufficient number of maps should be provided to display all aquatic resources on the site, with a general guideline of using a scale not exceeding 1 inch = 400 feet (approximately 1:4800). Multiple maps are acceptable and often necessary to ensure legibility and detail. If multiple maps are used, include an overview map of the delineation and an index map showing the location of each individual sheet. Each sheet should be scaled appropriately to clearly display delineation boundaries.

Example Aquatic Resources Delineation Maps (Non-tidal with Index Sheet):



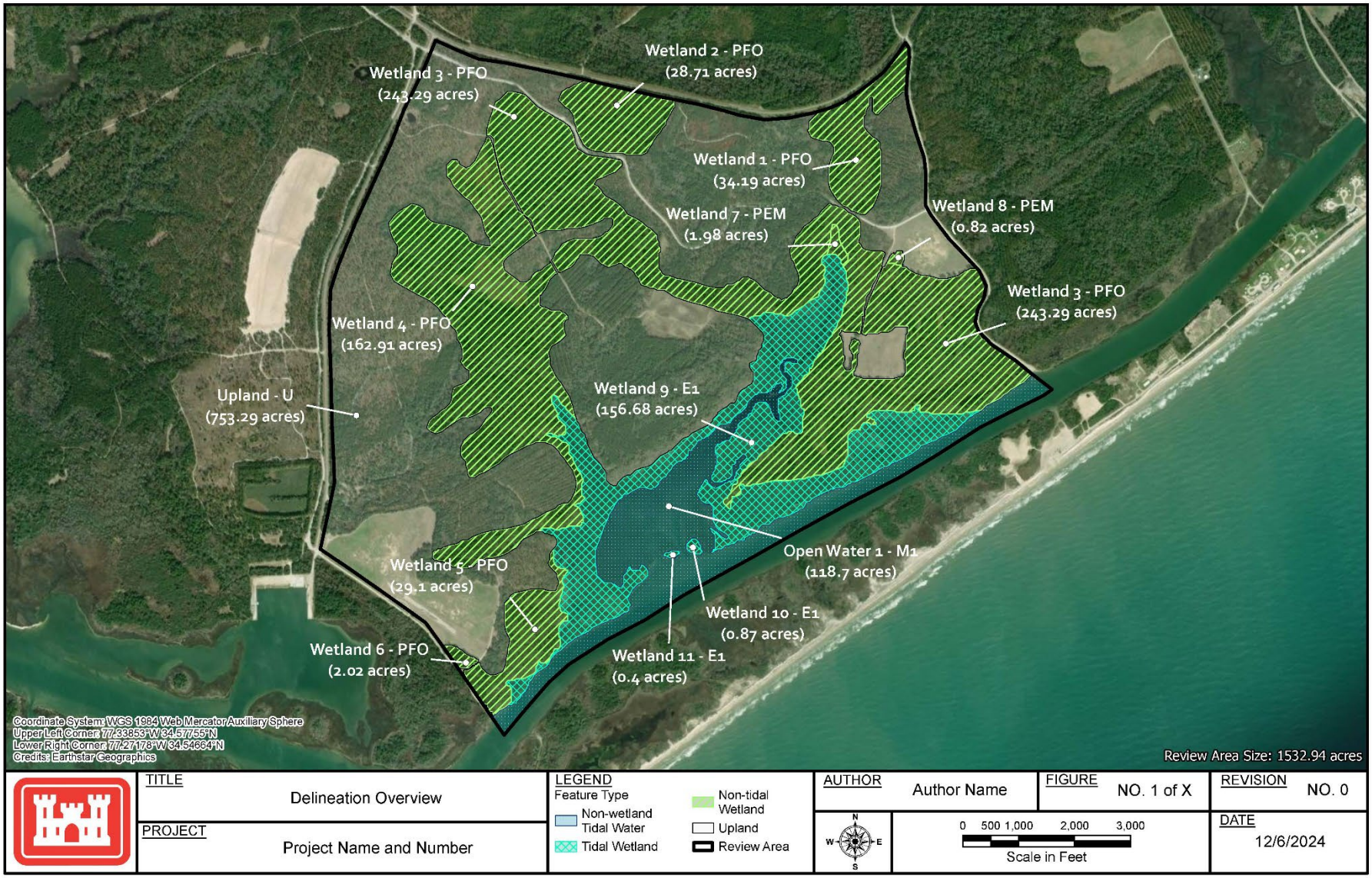


TITLE: Delineation Gridded Index	LEGEND: Feature Type; Non-tidal Wetland; Non-wetland Water; Upland; Review Area	AUTHOR: Author Name	FIGURE: NO. 2 of 15	REVISION: NO. 0
PROJECT: Project Name and Number		N W E S	0 500 1,000 2,000 3,000 Scale in Feet	DATE: 12/6/2024



