FINAL MITIGATION PLAN
COLONIAL FARMS WETLAND MITIGATION SITE

Edgecombe County, NC

NCDEQ Contract No. 200207-01

NCDMS ID No. 100191

NCDWR Project No. 2021-0399v2

USACE Action ID: SAW-2021-00346

RFP No. 16-20200207

Tar-Pamlico River Basin

HUC 03020103

February 2022

Prepared For:

NC Department of Environmental Quality

Division of Mitigation Services

1652 Mail Service Center, Raleigh, NC 27699-1652

Mitigation Services
ENVIRONMENTAL QUALITY

February 25, 2022

Kim Browning
Mitigation Project Manager
Wilmington District, US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587

Subject: SAW-2021-00346 / Colonial Farms Wetland Mitigation Site / Mitigation Plan IRT Comments/ Tar-Pam 03020102; Edgecombe County, NC

Dear Kim,

SWE/Eco Terra appreciates the IRT's continued thorough review of the project. We have addressed additional comments received by the IRT via email on February 24, 2022 for the Colonial Farms Wetland Mitigation Site – Final Draft Mitigation Plan. Our responses are below in blue:

Additional IRT Comments:

1. Response to USACE comment #13: Please note that the use of NCWAM helps demonstrate the specific functional areas where improvements may be made and establishes baseline conditions. Results from these assessment methods will not be used in determining mitigation success. It is not appropriate to use NCWAM to track functional uplift during monitoring.
   a. For the final mitigation plan, data collection and a baseline methodology must be used in order to document functional uplift. Without seeing the revision to Section 4.5, which stated that no baseline condition classification methodology is included, we may require additional information prior to authorizing the 404/401 permit for this project.

NCWAM will not be used to track functional uplift (hydrology, water quality, habitat) post construction during annual monitoring. The previous response was in error. Section 4.5 includes baseline condition documentation indicating presence of hydric soils, absences of wetland vegetation, and absence of wetland hydrology allowing for functional uplift from wetland work.

2. Response to USACE comment #19: The text of the mitigation plan refers to new culverts associated with the new ditch; however, your response indicates that existing culverts will be adjusted. Please confirm which response is correct and adjust the mitigation plan accordingly.

The existing culverts under the farm road will be abandoned and hydrology rerouted in the new ditch proposed parallel to the farm road as shown in the mitigation plan. A new culvert will connect to the main ditch at the outlet of the project.

3. Response to USACE comment #20: Your response confirms that possible wetter conditions on the adjacent property are likely to occur. The impact to the hydrology of the adjacent land, resulting in increased wetness and potentially the reestablishment of wetlands on those parcels remains a concern. Given that wetlands are proposed to the edge of your parcel, it seems logical that filling a ditch that is right next to the property line will impact both sides of the boundary. This is especially

concerning since the landowner continues with ditch maintenance in the wetland adjacent to the site, and will potentially construct new ditches immediately adjacent to your project that would result in drainage of wetlands on Colonial Farms site. Documentation of hydrology near the edge of the crediting area will be critical during monitoring.

The word "not" was left out in error. The landscape position and increasing gradient of the Site relative to the adjacent property to the west should not increase wetness. The south boundary ditch including area south of this ditch is included in the CE to minimize encroachment. Flow patterns on the West south boundary (as noted in USACE Comment #20 response) entering the restoration area as well as flow patterns on the adjacent south parcel minimize any hydrology changes to adjacent parcels.

4. Response to USACE comment #28: Vegetation monitoring plots must make up a minimum of 2% of the planted portion of the site, and plots should be representative of different planting zones. Since a significant portion of the easement will be upland planting, one permanent and one random vegetation plot in the non-credited upland area will be required.

Noted and revised to include the additional vegetation monitoring in the upland non-credit area.

5. Response to USACE comment #36: Please see attached NOAA layer in relation to the project site and confirm that work will not be performed in this area.

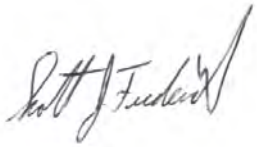
Confirmed work will not be in the NOAA Critical Habitat Designation area.

6. The IRT shares the concern that this site is isolated and lacks connection to other protected areas, which greatly diminishes the functional uplift potential for this site. The sections on site selection and the potential for functional uplift should be expanded in order to justify the proposed ratios.

Noted and revised Section 2.0 and 3.1 for clarity and justification.

We look forward to construction this winter and a successful project together. Thank you.

Sincerely,



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cc: Norton Webster, Eco Terra

February 15, 2022

Kim Browning
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Subject: SAW-2021-00346 / Colonial Farms Wetland Mitigation Site / Mitigation Plan IRT Comments/ Tar-Pam 03020102; Edgecombe County, NC

Dear Kim,

SWE/Eco Terra appreciates the IRT's time and thorough review of the project. We have addressed all comments received by the IRT provided by Memorandum of Record on February 2, 2022 for the Colonial Farms Wetland Mitigation Site - Draft Mitigation Plan. Our responses are below in blue:

Erin Davis, NCDWR:

1. Page 6, Section 3.4 – Please confirm the project site is not associated with any Animal Feeding Operations Permit Waste Utilization Plan.

   Confirmed it is not.

2. Page 7, Section 3.7 – Please include a brief discussion of projected future land use, including potential land use changes in the vicinity of the project and in the watershed.
   Revised Section 3.7 to include future land use in the vicinity and surrounding sub-watershed.
3. Page 9, Section 4.2 – Drainage effect was mentioned in Section 3.7. Was DrainMod or another modeling tool used to assess the current ditch drainage effect on the project area and potential hydrologic uplift from ditch filling/plugging? If so, please provide the results and calculation documents. If not, a lateral effect analysis is recommended.

   No modeling was completed initially to show drainage effect of ditches on the site. A lateral effect analysis of Portsmouth soils reveals a potential drainage effect from the main, central ditch of approximately 206 ft indicating substantial hydrologic uplift from ditch filling and plugging. Updated Section 4.2.
4. Page 10, Section 4.3 – Are adjacent forested wetlands separated from the proposed project by row crop fields?

   No, adjacent forested wetlands will be contiguous to the project Site on all sides with the exception of the north area that is separated by a farm road.
5. Page 14, Section 7.1 – Cattail was mentioned as being present onsite and should be treated early to avoid dispersal across the conservation easement. Also, since privet is present immediately adjacent to the site, DWR highly recommends working with the landowner to treat as much of the invasive shrub as possible.
   Ditches will be filled to grade, eliminating emergent marsh hydrology conditions necessary for cattail to survive and compete for native tree species. Any remaining cattail will be controlled. Privet control will occur adjacent to the project as necessary and with landowner consent.

6. Page 14, Section 7.2 – This section mentions ditches being plugged or filled "at various locations". However, Fig. 12 shows all existing ditches being completely filled or plugged. Please update text. Also, please callout the location of the referenced wetland outlet on Fig. 12

   Updated both text and Figure 12.

7. Page 16, Table 7 – Please update the table to reflect the March 20th growing season start date in addition to, or in replacement of, the February 20th monitoring start date. Are you concerned that two of the three gauges showed zero consecutive days' flow with a wetter than normal pre- growing season? Also, since Gauge 2 is located at the OHWM of the main ditch and the ditch is proposed to be filled to surrounding grade, will the gauge be relocated post-construction?
   Table 7 indicates a monitoring period that began prior to and includes the March 20th growing season date. The wetter than normal pre-growing season was followed by a drier than normal early growing season period for the remainder of the baseline period presented graphically in Appendix A. The lack of hydrology indicates the site drainage network is effectively removing surface and subsurface hydrology. Gauge 2 was located above OHWM at the anticipated grade post-construction; therefore, it will remain post-construction.

8. Page 17, Section 7.5 – DWR appreciates the identification/use of the nearby reference wetland. Which of the proposed planting plan species are present at the reference wetland?

   Reference wetland species include several oak species including swamp chestnut oak, water oak, willow oak, cherrybark oak, muscle wood, sycamore, green ash, yellow poplar, elm, and swamp blackgum.

9. Page 17, Section 7.6 – Please note that a late planting extension request needs to be approved by the IRT and may involve a postponement of the MY1 monitoring period.
   Noted. Every attempt will be made to construct and plant during the late dormant season prior to the beginning of the growing season (March 20th).

10. Page 19, Section 8.0 – Please add site hydrology to the first sentence.

    Revised.

11. Page 19, Section 8.1 – Please provide a brief description of the proposed Variable Plots. DWR requests that at least one more of the proposed fixed plots be changed to a variable plot. Also, please note that any volunteer species (or planting substitutions) not included in Table 8 need to be approved by the IRT to count toward vegetative success criteria. DWR is ok with the understory species listed in Table 8 being exempt from the vigor performance standard.

    A description of the variable plots is included in the last paragraph of Section 8.1. Plots will be 1-are in size and include tree species and height data. Variable plots have been increased to 4 annually, including one additional variable plot in the upland planting area as requested by USACE Comment #.

12. Page 21, Section 8.3 – Are drain tile plugs proposed for this project?

    No. The text has been revised.

13. Page 26, Section 12 – It would be helpful to have a majority of the information in this section presented earlier in the plan, perhaps as an expanded discussion the end of Section 7.2.

    Noted for future plan presentation and clarity.

14. Figure 1 (or other figure) – Is it possible to add a parcel layer for context of where the project site is within the 309-acre property?

    Yes. Revised Figure 1 included.

15. Figure 8 – Please include any ditches/drainage paths connected to the site to the south. Based on Fig. 3, there appear to be up to three potential drainage signatures?

    Revised Figure 8 to show connection of site to drainage patterns.

16. Figure 11 – If any of the vernal pools overlap wetland credit area, please make sure at least one fixed veg plot is located within a pool area (e.g., veg plot at Gauge 1). During field installation please avoid well placement within vernal pool areas, as well as filled ditches/swales.

    Noted and shown in Figure 11.

17. Appendix A – A few questions on the water budget calculation:

    a. Was the surface water flow revised based on the proposed four culvert removals and new ditch redirecting all flows north of the access road away from the project site?
    The hydrology entering the north perimeter ditch from the four culverts (proposed for removal) was not included in the water budget.

    b. Please confirm the wetland hydrology requirement referenced was the 12% mitigation hydroperiod threshold and not the 5% jurisdictional hydroperiod.

    Yes, the water budget was analyzed to reveal hydrology at the site including the 12% mitigation hydroperiod threshold.

    c. The IRT has observed some wetland mitigation sites trending drier later in monitoring, likely in part due to increased ET with the maturing overstory (particularly if pine is present). Was the proposed cover type change a consideration?

    The cover type used was trees/herbaceous (CN = 85). Pine trees will be managed and minimized within the site to reduce this concern.

18. Appendix D – DWR appreciates the level of detail provided in the soils report. The only thing I would've like to have seen is the 25 sample points GPS-ed and shown on the soil boring map.

    Noted for future Soils Reports.

19. Sheets L1.01 & EC1.01 – DWR is glad to see a good diversity of woody and herbaceous species proposed.

    Noted and agree.

20. Sheet EC1.00, Sequence #5 – If there is clearing of existing woody vegetation, DWR encourages the addition of native woody debris within the project wetland area as habitat enhancement.

    Noted and will add woody debris when possible.

USACE Comments, Kim Browning:

1. General Comment: The project flows to a ditch that flows through agricultural land prior to reaching the Tar River, which defeats the purpose of removing agricultural inputs if those lands will continue to be farmed. This is especially concerning since the landowner continues with ditch maintenance in the wetland adjacent to the site. While this site will likely provide wetland habitat, the lack of connecting buffers greatly diminishes the functional uplift potential for this site.

   Noted and agree the site has limitations to provide uplift other than within the project boundary and non-ditched wetlands to the west.

2. Are the easement boundaries on Figures 4 and 7 consistent with those on the other figures? They seem to exclude the woods in the southeast corner of the easement.

   Revised Figures 4 and 7 for consistency.

3. Page 1, Section 1.0: The text states that riparian areas, wetlands, and streams will be restored and preserved. I think it's more appropriate to state that wetlands will be restored and protected in a permanent conservation easement. Streams are not part of this project. This section also states that the site will be connected to existing Natural Heritage Areas and conservation lands. This site appears to be isolated with no connection to other protected areas. Lastly, the text states that the site will target projects under the Nutrient Offset and Buffer programs. Is there a buffer project associated with this site? Please revise the text accordingly.

   The text referenced in this comment refers to the goals of the NCDMS 2018 Tar-Pamlico River Basin Restoration Priority (RBRP) and not the Site goals, which follow further down in the Section.

4. Page 1, Section 1.0: The bold text states that agricultural byproducts, such as poultry manure, will be removed from the agricultural land. Section 3.7 does not mention poultry manure application. Please verify and adjust the text accordingly.

   Revised the text in Section 3.7.

5. Page 2: The first paragraph states that fecal coliform will be reduced. Please confirm whether fecal coliform inputs are currently an agricultural input. (Same comment for Table 3). Additionally, this paragraph states that there will be an overall protection of a continuous forested wetland corridor. This site is not contiguous with other conserved lands.

   Some level of fecal coliform may be reduced on site from the cessation of spreading poultry manure. It is anticipated there will be some level of background fecal coliform in poultry litter spread on site depending on the source and composting management. However, given the uncertainty of actual fecal coliform levels resulting from historic poultry manure application, the focus will be on nutrient removal from agricultural byproducts only. Revised accordingly.

6. Page 3, Table 1: Please include the PJD, issued December 10, 2021, in the final report and update this table. The PJD indicates that all aquatic resources within the review area are jurisdictional features since they meet the definition of an RPW. A 404 permit will be required for this project prior to construction.

   The PJD is included in the Final Plan.

7. Appendix E and Section 10.1 lists one property owner associated with the purchase and sale agreement, Quincy Farms Family Limited Partnership; however, the draft conservation easement in Appendix H shows the easement boundary extending onto the

Dunn F Marshall Jr et al property in the southeast corner of the site. Perhaps it's just the way the lines were drawn on sheet 1 in Appendix H. Please confirm that the easement will be on one property.

Confirmed the easement will be on one property.

8. Section 3.5: Please update this section with the PJD completed December 10, 2021.

   Revised.

9. Section 3.6: There are a lot of redundancies in this section on pages 6 and 7. The site is close to, but not adjacent, to the Tar River, and since several of the parcels adjacent to the site have been timbered recently, there isn't much confidence that the forested corridor that currently connects the site to the Tar River will remain forested.

   Revised accordingly and removed erroneous repetition in the text.

10. Section 3.7, Page 7: The text states that the site is in active pasture agriculture. Please confirm whether livestock are on site.

    Revised to remove reference to active pasture. No livestock is on the site.

11. Section 3.7, Page 8: There is concern regarding hydrologic trespass on the southern border of the easement. The grading plan, Sheet EC2.01, shows grading and ditches being filled to existing field elevations, so it's unclear how this eliminates additional flows southward. The plan includes wetland reestablishment all the way to the property line, so it is reasonable to expect that removal of the drainage effect of those ditches may result in wetter conditions on the adjacent parcel. It would be advisable to consider the consequences of moving forward with a project that could result in impacts to adjoining parcels that are not under the control of the sponsor/applicant.

    These concerns were considered during site investigation to determine soils and landscape position, wetland design, and survey work to confirm ditch control. The south property line contains non-hydric soils and a higher landscape position relative to the Site. A natural toeslope drainage pattern occurs on the adjacent property directing hydrology away from the southwest corner.

12. Section 4.3: Vegetation uplift should also include vigor.

    Revised accordingly.

13. Section 4.5: Section 332.4(c)(5) of the Mitigation Rule requires documentation of baseline conditions and anticipated functional uplift. Section 4.5 states that no baseline condition classification methodology is included to document uplift. Without baseline data on water quality and habitat, how do you intend to demonstrate functional uplift? It may be inappropriate to conduct a NC WAM evaluation due to a lack of wetland hydrology; however, the NC WAM description of a bottomland hardwood forest and Brownwater Swamp, as well as data collected at the site, should be utilized to determine wetland functions to target for uplift.

    Revised to describe drained historic wetlands and additional NCWAM description of the proposed wetland type. As noted, NCWAM was not used due to current agricultural state (lacking vegetation) and the lack of hydrology for the proposed re-establishment area. However, additional Bottomland Hardwood and Riverine Swamp descriptors from NCWAM are now included in this section. NCWAM will be used to track functional uplift (hydrology, water quality, habitat) post construction during annual monitoring.

14. Section 5 and Appendix C: Please provide any correspondence from WRC.

    During the Categorical Exclusion preparation, NCWRC was not contacted directly due to lack of impacts to water bodies in the project vicinity. A self-certification was completed with USFWS and NCWRC was copied on the correspondence and did not provide

comment. NCWRC did not comment on the Project during the Public Comment period and was not present during the IRT site visit.

15. Section 5.6: To add to DMS' comment #9, the PJD indicated that all aquatic resources on site are jurisdictional features. Wetland reestablishment may only be proposed on areas that are not currently jurisdictional. Rehabilitation may be proposed on areas that are currently jurisdictional but have been drained, typically from agricultural practices. All areas that were identified as jurisdictional on the PJD, and are proposed for restoration, should be labeled as rehabilitation throughout the mitigation plan. I've attached a list of wetland mitigation types below, along with descriptions, for future reference.

    Revised accordingly to accommodate jurisdictional ditches identified by the PJD.

16. Section 7.0: Please specify that the easement will be transferred to State Stewardship.

    Revised accordingly.

17. Section 7.1: Which species are currently present in the wooded portion of the easement (southeast)? If invasive species, or considerable amounts of red maple or loblolly pine, are present, I would suggest treating these early in the project to eliminate a seed source and reduce competition.

    Revised accordingly. Treatment of invasive and nuisance species will be done early and often appropriately.

18. Table 6 and Section 7.2: This table should be revised to reflect rehabilitation areas, as discussed in comment #14 above. The Corps supports a 1:1 ratio for the rehabilitation, provided you present baseline data that demonstrates the need for functional uplift at that ratio

    Revised accordingly.

19. Page 15: The third paragraph states that a new ditch will be installed north of the existing farm path. Previously in the text, I noted that new culverts would be associated with this ditch. Please note that any work performed in jurisdictional areas that are outside the area of review for this project will not be covered by the NWP27 associated with this mitigation site. Unless you can justify in the text why this ditch is integral to the success of the mitigation site, you may need to speak to the Corps County PM to determine whether this work will be considered an agricultural exemption, or if a DA Permit is needed.
    a. Sheet EC2.00: The limits of disturbance appear to be outside the conservation easement on the north side of the project.

    The new ditch is essential to the success of the project and justification included in the text. The PJD review area included the proposed limits of disturbance north of the project encompassing where the new ditch will be placed, culvert modification, as well as necessary fill needed for the north project ditch. The new ditch proposed will be placed in a non-jurisdictional area as determined by the PJD along with temporary wetland impacts associated with rerouting of the ditch flow parallel to the road and adjusting existing culvert flow.

20. Sheet EC2.01: This is just a general design question, but it appears that many of the vernal pools are adjacent to/included in the same location as the ditch plugs. If the purpose of the vernal pools is to provide habitat and filter offsite concentrated flow, will the ditch plugs restrict the flow path to the pools? I also question whether this will cause increased wetness in the adjacent property to the west,

    The intent of the vernal pool locations is to receive surface and subsurface drainage appropriately as it enters the Site. The plugs are designed as reinforcement at these entry points to direct flow through vernal pools and sheet flowing onto the Site, rather than true

restrictions and causing possible wetter conditions on adjacent areas. The landscape position and gradient of the Site relative to the adjacent property to the west should increase wetness.

21. Section 7.4: Since the growing season for hydrologic monitoring is March 20 – November 11, why did you include data that began February 20? Since this plan was not submitted until October, it would have been beneficial to submit gauge data from March 20 – October to get a more accurate baseline of hydrologic conditions.
    Hydrology data was collected to present data for the time prior to and including the start of the growing season primarily to show early growing season conditions. Under such disturbed conditions, additional data likely would not show any new information to support or debate the success of the restoration work proposed. Additional data will be provided in the future when available for clarity and data presentation.
22. Section 7.4: Do you anticipate that Gauge #2 will need to be reinstalled after construction due to its proximity to the ditch being filled?

    No. As noted in DWR Comment #7.
23. Table 7: Gauge 2 is exceeding the 12% hydroperiod prior to restoration. Would this still be the case if gauge data was collected with a March 20 start date? Why was this gauge installed at the OHWM of ditch 2 rather than a representative area for the middle of the site?

    No. As noted in DWR Comment #7. It was considered representative of the middle of the Site and at an elevation relative to groundwater post-construction.
24. Section 7.5: It would be helpful to know which species were identified on the reference wetland. Additionally, please include the gauge data for the reference wetland. This section should also address expected discrepancies between the reference site and the mitigation site that may occur because the developmental differences that exist (e.g., hydrology within reference sites may be lower than expected on the mitigation site due to increased evapotranspiration resulting from more mature vegetation than on a newly planted wetland site).
    Revised to include additional information about the vegetation community species present and expected hydrology scenarios for comparison. No reference wetland gauge information is available at this time. A reference wetland gauge will be established during construction.
25. Section 7.6: If actual species composition changes drastically due to availability and cost, please notify the IRT in advance if species substitutions are made.

    Will notify accordingly.
26. Table 8: I believe Ironwood is FAC, not FACW. Please confirm.

    Revised.
27. Sheet EC1.01: The permanent seeding list contains many warm-season grass species that are beneficial to wildlife, especially nesting birds; however, about half of the species listed are for well-drained soils. I would suggest focusing those species in the upland planting area.

    Noted.
28. Section 8.1: Since a significant portion of the easement will be upland planting, please place one permanent and one random vegetation plot in the non-credited upland area to ensure overall vegetation success and monitor for invasive species.

    The upland areas will be planted with similar vegetation within the same landscape position, however within borderline non-hydric soils and maintained similarly as wetland credit area vegetation. Nuisance and invasive species will be visually monitored and managed in these areas, but additional fixed vegetation plots are not necessary to determine success of the

credit area proposed. One variable plot will be completed to provide some quantitative data on potential nuisance and invasive species that may affect overall wetland vegetation success.

29. Section 8.3 and Table 10: Where will the fixed photo locations be? Please show on Figure 11.

    Revised Figure 11 and amended according to DWR Comment #11.

30. Table 10: I would suggest hydrology monitoring more frequently than semi-annually. We have encountered a lot of hydrology monitoring reports that did not meet success criteria due to malfunctioning gauges.

    Revised accordingly.

31. Table 9: The wetland hydrology performance standard should be stated as 10% for MY1 and MY2, and 12% for MY3-MY7.

    Revised accordingly.

32. Table 11: This timeline will likely need to be updated.

    Revised.

33. Page 25: I would suggest adding language that discusses the potential for the site to become too wet, and how that will be addressed. As well as discussing the potential for hydrologic trespass onto adjacent properties. The water budget in Appendix A states that an anticipated excess of 12.2 inches annually is expected. Is this a cause for concern.

    Noted and revised accordingly. The excess annual water calculate by the water budget is not a major concern due to Site landscape position, topography, and soils.

34. Section 12: The information in this section would have been beneficial in the beginning of the mitigation plan. Is the farm access road within the conservation easement? I did not see it as an allowable acceptance to the easement language. If so, the maintenance of this road will need to be discussed in the text for the monitoring period and long term stewardship site

    Noted for future plans. The farm road will be maintained outside of the easement.

35. Table 13: Please update with rehabilitation rather than REE for the currently jurisdictional areas.

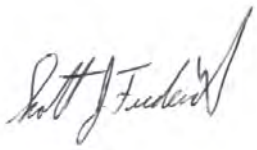
    Revised.

36. Categorical Exclusions: Was the NOAA Coastal Critical Habitat layer referenced for this site? A layer for coastal critical habitat showed up on the Corps' Regulatory Viewer. Please confirm.

    The project area is not listed by NOAA as a Critical Coastal Habitat using their habitat mapper.

Please let us know if additional information is needed for the Final Mitigation Plan. We look forward to construction this winter and a successful project together.

Sincerely,



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cc: Norton Webster, Eco Terra

FINAL MITIGATION PLAN
COLONIAL FARMS WETLAND MITIGATION SITE

Edgecombe County, NC

NCDEQ Contract No. 200207-01 & NCDMS ID No. 100191

NCDWR Project No. 2021-0399v2

USACE Action ID: SAW-2021-00346

RFP No. 16-20200207

Tar-Pamlico River Basin

HUB 03020103

Prepared For:

NC Department of Environmental Quality

Division of Mitigaiton Services

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This Mitigation Plan has been written in conformance with the requirements of the following:

- Federal rule for compensatory mitigation project sites as described in the Federal Register Title 33 Navigation and Navigable Waters Vollume 3 Chapter 2 Section §332.8 paragraphs (c)(2) through (c)(14).
- NCDEQ Division of Mitigation Services In-Lieu Fee Instrument signed and dated July 28, 2010

These documents govern DMS operations and procedures for the delivery and compensatory mitigation.

Contributing Staff

Michael Beinenson, Eco Terra Principal in Charge

Norton Webster, Eco Terra Construction Oversight

Scott Frederick, Eco Terra/SWE Project Manager

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Appendices

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1.0 Introduction

The Colonial Farms Wetland Mitigation Site, hereinafter referred to as "the Site" or "CFWMS" located in Edgecombe County, approximately 2.5 miles south of the City of Tarboro off Colonial Road (35.853767, -77.549397) (Figure 1). The Site is located on one parcel controlled by Quincy Family Farms Limited Partnership (PIN: 4726898091) (35.853767, -77.549397). The Site is accessed via a dirt farm road east of Colonial Road. The Site The Site is located within 14-digit HUC 03020103010020 and includes wetland re-establishment of a riparian wetland system in the Tar-Pamlico Hydrologic Unit Code (HUC) 03020103 and NC Division of Water Resources (DWR) Subbasin 03-03-04. The Colonial Farms Wetland Mitigation Site will provide both ecological and water quality benefits within the Tar-Pamlico Basin by achieving overarching goals of the CU according to the NC Division of Mitigation Service's (NCDMS) 2018 Tar-Pamlico Basin Restoration Priorities (RBRP) document.

The goals listed in the NCDMS 2018 Tar-Pamlico River Basin Restoration Priority (RBRP) document are:

- promote nutrient reduction in municipal areas through the implementation of stormwater best management practices
- promote nutrient and sediment reduction in agricultural areas by restoring and preserving wetlands, streams, and riparian areas
- continue targeted implementation of projects under the Nutrient Offset and Buffer programs, as well as focusing DOT sponsored restoration in areas where they will provide the most functional improvement to the ecosystem
- protect, augment, and connect Natural Heritage Areas and other conservation lands

Specific goals listed for the HUC 03020103 are:

- continue to implement the NCDMS Middle Tar-Pamlico Local Watershed Plan
- support removal of barriers to anadromous fish movement and to help improve nursery and spawning habitats
- support implementation of Coastal Habitat Protection Plan (CHPP) strategies

Project specific goals listed for the 14-digit HUC 03020103010020 and LWP are:

- buffer restoration and reduction of nutrient and sediment inputs due to agriculture
- wetland restoration to prevent flooding, increase baseline flow, and improve aquatic and terrestrial habitat

Goals specific to this Site include reduction of both nutrient and sediment runoff, conversion to a natural, native ecosystem, promotion of water infiltration and retention on-site, and removal of direct land application of agricultural byproducts such as poultry manure. Although many of these benefits are limited to the actual Site location, others, such as sediment and nutrient removal, and improved wildlife habitats, have larger overall effects.

These goals and objectives are consistent with the NC Division of Mitigation Services 2018 RBRP document and will directly address multiple stressors and make a positive contribution to overall water quality issues in the basin. By combating these issues at their sources and within riparian

floodplain areas, maximum ecological uplift can be achieved. Specifically, by removing agricultural inputs and ceasing byproduct land application, fecal coliform, nutrients, and sediment will be reduced, filtered, and sequestered, thus reducing these pollutants ultimately reaching the Tar River. The Project will result in ecological improvements including but not limited to terrestrial and aquatic habitat improvements, and overall protection of a forested wetland corridor in perpetuity. The goals and objectives of the Site are defined in Section 6.0, Table 5.

Site implementation will include filling and plugging existing drainage ditches, site grading, restoring wetland hydrology, planting site-specific hardwood trees and shrubs, permanent seeding with herbaceous mixes, treating invasive plant species (as necessary), and reconnecting restored riparian wetlands to a functioning wetland corridor. The CFWMS is proposed to produce **15.004 Wetland Mitigation Units** in the Tar-Pamlico Basin CU 03020103. The Site Protection Instrument detailing the conservation easement is included in Section 10.2. General Project information is included below in Table 1.