TITLE: Delineation Grid C3	LEGEND	AUTHOR: Author Name	FIGURE: NO. 4 of 15	REVISION: NO. 0	
PROJECT: Project Name and Number	Boundary Flagging: Non-wetland Water; Non-tidal Wetland; Data Points Feature Type: Non-tidal Wetland; Non-wetland Water; Upland; Review Area	N W E S	0 110 220 440 660 Scale in Feet	DATE: 12/6/2024	

Example Aquatic Resources Delineation Maps (Tidal Overview):



Appendix D – Other Helpful Figures and Images

Other helpful data should be included here, such as:

- A USGS topographic map showing the review area as a polygon on a 7.5-minute USGS Quadrangle name and grid boundary.

- USGS 3DEP LiDAR map or better (if available).

- Aerial images depicting current and past site conditions. If multiple years of aerial photographs are available, it is recommended that several aerial images be provided to show the review area under a range of hydrologic conditions and during a range of seasonal variation to the maximum extent possible. It is also recommended that color infrared imagery (CIR) be provided when available.
  - Imagery source and data that the imagery was captured should be provided for all aerial images.
  - If any of the images were relied upon to inform the delineation, an evaluation of precipitation normalcy [e.g., a report from the USACE's Antecedent Precipitation Tool (APT)] should be provided to inform the normality of precipitation on the date that the photograph was captured.
  - All aerial imagery should be orthorectified, date-stamped, and with the imagery source identified on the map. If Google Earth imagery is used, it is recommended to include an explanation of how the time of year of the imagery was determined and how it influenced the delineation.

- A cross-section showing the location and elevation of the MHWL and HTL for each tidal water body and each tidal wetland, as applicable. Cross-sections may also be useful for OHWM determinations on non-tidal water bodies.
  - Where specific elevations are shown, and for all cross sections, the reference elevation datum (e.g., North American Vertical Datum of 1988, National Geodetic Vertical Datum of 1929, etc.) should be indicated.

- A map including the location of any wetland delineation sampling design transects, if applicable. (See 1987 Manual Part IV.D and Part IV.E).

- A map including the location and direction of any photographs taken.

- A U.S. Fish and Wildlife Service National Wetland Inventory (NWI) map.

- A Federal Emergency Management Agency (FEMA) National Flood Hazard Insurance Rate floodplain map.

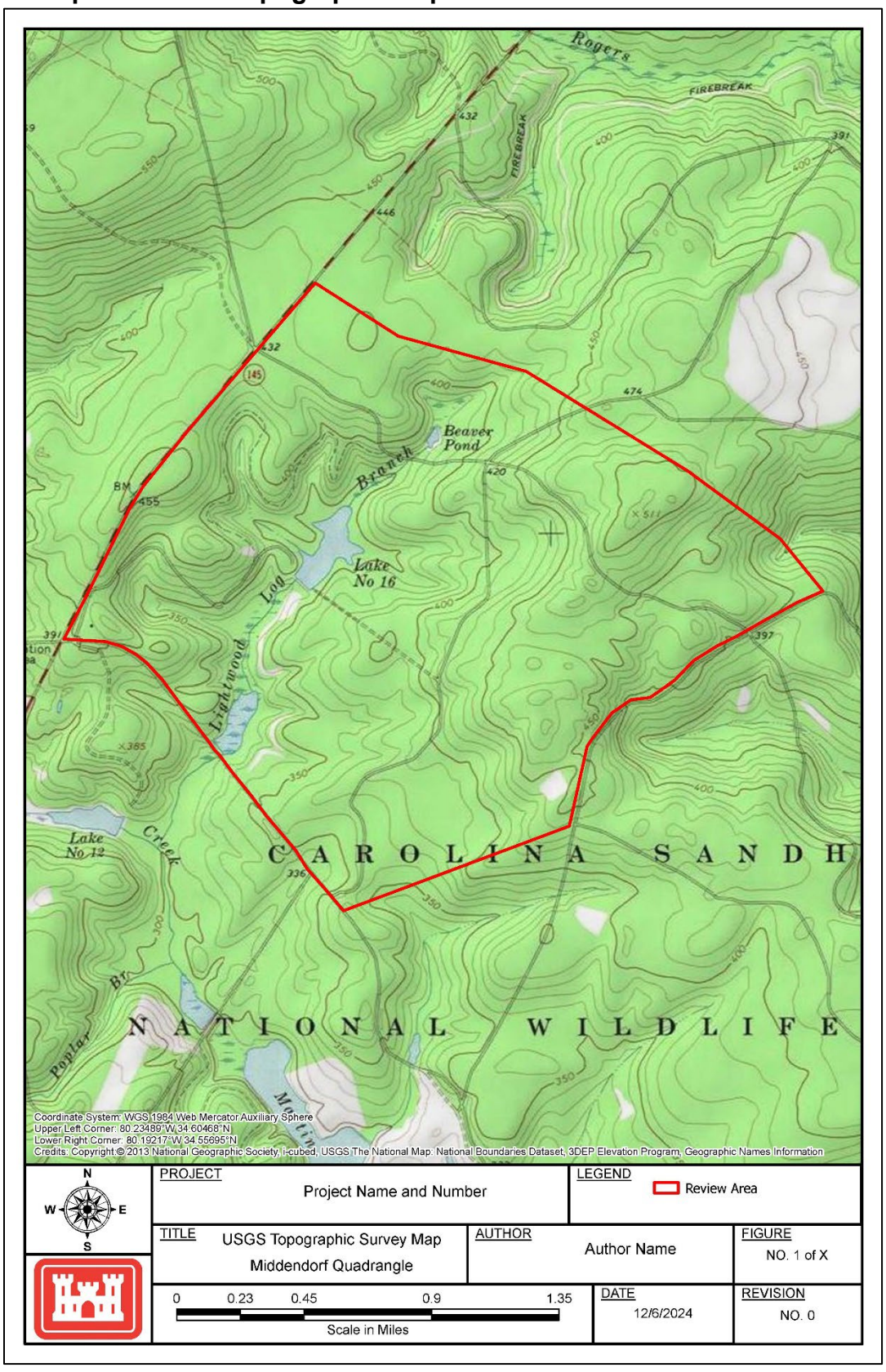
- A U.S. Department of Agriculture NRCS Soil Survey map of the review area including a table listing the map unit symbols and map unit/soil series names.

The NRCS soil map should include information depicting the hydric rating of individual soils in a color-coded figure (e.g., the Hydric Rating by Map Unit feature).

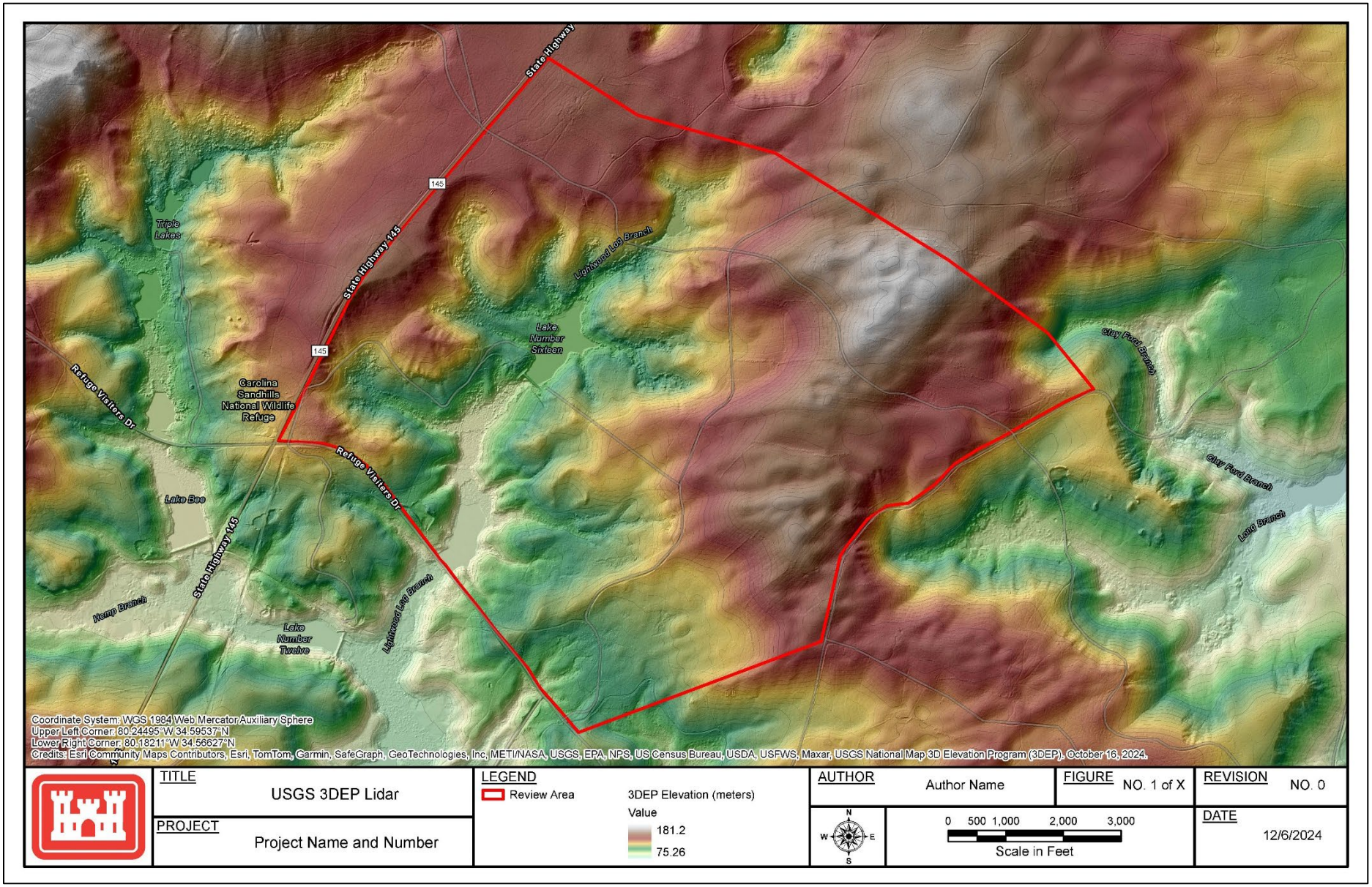
- Color photographs depicting each aquatic resource in the review area, each data point location sampled, each soil profile examined at a data point (include a tape measure in the foreground to show soil profile measurement), hydrology indicators used to inform the wetland delineation, and each vegetation community type that exists within the review area.
    - Photographs should be clearly labeled with captions that include a title of what the photograph is intended to depict, the date and time the photograph was collected, collection source, direction of view (azimuth degrees or upstream/downstream), and geographic coordinates.