Table 1: Project Attributes

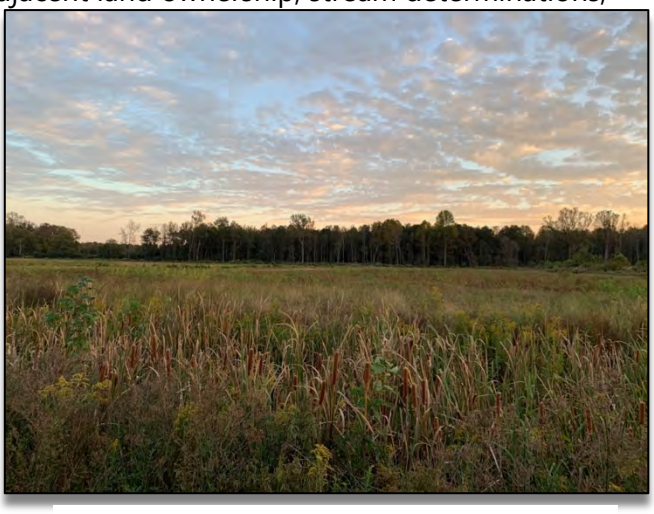
Project Information	
Project Name	Colonial Farms Wetland Mitigation Site
County	Edgecombe
Project Area (Planted Acreage) (ac)	15.004 (21.4)
Project Coordinates	35.853767, -77.549397
Project Watershed Summary Information	
Physiographic Province	Coastal Plain
River Basin	Tar-Pamlico
USGS HUC (8-digit, 14-digit)	03020103, 03020103010020
NCDWR Sub-basin	03-03-04
Project Drainage Area (ac)	64.0
Project % Impervious Area	0%
Land Use Classification	Agriculture
Ecoregion	Southeastern Plains (Rolling Coastal Plain) EPA Level III
Wetland Summary Information	
Pre-project (ac)	14.381 drained, 0.623 existing ditches
Post-project (ac)	15.004
WMU (NR)*	15.004
Mapped Soil Series	Portsmouth
Soil Hydric Status	Hydric (90%)
Soil Drainage Class	Very poorly drained
Source of Hydrology	Precipitation, groundwater
Hydrologic Impairment	Ditched and drained
Restored Vegetation Community	Bottomland Hardwood (Zone 1) Brownwater Swamp (Zone 2)

% Exotic/Invasive Vegetation		0%	
Restoration Method		Hydrologic/Vegetative	
Enhancement Method		n/a	
Regulatory Considerations			
	Applicable?	Resolved?	Supporting Docs?
Waters of the US (Sec. 404)	Yes	No	PJD (pending)
Waters of the US (Sec. 401)	Yes	No	PJD (pending)
Endangered Species Act	Yes	Yes	Cat. Ex. (Appendix C)
Historic Preservation Act	Yes	Yes	Cat. Ex. (Appendix C)
CZMA/CAMA	No	Yes	Cat. Ex. (Appendix C)
Essential Fisheries Habitat	No	Yes	Cat. Ex. (Appendix C)

* WMU = wetland mitigation unit, RNR = non-riverine

2.0 Watershed Approach and Site Selection

Implementation feasibility was determined through preliminary on-site surveys of historical riparian wetland areas, soils, site hydrology, adjacent land ownership, stream determinations, existing vegetation, current and historic land use, and drainage networks. Site investigations and desktop mapping reveal an appropriate area suitable for riparian wetland restoration including presence of hydric soils that are adequately drained to support row crop vegetation, topography, and landscape position.



Southeast view of Site

The site was also chosen relative to the proximity of adjacent forested habitats and corridor servicing the Tar River, filtering overland runoff leaving agricultural fields within the greater sub-watershed, as well as the ability to restore and protect a riparian system and support overarching goals for the Tar-Pamlico RBRP. Restoration of the Site will directly and indirectly address specific goals and stressors identified in the RBRP by land use conversion of agriculture to a forested wetland, ceasing land application of agricultural byproduct activities and fertilizer nutrients (150-175 lbs/ac N and 36-84 lbs/ac P), restoring wetland vegetation plant communities, and restoring wetland hydrology. No site constraints such as drainage flow patterns affecting adjacent landowners from the proposed restoration work is anticipated.

3.0 Existing Conditions

The Site is located in the Tar-Pamlico 03020103 subbasin within the Tar River watershed and a component of the greater Tar River watershed. The project area is situated along the toe slope and floodplain portion of the property in an agricultural field with a perimeter and central drainage network complex draining the site to the east and toward the Tar River. A farm road access abuts the north boundary of the project. The following sections describe the existing conditions and characteristics of the Site and its watershed.

3.1 Watershed Characterization

The Site is located in HUC 03020103010020 and will include the restoration of a forested riparian wetland system within Hendricks Creek watershed and the geomorphic floodplain of the Tar River. The Site is also situated within a Water Quality Targeted Resource Area (TRA) and the Middle Tar-Pamlico Local Watershed Planning (LWP) area (Figure 5). Hendrick's Creek and the Tar River are defined as Class C and Nutrient Sensitive Waters (NSW) according to the NC Department of Environmental Quality (NCDEQ).

The watershed consists of a mixture of forest land and agriculture, both row crops and permitted animal operations. Edgecombe County remains mostly undeveloped aside from the areas in and surrounding Rocky Mount and Tarboro. Land use in the surrounding area to the Project is primarily agriculture/pasture along the river, silviculture, and single-family residential. According to the Tar-Pamlico RBRP, from 2001-2011 land use/land cover changes for HUC 03020103010020 were increased impervious surfaces by 33.58 acres, 43.37 acres of forest converted to developed , 269.99 acres of forest converted to agriculture, and 4.67 acres of wetlands lost. Within the Hendricks Creek watershed, 22% of streams are 303(d) listed, 42% of the HUC is forested, and 4.2% is impervious. There are 53 miles of streams and 46% are unbuffered. Animal operations permitted in the HUC include 5 swine and 5 cattle. The County's population decreased 9.0% since the 2010 census.

The sub-watershed servicing the project comprises approximately 60 acres including agricultural fields upgradient on the escarpment. Overland flow from the agriculture fields enters a forested corridor before entering the project Site.

3.2 Soils and Geology

The Site is located in a relatively flat area underlain by Portsmouth, Ballahack, and Altavista series soils. Portsmouth and Ballahack soils are hydric soils according to the National Hydric Soil List (NRCS, 1995) and the Altavista soils contain inclusions of hydric soils. Overall, the Site is flat to gently sloping (0-2%) to the east and southeast toward the depressional area in the middle of the parcel and extends from the toe slope, across the geomorphic floodplain toward the Tar River. Elevations at and surrounding the Project Site are nearly flat and depressional relative to surrounding soils and topography. The soils at the Site are briefly summarized in Table 2 and depicted on Figure 7.

Ballahack soils exhibit deep profiles, are very poorly drained, have slow runoff, and moderate to moderately high to high permeability. This soil is found in depressions and flats in the Coastal

Plain and formed from loamy, sandy, and clayey stratified marine sediments. The water table in an undrained Ballahack soil is found from the surface to a depth of 12 inches.

Portsmouth fine sandy loam soils are very deep, very poorly drained, very slow to no runoff, and moderate in the solum and rapid to very rapid in underlaying material. These soils are found on marine terraces in the Coastal Plain and formed from loamy marine sediments. The water table in an undrained Portsmouth soil is found from the surface to a depth of 12 inches. Geologically, the Project Site is located in the Coastal Plain Physiographic Region and Southeastern Plains ecoregion.

The Altavista soils are moderately well-drained soils found along the edges of depressions. These soils formed in old loamy alluvium loamy sediments on stream terraces and valleys in the Coastal Plain region. Altavista soils have moderate permeability, and the water table is typically 18-30 inches during the dormant season, December through April.

Typical Portsmouth hydric soils within the proposed Colonial Farms Wetland Mitigation Site in Edgecombe County, NC.

In general, areas within the Altavista soil unit did not meet hydric status except for natural micro topographic depressions typical of floodplain areas. These hydric inclusion areas were not substantial enough to claim restoration credit.

Geologically, the Site is located in the Coastal Plain Physiographic Region and Southeastern Plains (Rolling Coastal Plain) EPA Level III ecoregion. This region has experienced numerous cycles of erosion and deposition, exposing, and submerging uplifted Quaternary clay, silt, sand, and gravel deposited over Tertiary sand and carbonates. These processes along with sea level changes over time have resulted in terraces forming along streams and rivers eroding through younger deposits.

Table 2: Site Soils

Map Unit Name	Map Unit Symbol	Hydric Soil	Hydrologic Soil Group#	% of Map Unit^
Ballahack fine sandy loam frequently flooded (Cumulic Humaquepts)	Ba*	Yes	B/D	90%
Portsmouth (Typic Umbraquults)	Pu*	Yes	B/D	90%
Altavista, fine sandy loam (Aquic Hapludults)	AaA	No	C	91%

Minor components of Altavista Map Unit				
Roanoke, silt loam (Typic Endoaquults)	Ro*	Yes	D	5%
Tomotley, fine sandy loam (Typic Endoaquults)	To*	Yes	B/D	7%
Wehadkee, fine sandy loam (Fluvaquentic Endoaquepts)	We*	Yes	D	1%
Bibb, sandy loam (Typic Fluvaquents),	BB*	Yes	D	1%

** National Hydric Soils List NRCS, 1995 and North Carolina Hydric Soils List for Edgecombe County, NRCS.*
 # Hydrologic Soil Group HSG – Indicator of decreasing runoff potential at soil saturation from A through D (NRCS, 2009). Example, a "B/D" indicates a drained/un-drained soil condition distinction if present on site.
^USDA-NRCS Web Soil Survey

The presence of hydric soils was confirmed by a North Carolina licensed soil scientist (NCLSS) and Eco Terra staff on October 12 and October 20, 2020. Details regarding this soils investigation and how it relates to the wetland restoration design are detailed in Section 7.0.

3.3 Vegetation

The dominant vegetation found throughout the wetland re-establishment area is rotational agriculture crops interspersed with occasional competing herbaceous grasses and weeds. The Site was most recently planted in soybeans and the previous year. Some examples of hydrophytic vegetation occur within the ditch areas such as common rush (*Juncus effuses*), flat sedge (*Carex* spp.), and cattail (*Typhus latifolia*) along the interior main drainage ditch, and red maple (*Acer rubra*) and black willow (*Salix nigra*) along the perimeter ditches as well. All ditch and top of bank vegetation are periodically mowed and/or herbicided at least annually.

3.4 Site Constraints

The Site is not located within a FEMA regulated floodplain outside of the Zone AE Special Flood Hazard Area (SFHA) associated with the Tar River and will not require FEMA coordination or a floodplain development permit. There are no other known easements at or near the Project Site that would prevent project implementation.

3.5 Site Resources (Jurisdictional Wetlands and Streams)

Potential jurisdictional features exist within the project area and will be filled, impacted, then restored. A jurisdictional stream occurs further down gradient near the Tar River and is serviced by drainage leaving the riparian wetland proposed for restoration. The jurisdictional determination (JD) was completed 12/10/21 for purposes of 401/404 permitting (Appendix B).

The on-site delineation of jurisdictional resources identified areas of existing jurisdictional non-wetland ditches. These features will be filled to accommodate the restoration plan. Proposed wetland re-establishment areas occur in the remaining agricultural fields. These wetlands were historically riparian wetlands typically found in mosaics with Bottomland Hardwood Forest and

Riverine Swamp wetlands as described by NCWAM Version 5.0. The North Carolina Wetland Assessment Method (NCWAM) was not utilized for rating the historic wetland area due to the current agricultural state of this area.

3.6 Landscape Characteristics

The farmed areas have been heavily disturbed through ditch construction and major grading and sloping to allow row crop agriculture that modify Site hydrology to decrease the water table during planting and harvesting times. The ditch system effectively drains the historical wetland areas within the floodplain and intercepts hydrology from adjacent forested wetlands to the west. Vegetation has been converted to row crop agriculture (currently soil beans) across the entire proposed Project wetland restoration area. Little to no forested buffer exists surrounding the existing main and perimeter ditches. Periodic sediment and nutrient-laden runoff is entering the ditch system from these areas.

The Site is in the floodplain of the Tar River to the east and is adjacent to a forested wetland (recently cut) to the west. Additional forested wetlands occur to the north of the farm road as well as to the south on the adjacent property. These areas together combined with the proposed Project will result in a restored forested wildlife habitat parcel along the floodplain of the Tar River.

Historical aerials denote that land uses at the Project Site have been agriculture since at least 1974 (Figure 4). Drone Deploy elevation mapping and NC Floodplain LIDAR data shows the Site topography slopes in a general east/southeast direction, away from the western escarpment and toe slope landform and flattens out in the middle of the Project area, connecting this area to a ditch and receiving stream to Tar River (Figures 3a and 3b). .

Receiving UT to the Tar River

3.7 Land Use/Land Cover

Land use within the vicinity of the project is predominantly managed agriculture row crops, with areas of mature and regenerating forest surrounding the Site on the southern, western, and northern boundaries. The Site is located within one parcel (~309 ac) that is currently being used for intensive row crop agriculture rotation and silviculture (Figure 2). As previously mentioned, the Site has been ditched/ drained and in row crop agriculture since at least 1974. Additional poultry manure fertilizer is used as necessary and available. The Site has recently cut forest vegetation along the toe slope adjacent to the historical wetland in the field. Future land use includes the establishment of a 21.4 ac conservation easement and re-establishment of 15.004 ac of wetlands and generally a 30-50 buffer surrounding this wetland restoration area. The Project Site will establish forested

wetlands and provide a connection to abutting forested wetlands in the sub-watershed. Outside of the Project will likely remain in agricultural and silvicultural use in the foreseeable future. A main ditch approximately 10-15 feet wide and 3-4 ft deep drains the historic wetland area and has a large drainage effect on the surrounding landscape. There was approximately 1-2 feet of water during the October 2020 site visit. The ditch gathers and concentrates flow from surrounding fields, generally flows north and gaining width, depth, and depth of water before connecting with the main west-east ditch. A lower elevation ponded area in this ditch collects water and changes the flow pattern of the ditch during dry to normal conditions (Figure 2). Along with lateral subsurface inputs, surface inputs from toe slope linear seeps, and precipitation, this main ditch system drains major overbank flooding events from the Tar River.

West view of Main West-East Ditch.

The main ditch has some drainage effect on the periphery of the southern portion of the field abutting an east-west perimeter ditch and drains water from the center of the property to the north perimeter ditch under wetter than normal and storm flow conditions. Under dry to normal conditions, the middle ditch drains from the center low area outward, causing water to flow to the south perimeter ditch. The perimeter west ditch collecting toe slope seep drainage also flows south toward this area under these conditions and will be plugged to reroute and distribute this hydrologic input across the Site. To eliminate potential hydrologic trespass likely occurring presently to some extent, this southern perimeter ditch will be filled and plugged, and hydrologic integrity improved through the wetland restoration design.

Another minor north-south ditch drains an interior depressional area and flows south toward the southern west-east perimeter ditch also creating hydrologic trespass to some extent under dry to normal conditions. This ditch is 3-4 feet wide and had approximately 1-2 feet of water during the October 2020 site visit, the deepest on the southern end. This ditch effectively terminates on the southern property boundary and only flows west toward the main south-north ditch during wetter than normal and storm events due to topography. The ditch is cut through a high relic levee non-hydric soil area to connect the drainage system complex. Filling and plugging this ditch will help eliminate additional flows to the south property boundary and potential hydrologic trespass.

North view of Minor South-North Ditch.

4.0 Functional Uplift

4.1 Wetland Functional Uplift Potential

The CFWMS project addresses drained wetlands located in the riparian region servicing a ditch, tributary to a small brownwater stream entering Tar River. The existing degraded area proposed for wetland re-establishment does not provide ecological functions due to past disturbances from row crop agriculture and management, land clearing and grading, surface water conveyances and groundwater lowering ditches, and periodic agricultural byproducts application. Filling and plugging the main interior ditch and minor perimeter ditches within the wetland restoration area will increase groundwater hydrology, surface water retention time, and riparian forest wetland hydrologic regime functions. These functions include increased water storage in the soil profile, groundwater recharge, and water quality treatment through nutrient sequestration and denitrification.

Restoring riparian forest vegetation communities with native species will increase wetland forest community functions over time. These functions include increased aquatic and terrestrial habitat, soil health, as well as nutrient and carbon cycling. Removal of continuous row crop agricultural impacts and other agricultural byproducts and soil amendments from the proposed wetland area will help reduce fecal coliform, sediment, and nutrient inputs leaving the Site and entering Tar River. By protecting the property in perpetuity, restoration efforts and functional uplift will be maximized.

The proposed restoration area will be planted at a density suitable to meet requirements for wetland mitigation. **The Site will address multiple goals set forth in the Tar-Pamlico RBRP. Table 3 summarizes the proposed ecological uplift provided by the Site**.

Table 3: Proposed Ecological Uplift

Activity	Goal Addressed	Uplift
Filling and Plugging Ditches	Wetland Restoration and Nutrient/Sediment Reduction[1]	Restore Site hydrology. Improve water quality by increasing the retention time on-stie for the filtering of sediment and and sequestering of nutrients.
Plant native wetland vegetation	Wetland Restoration and Nutrient/Sediment Reduction[1]	Restore native wetland forest. Improve terrestrial and aquatic habitats by restoring native hardwood trees. Improve water quality by sequestering nutrients from agricultural byproducts.
Recording a conservation easement.	Conserve Site in perpetuity[1]	Improve water quality by permanently protecting the Site, restricting the application of fertilizers and agricultural byproducts on the property, and preventing tillage of the land. Improve habitat

[1] *Addresses goal of the 6-digit HUC 030102 in the RBRP*

4.2 Hydrology

Historic Site hydrology has been modified through land conversion, agricultural activities, and site grading and ditching to convey surface water off site and lower groundwater levels. Hydrology modifications such as those found at the Site typically result in reduced shallow groundwater levels, Site water retention, as well as increased evapotranspiration from open water surfaces and increased soil temperature at times, leading to faster surface runoff and decreased water storage in surface soil horizons. Both situations result in increased peak flows and base flows in adjacent receiving streams, in this case the agricultural ditch and eventual UT to Tar River connecting the proposed riparian forest wetland restoration. Reduced shallow groundwater levels and Site storage also results in increased organic matter oxidation and soil surface subsidence, decreased nutrient cycling, and sequestration. An analysis of Site drainage due to the main, central ditch revealed a lateral drainage effect of approximately 206 ft (Lateral Effect, Skaggs. Site hydrology uplift is isolated to the riparian forest and associated watershed, which will be protected through the conservation easement in perpetuity. **Hydrological uplift will be documented with shallow groundwater gauges before and after construction to demonstrate restored wetland hydrology specific to the Site and hydric soils present.**

4.3 Biology

Existing terrestrial habitat is open agricultural row crop fields interspersed with opportunistic weedy vegetation, indicating a highly disturbed site. No data exists on present biological communities and any native vegetation planted will substantially improve the habitat complex servicing the riparian forest wetland. Aquatic species habitat will also form in micro-topographies and help improve these species diversity. The majority of adjacent forested wetlands surrounding the project are contiguous to the project with the exception of the north area that is separated by a farm road, making the project an important component to providing important biological habitat otherwise absent from a large agricultural landscape. It is likely measurable uplift and improvements will not occur until after the monitoring period and following close-out of the project. However, increased fauna abundance may be noted during semi-annual Site inspections and annual Site monitoring as the planted vegetation matures and habitat increases. **Vegetation uplift will be measured with performance standards relative to species height, abundance, vigor,a density.**

4.4 Physicochemical

The 2018 Tar-Pamlico RBRP identifies nutrient and sediment impairments on waterways within the 6-digit HUC as a current basin stressor and the Site is located in a Water Quality TRA. No water quality monitoring is proposed at the confluence of the restored wetland and connecting ditch and UT to Tar River. And, no water quality monitoring is known to exist within this sub watershed to document physicochemical uplift. By ceasing row crop agriculture and stopping agricultural byproduct inputs, physicochemical function uplift is very likely for surface and shallow groundwater baseflow within and leaving the restored wetland. These improvements are isolated to the waters entering and leaving the riparian forest wetland system and will occur over an extended period of time exceeding the monitoring period of the project. Utilizing realistic yield model calculations for rotational crops in NC (corn/soy w/ poultry manure), and Site soils and topography, estimated fertilizer applications to meet crop demands for nutrients annually were calculated. Based on the model database, approximately 150-175 lbs/ac N and

36-84 lbs/ac P will be removed from the Site through cessation of intensive agriculture (NCINMC, 2014). **No physiochemical uplift will be measured with any performance standard.**

4.5 Overall Functional Uplift Potential

The Site has potential for functional uplift through the proposed restoration work, however largely limited to the site proper. Uplift is anticipated from riparian forest wetland re-establishment work as noted previously. Hydrological, biological, and physicochemical improvements are likely as a result of this project. **Specific measurable uplift will include hydrologic and vegetative performance standards.** NCWAM is one method for identifying potential functional uplift (hydrology, water quality, habitat). However, the proposed wetland re-establishment area was not evaluated using NCWAM for baseline conditions due to the lack of hydrology and vegetation. Baseline data collected from field investigations, hydrology monitoring, and the soil evaluation does indicate the presence of hydric soils, absence of wetland hydrology due to historic ditching, and absence of wetland vegetation due to the current conventional row agriculture land use. Functional uplift for the Site wetland hydrology, wetland vegetation, and habitat is possible. Additional water quality benefits are possible by receiving and treating overland flow from adjacent agriculture fields in the sub-watershed. Many wetland functions are restored slowly following construction and post close-out of the project and vegetation and hydrology data collected during monitoring will be used to indicate functional uplift post construction.

4.6 Site Constraints to Functional Uplift

No Site constraints exist or are anticipated in the future to achieving functional uplift to the wetlands. There are no known easements at or near the Project Site that would prevent project implementation. There are no other known Site constraints that will affect the functional uplift of the project.

5.0 Regulatory Considerations

5.1 Threatened and Endangered Species

The US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) identifies five federally threatened or endangered species under the Endangered Species Act as potentially occurring in Edgecombe County. One species is protected under the Bald and Golden Eagle Protection Act (Table 4). A review of the NC Natural Heritage Program (NCNHP) data dated January 2021, identified no known element occurrences of federally listed species rare plants and animals, natural communities, and important animal assemblages in the project area or within one mile of the Site within one mile of the Site. Additional protected areas identified by NCNHP are described in Section 5.5 below. USFWS correspondence is included in Appendix C.

Table 4: Federally Listed Species Potentially Occurring in Edgecombe County

Scientific Name	Common Name	Federal Status*	Suitable Habitat
Haliaeetus leucocephalus	Bald Eagle	BGPA	N
Norurus furiosus	Carolina Madtom	PE	N
Necturus lewisi	Neuse River waterdog	PT	N
Fusconaia masoni	Atlantic pigtoe	PT	N
Parvaspina steinstansana	Tar River spinymussel	E	N
Elliptio lanceolata	Yellow lance	T	N

* E - Endangered, T – Threatened, T(S/A) – Threatened due to similarity of appearance, PE – Proposed Endangered, PE – Proposed Threatened, ARS – At Risk Species, BGPA – Bald and Golden Eagle Protection Act

5.2 Cultural Resources

The National Historic Preservation Act declares a national policy of historic preservation to protect, rehabilitate, restore, and reuse districts, sites, buildings, structures, and objects significant in American architecture, history, archaeology, and culture. Section 106 mandates that federal agencies consider the effect of an undertaking on a property that is included in, or is eligible for inclusion in, the National Register of Historic Places. The NC State Historic Preservation Office's (SHPO) online mapping resource was reviewed to determine the presence of known historic resources at or near the Site. According to the database, there is one (1) known cultural resource within one mile of the Site area (Figure 9). This resource, the Staton House, is identified as "gone." No known historic resources are identified within the Site proper. SHPO correspondence is included in Appendix C.

5.3 FEMA Floodplain Compliance and Hydrologic Trespass

The Site is not located within a FEMA regulated floodplain and outside of the Zone AE Special Flood Hazard Area (SFHA) associated with the Tar River and will not require FEMA coordination or a floodplain development permit. Hydrologic trespass is not anticipated due to inherent soils, landscape position, and natural drainage patterns for the Site. Filling and plugging the main interior ditch will back water up laterally to the extent of the proposed conservation easement. The down-gradient ditch system and natural topographic crenulation draining the watershed currently will remain. There are no other known constraints within the Site.

5.4 Airports

There are no airports within a five-mile radius of the Site (Figure 10). The restoration of a riparian wetland is not expected to create issues with waterfowl for any other nearby airports.

5.5 Adjacent and Proximal Planning Elements

The NCNHP identifies one natural heritage and/or managed areas within a five-mile radius of the Site (Figure 10). This prominent, high value natural heritage area is identified as the Tar River Corridor Natural Heritage Area, adjacent to the Project. In addition, there are multiple managed area (private and state) within a five-mile radius of the Site. NCDMS denotes one existing project, approximately four miles to the west. No other elements were identified.

5.6 401/404/Sediment and Erosion Control and Other Environmental Considerations

Potential jurisdictional wetlands occur within the project area as identified by field staff and a North Carolina Licensed Soil Scientist on June 18 and October 9, 2020. During construction, temporary erosion control fencing will be installed to prevent incidental placement of material moved into ditches leading to jurisdictional features off property during filling and plugging of drainage ditches and site construction. Erosion control fencing is denoted in the Construction Site Plan sheets. Sediment and erosion control permitting will be implemented according to State and County Rule. No other environmental considerations are anticipated relevant to the project implementation or long-term protection.

6.0 Goals and Objectives

The purpose of the CFWMS is to establishment of a compensatory Mitigation Site for the Division of Mitigation Services within the Tar-Pamlico Basin (HUC 03020103) to generate in-kind mitigation credits that may be used to provide compensatory mitigation for unavoidable impacts to wetlands associated with Department of the Army permit authorizations pursuant to Section 404 of the Clean Water Act (Figure 6 – Service Area). The CFWMS will provide mitigation for unavoidable losses of jurisdictional wetlands through effective uplift measures. Restoration activities will focus on improving water quality, restoring aquatic and terrestrial habitats, and providing nature with a "head-start" to overcome the previous and on-going impacts from land use conversion and site disturbance. Site implementation will help address the overarching RBRP 6-digit CU goals for wetland restoration, contribute to reduced nutrient and sediment inputs and improved water quality, and protect and preserve conservation lands in perpetuity. The goals and objectives of the Site are defined in Table 5.

Table 5: Goals and Objectives

Goal	Objective	Expected Outcomes	Function Supported
Reduce Nutrients and Sediment in Agricultural Areas [1]	Remove fertilizer and agricultural byproducts applied to wetland. Establish native woody wetland vegetation, securing soil in place, and reducing wind and runoff erosion.	Improve Water Quality through Nutrient & Sediment Reduction	Biological, Physicochemical
Restore Wetland Hydrology [1,3]	Fill drainage ditches to restore site hydrology.	Increase hydrology and shallow water table during the early growing season (12%), reduce nutrients and sediment in agricultural areas, and increase wetland habitats. Increase flood storage capacity in restored wetlands.	Hydrological, Physicochemical, Biological
Improve Habitat and Connectivity [2,3]	Establish native woody wetland vegetation. Promote connectivity to	Increase native wetland tree species diversity and habitats. Increase habitat connectivity from	Biological

	existing Tar River Corridor Natural Heritage Area .	riparian forest wetland to UT to Tar River riparian corridor.	
Restore Wetland Vegetation [1,2,3]	Establish native woody wetland vegetation in proposed wetland re-establishment areas.	Increase native wetland tree species quantity and diversity. Increase nutrient cycling and sequestering sediment, and riparian wetland water storage, decreasing peak runoff volumes in streams and reducing flooding.	Hydrological, Physiochemical, Biological
Protect Site [1,2,3]	Record permanent Conservation Easement to protect the Site in perpetuity.	Protect Site from future impacts and encroachment and direct impacts to wetlands. Support all wetland functions in perpetuity.	Hydrological, Physicochemical, Biological

[1] *Addresses goal of the 6-digit HUC 030202 in the RBRP*
[2] *Addresses goal of the 8-digit HUC 03020103 in the RBRP*
[3] *Addresses goal of the 14-digit HUC 03020103010020 in the RBRP and LWP*

7.0 Design and Implementation Plan

The proposed wetland mitigation work will be accomplished to achieve functional uplift relative to existing Site conditions. Proposed wetland work is shown in Figure 12. Riparian wetlands will be re-established by filling and plugging agricultural ditches to provide hydrologic uplift and establishing native riparian wetland community vegetation to provide vegetation uplift. Disturbed and degraded hydric soils present will be restored by promoting hydric soil formation with increased hydrology, site roughness development, and field crown and residual spoil area removal and Site grading, providing additional wetland functional uplift. Agricultural activities will cease within the proposed wetland restoration area. The Site will be protected in perpetuity by a conservation easement and maintained by the State Stewardship Program.