All maps should generally be submitted using the same orientation, typically with the north arrow pointing upwards.

Example of USGS Topographic Map:



Example USGS 3DEP LiDAR Map:



Example of an NWI Map:

TITLE

National Wetland Inventory

WETLAND CLASS AND DESCRIPTION

PEM: Persistent Emergent wetlands are dominated by plants which have leaves and stems above the surface of the water during the entire year. In these wetlands emergent plants are the tallest life form and cover > 30% of the area.

PFO: Forested Broad-leaved Deciduous wetlands are dominated by broad-leaved deciduous trees > 6 m (20 ft) tall which cover > 30% of the area. Broad-leaved Deciduous Forested Wetlands are found throughout the United States, but are most common in the South and East. These wetlands generally occur on mineral soils or highly decomposed organic soils.

PFO: Forested Needle-Leaved Evergreen wetlands are dominated by needle-leaved evergreen trees > 6 m (20 ft) tall which cover > 30% of the area. Forested Wetlands are most common in the eastern U.S. In northern areas with nutrient-poor organic soils black spruce is common. In more nutrient-rich areas eastern arborvitae (Thuja occidentalis) dominates northern wetlands. Along the Atlantic Coast on organic soils Atlantic white cedar (Chamaecyparis thyoides) is common. Pond pine is found in the Southeast in association with dense stands of broad-leaved evergreen and deciduous shrubs.

PSS: Broad-Leaved Deciduous Shrub/Scrub wetlands are dominated by broad-leaved deciduous woody plants < 6m (20 ft) tall that cover > 30% of the area. While these wetlands only occur in the Estuarine and Palustrine Systems, they are one of the most widespread wetland classes in the United States. Typical species include sea-myrtle (Baccharis halimifolia) and high-tide bush (Iva frutescens).

PSS: Broad-Leaved Evergreen Shrub/Scrub wetlands are dominated by Broad-Leaved Evergreen woody plants < 6m (20 ft) tall that cover > 30% of the area. In the Estuarine System these wetlands are known for extensive stands of mangroves (Rhizophora mangle, Languncularia racemosa, Conocarpus erectus, and Avicennia germinans).

PUB: Unconsolidated Bottom wetlands have a substrate composed of particles smaller than stones (< 10 inches, 25.4 cm) covering > 25% of the area. Plants cover less than 30% of the area.

RSB: Streambed wetlands include channels in the Estuarine System, intermittent portions of the Riverine System, and all tidal channels of the Riverine System that are completely dewatered at low tide.

RUB: Unconsolidated Bottom wetlands have a substrate composed of particles smaller than stones (< 10 inches, 25.4 cm) covering > 25% of the area. Plants cover less than 30% of the area.

LEGEND

- Review Area
- USA Wetlands Wetland Type
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

PROJECT

Project Name and Number

N W E S

0 1,000 2,000 4,000 6,000

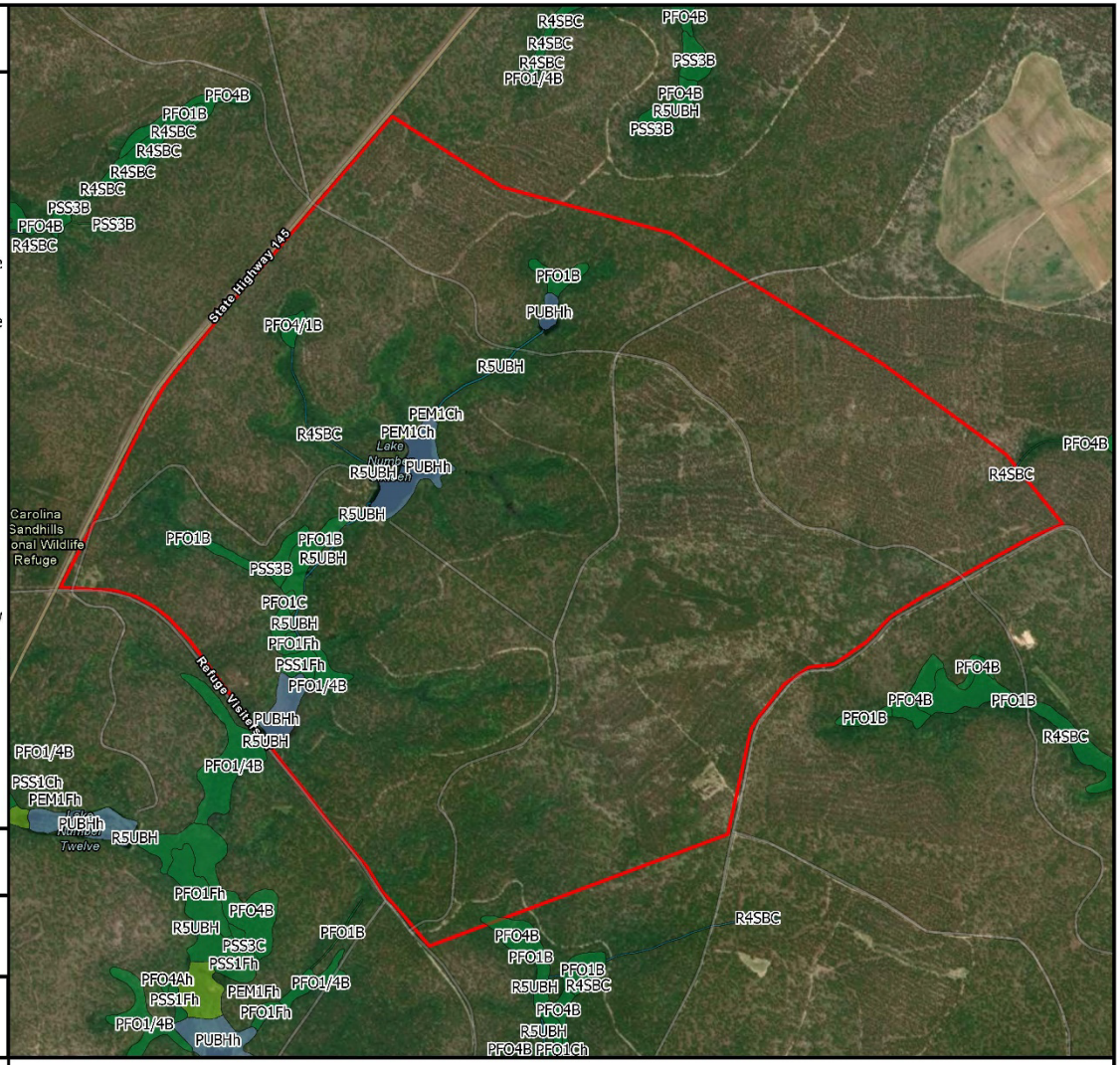
Scale in Feet

AUTHOR: Author Name

FIGURE: NO. 1 of X

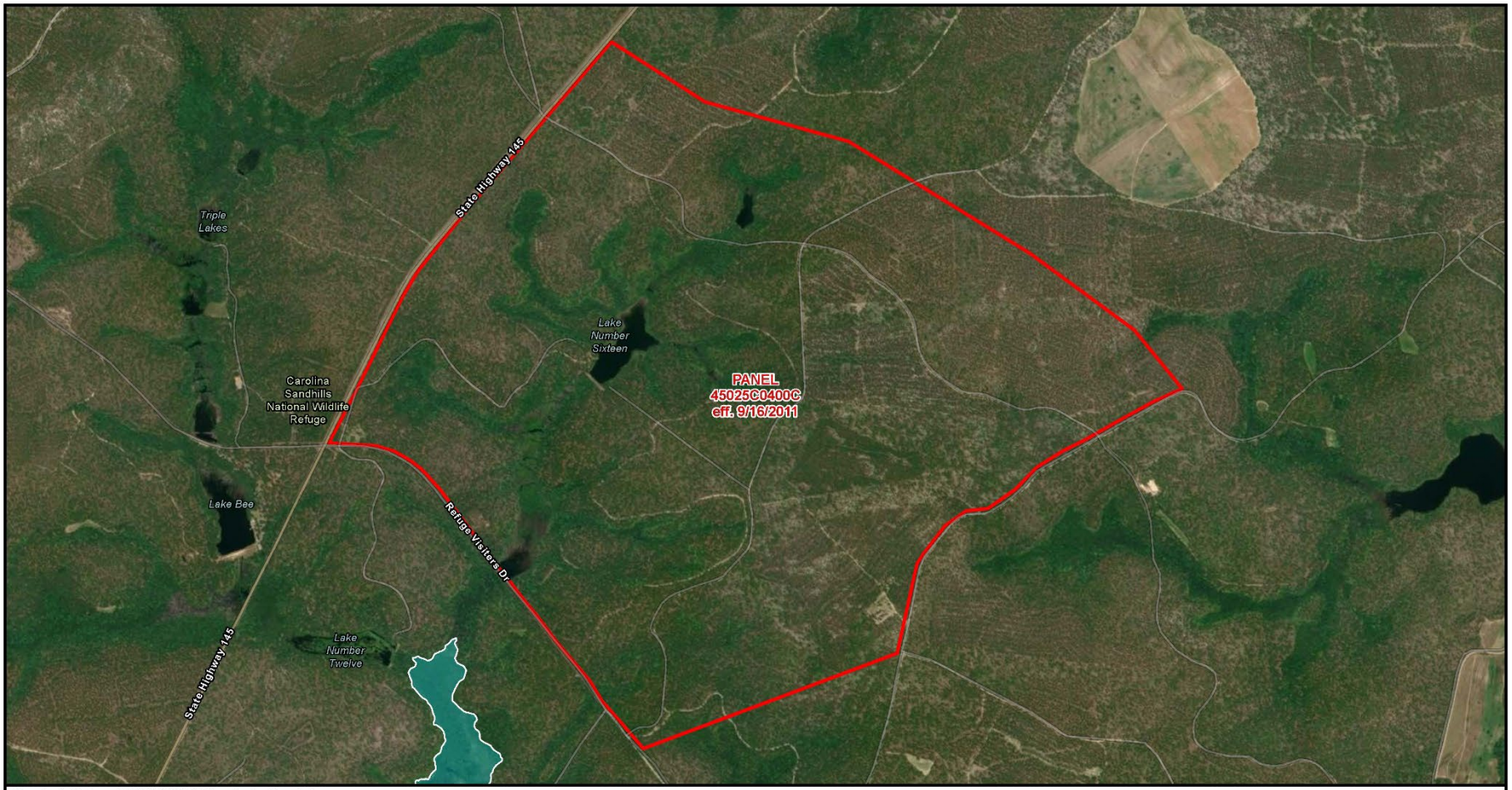
DATE: 12/6/2024

REVISION: NO. 0



Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Upper Left Corner: 80.23488°W 34.59755°N
Lower Right Corner: 80.19218°W 34.56409°N
Credits: Maxar, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

Example of FEMA National Flood Hazard Map:



Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Upper Left Corner: 80.24758°W 34.59537°N
Lower Right Corner: 80.17948°W 34.56627°N
Credits: Maxar, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

TITLE: FEMA National Flood Hazard Layer	LEGEND: Review Area; Flood Hazard Zones: 1% Annual Chance Flood Hazard	AUTHOR: Author Name	FIGURE: NO. 1 of X	REVISION: NO. 0
PROJECT: Project Name and Number		N / W / E / S	0 500 1,000 2,000 3,000 Scale in Feet	DATE: 12/6/2024

Example of an NRCS Soil Survey Map:

TITLE

USDS NRCS SSURGO Soils

SOIL MAP UNIT CODE, DESCRIPTION, HYDRIC PERCENTAGE