7.1 Parcel Preparation

The land proposed for wetland restoration is currently in row crop agricultural management. The site will be graded according to the proposed construction plans including crowned areas and higher elevation areas to help fill in the ditches. No grading will exceed 12" in depth. Sediment and erosion control measures will be used will be used according to State and local permits to prevent sediment from entering surface waters during a rain event. Pre-emergent herbicide will be used in the tree rows to control potential herbaceous weed competition. Cattail and privet will be controlled with herbicides as necessary in select areas. All herbicides will be applied by a licensed herbicide applicator. An aquatic safe herbicide will be used in appropriate areas for control of herbaceous competition and non-native invasive plant species. In the event that drain tiles are found during construction, they will be noted and removed or destroyed.

7.2 Wetland Restoration Approach

The Site proposes to restore at most 15.004 acres of riparian wetlands for a total of 15.004 WMUs (Figure 12). The Site will restore wetland hydrology and establish native hardwood trees throughout the restored areas. The credit calculation is stated below (Table 6).

Table 6: Proposed Mitigation Credits

Site Component	Mitigation Approach	Wetland Acreage	Ratio	Total Credit Amount
Drained Wetland Area	REE	14.381	1:1	14.381 WMUs
Jurisdictional Ditches	RH	0.623	1:1	0.623 WMUs

WMU = Wetland Mitigation Unit, REE = Re-establishment, RH = Rehabilitation

The dominant Bottomland Hardwood Forest and minor Brownwater Swamp wetland complex (Schafale, M.P., 2012) most similar to a Bottomland Hardwood/ Riverine Swamp Forest (NCWAM) wetland respectively, will be restored through re-establishment in areas where the hydrology is negatively impacted by drainage ditches, past site and soil disturbances, and areas devoid of native tree and shrub communities. Construction will include filling the Site ditches and restoring the restrictive soil layer within the ditches. Ditch restoration work will be documented as rehabilitation. The main south-north ditch and west-east ditches will be plugged (100 ft min.) and filled to grade to increase the time water remains onsite throughout the property, as well as the smaller western perimeter ditch and lateral ditch draining historic depressional wetlands (Figure 8). Plug material will be native soil found on-site with appropriate clay content for keying into the existing restrictive soil horizon. The outlet of the wetland will be stabilized using biodegradable matting, herbaceous seed mix, and planted with woody vegetation.

Grading, 6-12 inches will mainly occur between and along the ditches in select areas to remove any field crowns, ditch spoil, and highly disturbed areas from past agricultural activities that are shown during a detailed topographic survey. Planting rows will be ripped to improve soil compaction prior to planting in the wetland areas or during mechanical planting. In areas with heavy compaction from farm equipment, the underlying soils will be ripped to facilitate increased infiltration, particularly the field entrance areas where equipment has been staged.

Soil scarification for temporary and permanent seeding may be required depending on the site condition at the time of planting and equipment used for seed application. Additional grading (<12 in) is required to fill the main perimeter ditch, promote micro site topography to increase depressional storage through vernal pool construction (>6 and <12in) and higher elevation areas (43' contour) as noted on plan sheets, improve runoff inputs into the wetland, and to ensure success of the wetland restoration. Vernal pools have been located and sized (0.1-0.2 ac) to maximize use of on-site soil material for filling ditches as well as serving as protection and inclusion of concentrated runoff into the wetland from adjacent linear seeps extending off the

escarpment to the west of the Site. Additional construction activities include removing culverts along the farm path and diverting water via a new ditch and plugging the north ditch at the outlet. The new ditch is essential to the success of the project by maintaining the farm road integrity adjacent to the Site and keeping the Site from getting too wet. The ditch will be dug in non-jurisdictional area as determined by the PJD (12/10/21) and connected via a new culvert to the main ditch leaving the Site. Detailed construction plans are in Appendix G.

7.3 Hydric Soils Investigation

Initial soils investigation work utilized online resources from the Natural Resources and Conservation Service (NRCS) web soil mapping. Soils within the wetland restoration areas are mapped as Portsmouth fine sandy loam and Ballahack fine sandy loam series soil (Figure 7). These soils are identified as hydric soils in North Carolina and listed in Edgecombe County as soils meeting hydric Criteria 2. Online mapping was confirmed with a NC licensed soil scientist (NCLSS). A series of soil borings was accomplished across the site and soil descriptions were completed on representative samples. Hydric soil indicators were used in accordance with the manual *Field Indicators of Hydric Soils in the United States, 2018*, USDA Natural Resources Conservation Service. Hydric indicators utilized on this site for soils investigated met the F13 – Umbric Surface hydric soils indicator. Soils mapped within the proposed restoration area have dark colored soil ten or more inches thick with a matrix of 3 or less and chroma 1 or less in the upper six inches and in which the lower four inches has the same colors or any other color with chroma 2 or less within the soil profile meeting the F13 criteria. Soils mapped within the proposed restoration area are hydric and are further described in the representative soil borings. (Appendix D).

7.4 Hydrologic Monitoring and Baseline Evaluation

Three shallow groundwater gauges were installed to evaluate the existing baseline hydrologic conditions of the Site (Figure 11). These gauges were placed in areas so they could remain throughout Site construction and monitoring phases. Groundwater Gauge 1 was placed on the edge of the wetland to the west, groundwater Gauge 2 was placed in the middle near the interior main ditch, lowest elevation area of the project, and groundwater Gauge 3 was placed on the edge of the project credit area proposed to the east. Groundwater gauges collected data at the Site between February 20, 2021 and April 30, 2021. According to the Antecedent Precipitation Tool, the 12-digit HUC030201030202 was experiencing "Wetter than Normal" precipitation prior to the start of the growing season on March 20, 2021. The defined growing season based on the Edgecombe County, NC WETS table for 50% probability of soil temperatures greater than 28 degrees Fahrenheit is March 20th to November 11th representing a 236-day growing season.

The Portsmouth series soil has a hydroperiod of 12-16% (Typic Umbraquults), as found in Table 1 in the *Wilmington District Stream and Wetland Compensatory Mitigation Update* (2016). Based on the defined growing season outlined above, wetland saturation thresholds for the project should range between 28 and 38 consecutive days of inundation within the defined growing season at the Site to provide minimum hydrology for adequate wetland processes to

occur. An analysis of the gauges representing baseline conditions during the early growing season indicate the Site is not meeting the hydrologic regime required for wetland processes and functions to occur. Gauge data is present in Table 7 below and plotted graphs are presented in Appendix A.

Table 7: Existing Shallow Groundwater Monitoring Gauge Data

Gauge	Consecutive Days Meeting Hydrology Standards	Consecutive % Growing Season	Monitoring Dates	Wetland Approach
1	0	0	2/20/21 to 4/30/21	Re-establishment
2	36	15	2/20/21 to 4/30/21	Re-establishment
3	0	0	2/20/21 to 4/30/21	Re-establishment[1]

1 Groundwater gauge 3 is located near the boundary of the wetland re-establishment area.

The proposed wetland re-establishment boundary is based on field indicators and hydrology data that supports that proposed areas will meet minimum saturation thresholds. Locations of proposed groundwater gauges for post construction monitoring were chosen so that data can be compared between existing and proposed groundwater gauges and confirm general hydrologic uplift at the Site. The existing gauge data, along with the absence of jurisdictional wetlands across the majority of the Site, and NCLSS investigation, provides support that if drainage effects on the Site are removed, proposed wetland areas will meet minimum required hydrology standards.

The on-site soils exhibit indicators of hydric soils and the proposed increase in hydroperiod will provide similar conditions to those associated with hydric soil formation. A water budget analysis was also completed to demonstrate the volume of water currently exiting the Site and the volume that is expected to be retained post-construction. Dry year and wet year, as well as a normal year following a dry year scenario were assessed. The proposed condition model incorporated the wetland restoration design, plugging drainage ditches and routing surface flows into the Site. Proposed conditions keep a substantial portion of lateral subsurface on-site. The water budget utilizes State Climate Office weather station data for hydrological inputs as well as specific Site characteristics. The water budget model demonstrates the potential of the Site to meet hydrology performance standards during a normal rainfall year for many months during the early growing season with approximately 12.2 in of surplus water across the Site on an annual basis (Appendix A).

7.5 Reference Wetland

A reference wetland was located south of the project within an adjacent parcel in an area containing similar vegetation community species, soil series, and within a landscape position as proposed for the restoration area. Reference wetland species include several oak species

including swamp chestnut oak, water oak, willow oak, cherrybark oak, muscle wood, elm, green ash, sugarberry, yellow poplar, and swamp blackgum. This reference vegetation composition and development will aid as a model for the restoration plant community and/or the plant community composition identified as Bottomland Hardwood Forest and Brownwater Swamp (Schafale, M.P., 2012). Shallow groundwater gauge data will be compared to on-site baseline groundwater gauges installed February 2021 and future monitoring. The reference wetland gauge and corresponding hydric soil hydroperiod (USACE, 2016) will be compared to Site hydrology conditions and/or relative to the proposed matching soil hydrologic regime and performance standards. Some discrepancies between reference hydrology and restored Site hydrology are expected due to cover type, age class, evapotranspiration rates, and other Site factors influencing hydrology equilibrium.

7.6 Vegetation Community Planting Plan

The area will be planted with native hardwood trees to promote the growth of vegetation typically found in a Bottomland Hardwood (Zone 1) and Brownwater Swamp (Zone 2) wetland complex (Table 8). Actual species composition will be based on availability, cost, and quantities. Planting will occur during the dormant season between November 15 and March 15 unless weather patterns or unforeseen circumstances require a later planting date.

Table 8: Conceptual Planting Plan

Scientific Name	Common Name	Vegetative Strata	Zone	Wetland Indicator Status	%
Quercus michauxii	Swamp chestnut oak	Canopy	1	FACW	10
Gordonia lasianthus	Loblolly bay	Understory	2	FACW	<5
Quercus lyrata	Overcup oak	Canopy	2	OBL	10
Betula nigra	River birch	Canopy	1	FACW	10
Cephalanthus occidentalis	Buttonbush	Understory	2	OBL	<5
Fraxinus pennsylvanica	Green ash	Canopy	1	FACW	<5
Liriodendron tulipifera	Yellow poplar	Canopy	1	FACU	<5
Quercus shumardii	Shumard oak	Canopy	1	FAC	10
Quercus pagoda	Cherrybark oak	Canopy	1	FACW	10
Carpinus caroliniana	Ironwood	Understory	1	FACW	<5
Quercus phellos	Willow oak	Canopy	2	FACW	10
Quercus laurifolia	Laurel oak	Canopy	1	FACW	10

Quercus nigra	Water oak	Canopy	1	FAC	10
Nyssa biflora	Swamp blackgum	Canopy	2	OBL	10
Magnolia virginiana	Sweetbay magnolia	Understory	2	FACW	<5
Ulmus americana	American elm	Canopy	1	FAC	<5
Persea palustris	Swamp bay	Understory	2	FACW	<5
Platanus occidentalis	Sycamore	Overstory	2	FACW	<5
Taxodium distichum	Bald Cypress	Overstory	2	OBL	<5
Nyssa aquatica	Water tupelo	Overstory	2	FACW	<5

7.7 Risk Assessment

Overall, this project has some risk due to landscape position, inherent soils, and location of the riparian wetland within the watershed to Tar River. Adjacent parcels consist of agriculture row crops which could contribute runoff and sediments into the protected easement as well as incidental impacts to vegetation from machinery. To address these risks, buffers in some areas around the wetland credit area are proposed and will be maintained within the protected easement to ensure wetland restoration success and minimize impacts from ongoing agricultural row crop operations. Given the location of the project, few issues should arise affecting potential project success and meeting ecological performance standards. However, the risks and uncertainties associated with the project and actions for addressing these concerns are presented below. Action steps to address issues may be included in an Adaptive Management Remedial Action Plan, if necessary, discussed in Section 11.0.

1. Easement Encroachment: Potential encroachment to the conservation easement on this Site includes trespass, incidental mowing, farm equipment trafficking, and timber harvesting. The isolated location of the easement relative to the remainder of the farm activities minimizes this risk.
    - Action: Easement boundaries will be clearly marked to prevent encroachment. The landowner has been made aware of the importance of encroachment prevention and accountability. Any encroachments that do occur will be remedied by Eco Terra to address any damage and provide any other corrections required by the IRT.
2. Invasive/Nuisance Species: Herbaceous and woody competition control from surrounding loblolly pine, sweetgum, privet, and red maple trees is the biggest concern for the Site.
    - Action: The Eco Terra will manage and maintain herbaceous competition during the first two years with both mechanical mowing and chemical herbicides. All herbicide application will be performed by a certified applicator in accordance with NC Department of Agriculture rules and regulations. Should woody competition emerge as an issue affecting the plant community proposed, mechanical measures will be implemented during the remaining monitoring period where problem areas are identified.

3. Drought/Floods: Extreme climatic conditions may occur during the monitoring period including long-term inundation due to landscape position and soil characteristics.
    - Action: Eco Terra will address issues arising from extreme weather patterns due to climatic conditions. Any areas within the project that become inundated longer than anticipate, or drier than anticipated, affecting planted vegetation, will be addressed through remedial action. Adaptive management remedial actions may include supplemental planting and/or replanting and stabilizing vernal pool inlets or ditch plug outlet if necessary.

8.0 Performance Standards

The success of the planted vegetation, site hydrology, and integrity of the easement boundary will be monitored on a yearly basis for a minimum of seven years to determine overall Site success and the expected ecological uplift described in the Site Development Section. The success criteria for the Colonial Farms Wetland Mitigation Site will follow current accepted and approved success criteria presented in the 2016 USACE IRT guidance. Specific success criteria components are presented below.

8.1 Vegetation

Specific and measurable success criteria for plant density within the proposed wetland restoration areas will follow updated 2016 IRT Guidance. Vegetation monitoring plots will be a minimum 0.0247 acres (100 m2) in size and will cover a minimum of two percent of the planted area. Vegetation monitoring will occur in Years 1, 2, 3, 5, and 7. The interim measures of vegetative success for the site will be the survival of at least 320 three-year old trees per acre at the end of monitoring year three (MY3), and 260 trees per acre at the end of monitoring year five (MY5). The final vegetative success criteria will be the survival of 210 trees per acre at the end of the seventh year (MY7) of Site monitoring. Planted vegetation within each plot must average seven feet in height at year five (MY5) and 10 feet in height at year seven (MY7).

Should vegetation monitoring reveal performance standards be not met for species vigor and density, site conditions will be analyzed and documented in annual monitoring reports. If necessary, remedial actions will occur according to the adaptive management plan discussed in Section 11.0. Any replanting required will be conducted between November 15 and March 15 unless weather patterns or unforeseen circumstances require a later planting date. Invasive and noxious species, and aggressive pioneer tree species such as loblolly pine and sweetgum, will be monitored and controlled so that none become dominant or alter the desired community structure of the Site. If necessary, Eco Terra will develop a species-specific control plan according to the adaptive management discussed in Section 11.0.

Both fixed (permanent) and variable (random) vegetation plots will be established to monitor planted vegetation community success representative of the wetland reestablishment area. Fixed plots will be located randomly within proposed vegetation communities post construction and documented in the as-built baseline report (MY0). All fixed plots will be a minimum of

0.0247 acre in size and square or rectangular in shape. All fixed plots will be located with GPS, marked, and recorded for annual evaluation. The following data will be recorded for all trees in the fixed plots: species, height and vigor, damage (if present), planting date (or date of observation for volunteers), and grid location. Trees documented within fixed plots will include planted as well as native, exotic, and invasive volunteer species. Variable plots will comprise of no more than 50% of the total required plots and be the same size as the fixed plots. Variable plots will also be located with GPS along with plot orientation and marked for evaluation during the monitoring year. Variable plot data collected will include species and height.

8.2 Hydrology

Hydrology monitoring will occur for seven years using continuous groundwater gauges to ensure the site meets the success criteria hydroperiod. Groundwater gauges will be installed at a density sufficient to represent the restoration area soils, vegetation communities, and topographic variations (Figure 11). Gauges will be placed to represent the middle and edge of the restoration area and at a density suggested by the IRT. The Site soils within the credit area are mapped as Portsmouth and Ballahack fine sandy loam. Field verification by a Licensed Soil Scientist determined the Site soil resources dedicated for wetland restoration is predominantly Portsmouth series soil. The Portsmouth series soil has a hydroperiod of 12-16% (Typic Umbraquults) and is found in Table 1 of the *Wilmington District Stream and Wetland Compensatory Mitigation Update* (2016). This hydroperiod correlates to a 236-day growing season from March 20th to November 11th for the Site based on the Edgecombe County, NC WETS table. The growing season is defined as the time period representing a 50% probability soil temperatures greater than 28 degrees Fahrenheit occur.

Due to extensive site modification and historical land use, a shorter hydroperiod may occur for Portsmouth soil, during the first two years for sites with extensive manipulation as discussed in the *Wilmington District Stream and Wetland Compensatory Mitigation Update* (2016). A 10% wetland hydrology criterion equates to 24 consecutive days of inundation during the first two monitoring years. Following the second growing season, wetland hydrology criterion of 12% of the 236-day growing season, representing 28 consecutive days of inundation is proposed. Should any monitoring gauges reveal performance standards are not met, all data will be analyzed and relative to reference conditions to determine if normal conditions occurred during the monitoring year. All gauges used for monitoring will include a detailed soil description before and after construction. Profile descriptions will include soil horizon depth, color, texture, and hydric soil characteristics.

8.3 Visual Assessments

Visual monitoring of all mitigation areas will be conducted a minimum of twice per monitoring year by qualified individuals. The visual assessments will include vegetation density, vigor, invasive species, and easement encroachments. Visual assessments of ditch plug stability will occur. Digital images will be recorded at fixed representative locations during each monitoring event; any noted problem areas or areas of concern will also be photographed and mapped. Results of visual monitoring will be presented in a plan view exhibit with a brief description of problem areas and digital images. Photographs will be used to subjectively evaluate success of

riparian vegetation and effectiveness of drain plugs. A series of photos over time should indicate successional maturation of wetland vegetation.

9.0 Monitoring Plan

A Site monitoring plan is necessary to document project success. To ensure the Site is constructed as planned an as-built survey will be completed following construction and completion of all physical and biological improvements including wetland restoration area establishment, ditch plugs, hydrology gauges, Site elevations, planted vegetation, permanent and variable vegetation plots, and other relevant site characteristics. The as-built report will be submitted to the USACE within 90 days of completion of the physical and biological improvements and is considered the baseline monitoring year (MY0).

To ensure performance standards are met and project goals and objectives are achieved, annual monitoring will be completed and submitted to the IRT following the end of the growing season for each reporting year. Monitoring reports documenting performance standards will be prepared annually and submitted to the IRT. Monitoring reports will document Site conditions, vegetation success, and other project trends. Complete monitoring reports will be submitted in monitoring years 1, 2, 3, 5, and 7 including vegetation, visual and hydrology assessments, and current Site conditions. For monitoring years 4 and 6 only visual and hydrology assessments will be reported along with current Site conditions. The monitoring plan will be implemented for a minimum until monitoring year seven (MY7), or until success criterion are met. Table 9 below describes the project goals and objectives and how performance standards will be monitored and achieved.

Table 9: Monitoring Plan

Goal	Objective	Performance Standards	Monitoring Metric
Restore wetland function and hydrology.	Restore wetlands through re-establishment of hydrology. Remove the drainage effects of agricultural ditching and maintenance.	Shallow groundwater within 12 inches of the soil surface for a minimum of 10% (24 consecutive growing season days) (MY1-MY2) and (12% (28 consecutive growing season days (MY3-MY7)	Shallow groundwater gauges (N=12).
Restore native wetland vegetation.	Plant native tree, shrub, and understory riparian wetland species.	Survival of 210 planted stems/ac (MY7). Interim survival of at least 320 planted stems/ac (MY3) and at least 260 stems/ac (MY5). Planted stems must average 7 ft in height (MY5) and 10 feet in height (MY7).	Fixed/Variable 100 m^2 vegetation plots (N=15).

Protect the Site in perpetuity.	Establish a conservation easement on the Site.	Record conservation easement.	Visual assessment for easement encroachment and Site integrity

9.1 Monitoring Components

Project monitoring components are shown in Table 10. Approximate locations of proposed vegetation plots and groundwater gauges are illustrated in Figure 11.

Table 10: Monitoring Components

Parameter	Monitoring Feature	Quantity	Frequency	Notes
Wetland Hydrology	Shallow Groundwater Gauge	12	Tri-Annual	1
Wetland Vegetation	Vegetation Plots	11 (fixed) 4 (variable)	Annual (Years 1, 2, 3, 5 and 7)	2
Visual Assessment	General Site Observations and Photos	Variable	Semi-Annual	3
Exotic and Nuisance Vegetation Assessment	General Site Observations and Photos	Variable	Semi-Annual	4
Project Easement Boundary Assessment	General Site Observations and Photos	Variable	Semi-Annual	5
Plot Photos and Photo Points	Fixed Photographs	12 Plots/10 Photo Points	Annual	6

1. Wetland gauges will be placed within the restoration area in addition to baseline gauges established to date and an appropriate reference wetland
2. The number shown represents either fixed and/or variable (random) plots proposed representing 2% of the planted acreage. Fixed plots will be monitored according to CVS Level II methodology. Annual variable plots will represent less than 50% of total plots and be monitored for planted stem species survival and vigor (height). All vegetation plots will comprise of either circular or 100m^2 square/rectangular sized plots (0.0247 ac). One variable plot and one fixed plot will be placed in the upland planting area. One fixed plot will be in the reference wetland.
3. The project will be visually inspected twice a year at a minimum. All site data will be included in the Annual Monitoring Report. If necessary, the Adaptive Management Plan will be implemented to address issues jeopardizing project success.
4. Exotic and nuisance vegetation will be noted and documented as necessary in Annual Reports.
5. Project encroachments will be noted and documented as necessary in Annual Reports.
6. Project photos will be documented according to the number proposed and provided in Annual Reports.

10.0 Site Establishment and Operation

Eco Terra Partners, LLC will provide financial assurances in the form of a performance bond bound to NCDMS. The performance bond will be in effect and submitted with the Task 3

deliverable and remain through Task 6 (submittal of baseline monitoring report) after which the bond may be retired (Appendix F). Table 11 outlines project milestones and projected time for completion or delivery.

Table 11: Proposed Project Timeline

Task	Project Milestone	Timeline* (Months from Contract Award)
1	Regulatory Site Visit & Submit Environmental Screening Report	May 2021 (4 mos.) (completed)
2	Submit Recorded Conservation Easement	Nov. 2021 (10 mos.)
3	Mitigation Plan, Financial Assurance, and Permitting	Dec. 2021-Jan.2022 (11-12 mos.)
4	Vegetative Planting and Earthwork and Installation of Monitoring Devices	Feb.-Mar. 2022 (12-14 mos.)
5	Baseline Monitoring Report Approved by NCDMS	Apr.-May 2022 (15-16 mos.)
6	Submit Monitoring Report #1 to NCDMS	Apr.-May 2022 (15-16 mos.)
7	Submit Monitoring Report #2 to NCDMS	Nov. 2023 (34 mos.)
8	Submit Monitoring Report #3 to NCDMS	Nov. 2024 (46 mos.)
9	Submit Monitoring Report #4 to NCDMS	Nov. 2025 (58 mos.)
10	Submit Monitoring Report #5 to NCDMS	Nov. 2026 (70 mos.)
11	Submit Monitoring Report #6 to NCDMS	Nov. 2027 (82 mos.)
12	Submit Monitoring Report #7 to NCDMS	Nov. 2028 (94 mos.)
13	Complete Project Close-out Process	May 2029 (100 mos.)

10.1 Current Ownership

Eco Terra has entered into an agreement with Quincy Family Farms Limited Partnership for Purchase and Sale of a Conservation Easement of the proposed Site within the larger contiguous farm property. The total proposed easement coverage is approximately 21.4 acres. Property information is provided in Table 12. The Memo of the purchase agreement with Quincy Family Farms Limited Partnership is provided in Appendix E. This agreement allows Eco Terra to proceed with recording a conservation easement following review of the State Property Office, to be held by the State of North Carolina.

10.2 Long-term Stewardship

The Site will be marked with signage by the Provider prior to as-builts. The Provider will inspect the boundary marking on a yearly basis and repair as needed during the monitoring period. The Site will be transferred to the NCDEQ Stewardship Program. The Stewardship Program shall serve as the conservation easement holder and long-term steward for the property and conduct inspections of the Site to determine whether the conservation easement is being upheld. The

NCDEQ Stewardship Program is developing an endowment system within the non-reverting, interest-bearing Conservation Lands Conservation Fund Account. The use of funds from the Endowment Account will be governed by North Carolina General Statue GS 113A-232(d)(3). Interest gained by the endowment fund may be used for stewardship, monitoring, stewardship administration, and land transaction costs, if applicable. No fencing is planned for this project. The draft Site Protection Instrument can be found in Appendix H.

The easement boundary will be protected in perpetuity. It has been agreed upon by the landowners and provides adequate protection for all resources proposed as part of the Site. The easement has been strategically located to connect adjacent natural habitats and extend wildlife corridors throughout the Site and surrounding areas. Marking and protecting of the easement boundary will utilize various methods depending upon the existing land use. Easement corners will utilize rebar with aluminum survey caps. Conservation easement signs will be posted at all corners, access points, and at 200-foot intervals.

Table 12: Current Ownership and Long-Term Protection

Parcel Identification Number	County	Owner	Option Agreement (ac)*	Memorandum of Option Conservation Easement Deed Book (DB) and Page Number (PG)	Identified Conservation Easement Holder
4726898091	Edgecombe	Quincy Family Farms Limited Partnership	21.4	(1751)/(124-135)	State of North Carolina

10.3 Assurance of Water Rights

Sufficient water rights exist to support the long-term sustainability of the site, as there are no severed rights on the properties.

11.0 Adaptive Management

The Adaptive Management Remedial Action Plan (Plan) provides detailed steps to address how potential problems identified during project development are resolved to ensure project success and achievement of ecological performance standards. In the event that the Site, or a specific component of the Site fails to achieve the defined performance standards, Eco Terra will develop necessary adaptive management plans and/or implement appropriate remedial actions for the site in coordination with DMS and the review agencies. Remedial action required will be designed to achieve the success criteria specified previously, and will include identification of the causes of failure, remedial design approach, work schedule, and monitoring criteria that will consider physical and climatic conditions.

Most minor issues are discovered and resolved during annual monitoring post-construction and semi-annual site inspections by Eco Terra staff and/or contractors. Minor issues discovered requiring small scale corrective actions include supplemental planting, controlling herbaceous and woody vegetation, controlling herbivory tree damage, ditch plug and inlet/outlet erosion, and managing invasive species in discrete impact areas.

Anticipated project maintenance includes herbaceous vegetation control and supplemental planting due to tree mortality during the first two years of site establishment. Maintaining easement integrity, monitoring infrastructure including gauges and plot boundaries is anticipated as well. The project site boundary conservation easement will also be marked with posts and signage and monitored for integrity post-construction until close-out. Identifying potential supplemental planting areas early in the year is important to maintaining vegetation communities and securing plant materials for the following planting season. Identifying problems with monitoring infrastructure early on will help alleviate gaps in monitoring data and ensuring performance standards are met. Semi-annual site inspections will help address any minor issues discovered as well as prepare designated staff responsible for overall project maintenance and monitoring.

Major issues discovered requiring large scale corrective actions include, but are not limited to, re-grading of the mitigation site to accommodate the Site being too wet or too dry, replanting more than 20% of the site to improve composition or species diversity, or the addition of stabilization structures. The Adaptive Management Remedial Action Plan will follow Section 332.8(o)(9) of the 2008 Mitigation Rule.

Should any issues arise during site monitoring and physical inspection that may affect potential project success and Site performance standards, Eco Terra will notify the IRT/DMS of the need to develop an Adaptive Management Remedial Action Plan. Once the Plan is prepared for IRT/DMS members, Eco Terra will:

- Notify the USACE as required by the Nationwide 27 permit general conditions as necessary.
- Notify NCDWR of 401 conditions as necessary.
- Revise performance standards, maintenance requirements, and monitoring requirements as necessary and/or required by the USACE.
- Obtain other permits as necessary.
- Submit the Adaptive Management Remedial Action Plan for IRT review and approval, including maps.
- Implement the Adaptive Management Remedial Action Plan; and
- Provide the IRT/DMS a Record Drawing/As-Built of remedial actions.

12.0 Determination of Credits

The credit area depicted in Figure 12 was determined by on-site investigations of the ditch network, topography, adjacent soils, location of topographic crenulation and subject stream,

and existing and proposed hydrologic conditions. Buffered areas surrounding the proposed wetland restoration area will be used to protect the wetland area from encroachment and adjacent land uses in appropriate places. A farm access road crosses the north side of the Project easement and will be maintained along with a new ditch to allow site hydrology to flow from the north and into the main west-east ditch. Two culverts will be moved to accommodate this new flow pattern and the discharge culvert will be outside of the conservation easement to the east. The measured easement offset to protect the wetland credit area (~30 ft) will be sufficient to achieve and maintain wetland hydrology criteria due to the hydrology inputs from the escarpment subsurface flows and surface hydrology including backwater effects from the Tar River. This easement offset is intended to protect the interior wetland credits from external drainage effects, including the new ditch proposed on the north side of the relatively permanent farm road. Additional material will be added to the farm road if necessary to maintain access.