PIB: Pelion loamy sand, 2 to 6 percent slopes (Hydric: 2%)
ApB: Alpin sand, 0 to 6 percent slopes, Carolina and Georgia Sandhills (Hydric: 0%)
AeC: Ailey sand, 6 to 10 percent slopes (Hydric: 2%)
CaB: Candor sand, 0 to 6 percent slopes (Hydric: 2%)
ApC: Alpin sand, 6 to 10 percent slopes (Hydric: 0%)
Jo: Johnston sandy loam, frequently flooded (Hydric: 90%)
AaB: Ailey sand, moderately wet, 2 to 6 percent slopes (Hydric: 2%)
VaD: Vaucluse loamy sand, 10 to 15 percent slopes (Hydric: 2%)
VaC: Vaucluse loamy sand, 6 to 10 percent slopes (Hydric: 2%)
TrC: Troup sand, 6 to 10 percent slopes, Carolina and Georgia Sand Hills (Hydric: 0%)
VaB: Vaucluse loamy sand, 2 to 6 percent slopes (Hydric: 2%)
CaC: Candor sand, 6 to 10 percent slopes (Hydric: 2%)
W: Water (Hydric: 0%)
TrB: Troup sand, 0 to 6 percent slopes, Carolina and Georgia Sand Hills (Hydric: 0%)
ApD: Alpin sand, 10 to 15 percent slopes (Hydric: 0%)
Og: Ogeechee sandy loam (Hydric: 95%)
AeD: Ailey sand, 10 to 15 percent slopes (Hydric: 2%)
PID: Pelion loamy sand, 10 to 15 percent slopes (Hydric: 2%)
PIC: Pelion loamy sand, 6 to 10 percent slopes (Hydric: 2%)
CaD: Candor sand, 10 to 15 percent slopes (Hydric: 2%)
KeB: Kenansville sand, 0 to 4 percent slopes (Hydric: 0%)

LEGEND

Review Area
Hydric Percentage
Not Hydric
Partially Hydric (1-25%)
Partially Hydric (26-50%)
Partially Hydric (51-75%)
Partially Hydric (76-95%)
All Hydric

PROJECT

Project Name and Number

N W E S

0 1,000 2,000 4,000 6,000

Scale in Feet

AUTHOR

Author Name

FIGURE

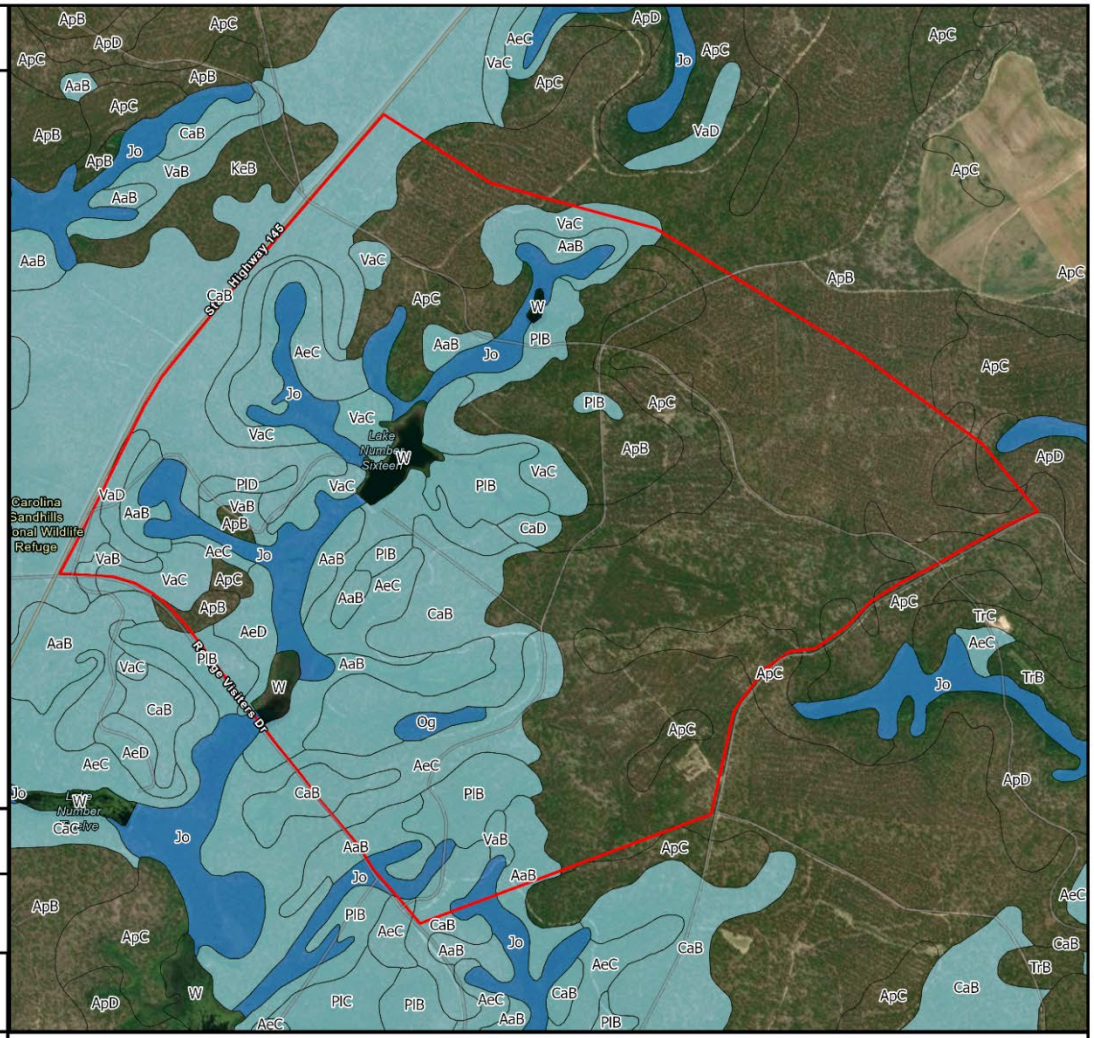
NO. 1 of X

DATE

2/12/2025

REVISION

NO. 0



Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Upper Left Corner: 80.23488°W 34.59756°N
Lower Right Corner: 80.19218°W 34.56408°N
Credits: Earthstar Geographics, Esri, TomTom, GarminoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWJ, USDA, USFWS