Additional similar buffer offsets are proposed on the east sides of the Project.
Lastly, the southern boundary ditch system will be filled to improve site hydrology both on the Project and the adjacent southern parcel. Another natural drainage feature and landform on the adjacent southern parcel effectively eliminates the need for any future perimeter ditch system and the site, soils, and topography are not candidates for future perimeter drainage or potential effects on the interior wetland credits proposed. Wetland re-establishment is proposed at a ratio of 1:1. Project assets are illustrated in Table 13.

Table 13: Project Assets

Asset	Original Mitigation Plan (ac)	Original Mitigation Category	Original Restoration Level	Original Mitigation Ratio (X:1)	Credits
Wetland 1_1	14.381	R	REE	1.00000	14.381
Ditch (1,2 & 3)	0.623	R	RH	1.00000	0.623
				Total:	15.004
				Riparian	
Project Credits				Wetland	
Re-establishment				15.004	
Totals				15.004	
Total Wetland Credits				15.004	

R – riparian
REE – wetland re-establishment
RH – wetland rehabilitation

Table 14: Proposed Wetland Credit Release Schedule

Release Milestone	Activity	Interim Credit Release/ Total Release
1	Site Establishment	0%/ 0%
2	Baseline Monitoring Report and As-built Survey	30%/ 30%
3	First Year Monitoring Report demonstrating criteria being met	10%/ 40%
4	Second Year Monitoring Reporting demonstrating criteria being met	10%/ 50%
5	Third Year Monitoring Report demonstrating criteria being met	15%/ 65%
6*	Fourth Year Monitoring Report demonstrating criteria being met	5%/ 70%*
7	Fifth Year Monitoring Report demonstrating criteria being met	15%/ 85%
8*	Sixth Year Monitoring Report demonstrating criteria being met	5%/ 90%*
9	Seventh Year Monitoring Report demonstrating criteria being met	10%/ 100%

*Vegetation plot data is not required with monitoring reports submitted during these monitoring years unless otherwise stated by the Mitigation Plan or directed by the IRT.

13.0 References

N.C. Department of Environmental Quality. Division of Land Resources. 2021. https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Geological%20Survey/NC_Generalized_Geologic_Map_Description.pdf

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Figures

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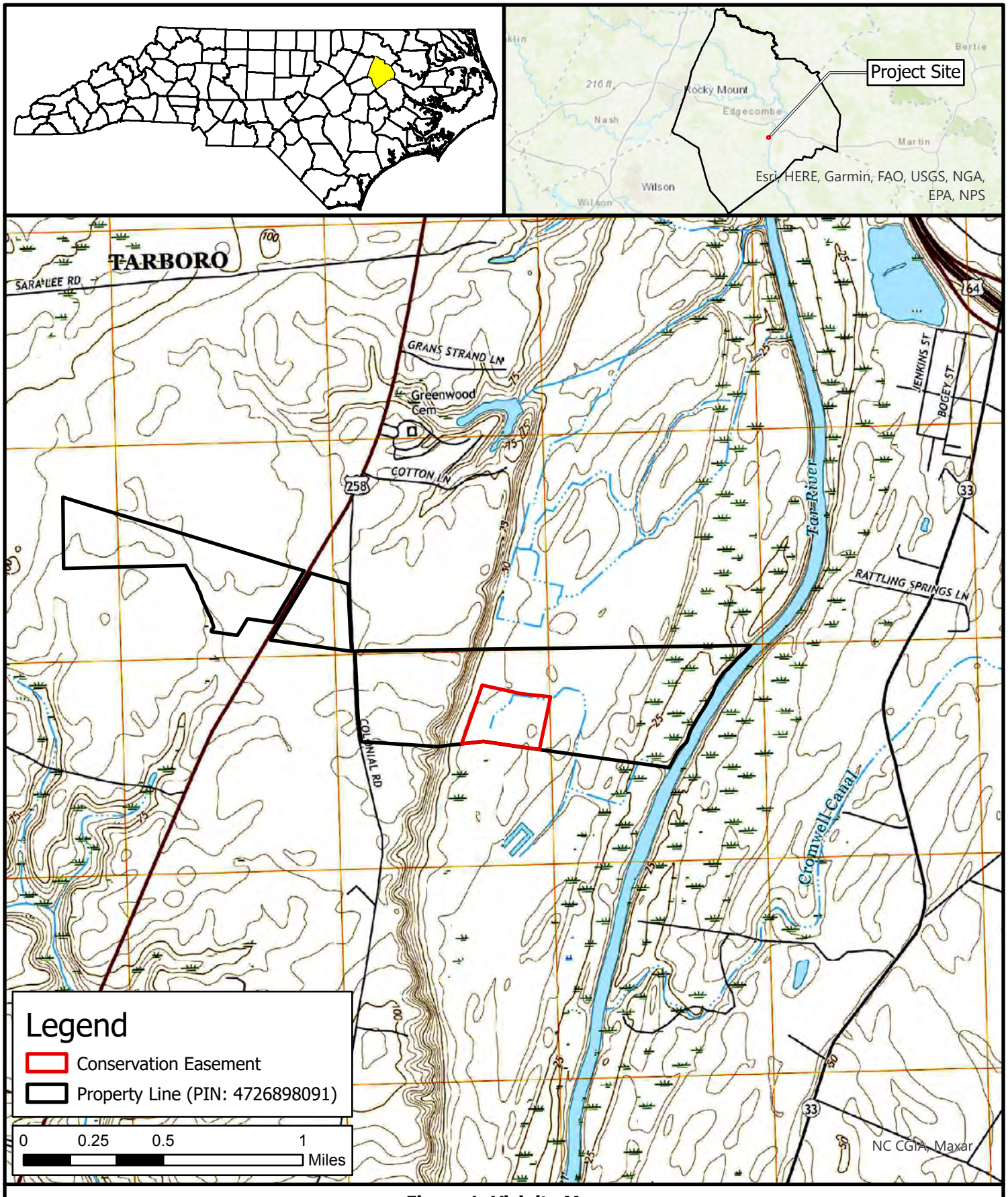


Figure 1: Vicinity Map
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

USGS 2016 Topographic Quadrangles: Old Sparta

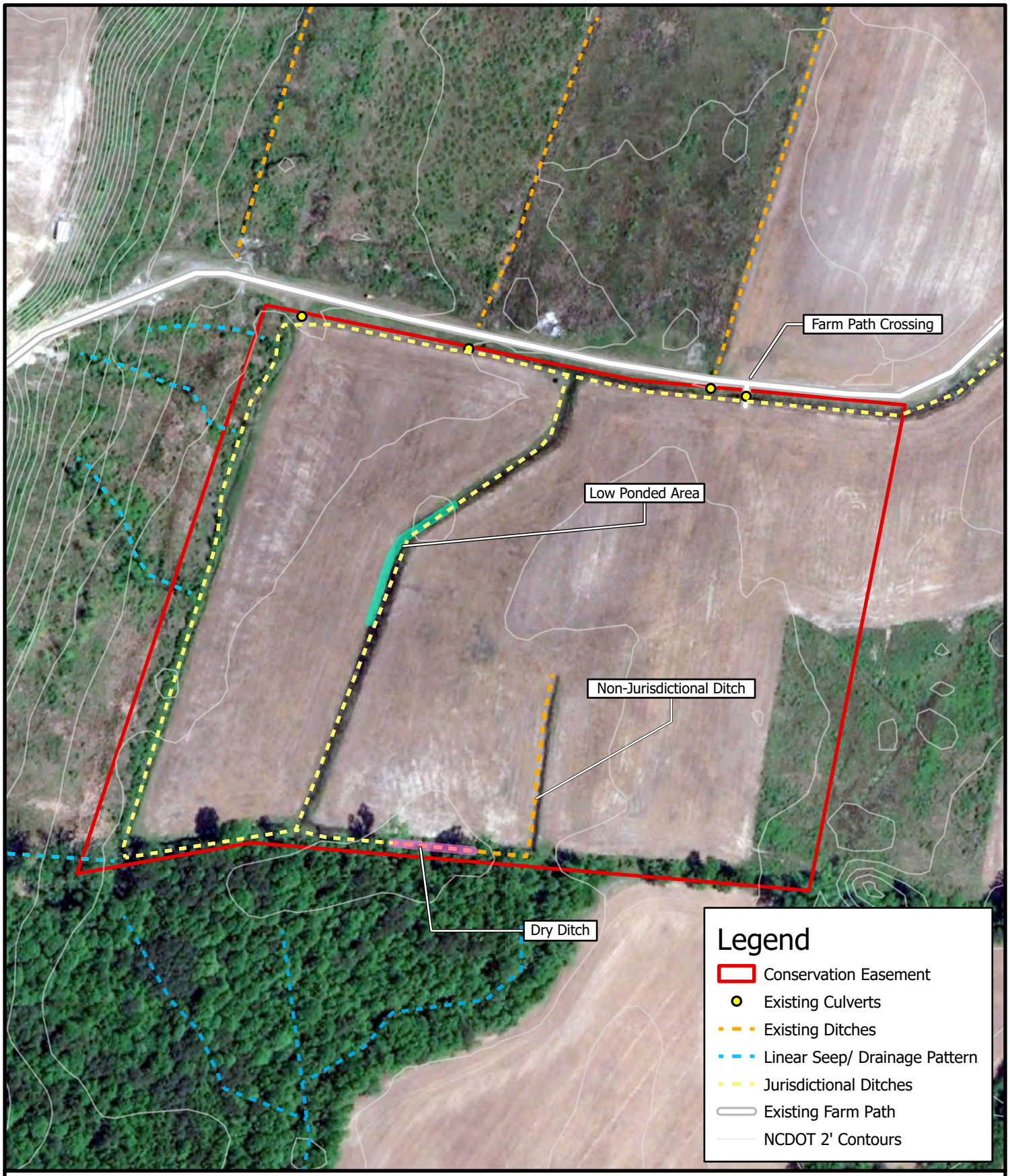


Figure 2: Existing Conditions
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

Google Earth 2021 Aerial Imagery

N
W E
S

0 125 250 500 Feet

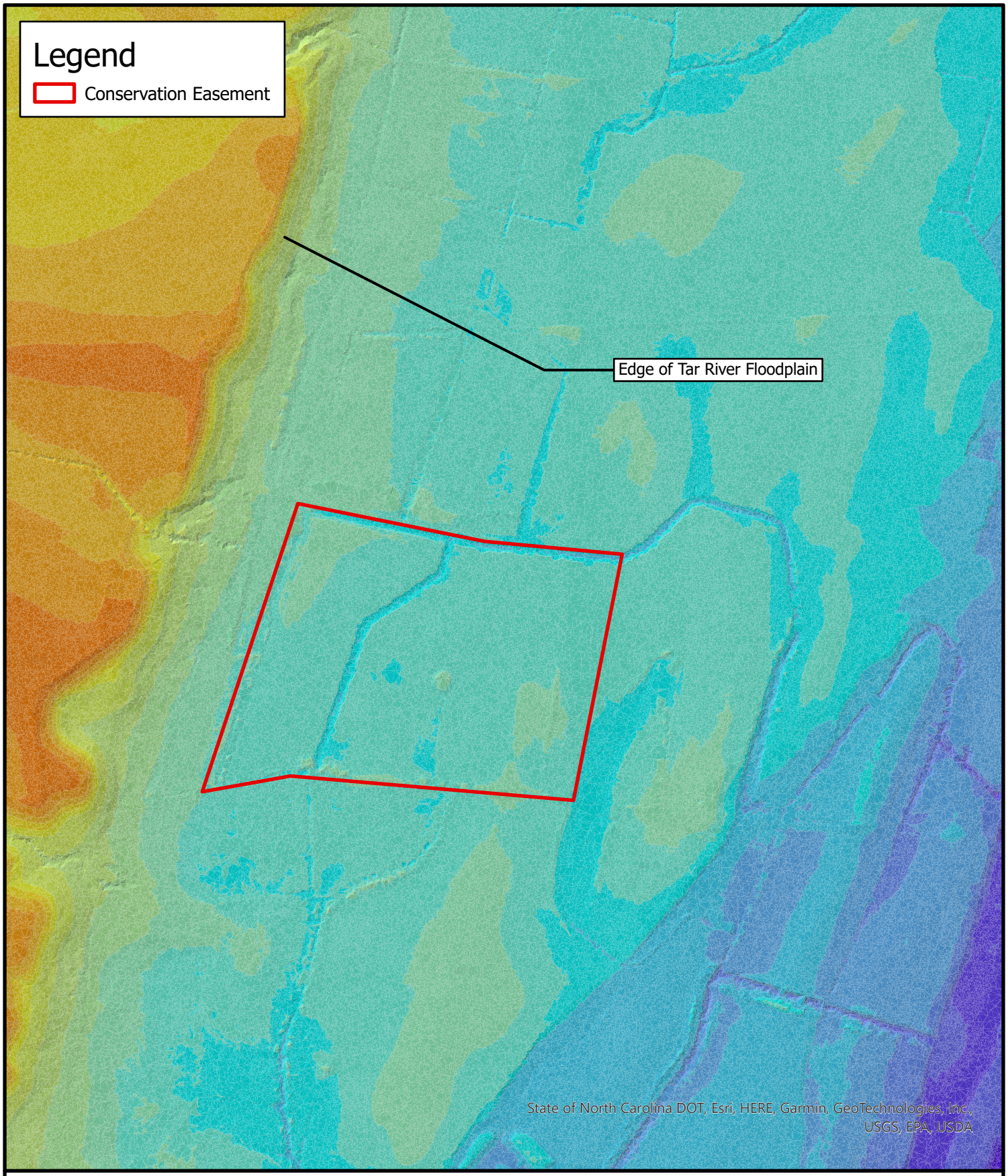


Figure 3: LiDAR
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

QL2 LiDAR

N
W E
S

0 250 500 1,000 Feet

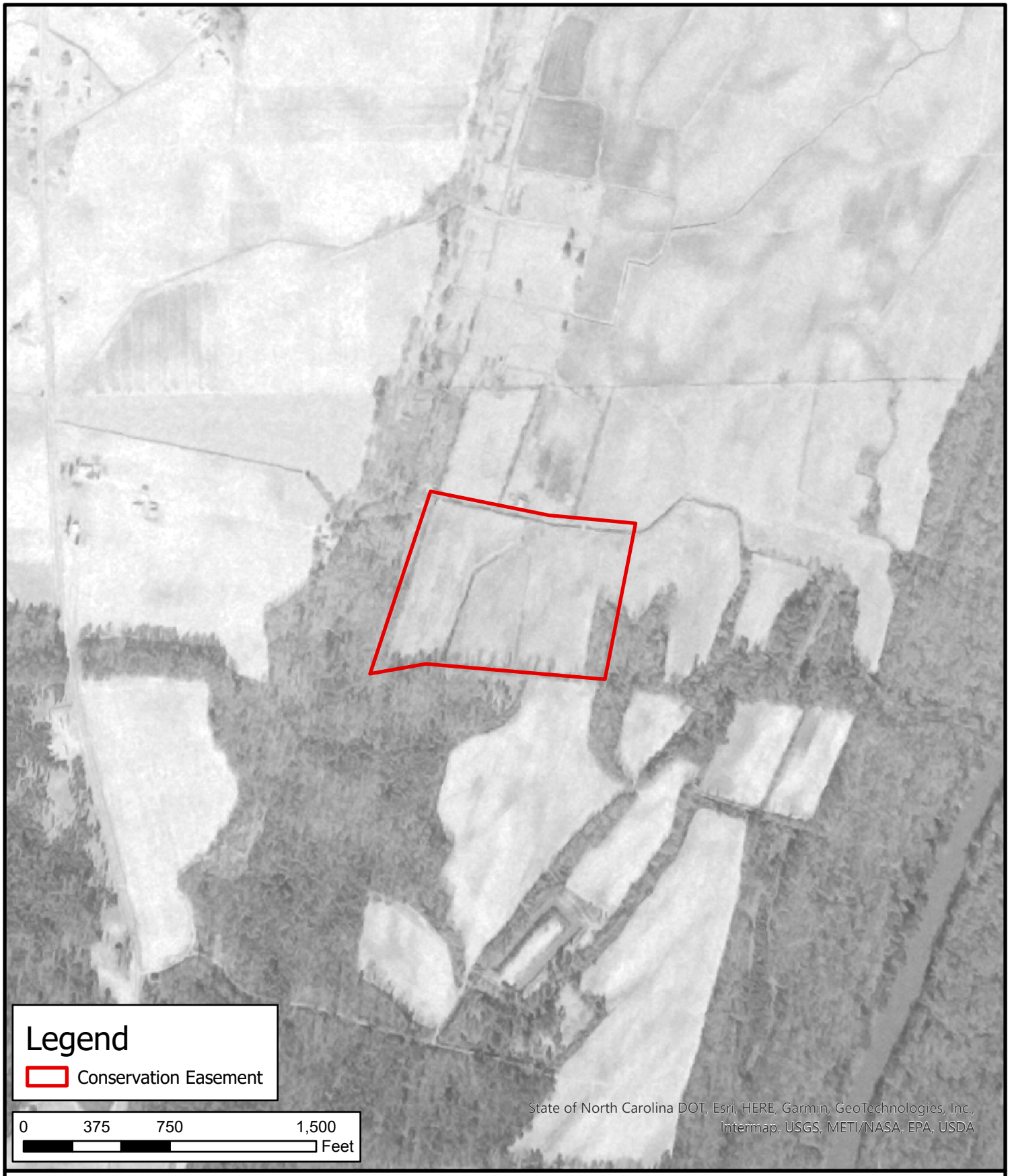


Figure 4: 1977 Historic Aerial
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

USGS Earth Explorer 1977 Single Frame Aerial

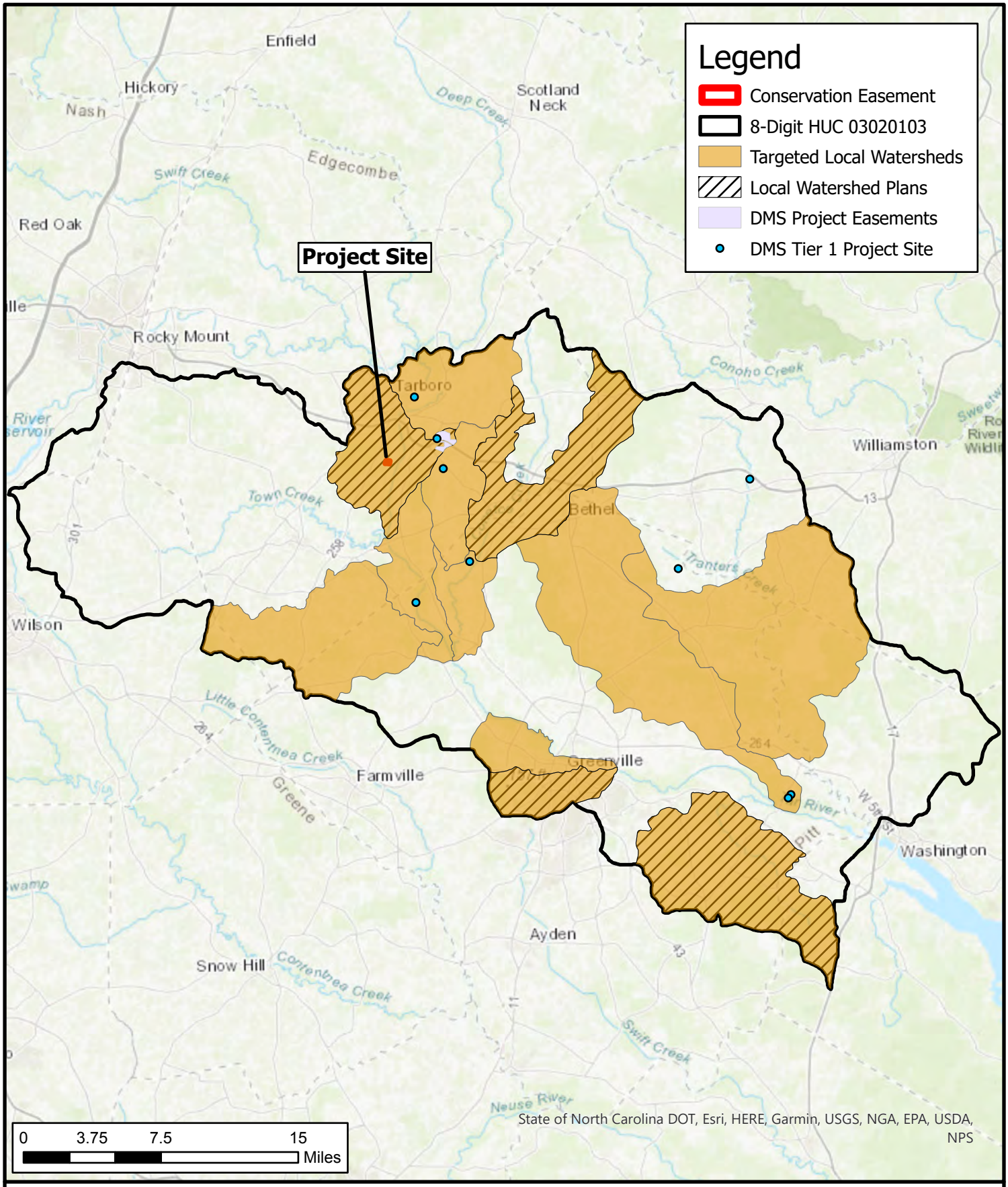


Figure 5: Watershed Planning
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

NC DMS TLW/LWP Data

Figure 6: Proposed Service Area
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

National Geographic World Map

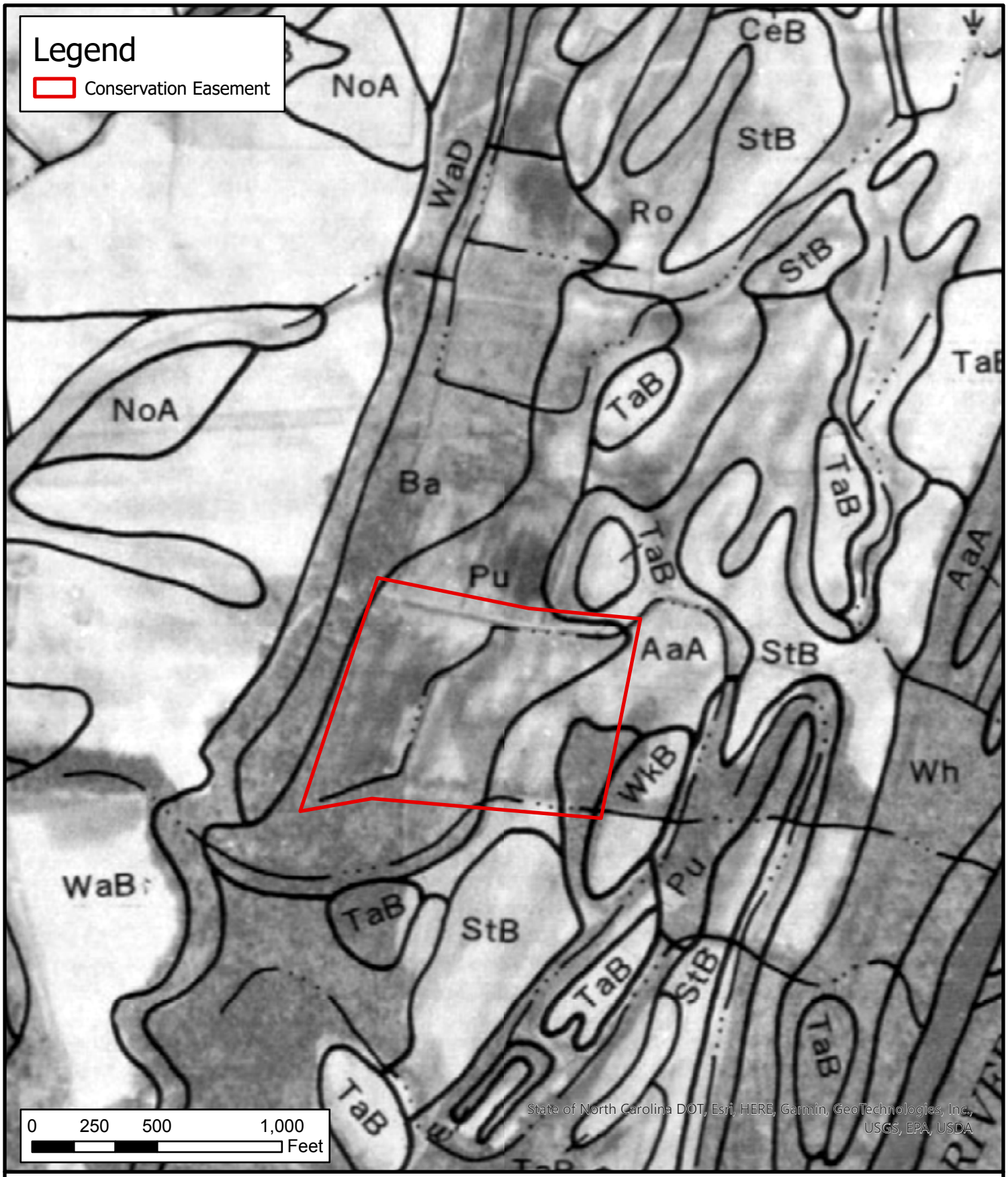


Figure 7: Soil Survey
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

1979 NRCS Soil Survey Map Sheet #26

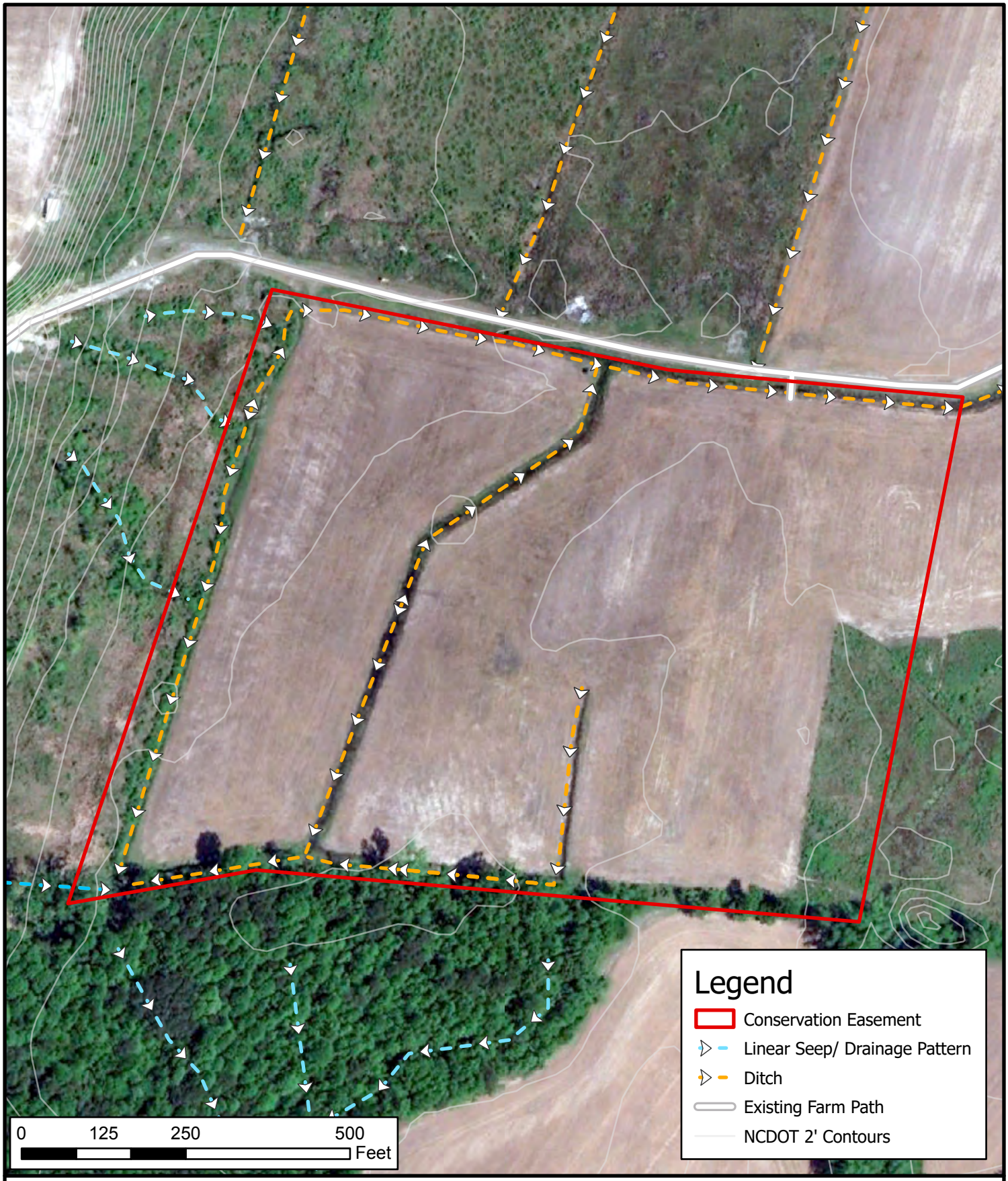


Figure 8: Ditch Network
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

Google Earth 2021 Aerial Imagery

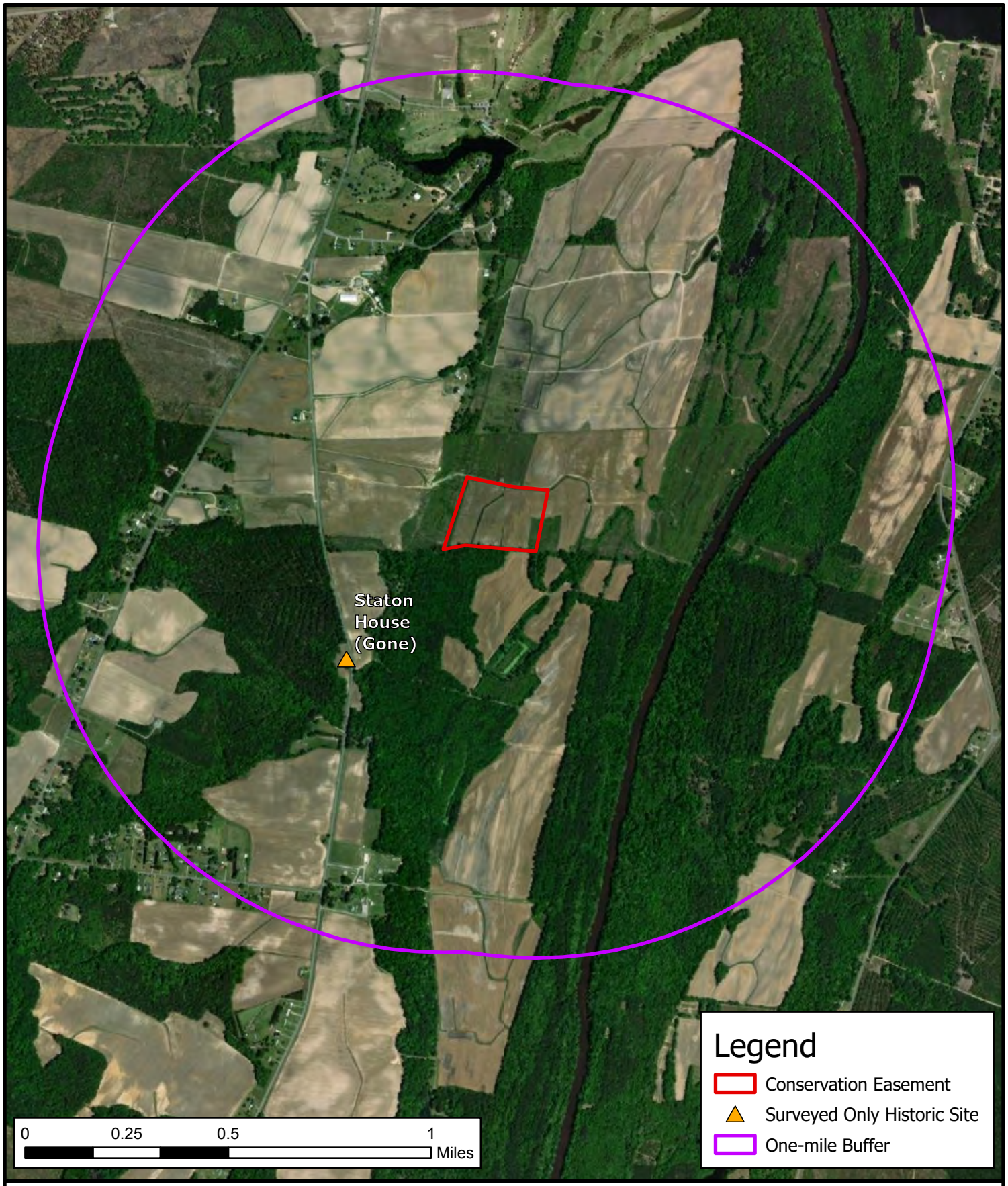


Figure 9: Cultural Resources
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

NC State Historic Preservation Office Data

N
W E
S

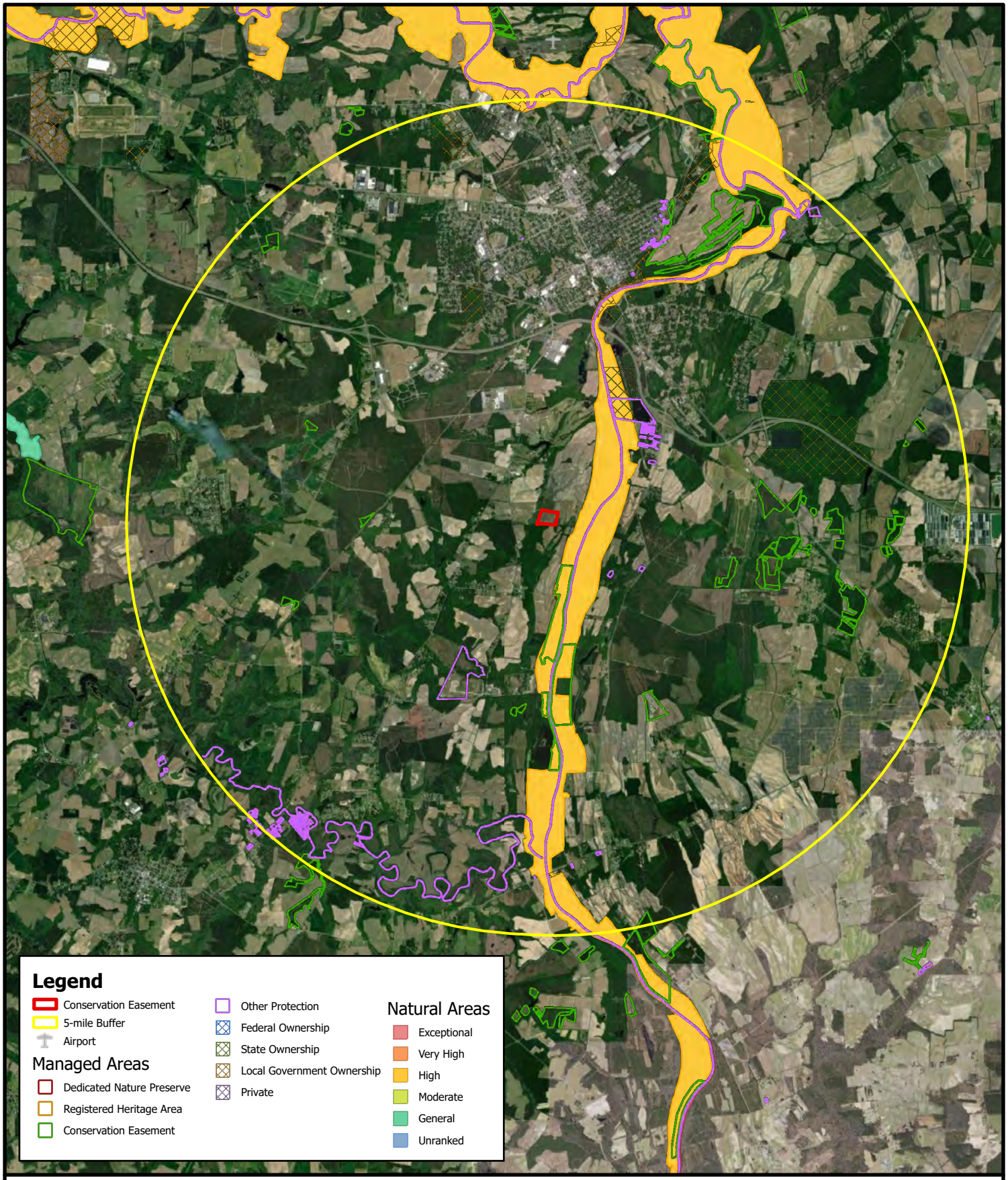


Figure 10: Planning Elements
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

NC Natural Heritage Program Data

N
W E
S

0 0.5 1 2 Miles

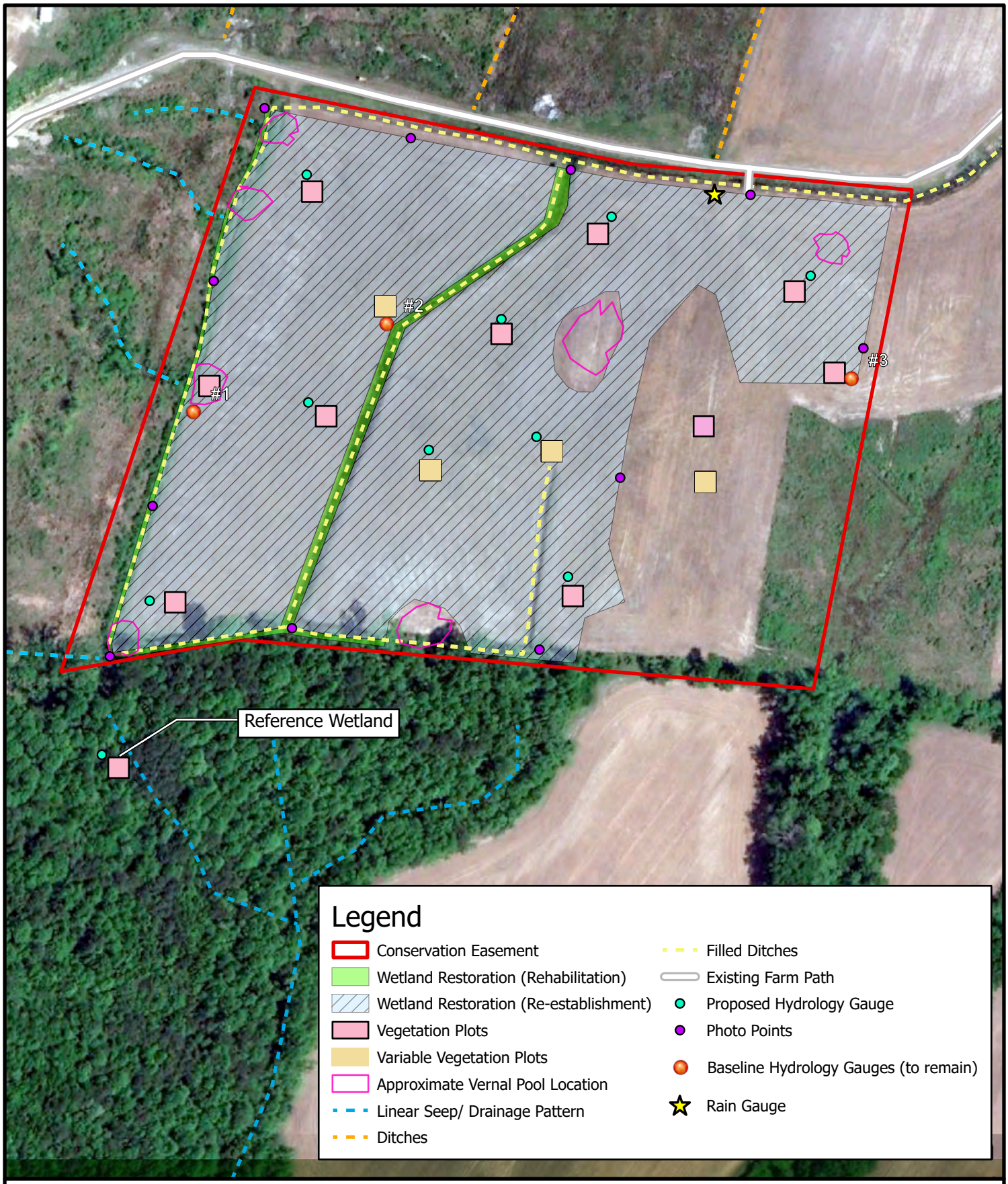


Figure 11: Monitoring Components
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

Google Earth 2021 Aerial Imagery

N
W E
S

0 87.5 175 350
Feet

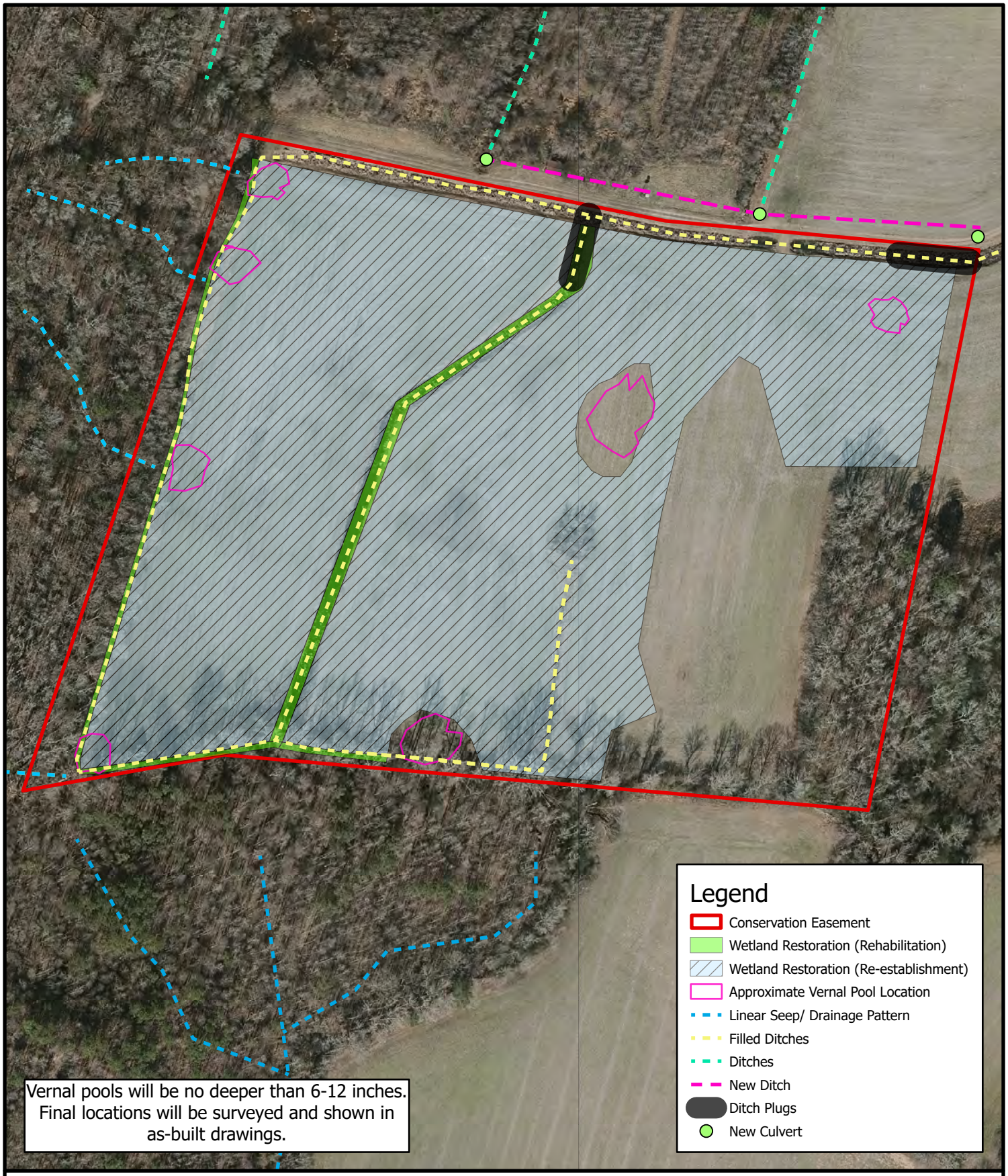


Figure 12: Proposed Conditions
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
August 2021

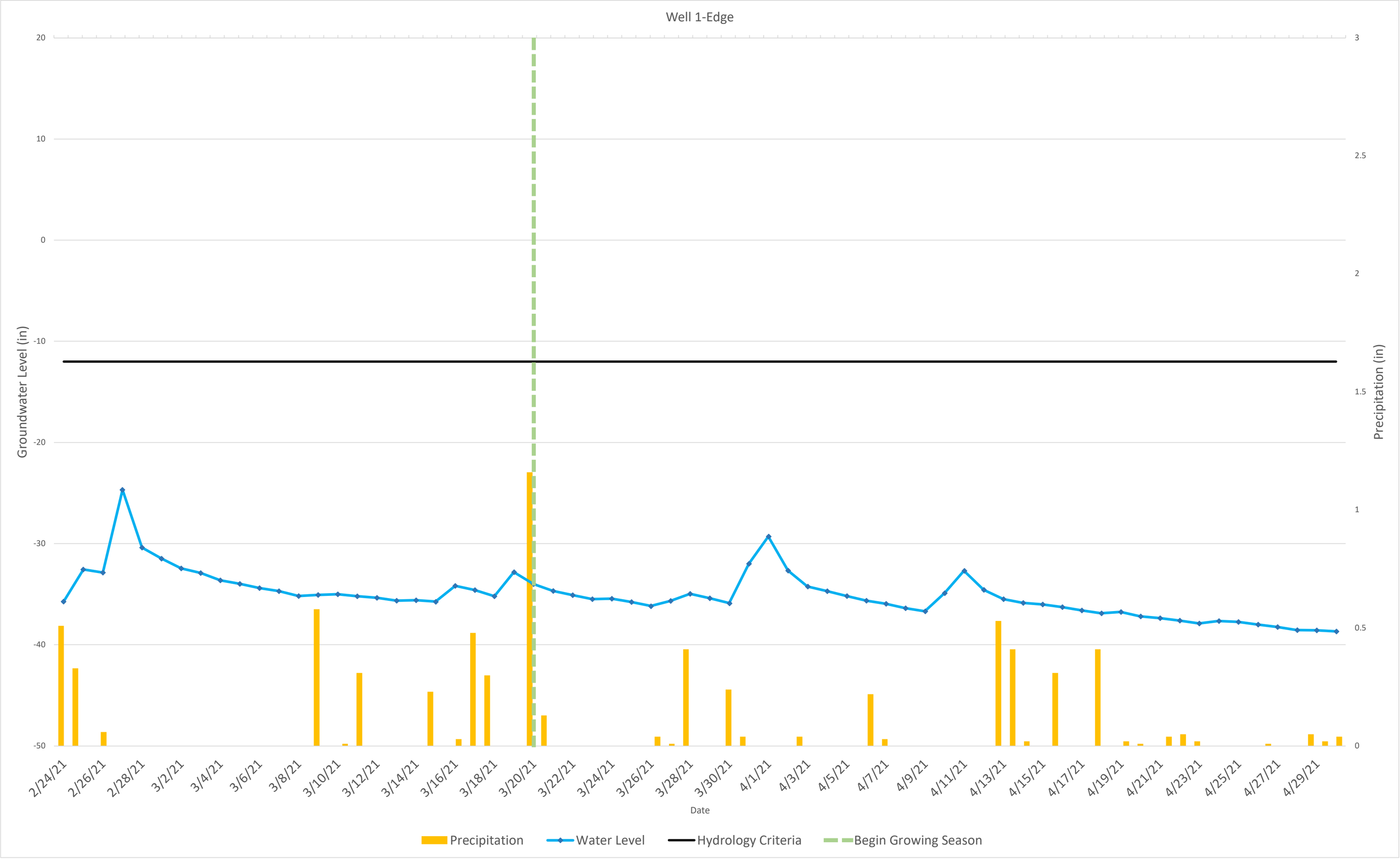
Google Earth 2021 Aerial Imagery

N
W E
S

0 75 150 300
Feet

Appendix A

Wetland Gauge Data and Water Budget


Well 1-Edge
Groundwater Level (in)
Precipitation (in)
20
10
0
-10
-20
-30
-40
-50
3
2.5
2
1.5
1
0.5
0
2/24/21
2/26/21
2/28/21
3/2/21
3/4/21
3/6/21
3/8/21
3/10/21
3/12/21
3/14/21
3/16/21
3/18/21
3/20/21
3/22/21
3/24/21
3/26/21
3/28/21
3/30/21
4/1/21
4/3/21
4/5/21
4/7/21
4/9/21
4/11/21
4/13/21
4/15/21
4/17/21
4/19/21
4/21/21
4/23/21
4/25/21
4/27/21
4/29/21
Date
Precipitation
Water Level
Hydrology Criteria
Begin Growing Season

Well 2-Middle

Groundwater Level (in)

20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0

Precipitation (in)

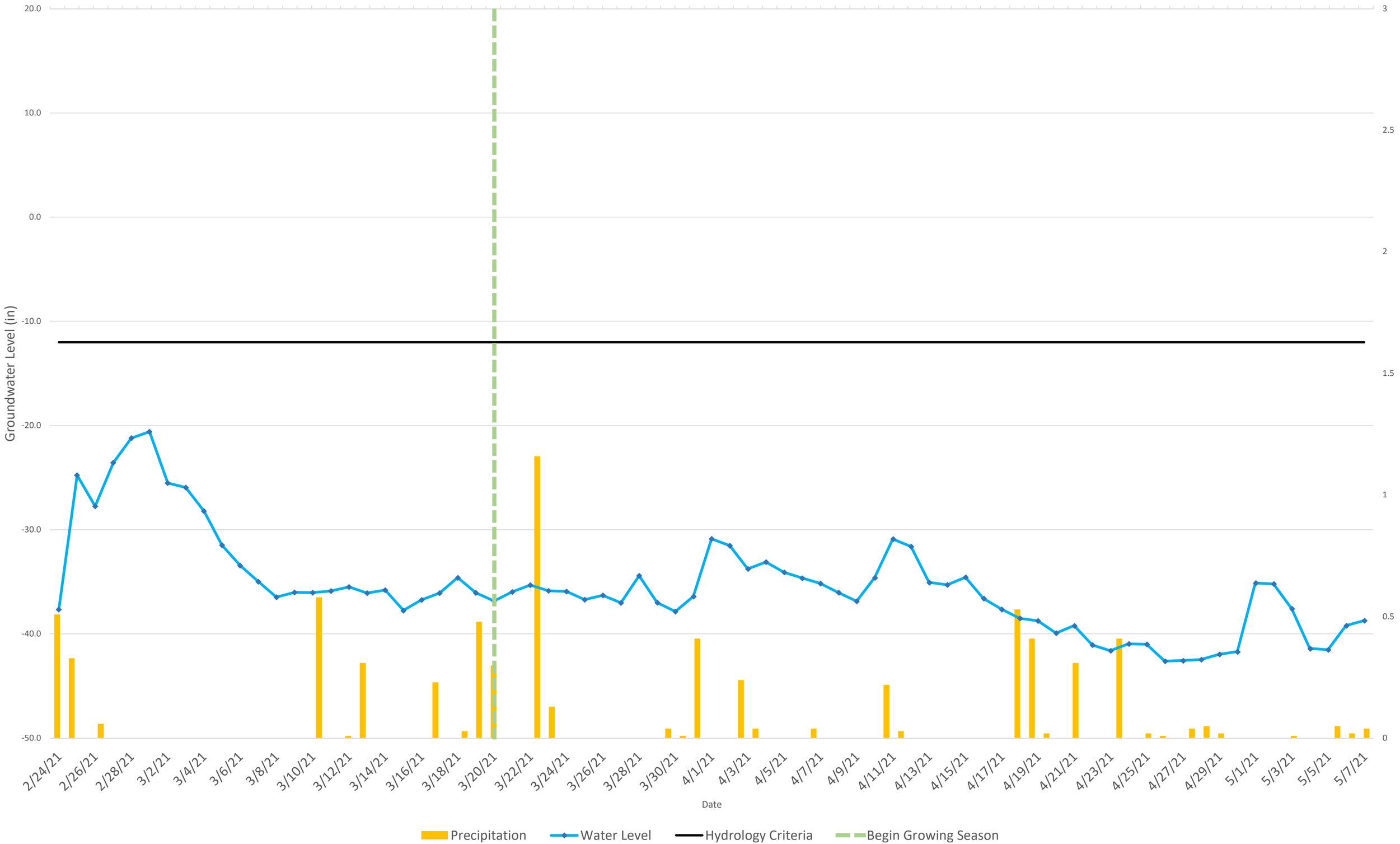
3
2.5
2
1.5
1
0.5
0

2/24/21
2/26/21
2/28/21
3/2/21
3/4/21
3/6/21
3/8/21
3/10/21
3/12/21
3/14/21
3/16/21
3/18/21
3/20/21
3/22/21
3/24/21
3/26/21
3/28/21
3/30/21
4/1/21
4/3/21
4/5/21
4/7/21
4/9/21
4/11/21
4/13/21
4/15/21
4/17/21
4/19/21
4/21/21
4/23/21
4/25/21
4/27/21
4/29/21

Date

Precipitation
Water Level
Hydrology Criteria
Begin Growing Season

Well 3-Edge


20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
Groundwater Level (in)
3
2.5
2
1.5
1
0.5
0
Precipitation (in)
2/24/21
2/26/21
2/28/21
3/2/21
3/4/21
3/6/21
3/8/21
3/10/21
3/12/21
3/14/21
3/16/21
3/18/21
3/20/21
3/22/21
3/24/21
3/26/21
3/28/21
3/30/21
4/1/21
4/3/21
4/5/21
4/7/21
4/9/21
4/11/21
4/13/21
4/15/21
4/17/21
4/19/21
4/21/21
4/23/21
4/25/21
4/27/21
4/29/21
5/1/21
5/3/21
5/5/21
5/7/21
Date
Precipitation
Water Level
Hydrology Criteria
Begin Growing Season

Colonial Farms Riparian Wetland
Water Budget Calculation

Water Budget Equation

The hydrologic cycle of a wetland can be expressed in a water budget that accounts for water inflows and outflows to the system, as follows:

$$\Delta S = [P + S_i + G_i] - [ET + S_o + G_o]$$

where:

ΔS = change in volume of water storage in a defined area over

timeP = precipitation

S_i = surface-water inflow

G_i = ground-water inflow

ET = evapotranspiration

S_o = surface water

outflowG_o = groundwater

outflow

Water Budget Calculation Assumptions

The proposed riparian wetland will be restored as an entire system surrounded by hydric and non-hydric soils within the subwatershed assessed. The following assumptions apply to the water budget calculation:

1. Precipitation that falls within the approximate 64-acre watershed including the 15.0-acre proposed riparian wetland footprint will be the primary hydrologic input along with subsurface ground-water inflow (lateral) inputs. Watershed area is estimated using USGS StreamStats.
2. Surface water inflow is estimated within the WETBUD model runoff calculations and the NRCS Curve Number method for estimating direct runoff from storm rainfall (NRCS National Engineering Handbook, Chapter 10). This method utilizes a runoff curve number based on the ground and cover crop watershed condition. The proposed wetland restoration area is under cultivation and currently in a soybean rotation. Surrounding areas of the water shed include recently cut forest as well as additional cultivated areas higher up on the escarpment.
3. Currently surface water outflow for the site is being conveyed off site via a single main ditch from a perimeter and internal drainage network, which will be plugged and filled mostly during construction, removing the surface water and groundwater outflow from the Site.
4. The existing ditches have broken through the Site's restrictive soil layer found most similar to Portsmouth and Ballahack series soils. Both soils have a sandy clay loam restrictive layer starting at approximately 20-30 in below the surface. The restrictive soil layer supports wetland hydrology by creating a perched condition restricting infiltration. During construction the west ditch will be filled with surrounding clay soil material at vernal pool inlets. These areas will receive linear seep surface and subsurface flows into the project area. Clay ditch plugs are proposed here which will restore the fragmented restrictive soil layer and prevent potential for vertical groundwater outflow in perimeter catchment ditches.

Precipitation

The USDA NRCS provides Wetlands Climate Tables through the Agricultural Applied Climate System (AgACIS) which includes climate data and summary reports. There are five AgACIS weather stations listed for Edgecombe County. Tarboro 1S was selected to retrieve average precipitation data from 1971-2020.

Evapotranspiration

The State Climate Office of North Carolina at NCSU developed the Cardinal Data Retrieval System (NC CDRS) provides Daily Reference Crop Evapotranspiration (ETo) and Daily Crop Evapotranspiration (ETc) for the previous 48-months at their weather stations around the state. A crop coefficient is multiplied by the ETo in order to calculate ETc.

The closest weather station to the Site is the ECONET Upper Coastal Plain Research Station

(Station ID: ROCK) in Edgecombe County, NC. The ROCK Upper Coastal Plain Research station is ~12-miles northwest of the Site.

The data was accessed from the NC CDRS ROCK weather station in October 2021 and provided ETo and ETc data. Corn at mid-season growth stage was selected for ETc as this crop has the highest water loss through evapotranspiration of the crops previously grown at the Site. The ETo and ETc data provided was from Jan 2000 – Jan 2020, which was averaged for eachmonth in order to perform the water budget calculation. Calculated ET values were also analyzed using average temperature over the same time period and the Thornthwaite Method and the most limiting ET was used in the WETBUD model.