Basic Photolog Example:

Photo Point 1. Data Point U-1.
Date/Time: 12/12/2024 11:12:50 AM Direction: 238.107° Coordinates: 29.972508, -81.969809

Photo Point 2. Black Creek south bank facing west.
Date/Time: 12/12/2024 11:12:50 AM Direction: 255.483° Coordinates: 29.974817, -81.967410

	TITLE	AUTHOR	FIGURE
	Site Photographs	Author Name	NO. 1 of X
	PROJECT	DATE	REVISION
	Project Name and Number	6/30/2025	NO. 0

Mapped Photolog Example:

PHOTO DESCRIPTION
Black Creek South Bank Facing West

EXIF PHOTO METADATA
Height, Width: 960, 1280
Date/Time Stamp: 12/12/2024 11:13:07 AM
Latitude: 0.000000
Longitude: 0.000000
Elevation (m): 0.00
Camera Make: samsung
Camera Model: SM-G781U
Focal Length (mm): 5.40
Focal Length 35mm Film (mm): 26.00
Camera/Phone Orientation: 1
Image Compass Direction (°): 0.00
Image Direction Reference: None

TITLE
Mapped Photo Log

Photo 11 of 18

0 155 310 620
Feet

GNSS POINT METADATA
Fix Time: 12/12/2024 11:12:50 AM
Fix Type: N/A
GPS Receiver: Samsung+SM-G781U
Position Source Type: N/A
Number of Satellites: 14.00
Latitude: 29.974817
Longitude: -81.967410
Altitude: N/A
Compass Reading (°): 317.54
Direction of Travel (°): N/A
Speed (km/h): N/A
PDOP: 1.20
HDOP: N/A
VDOP: N/A
Horizontal Accuracy (m): 4.23
Vertical Accuracy (m): N/A
Average Horizontal Accuracy (m): N/A
Average Vertical Accuracy (m): N/A

PHOTOLOG POINT, PHOTO, AND MAP METADATA
Latitude: 29.974817 Longitude: -81.967410 Direction: 255.00
Photographed by None on N/A at 12/12/2024 11:12:50 AM UTC
Map generated by Overview Zoom Level on 6/30/2025
File name: Photo961436.jpg

Review Area
Photo Points

Appendix E – Wetland Determination Data Forms

Completed USACE wetland determination data forms for all areas that were sampled to identify the presence or absence of wetlands and/or to delineate wetland and upland boundaries. The forms should specify the exact location of data collected in decimal degrees and the date(s) data was collected.

- At least one data point should be provided for a representative location within each plant community type in the review area.
  - Note: The paired data points should be located in representative locations within each plant community but should also be in close enough proximity to the wetland/upland boundary to inform the delineation of the landward extent of the wetland. Near the wetland boundary, it may be necessary to adjust plot size or shape to avoid overlapping the boundary and extending into an adjacent plant community.
  - The use of transects should be considered for wetland/wetland complexes that exceed 5 acres in size (see Part IV. of the 1987 Manual).

- At least one pair of upland/wetland data points should be provided for each delineated wetland boundary.

- For Atypical situations (See 1987 Manual, Part IV.F.), Data Form 3 Atypical Situations should also be completed.

- For “difficult wetland situations” (See Chapter 5 of the applicable Regional Supplement), describe in the remarks section of the data form and in the delineation report text how the procedures in Chapter 5 of the applicable Regional Supplement were followed.

USACE’s Automated Wetland Determination Data Sheets (ADS) are recommended since they improve accuracy and efficiency of data collection. The ADS and the ADS User Guide can be found under “General Information” at: https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/reg_supp/

Additional data points may be necessary, and should be shown on the map, depending on various factors including the size and shape of the aquatic resource, changes in vegetation communities, and slope.

Data forms should be complete and legible and reflect the current review area conditions and vegetative communities.

Appendix F – OHWM Data Forms

Completed OHWM data forms that document the landward extent of non-tidal waterbodies (when needed).

Use of the OHWM data form (ENG 6250) is optional, but we anticipate that many practitioners will use the form as an efficiency tool to collect relevant OHWM information rapidly and in a standardized format.