Results and Conclusions

The monthly and annual water budget results for the proposed wetlands are presented in the "Water Budget Net Balance +/-" column of the table above. A monthly running total of the waterbudget is presented in "Water Budget Remaining Total +/-" column of the table above. Net negative water budget balances were observed during the main growing season and highest ET months during year. A water surplus is available on a monthly and annual basis. As this is a primarily precipitation driven system, increased ET values should not affect the surplus water as significant as decreased precipitation. This analysis reflects monthly water budget conditions based on monthly direct precipitation and subtracting monthly evapotranspiration to arrive at monthly water budget summaries.

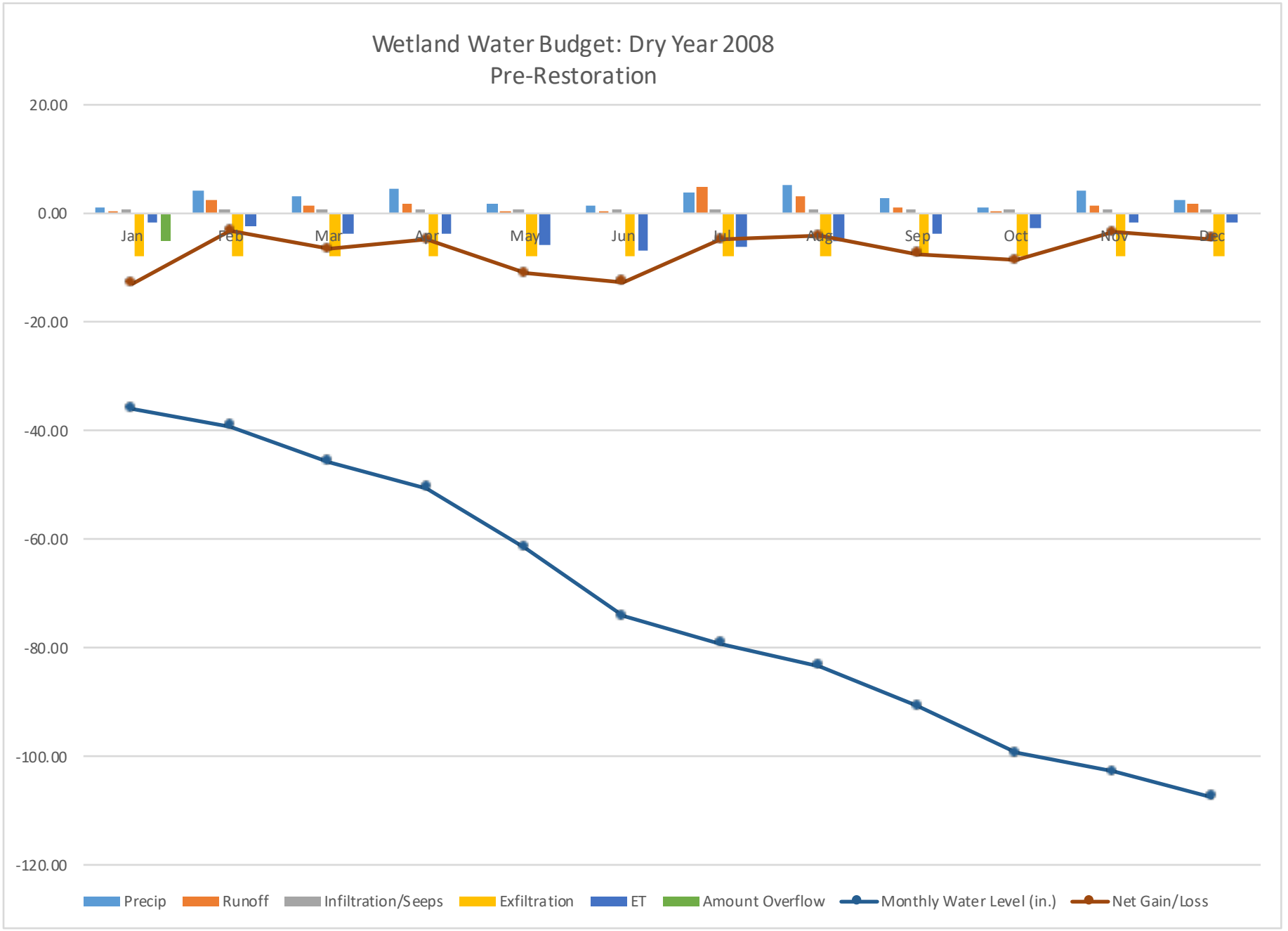
Based on this calculation ~1.2 feet of surplus water will cover the entire 15.0-acre Site on an annual basis. Considering the approximate depth to the restrictive soil layer (10-14 in) the proposed wetland project will be able to meet the wetland hydrology requirement during years of normal precipitation.

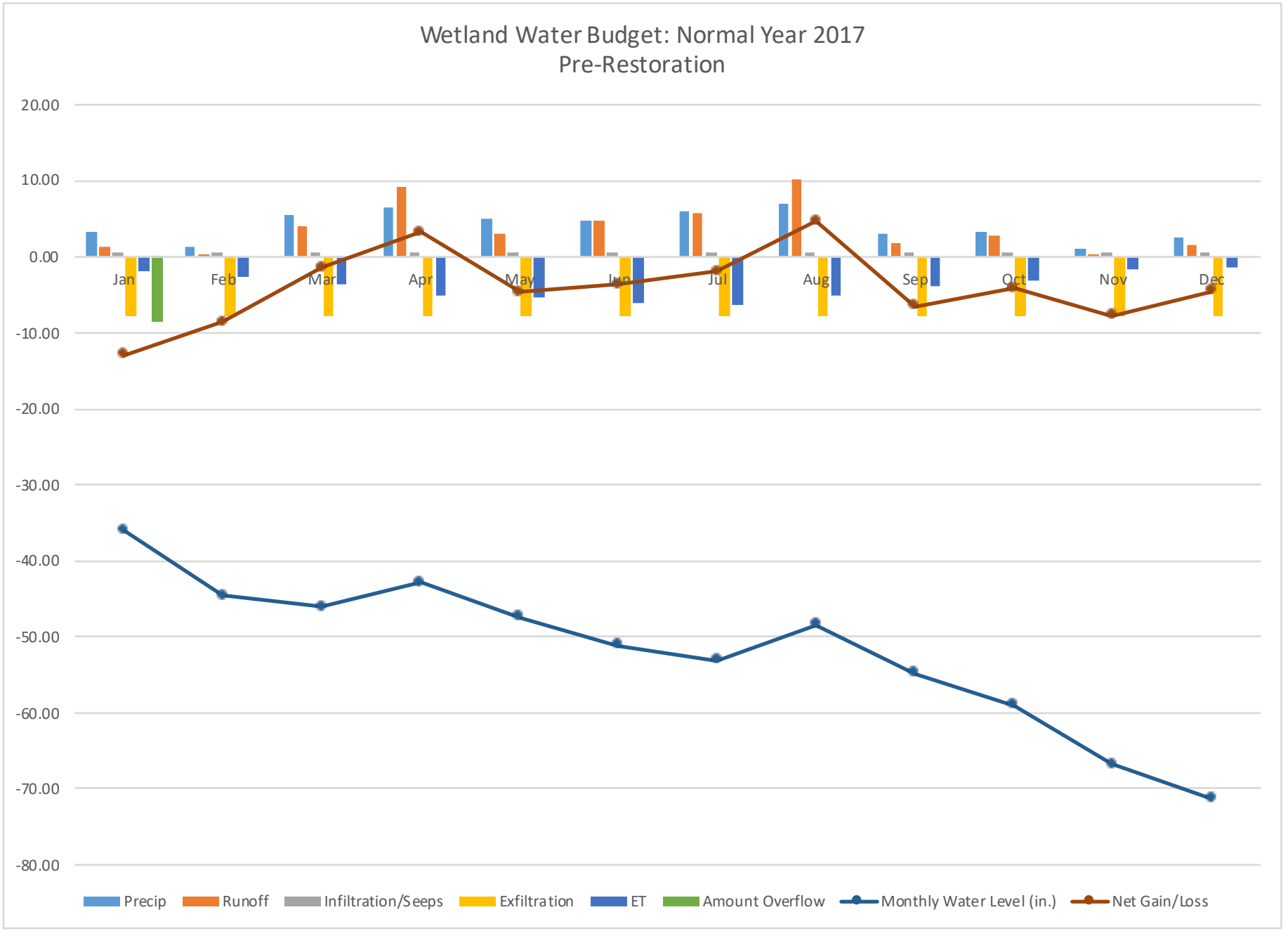
References

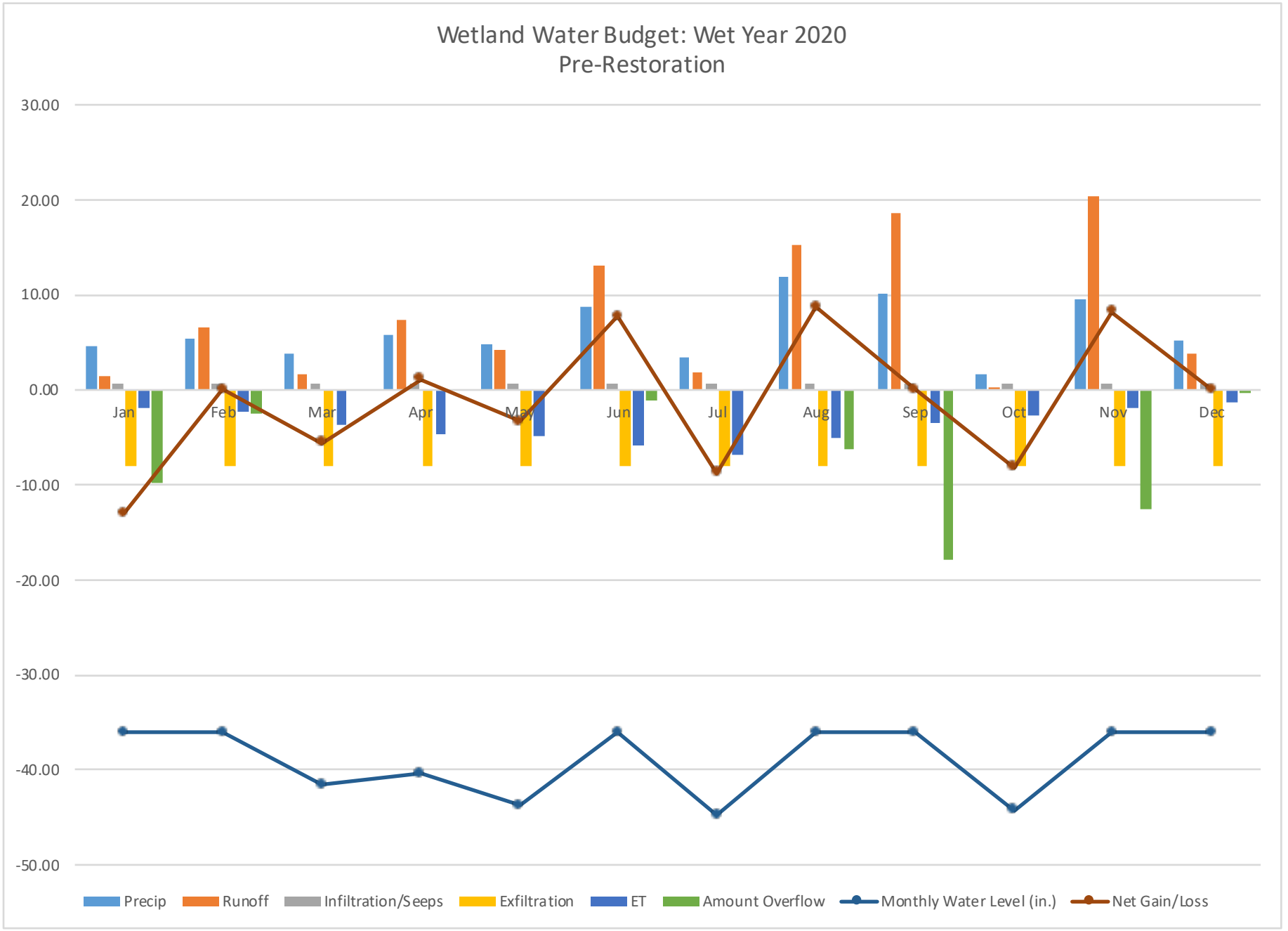
NRCS National Engineering Handbook. Estimation of Direct Runoff from Storm Rainfall Runoff. Part 630 Hydrology. Chapter 10. Updated 2004. https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17752.wba

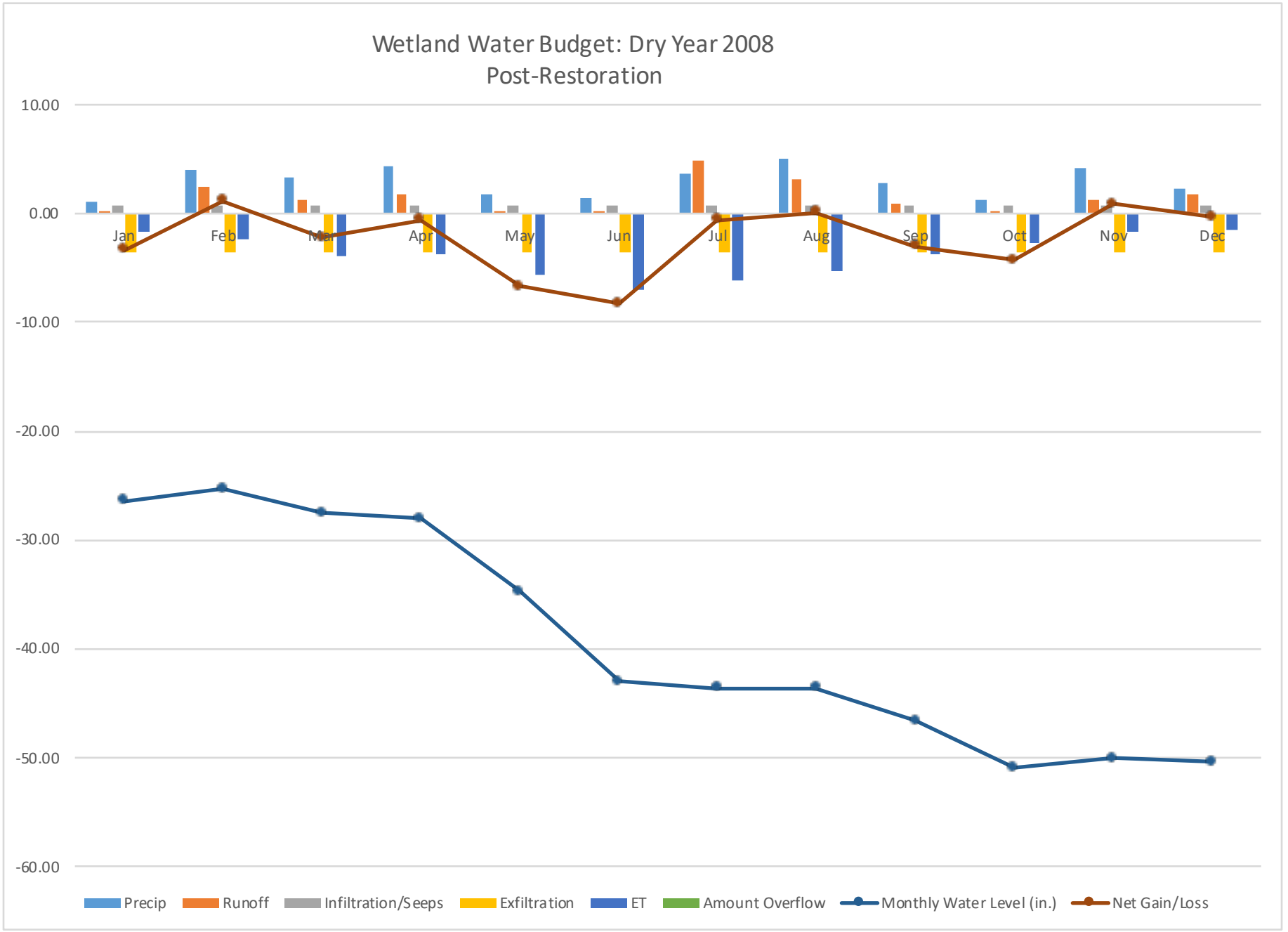
State Climate Office of North Carolina, NC State University. Cardinal [data retrieval interface] available at https://products.climate.ncsu.edu/cardinal/request. Accessed October 10, 2021.

Resource Protection Group, Inc. – WETBUD Water Budget Modeling Software. V2.0. 2021


Wetland Water Budget: Dry Year 2008
Pre-Restoration
20.00
0.00
-20.00
-40.00
-60.00
-80.00
-100.00
-120.00
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Precip
Runoff
Infiltration/Seeps
Exfiltration
ET
Amount Overflow
Monthly Water Level (in.)
Net Gain/Loss


Wetland Water Budget: Normal Year 2017
Pre-Restoration
20.00
10.00
0.00
-10.00
-20.00
-30.00
-40.00
-50.00
-60.00
-70.00
-80.00
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Precip
Runoff
Infiltration/Seeps
Exfiltration
ET
Amount Overflow
Monthly Water Level (in.)
Net Gain/Loss


Wetland Water Budget: Wet Year 2020
Pre-Restoration
30.00
20.00
10.00
0.00
-10.00
-20.00
-30.00
-40.00
-50.00
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Precip
Runoff
Infiltration/Seeps
Exfiltration
ET
Amount Overflow
Monthly Water Level (in.)
Net Gain/Loss


Wetland Water Budget: Dry Year 2008
Post-Restoration
10.00
0.00
-10.00
-20.00
-30.00
-40.00
-50.00
-60.00
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Precip
Runoff
Infiltration/Seeps
Exfiltration
ET
Amount Overflow
Monthly Water Level (in.)
Net Gain/Loss

Wetland Area
Water Budget: Normal Year 2017

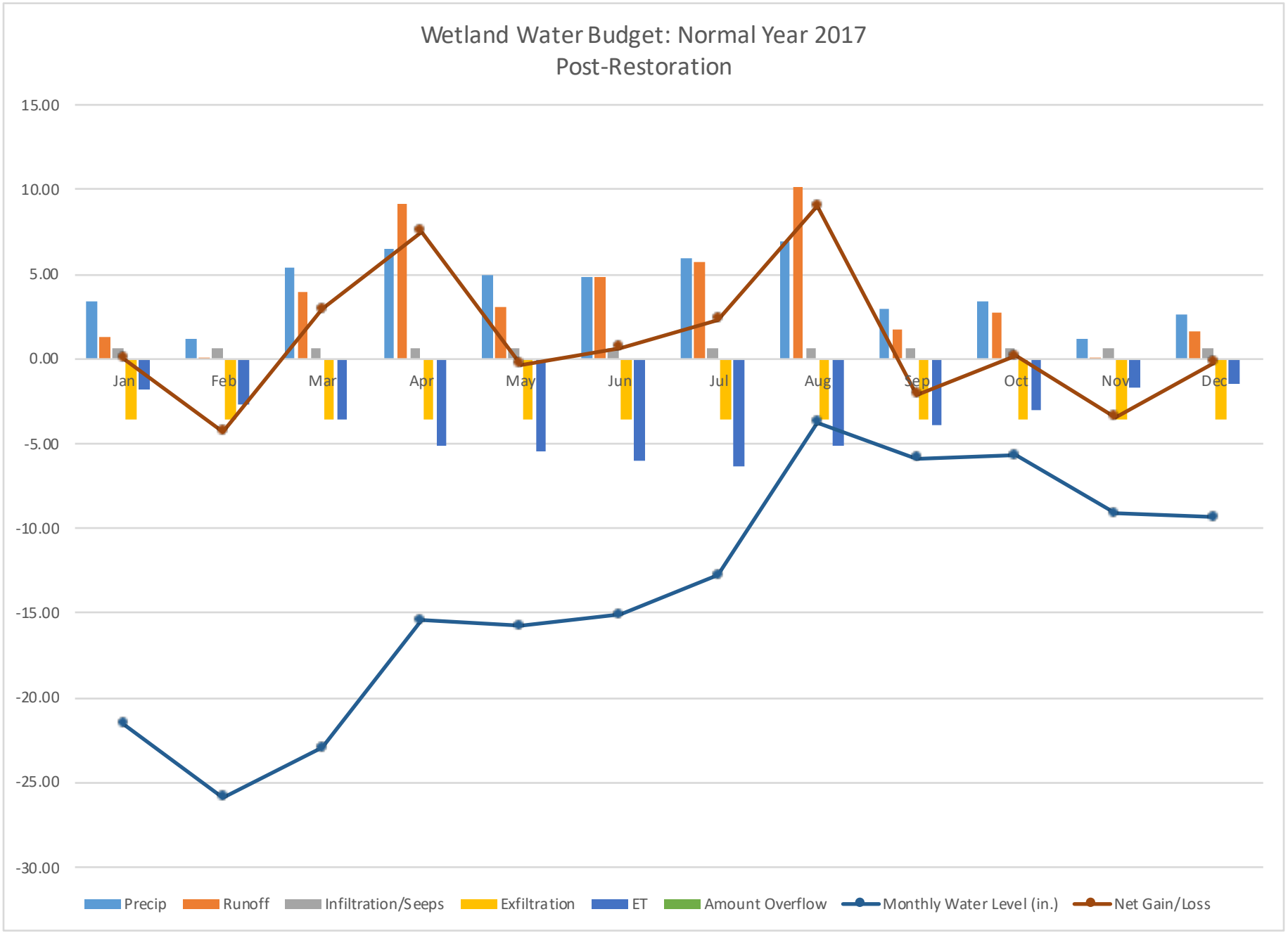
DATA												
CN	85			Watershed Area	64							
S	1.76			Pond/Wetland Area	15							
Ia	0.35											
Groundwater in	0.66	ft/mo =	7.92	in/mo								
Groundwater out	-0.30	ft/mo =	-3.6	in/mo								
Outfall elevation	0.00	ft =	0	inches								
Initial water elev	-1.80	ft =	-21.6	inches								
ET (in)	1.79	2.71	3.55	5.14	5.41	5.99	6.37	5.06	3.94	3.00	1.67	1.44

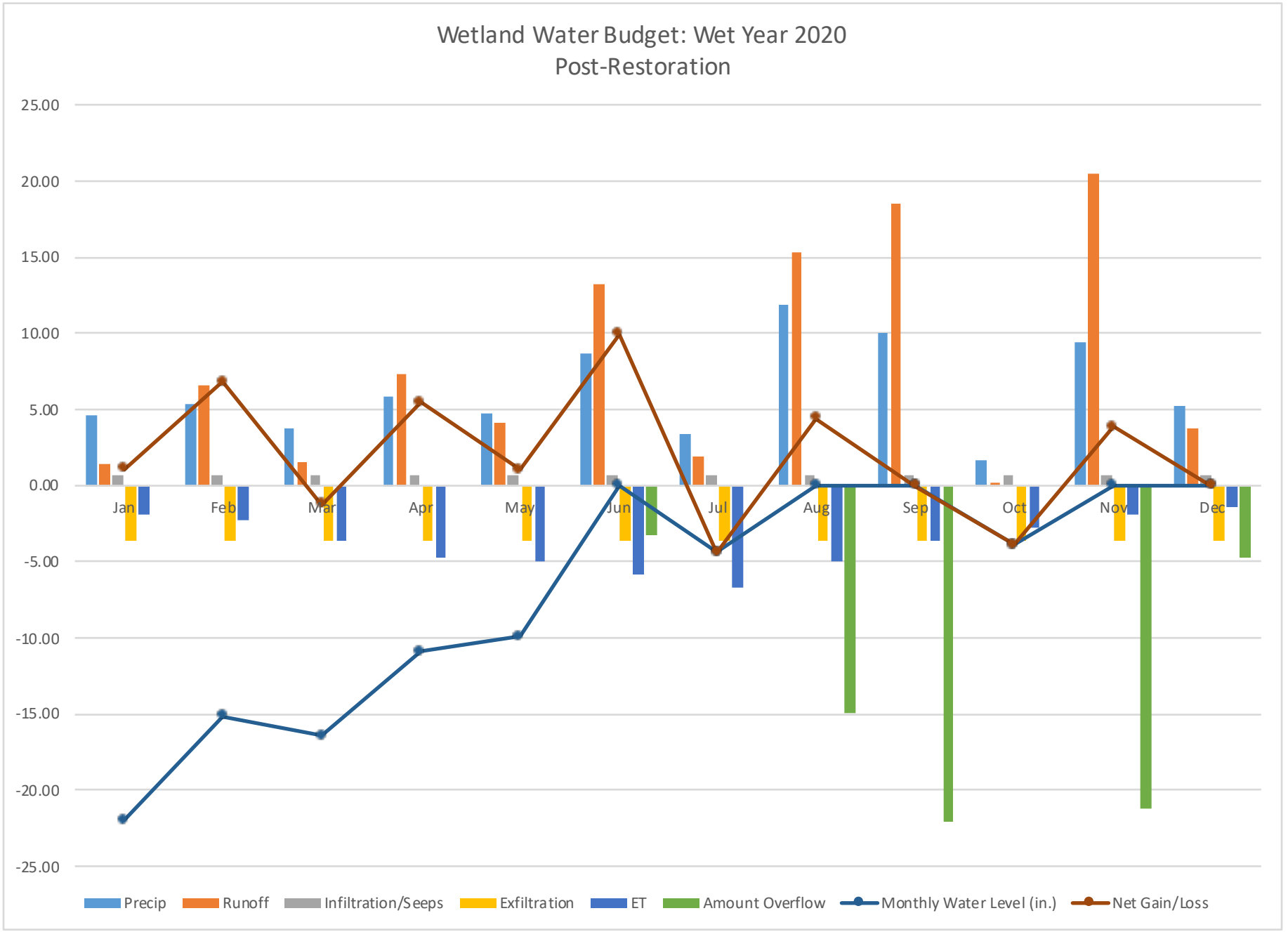
Wet Year	2017											
Precipitation (in.)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.28	0	0.76	0	0.14	0	0	0	1.44	0	0	0
2	1.24	0	0.05	0	0	0	0	0	0.15	0	0	0
3	0.13	0.14	0	0.27	0	0	0	0	0	0.01	0	0
4	0	0	0	0	0.53	0	1.36	0	0	0	0	0
5	0	0	0	0.08	1.08	2.03	1.48	0	0.27	0	0	0
6	0.53	0.01	0	0.09	0	0	0	0	0.37	0	0	0.35
7	0.23	0	0	0	0	0	0	0.01	0.01	0.05	0.02	0
8	0.01	0.06	0.02	0	0	0.01	0.71	1.29	0	1.3	0.09	1.34
9	0.18	0.44	0	0	0.08	0.01	0.01	0	0	0	0.48	0.53
10	0.19	0	0	0	0.05	0	0	0	0	0.01	0.03	0
11	0.01	0	0	0	0.41	0	0	0.07	0	0.01	0	0
12	0.01	0.01	0	0.1	0	0	0	3.13	0.37	0	0	0
13	0	0	0.9	0.01	0.18	0	0	0.04	0.01	0	0.43	0
14	0.11	0	0.9	0	0	0.84	0.05	0.15	0.13	0.06	0	0
15	0	0.57	0	0	0	0.01	0.01	1.31	0	0	0	0
16	0	0	0	0	0	1	0.03	0	0	0.22	0	0
17	0.02	0	0	0.59	0	0.12	0.01	0.24	0	0	0	0
18	0	0	0.8	0.04	0	0	0	0	0.01	0	0	0
19	0	0	0.01	0.03	0	0	0	0	0	0	0.08	0
20	0.06	0	0	0	0	0.15	0	0	0	0.01	0	0.34
21	0.04	0	0.21	0.03	0	0.03	0	0	0	0	0	0
22	0.05	0	0.1	0.01	0.06	0	0	0	0	0	0.01	0
23	0.17	0	0	0.68	1.45	0.01	1.22	0.09	0	0.46	0	0
24	0	0	0	2.81	0.76	0.57	0	0.01	0	0.04	0	0.01
25	0	0	0	1.75	0.18	0.01	0	0	0	0	0	0
26	0.14	0	0	0.01	0	0	0	0.03	0.14	0	0	0
27	0	0	0	0	0	0	0.02	0	0	0	0	0.01
28	0	0	0.05	0	0	0	1.01	0.32	0.07	0	0	0
29	0	.00	0.01	0	0	0	0.03	0.23	0.01	1.24	0	0
30	0	.00	0	0	0.01	0	0	0.01	0	0	0	0
31	0	.00	1.59	.00	0	.00	0	0	.00	0	.00	0
Total	3.40	1.23	5.40	6.50	4.93	4.79	5.94	6.93	2.98	3.41	1.14	2.58
	2017	49.23	inches									

Wetland Area
Water Budget: Normal Year 2017
Runoff 2017

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	1.77	0.00	0.00	0.00
2	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.07	0.00	1.56	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.91	3.49	1.87	0.00	0.00	0.00	0.00	0.00
6	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.26	1.39	0.00	1.41	0.00	1.51
9	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.07
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.24	0.00	0.00	0.00	0.00
13	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
14	0.00	0.00	0.55	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.10	0.00	0.00	0.00	0.00	0.00	1.44	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.22	1.79	0.00	1.22	0.00	0.00	0.03	0.00	0.00
24	0.00	0.00	0.00	6.10	0.33	0.10	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.33	0.12	3.99	9.07	3.10	4.78	5.67	10.07	1.77	2.70	0.05	1.58
	2017	44.24	inches									

Inputs (in.)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Precip	3.40	1.23	5.40	6.50	4.93	4.79	5.94	6.93	2.98	3.41	1.14	2.58	
Runoff	1.33	0.12	3.99	9.07	3.10	4.78	5.67	10.07	1.77	2.70	0.05	1.58	
Infiltration/Seeps	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	
Outputs (in.)													
Exfiltration	-3.60	-3.60	-3.60	-3.60	-3.60	-3.60	-3.60	-3.60	-3.60	-3.60	-3.60	-3.60	
ET	-1.79	-2.71	-3.55	-5.14	-5.41	-5.99	-6.37	-5.06	-3.94	-3.00	-1.67	-1.44	
Depth (in.)	-21.60	-25.90	-23.00	-15.50	-15.82	-15.18	-12.88	-3.88	-6.01	-5.84	-9.26	-9.48	
Amount Overflow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Net Gain/Loss	0.00	-4.30	2.90	7.49	-0.32	0.64	2.30	9.00	-2.13	0.17	-3.42	-0.22	12.12
Monthly Water Level (in.)	-21.60	-25.90	-23.00	-15.50	-15.82	-15.18	-12.88	-3.88	-6.01	-5.84	-9.26	-9.48	


Wetland Water Budget: Normal Year 2017
Post-Restoration
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Precip
Runoff
Infiltration/Seeps
Exfiltration
ET
Amount Overflow
Monthly Water Level (in.)
Net Gain/Loss


Wetland Water Budget: Wet Year 2020
Post-Restoration
25.00
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Precip
Runoff
Infiltration/Seeps
Exfiltration
ET
Amount Overflow
Monthly Water Level (in.)
Net Gain/Loss

Appendix B

USACE Jurisdictional Determination

SAW-2021-00346

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. **SAW-2021-00346** County: **Edgecombe** U.S.G.S. Quad: **NC-Old Sparta**

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Requestor: **Eco Terra**
Mr. Norton Webster
Address: **1328 DeKalb Ave**
Atlanta, GA 30307
Telephone Number: **(919) 548-0949**
E-mail: **norton@ecoterra.com**

Size (acres) **21**
Nearest Waterway **Tar River**
USGS HUC **03020103**
Nearest Town **Tarboro**
River Basin **Pamlico**
Coordinates Latitude: **35.853300**
Longitude: **-77.549041**

Location description: **The review area for this Jurisdictional Determination is an approximately 20-acre area located at 529 Colonial Road in Tarboro, Edgecombe County, NC. The review area is located within a larger parcel identified by parcel # 4726-89-8091.**

Indicate Which of the Following Apply:

A. Preliminary Determination

☒ There appear to be **waters** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). The **waters** have been delineated, and the delineation has been verified by the Corps to be sufficiently accurate and reliable. The approximate boundaries of these waters are shown on the enclosed delineation map (***Figure A: Project Resources Map***) dated October 2021. Therefore this preliminary jurisdiction determination may be used in the permit evaluation process, including determining compensatory mitigation. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction.

☐ There appear to be **waters** on the above described project area/property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). However, since the **waters** have not been properly delineated, this preliminary jurisdiction determination may not be used in the permit evaluation process. Without a verified wetland delineation, this preliminary determination is merely an effective presumption of CWA/RHA jurisdiction over all of the **waters** at the project area, which is not sufficiently accurate and reliable to support an enforceable permit decision. We recommend that you have the **waters** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

B. Approved Determination

☐ There are Navigable Waters of the United States within the above described project area/property subject to the permit requirements of Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403) and Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ There are **waters**on the above described project area/property subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐We recommend you have the **waters** on your project area/property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

SAW-2021-00346

☐ The **waters** on your project area/property have been delineated and the delineation has been verified by the Corps. The approximate boundaries of these waters are shown on the enclosed delineation map dated . We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

☐ There are no waters of the U.S., to include wetlands, present on the above described project area/property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

☐ The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in **Morehead City, NC, at (252) 808-2808** to determine their requirements.

Placement of dredged or fill material within waters of the US, including wetlands, without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). Placement of dredged or fill material, construction or placement of structures, or work within navigable waters of the United States without a Department of the Army permit may constitute a violation of Sections 9 and/or 10 of the Rivers and Harbors Act (33 USC § 401 and/or 403). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Billy W. Standridge at (910) 251-4595 or Billy.w.standridge@usace.army.mil**.

C. Basis For Determination: Basis For Determination: See the preliminary jurisdictional determination form dated 12/10/2021.

D. Remarks: The waters within the review area are depicted on the attached *Figure A: Project Resource Map – Colonial Farms Wetland Mitigation Site* dated October 2021.

E. Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

F. Appeals Information (This information applies only to approved jurisdictional determinations as indicated in B. above)

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers
South Atlantic Division
Attn: Mr. Philip A. Shannin
Administrative Appeal Review Officer
60 Forsyth Street SW, Floor M9
Atlanta, Georgia 30303-8803
AND
PHILIP.A.SHANNIN@USACE.ARMY.MIL

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **Not applicable**.
It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: Billy W. Standridge

Date of JD: **12/10/2021** Expiration Date of JD: **Not applicable**

SAW-2021-00346

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Copy furnished:

Agent:	**Soil, Water, and Environment Group, PLLC**
	Mr. Scott J. Frederick
Address:	**3216 Byers Drive, Suite B**
	Raleigh, NC 27607
Telephone Number:	**(919) 831-1234**
E-mail:	**sjfrederick@swegroup.com**

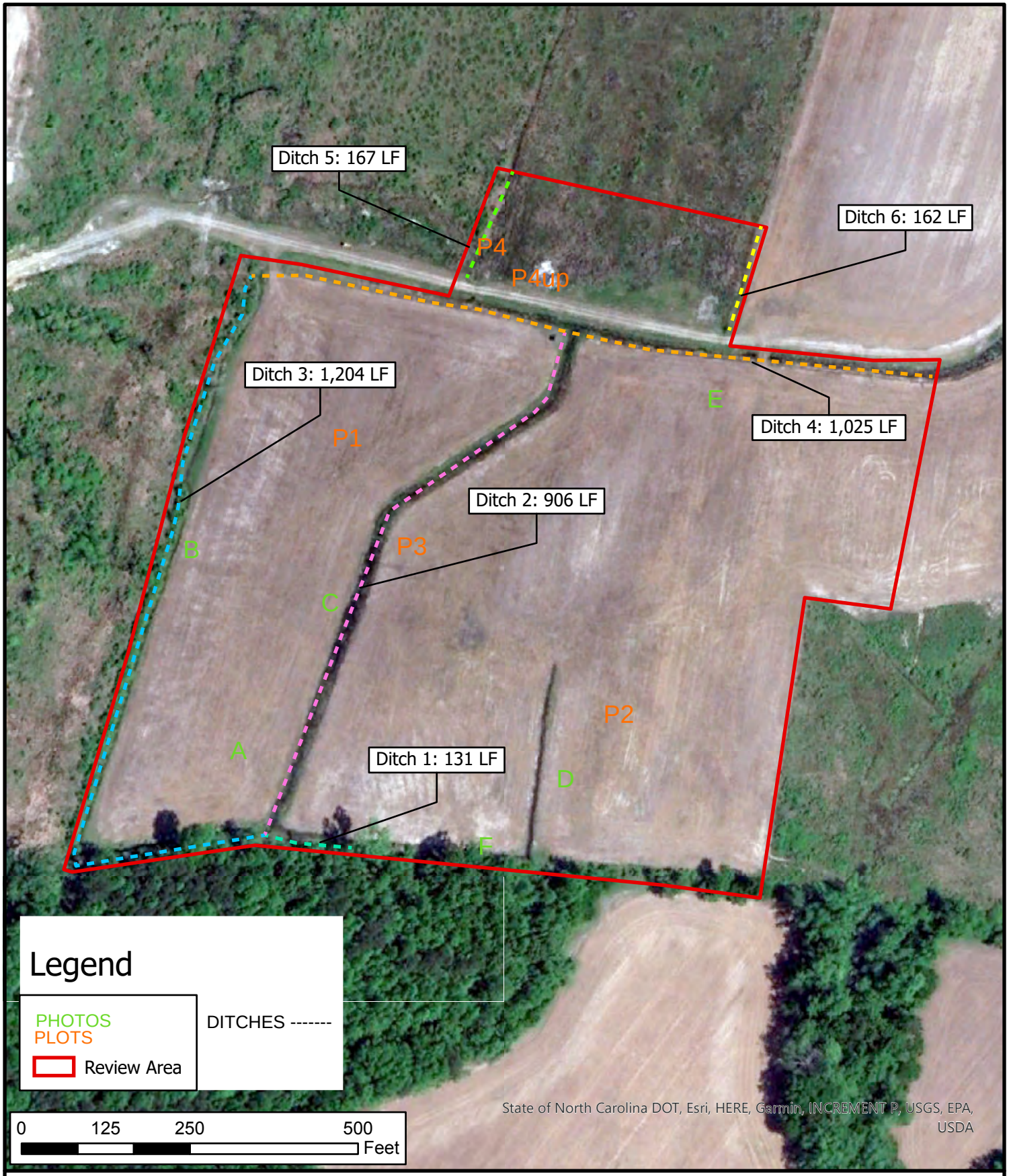


Figure A: **Project Resources Map**
Colonial Farms Wetland Mitigation Site
Tar-Pamlico 03020103
Edgecombe County, North Carolina
October 2021

2021 Google Earth Aerial Imagery

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: **Eco Terra**, **Mr. Norton Webster**	File Number: **SAW-2021-00346**	Date: **12/10/2021**

Attached is:		See Section below
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
☐	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
☐	PERMIT DENIAL	C
☐	APPROVED JURISDICTIONAL DETERMINATION	D
☒	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at or http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx or the Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.
SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT
REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)
ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.
POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact: **District Engineer, Wilmington Regulatory Division** **Attn: Billy W. Standridge** **Washington Regulatory Office** **U.S Army Corps of Engineers** **2407 West Fifth Street** **Washington, North Carolina 27889**	If you only have questions regarding the appeal process you may also contact: MR. PHILIP A. SHANNIN ADMINISTRATIVE APPEAL REVIEW OFFICER CESAD-PDS-O 60 FORSYTH STREET SOUTHWEST, FLOOR M9 ATLANTA, GEORGIA 30303-8803 PHONE: (404) 562-5136; FAX (404) 562-5138 EMAIL: PHILIP.A.SHANNIN@USACE.ARMY.MIL

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.		
_____ Signature of appellant or agent.	Date:	Telephone number:

For appeals on Initial Proffered Permits send this form to:

District Engineer, Wilmington Regulatory Division, **Attn: Billy W. Standridge, 69 Darlington Avenue, Wilmington, North Carolina 28403**

For Permit denials, Proffered Permits and Approved Jurisdictional Determinations send this form to:

Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Philip Shannin, Administrative Appeal Officer, CESAD-PDO, 60 Forsyth Street, Room 10M15, Atlanta, Georgia 30303-8801
Phone: (404) 562-5137

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 12/10/2021

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Eco Terra, Mr. Norton Webster, 1328 DeKalb Ave, Atlanta, GA 30307

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Wilmington District, NCDMS Maple Swamp Mitigation Site, SAW-2021-00346

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: The review area for this Jurisdictional Determination is an approximately 20-acre area located at 529 Colonial Road in Tarboro, Edgecombe County, NC. The review area is located within a larger parcel identified by parcel # 4726-89-8091.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: NC County: Edgecombe City: Tarboro
Center coordinates of site (lat/long in degree decimal format): Latitude: 35.853300 Longitude: -77.549041

Universal Transverse Mercator:

Name of nearest waterbody: Tar River

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐Office (Desk) Determination. Date:

☒Field Determination. Date(s):11/19/2021

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION

Site Number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resources in review area (acreage and linear feet, if applicable	Type of aquatic resources (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
SAW-2021-00346 Ditch 1	35.852586	-77.549039	130 lf (0.03 ac)	Non-wetland waters	Section 404
SAW-2021-00346 Ditch 2	35.853494	-77.549872	906 lf (0.2 ac)	Non-wetland waters	Section 404
SAW-2021-00346 Ditch 3	35.852706	-77.551178	1204 lf (0.39 ac)	Non-wetland waters	Section 404
SAW-2021-00346 Ditch 4	35.854522	-77.549533	1025 lf (0.23 ac)	Non-wetland waters	Section 404
SAW-2021-00346 Ditch 5	35.854614	-77.549344	167 lf (0.02 ac)	Non-wetland waters	Section 404
SAW-2021-00346 Ditch 6	35.854411	-77.548081	162 lf (0.02 ac)	Non-wetland waters	Section 404

1. The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre- construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply) Checked items are included in the administrative record and are appropriately cited:

☒Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:

PJD package submitted by SWE Group

Map: **Figure A: Project Resources Map**

☒Data sheets prepared/submitted by or on behalf of the PJD requestor. Datasheets:

☒Office concurs with data sheets/delineation report.

☐Office does not concur with data sheets/delineation report. Rationale:_____

☐Data sheets prepared by the Corps:_____

☐Corps navigable waters' study:

☐U.S. Geological Survey Hydrologic Atlas:

☐USGS NHD data:

☐USGS 8 and 12 digit HUC maps:

☒U.S. Geological Survey map(s). Cite scale & quad name: 2016 Topo Old Sparta

☒Natural Resources Conservation Service Soil Survey. Citation: **1979 NRCS Soil Survey Map Sheet #26**

☐National wetlands inventory map(s). Cite name:

☐State/local wetland inventory map(s):_____

☐FEMA/FIRM maps:

☐100-year Floodplain Elevation is:_____ (National Geodetic Vertical Datum of 1929)

☒Photographs: ☐ Aerial (Name & Date):

or ☒ Other (Name & Date): **Site photos October 2020, Feb 2021, & June 2021**

☐Previous determination(s). File no. and date of response letter:_____

☒Other information (please specify): **LiDAR**

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Billy W. Stanbridge

Signature and date of Regulatory staff member completing PJD
12/10/2021

Scott J. Frederick

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1] 12/9/2021

[1] Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Appendix C

Categorical Exclusion and Regulatory Correspondence

Appendix A

Categorical Exclusion Form for Division of Mitigation Services Projects
Version 2

Note: Only Appendix A should to be submitted (along with any supporting documentation) as the environmental document.

Part 1: General Project Information	
Project Name:	Colonial Farms Wetland Mitigation Site - Option 1
County Name:	Edgecombe
DMS Number:	100191
Project Sponsor:	Eco Terra Partners
Project Contact Name:	Ted Griffith
Project Contact Address:	1328 Dekalb Ave NE, Atlanta, GA 30307
Project Contact E-mail:	Ted@ecoterra.com
DMS Project Manager:	Jeremiah Dow

Project Description

This project seeks to provide non-riparian wetland mitigation credits for unavoidable impacts within the Tar-Pamlico river basin.

For Official Use Only

Reviewed By:

05/17/2021 — Jeremiah Dow

Date — **DMS Project Manager**

Conditional Approved By:

Date — **For Division Administrator FHWA**

☐ **Check this box if there are outstanding issues**

Final Approval By:

5-13-21 — Donald W. Brew

Date — **For Division Administrator FHWA**

Part 2: All Projects Regulation/Question	Response
Coastal Zone Management Act (CZMA)	
1. Is the project located in a CAMA county?	☐ Yes ☒ No
2. Does the project involve ground-disturbing activities within a CAMA Area of Environmental Concern (AEC)?	☐ Yes ☐ No ☒ N/A
3. Has a CAMA permit been secured?	☐ Yes ☐ No ☒ N/A
4. Has NCDCM agreed that the project is consistent with the NC Coastal Management Program?	☐ Yes ☐ No ☒ N/A
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)	
1. Is this a "full-delivery" project?	☒ Yes ☐ No
2. Has the zoning/land use of the subject property and adjacent properties ever been designated as commercial or industrial?	☐ Yes ☒ No ☐ N/A
3. As a result of a limited Phase I Site Assessment, are there known or potential hazardous waste sites within or adjacent to the project area?	☐ Yes ☒ No ☐ N/A
4. As a result of a Phase I Site Assessment, are there known or potential hazardous waste sites within or adjacent to the project area?	☐ Yes ☐ No ☒ N/A
5. As a result of a Phase II Site Assessment, are there known or potential hazardous waste sites within the project area?	☐ Yes ☐ No ☒ N/A
6. Is there an approved hazardous mitigation plan?	☐ Yes ☐ No ☒ N/A
National Historic Preservation Act (Section 106)	
1. Are there properties listed on, or eligible for listing on, the National Register of Historic Places in the project area?	☐ Yes ☒ No
2. Does the project affect such properties and does the SHPO/THPO concur?	☐ Yes ☐ No ☒ N/A
3. If the effects are adverse, have they been resolved?	☐ Yes ☐ No ☒ N/A
Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act)	
1. Is this a "full-delivery" project?	☒ Yes ☐ No
2. Does the project require the acquisition of real estate?	☒ Yes ☐ No ☐ N/A
3. Was the property acquisition completed prior to the intent to use federal funds?	☐ Yes ☒ No ☐ N/A
4. Has the owner of the property been informed: * prior to making an offer that the agency does not have condemnation authority; and * what the fair market value is believed to be?	☒ Yes ☐ No ☐ N/A

Part 3: Ground-Disturbing Activities Regulation/Question	Response
American Indian Religious Freedom Act (AIRFA)	
1. Is the project located in a county claimed as "territory" by the Eastern Band of Cherokee Indians?	☐ Yes ☒ No
2. Is the site of religious importance to American Indians?	☐ Yes ☐ No ☒ N/A
3. Is the project listed on, or eligible for listing on, the National Register of Historic Places?	☐ Yes ☐ No ☒ N/A
4. Have the effects of the project on this site been considered?	☐ Yes ☐ No ☒ N/A
Antiquities Act (AA)	
1. Is the project located on Federal lands?	☐ Yes ☒ No
2. Will there be loss or destruction of historic or prehistoric ruins, monuments or objects of antiquity?	☐ Yes ☐ No ☒ N/A
3. Will a permit from the appropriate Federal agency be required?	☐ Yes ☐ No ☒ N/A
4. Has a permit been obtained?	☐ Yes ☐ No ☒ N/A
Archaeological Resources Protection Act (ARPA)	
1. Is the project located on federal or Indian lands (reservation)?	☐ Yes ☒ No
2. Will there be a loss or destruction of archaeological resources?	☐ Yes ☐ No ☒ N/A
3. Will a permit from the appropriate Federal agency be required?	☐ Yes ☐ No ☒ N/A
4. Has a permit been obtained?	☐ Yes ☐ No ☒ N/A
Endangered Species Act (ESA)	
1. Are federal Threatened and Endangered species and/or Designated Critical Habitat listed for the county?	☒ Yes ☐ No
2. Is Designated Critical Habitat or suitable habitat present for listed species?	☐ Yes ☒ No ☐ N/A
3. Are T&E species present or is the project being conducted in Designated Critical Habitat?	☐ Yes ☐ No ☒ N/A
4. Is the project "likely to adversely affect" the specie and/or "likely to adversely modify" Designated Critical Habitat?	☐ Yes ☐ No ☒ N/A
5. Does the USFWS/NOAA-Fisheries concur in the effects determination?	☐ Yes ☐ No ☒ N/A
6. Has the USFWS/NOAA-Fisheries rendered a "jeopardy" determination?	☐ Yes ☐ No ☒ N/A

Executive Order 13007 (Indian Sacred Sites)	
1. Is the project located on Federal lands that are within a county claimed as "territory" by the EBCI?	☐ Yes ☒ No
2. Has the EBCI indicated that Indian sacred sites may be impacted by the proposed project?	☐ Yes ☐ No ☒ N/A
3. Have accommodations been made for access to and ceremonial use of Indian sacred sites?	☐ Yes ☐ No ☒ N/A
Farmland Protection Policy Act (FPPA)	
1. Will real estate be acquired?	☒ Yes ☐ No
2. Has NRCS determined that the project contains prime, unique, statewide or locally important farmland?	☒ Yes ☐ No ☐ N/A
3. Has the completed Form AD-1006 been submitted to NRCS?	☒ Yes ☐ No ☐ N/A
Fish and Wildlife Coordination Act (FWCA)	
1. Will the project impound, divert, channel deepen, or otherwise control/modify any water body?	☐ Yes ☒ No
2. Have the USFWS and the NCWRC been consulted?	☐ Yes ☐ No ☒ N/A
Land and Water Conservation Fund Act (Section 6(f))	
1. Will the project require the conversion of such property to a use other than public, outdoor recreation?	☐ Yes ☒ No
2. Has the NPS approved of the conversion?	☐ Yes ☐ No ☒ N/A
Magnuson-Stevens Fishery Conservation and Management Act (Essential Fish Habitat)	
1. Is the project located in an estuarine system?	☐ Yes ☒ No
2. Is suitable habitat present for EFH-protected species?	☐ Yes ☐ No ☒ N/A
3. Is sufficient design information available to make a determination of the effect of the project on EFH?	☐ Yes ☐ No ☒ N/A
4. Will the project adversely affect EFH?	☐ Yes ☐ No ☒ N/A
5. Has consultation with NOAA-Fisheries occurred?	☐ Yes ☐ No ☒ N/A
Migratory Bird Treaty Act (MBTA)	
1. Does the USFWS have any recommendations with the project relative to the MBTA?	☐ Yes ☒ No
2. Have the USFWS recommendations been incorporated?	☐ Yes ☐ No ☒ N/A
Wilderness Act	
1. Is the project in a Wilderness area?	☐ Yes ☒ No
2. Has a special use permit and/or easement been obtained from the maintaining federal agency?	☐ Yes ☐ No ☒ N/A

National Historic Preservation Act (Section 106) NC SHPO Coordination

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper | Secretary D. Reid Wilson

March 19, 2021

Jamey O'Shaughnessey
Eco Terra Management, LLC
1117 Peachtree Walk Northeast, Suite 126
Atlanta, GA 30309

jamey@ecoterra.com

Re: Colonial Farms mitigation site, 35°51'13.56"N 77°32'57.83"W, Colonial Road, Tarboro, Edgecombe County, ER 21-0576

Dear Mr. O'Shaughnessey:

Thank you for your letter of February 12, 2021, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

Endangered Species Act (ESA)

Species Conclusions Table

Project Name: Colonial Farms Wetland Mitigation Site

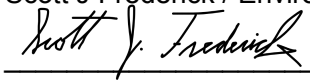
Date: 3/29/2021

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Notes / Documentation
Neuse River Waterdog *Necturus lewisi*	No suitable habitat	may affect, not likely to adversely affect	No gravel, bedrock, cover, and stream flow does not support suitable habitat for the Neuse-River Waterdog. We expect the restoration of wetlands to have a beneficial effect on water quality of the Tar River and a beneficial effect for this species. We will be following stringent sentiment control practices to ensure that our project does not affect any downstream habitat that may be suitable for this species.
Carolina Madtom *Noturus furiosus*	No suitable habitat	may affect, not likely to adversely affect	Suitable substrate not present, stream flow not suitable, water quality not supportive. We expect the restoration of wetlands to have a beneficial effect on water quality of the Tar River and a beneficial effect for this species. We will be following stringent sentiment control practices to ensure that our project does not affect any downstream habitat that may be suitable for this species.
Atlantic Pigtoe *Fusconaia masoni*	No suitable habitat	No effect	Suitable substrate not present, stream flow not suitable, and water quality not supportive. We will be following stringent sentiment control practices to ensure that our project does not affect any downstream habitat that may be suitable for this species.
Tar River Spinymussel *Elliptio steinstansana*	No suitable habitat	may affect, not likely to adversely affect	Silt-free unconsolidated beds of coarse sand and gravel in relatively fast-flowing, well oxygenated stream reach not present. We expect the restoration of wetlands to have a beneficial effect on water quality of the Tar River and a beneficial effect for this species. We will be following stringent sentiment control practices to ensure that our project does

			not affect any downstream habitat that may be suitable for this species.
Yellow Lance *Elliptio lanceolata*	No suitable habitat	No effect	Suitable substrate not present, stream flow not suitable, and water quality not supportive. We will be following stringent sentiment control practices to ensure that our project does not affect any downstream habitat that may be suitable for this species.
Critical Habitat	No critical habitat present	No effect	n/a
Bald Eagle	Unlikely to disturb nesting bald eagles	No Eagle Act Permit Required	No nesting trees have been noted. Furthermore, no trees will be impacted by the project.
Northern Long-eard Bat	No suitable habitat	No effect	No tree cutting or tree removal will occur

Acknowledgement: I agree that the above information about my proposed project is true. I used all of the provided resources to make an informed decision about impacts in the immediate and surrounding areas.

Scott J Frederick / Environmental Scientist 3/30/2021



Signature /Title **Date**

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
P.O. Box 33726
Raleigh, NC 27636-3726

Date:_____

Self-Certification Letter

Project Name Colonial Farms Wetland Mitigation Site

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Raleigh Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. Based on your analysis, mark all the determinations that apply:

☐ "no effect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or

☐ "may affect, not likely to adversely affect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or

☐ "may affect, likely to adversely affect" determination for the Northern long-eared bat (Myotis septentrionalis) and relying on the findings of the January 5, 2016, Programmatic Biological Opinion for the Final 4(d) Rule on the Northern long-eared bat;

☑ "no Eagle Act permit required" determinations for eagles.

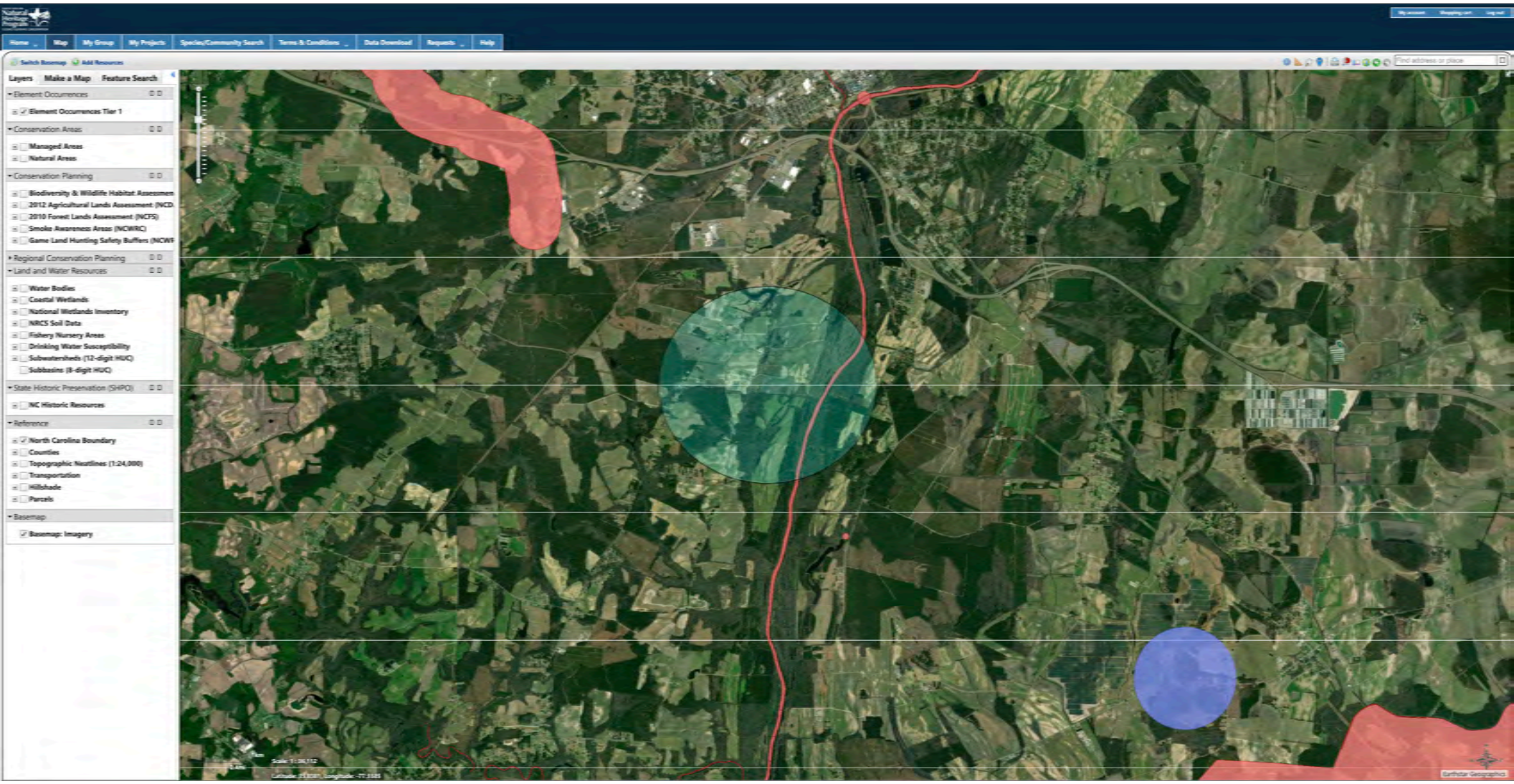
We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the "no effect" or "not likely to adversely affect" determinations for proposed and listed species and proposed and designated critical habitat; the "may affect" determination for Northern long-eared bat; and/or the "no Eagle Act permit required" determinations for eagles. Additional coordination with this office is not needed. Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species. Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for 1 year. Information about the online project review process including instructions, species information, and other information regarding project reviews within North Carolina is available at our website http://www.fws.gov/raleigh/pp.html. If you have any questions, you can write to us at Raleigh@fws.gov or please contact Leigh Mann of this office at 919-856-4520, ext. 10.

Sincerely,

/s/Pete Benjamin

Pete Benjamin
Field Supervisor
Raleigh Ecological Services

Enclosures - project review package


Home
Map
My Group
My Projects
Species/Community Search
Terms & Conditions
Data Download
Requests
Help
Switch Basemap
Add Resources
Layers
Make a Map
Feature Search
Element Occurrences
Element Occurrences Tier 1
Conservation Areas
Managed Areas
Natural Areas
Conservation Planning
Biodiversity & Wildlife Habitat Assessment
2012 Agricultural Lands Assessment (NCD
2010 Forest Lands Assessment (NCFS)
Smoke Awareness Areas (NCWRC)
Game Land Hunting Safety Buffers (NCWF
Regional Conservation Planning
Land and Water Resources
Water Bodies
Coastal Wetlands
National Wetlands Inventory
NRCS Soil Data
Fishery Nursery Areas
Drinking Water Susceptibility
Subwatersheds (12-digit HUC)
Subbasins (8-digit HUC)
State Historic Preservation (SHPO)
NC Historic Resources
Reference
North Carolina Boundary
Counties
Topographic Neatlines (1:24,000)
Transportation
Hillshade
Parcels
Basemap
Basemap: Imagery
Find address or place
Earthstar Geographics

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Ecological Services Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Phone: (919) 856-4520 Fax: (919) 856-4556

In Reply Refer To: March 29, 2021
Consultation Code: 04EN2000-2021-SLI-0919
Event Code: 04EN2000-2021-E-02017
Project Name: Colonial Farms Wetland Mitigation Site

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The species list generated pursuant to the information you provided identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Section 7 of the Act requires that all federal agencies (or their designated non-federal representative), in consultation with the Service, insure that any action federally authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally-listed endangered or threatened species. A biological assessment or evaluation may be prepared to fulfill that requirement and in determining whether additional consultation with the Service is necessary. In addition to the federally-protected species list, information on the species' life histories and habitats and information on completing a biological assessment or

evaluation and can be found on our web page at http://www.fws.gov/raleigh. Please check the web site often for updated information or changes

If your project contains suitable habitat for any of the federally-listed species known to be present within the county where your project occurs, the proposed action has the potential to adversely affect those species. As such, we recommend that surveys be conducted to determine the species' presence or absence within the project area. The use of North Carolina Natural Heritage program data should not be substituted for actual field surveys.

If you determine that the proposed action may affect (i.e., likely to adversely affect or not likely to adversely affect) a federally-protected species, you should notify this office with your determination, the results of your surveys, survey methodologies, and an analysis of the effects of the action on listed species, including consideration of direct, indirect, and cumulative effects, before conducting any activities that might affect the species. If you determine that the proposed action will have no effect (i.e., no beneficial or adverse, direct or indirect effect) on federally listed species, then you are not required to contact our office for concurrence (unless an Environmental Impact Statement is prepared). However, you should maintain a complete record of the assessment, including steps leading to your determination of effect, the qualified personnel conducting the assessment, habitat conditions, site photographs, and any other related articles.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

Not all Threatened and Endangered Species that occur in North Carolina are subject to section 7 consultation with the U.S Fish and Wildlife Service. Atlantic and shortnose sturgeon, sea turtles,when in the water, and certain marine mammals are under purview of the National Marine Fisheries Service. If your project occurs in marine, estuarine, or coastal river systems you should also contact the National Marine Fisheries Service, http://www.nmfs.noaa.gov/

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office. If you have any questions or comments, please contact John Ellis of this office at john_ellis@fws.gov.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Raleigh Ecological Services Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
(919) 856-4520

Project Summary

Consultation Code: 04EN2000-2021-SLI-0919
Event Code: 04EN2000-2021-E-02017
Project Name: Colonial Farms Wetland Mitigation Site
Project Type: LAND - RESTORATION / ENHANCEMENT
Project Description: Colonial Farms Wetland Mitigation Site is a riparian buffer restoration site in which ditched and drained cropland is being converted to a riparian wetland through the plugging of ditches and planting of native hardwood trees.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.8533972,-77.54913206240602,14z

Counties: Edgecombe County, North Carolina

Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Amphibians

NAME	STATUS
Neuse River Waterdog *Necturus lewisi* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6772	Proposed Threatened

Fishes

NAME	STATUS
Carolina Madtom *Noturus furiosus* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/528	Proposed Endangered

Clams

NAME	STATUS
Atlantic Pigtoe *Fusconaia masoni* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5164	Proposed Threatened
Tar River Spinymussel *Elliptio steinstansana* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1392	Endangered
Yellow Lance *Elliptio lanceolata* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4511	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Fw: DUE DATE: APRIL 29, 2021 Fw: [EXTERNAL] Online Project Review Request Letter | Colonial Farms Wetland Mitigation Site

Inbox ×

Matthews, Kathryn H
to me, Leigh, John

1:38 PM (1 hour ago)

Hi Jamey,

We received this one also as a PN from the Corps. I will provide a written response to the Corps PN. I just wanted to let you know that I would recommend a determination of "may affect, not likely to adversely affect" rather than "no effect" for this one. The reason is because the project is located within the 500-year floodplain of the Tar, and also just a few hundred feet from the 100-year floodplain. There are records of Neuse River waterdog, Tar River spinymussel, and Carolina madtom in the Tar at this location.

The other point is that we expect restoration of wetlands to have a beneficial effect on the water quality of the Tar River and a beneficial effect for these species. No effect is literally, no effect at all. You don't need to revise the package for this one, but I just wanted to let you know my thoughts for future projects.

Also, I was wondering why you are unable to expand the columns and rows in the Conclusions Table to include all the info you want. It is a template, but you are welcome to make the rows larger to incorporate all the info you'd like to.

Please note that I am teleworking almost exclusively. Email is the best way to reach me. Thanks,

Kathy Matthews
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
551-F Pylon Drive
Raleigh, NC 27606
919-856-4520, x. 27

From: Mann, Leigh <leigh_mann@fws.gov> on behalf of Raleigh, FW4 <raleigh@fws.gov>
Sent: Monday, April 12, 2021 11:06 AM
To: Matthews, Kathryn H <kathryn_matthews@fws.gov>
Subject: DUE DATE: APRIL 29, 2021 Fw: [EXTERNAL] Online Project Review Request Letter | Colonial Farms Wetland Mitigation Site

Uniform Relocation Assistance and Real Property Acquisition Polices Act (Uniform Act)

March 8, 2021

Quincy Farms Family Limited Partnership
3016 Harts Mill Run Rd.
Tarboro, NC 27886

Re: Colonial Farms Wetland Mitigation Site: Division of Mitigation Services Riparian Wetland Project in Edgecombe County

Dear Quincy Farms Family Limited Partnership,

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Buyer herby notifies Seller that: (i) Buyer believes that the fair market value of the Mitigation Values of the Mitigation Property is an amount equal to the Purchase Price; and (ii) Buyer does not have the power of eminent domain.

The purpose of this letter is to notify you that Eco Terra Partners, LLC and The State of North Carolina, in offering to purchase your property in Edgecombe county, North Carolina, does not have the power to acquire it by eminent domain. Also, Eco Terra Partners, LLC's offer to purchase your property is based on what we believe to be its fair market value.

Sincerely,

Jamey O'Shaughnessey

Assistant Project Manager
Jamey@ecoterra.com
W: 984-222-5116

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Colonial Farms Wetland Mitigation Site
Colonial Farms Wetland Mitigation Site
Macclesfield, NC 27852

Inquiry Number: 6396141.10s
March 08, 2021

The EDR Radius Map™ Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

COLONIAL FARMS WETLAND MITIGATION SITE
MACCLESFIELD, NC 27852

COORDINATES

Latitude (North):	35.8533190 - 35° 51' 11.94''
Longitude (West):	77.5494470 - 77° 32' 58.00''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	269770.2
UTM Y (Meters):	3970480.8
Elevation:	43 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5944960 OLD SPARTA, NC
Version Date:	2013

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20141006, 20140521
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
COLONIAL FARMS WETLAND MITIGATION SITE
MACCLESFIELD, NC 27852

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION

NO MAPPED SITES FOUND

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROLS..... Institutional Controls Sites List

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

NC HSDS..... Hazardous Substance Disposal Site

State- and tribal - equivalent CERCLIS

SHWS..... Inactive Hazardous Sites Inventory

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... List of Solid Waste Facilities
DEBRIS..... Solid Waste Active Disaster Debris Sites Listing
OLI..... Old Landfill Inventory
LCID..... Land-Clearing and Inert Debris (LCID) Landfill Notifications

State and tribal leaking storage tank lists

LUST..... Regional UST Database
LAST..... Leaking Aboveground Storage Tanks
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
LUST TRUST..... State Trust Fund Database

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing
UST..... Petroleum Underground Storage Tank Database
AST..... AST Database
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL..... No Further Action Sites With Land Use Restrictions Monitoring

State and tribal voluntary cleanup sites

VCP..... Responsible Party Voluntary Action Sites
INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Brownfields Projects Inventory

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY	Recycling Center Listing
HIST LF	Solid Waste Facility Listing
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS	Spills Incident Listing
IMD	Incident Management Database
SPILLS 90	SPILLS 90 data from FirstSearch
SPILLS 80	SPILLS 80 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees

INDIAN RESERV Indian Reservations
FUSRAP Formerly Utilized Sites Remedial Action Program
UMTRA Uranium Mill Tailings Sites
LEAD SMELTERS Lead Smelter Sites
US AIRS Aerometric Information Retrieval System Facility Subsystem
US MINES Mines Master Index File
ABANDONED MINES Abandoned Mines
FINDS Facility Index System/Facility Registry System
UXO Unexploded Ordnance Sites
ECHO Enforcement & Compliance History Information
DOCKET HWC Hazardous Waste Compliance Docket Listing
FUELS PROGRAM EPA Fuels Program Registered Listing
AIRS Air Quality Permit Listing
ASBESTOS ASBESTOS
COAL ASH Coal Ash Disposal Sites
DRYCLEANERS Drycleaning Sites
Financial Assurance Financial Assurance Information Listing
NPDES NPDES Facility Location Listing
UIC Underground Injection Wells Listing
AOP Animal Operation Permits Listing
SEPT HAULERS Permitted Septage Haulers Listing
CCB Coal Ash Structural Fills (CCB) Listing
MINES MRDS Mineral Resources Data System
PCSRP Petroleum-Contaminated Soil Remediation Permits

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS Recovered Government Archive State Hazardous Waste Facilities List
RGA LF Recovered Government Archive Solid Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

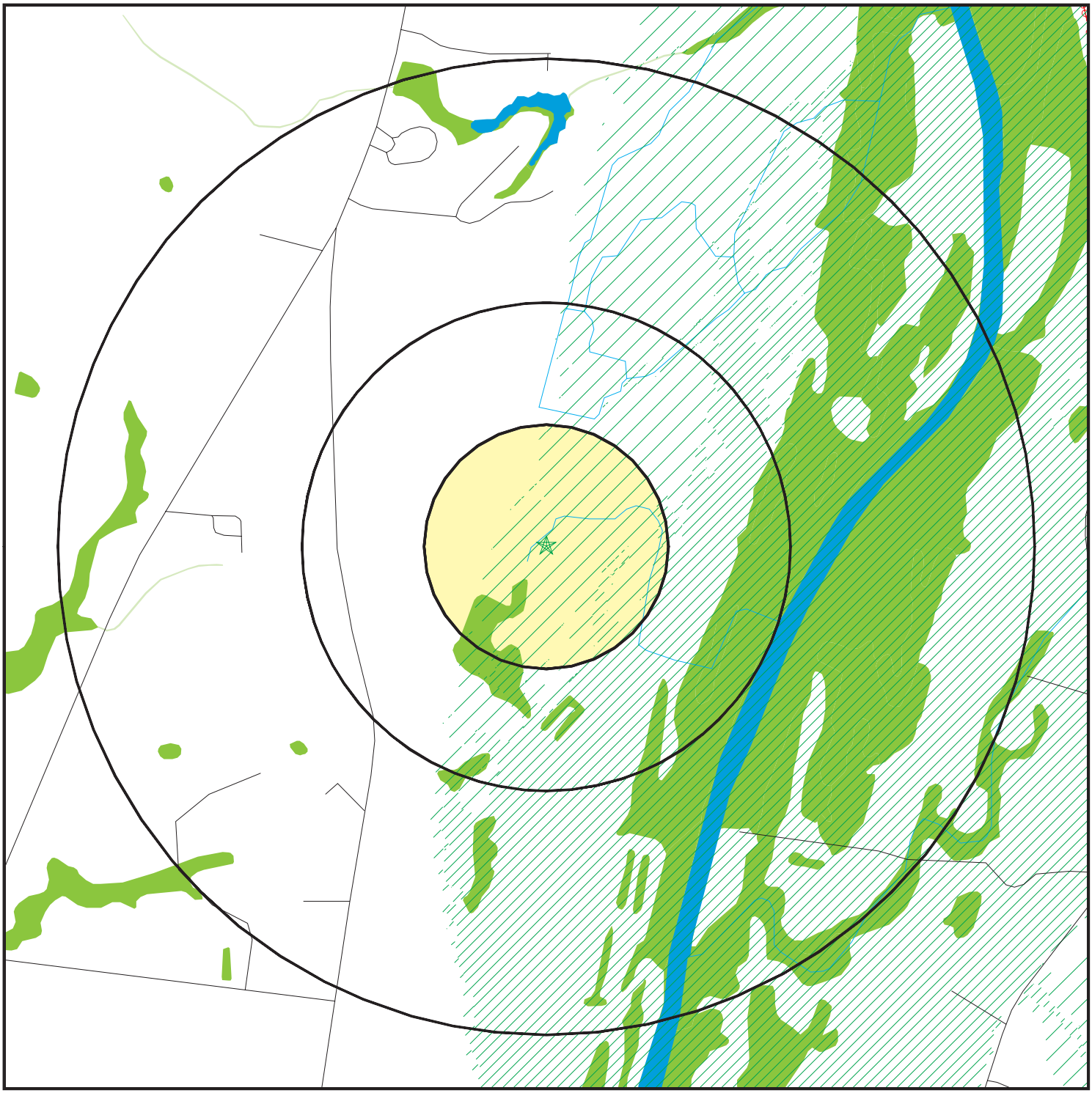
Surrounding sites were not identified.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 6396141.10S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites

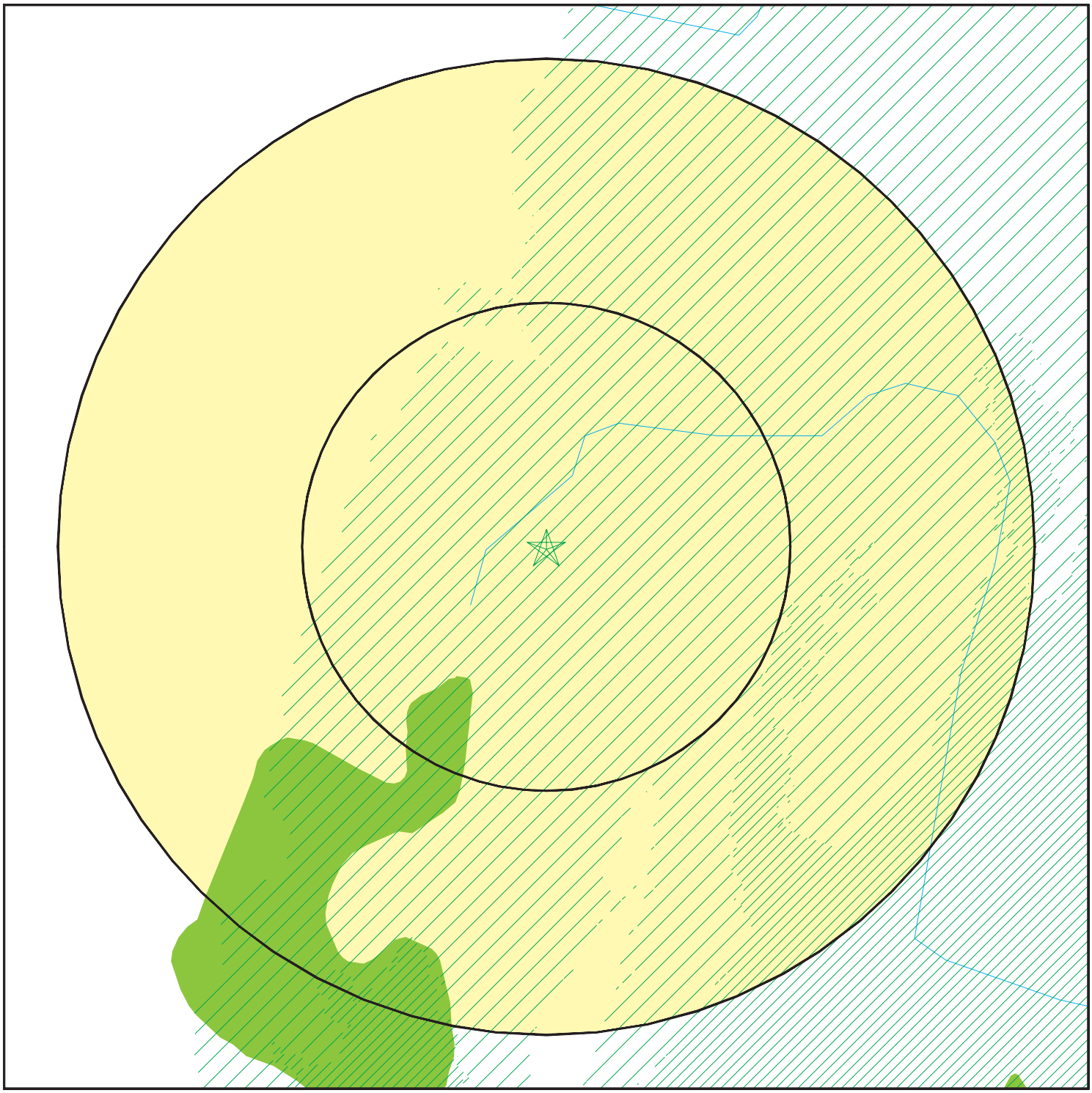
0 1/4 1/2 1 Miles

- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Colonial Farms Wetland Mitigation Site	CLIENT:	Eco Terra Management, LLC
ADDRESS:	Colonial Farms Wetland Mitigation Site Macclesfield NC 27852	CONTACT:	Jamey Oshaughnessey
LAT/LONG:	35.853319 / 77.549447	INQUIRY #:	6396141.10s
		DATE:	March 08, 2021 4:24 pm

DETAIL MAP - 6396141.10S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Hazardous Substance Disposal Sites

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Colonial Farms Wetland Mitigation Site	CLIENT: Eco Terra Management, LLC
ADDRESS: Colonial Farms Wetland Mitigation Site Macclesfield NC 27852	CONTACT: Jamey Oshaughnessey INQUIRY #: 6396141.10s
LAT/LONG: 35.853319 / 77.549447	DATE: March 08, 2021 4:25 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
NC HSDS	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
DEBRIS	0.500		0	0	0	NR	NR	0
OLI	0.500		0	0	0	NR	NR	0
LCID	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0
LAST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
LUST TRUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
HIST LF	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
IMD	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SPILLS 90	TP		NR	NR	NR	NR	NR	0
SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
ASBESTOS	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
AOP	TP		NR	NR	NR	NR	NR	0
SEPT HAULERS	TP		NR	NR	NR	NR	NR	0
CCB	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MINES MRDS	TP		NR	NR	NR	NR	NR	0
PCSRP	0.500		0	0	0	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	0	0	0	0	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number

NO SITES FOUND

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

Farmland Protection Policy Act (FPPA)

USDA
United States Department of Agriculture

Natural Resources
Conservation Service

North Carolina
State Office

4407 Bland Rd.
Suite 117
Raleigh
North Carolina 27609
Voice (704) 680-3541
Fax (844) 325-2156

March 10, 2021

Jamey O'Shaughnessey
Environmental Associate
Eco Terra Management LLC
1117 Peachtree Walk NE; Suite 126
Atlanta, GA 30309

Dear Jamey O'Shaughnessey;

The following information is in response to your request soliciting comments regarding the Proposed Colonial Farms Mitigation Site in Edgecombe County, NC.

Projects are subject to Farmland Protection Policy Act (FPPA) requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.

For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land. Farmland means prime or unique farmlands as defined in section 1540(c)(1) of the Act or farmland that is determined by the appropriate state or unit of local government agency or agencies with concurrence of the Secretary to be farmland of statewide of local importance.

"Farmland" does not include land already in or committed to urban development or water storage. Farmland ``already in'' urban development or water storage includes all such land with a density of 30 structures per 40-acre area. Farmland already in urban development also includes lands identified as ``urbanized area'' (UA) on the Census Bureau Map, or as urban area mapped with a ``tint overprint'' on the USGS topographical maps, or as ``urban-built-up'' on the USDA Important Farmland Maps. See over for more information.

The area in question includes land classified as Prime Farmland. In accordance with the Code of Federal Regulations 7CFR 658, Farmland Protection Policy Act, the AD-1006 was initiated. NRCS Completed Parts II, IV, V of the form and returned for completion by the requesting agency.

If you have any questions, please feel free to call me at (704) 680-3541 office or (704) 754-6734 cell.

Sincerely,

Kristin L May

Kristin L May
Acting State Soil Scientist

cc:
Carl Kirby, acting supervisory soil conservationist, NRCS, Snow Hill, NC

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request 02/21/2021	
Name of Project Colonial Farms Mitigaiton Site		Federal Agency Involved NC DOT / FHWA	
Proposed Land Use Wetland Restoration		County and State Edgecombe County North Carolina	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS 2/21/2021	Person Completing Form: Kristin Mav
Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☑ NO ☐	Acres Irrigated None	Average Farm Size 598
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: 89.45 % 290157 ac	Amount of Farmland As Defined in FPPA Acres: 89.45 % 290157 ac	
Name of Land Evaluation System Used Edgecombe Co. LESA	Name of State or Local Site Assessment System NA	Date Land Evaluation Returned by NRCS 3/10/2012	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	21			
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	21.4			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	3.1			
B. Total Acres Statewide Important or Local Important Farmland	0			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	29.7			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	83			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	15			
2. Perimeter In Non-urban Use	(10)	10			
3. Percent Of Site Being Farmed	(20)	20			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	15			
6. Distance To Urban Support Services	(15)	10			
7. Size Of Present Farm Unit Compared To Average	(10)	7			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	5			
10. On-Farm Investments	(20)	5			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	87	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	83	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	87	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	170	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES ☐ NO ☐

Reason For Selection:

Name of Federal agency representative completing this form:	Date:

(See Instructions on reverse side) **Form AD-1006 (03-02)**

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, http://fppa.nrcs.usda.gov/lesa/.

Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s)of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map**,** or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)

Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.

Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.

Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.

Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.

2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \text{ X } 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

Appendix D

NCLSS Soil Report and Borings

Soil, Water, & Environment Group, PLLC
3216 Byers Drive, Suite B
Raleigh, NC 27607
Ph# (919) 831-1234 • Fax# (919) 899-9100 • http://www.swegrp.com

October 23, 2020

Mr. Ted Griffith
Eco-Terra Management, LLC
117 Peachtree Walk NE
STE 126
Atlanta, GA 30309

Re: Soil Analysis and Evaluation for the Colonial Farms Wetland Restoration Mitigation Site, Edgecombe County, NC

Dear Mr. Griffith,

Soil, Water, and Environment Group, PLLC was requested by Eco-Terra to provide a hydric soil determination at a proposed wetland mitigation site south of the City of Tarboro and east of Colonia Road in Edgecombe County, North Carolina (Figure 1). The soil investigation was conducted in accordance with the RFP #16-20200207 requesting riparian wetland mitigation credits for the Tar-Pamlico River Basin (HUC 03020102) from the NC Department of Environment and Natural Resources, Division of Mitigation Services. The site is located in LRR P, MLRA 133A within the Upper Coastal Plain physiographic region. Currently the site investigated is in soybean row crops.

Prior to going to the site, background data, maps, and online resources were researched to familiarize staff with the area, regional soils, as well as the landscape setting of the project. The following is a description of the data set included with this correspondence related to the Colonial Farms Wetland Mitigation Site:

Hydric Soil Investigation

On October 12 and 20, 2020, SWE Group personnel investigated the Colonial Farms Wetland Mitigation Site to confirm published NRCS soil survey mapping data, record detailed soil descriptions for selected areas representing different landscape positions across the site, and to determine the extent of hydric soils for the purpose of wetland restoration site criteria. The proposed wetland restoration is located in a prior converted depressional riverine swamp and bottomland hardwood landscape position site with substantial site drainage required for continued row crop production. A series of ditches effectively drain the area centrally and on the perimeter.

A series of approximately 25 hand augerings was accomplished across approximately 22 acres of the proposed wetland restoration site at maximum depths of approximately 24-30 in. Detailed soil descriptions including depth of horizon, color, texture, structure, and consistence were recorded (Figure 2: Soil Boring Map).

The site-specific soil descriptions included in this report are most similar to Portsmouth fine sandy loam series soils as described by the Edgecombe County Soil Survey (NRCS, 1979 and Web Soil Survey, 2020) with variations in texture, color, and thickness. The site has been in agriculture and cleared for over 50 years and hydric soils have been modified and effectively drained. Landscape positions include flats and depressions on the geomorphic floodplain of the Tar River.

Hydric soils found on the site occur generally in the same depressional landscape position that historically were part of a floodplain wetland complex. Slopes on site are flat to nearly flat centrally and generally sloping from northwest to southeast draining the site and sideslopes at the northwest into a main ditch exiting the site. Another shorter ditch segment drains a depressional area that is situated near a high levee soil deposit found and determined non-hydric. The seasonal high water table on undrained site soils is found between 0-12 inches. Due to active and on-going drainage, the observed water table ranged from 16-22 inches in the later growing season.

NRCS Mapped Soils

Portsmouth (Pu) fine sandy loam soils are very poorly drained soils found along a variety of landscape positions including stream/marine terraces, depressions, interstream divides, valleys, and backswamps. These soils formed in marine sediments, have moderate permeability in the solum and rapid to very rapid in underlying horizons. The water table is less than 12 inches for six to seven months out of the year. Slopes are generally 0-2%. An image of the printed (NRCS) 1979 soil survey map of the Project is shown in Figure 3. Geologically, the Project Site is located within the Coastal Plain physiographic province and Southeastern Plains ecoregion. Coastal Plain riparian wetland system hydrology and hydric soil characteristics are typically driven by precipitation, lateral flow from less permeable soil horizons, and overbank flooding within the geomorphic floodplain. Site specific hydrology and hydric soil formation is driven primarily by lateral flow from the escarpment of the Tar River as well as back flows and overbank flooding during major storm events.

Portsmouth soils are classified as hydric and found on the National Hydric Soils List (NRCS, 1995). These soils typically have a black, 10YR 2/1 fine sandy loam Ap surface horizon (0-12 in), and a gray 10YR 5/1 fine sandy loam Eg horizon (12-19in), followed by a gray 10YR 5/1 and dark gray 10YR 4/1 fine sandy loam BEg subsurface horizon (19-23 in). (NRCS, 2008).

A series of soil borings were accomplished across the site and soil descriptions were completed on representative samples. Hydric soil indicators were used in accordance with the manual *Field Indicators of Hydric Soils in the United States, 2018*, USDA Natural Resources Conservation Service.

Hydric indicators utilized on this site were as follows:

F13. Umbric Surface.
A layer 25 cm (10 in) or more thick, starting at a depth less than or equal to the upper 15cm (6 in) from the soil surface, in which the upper 15cm (6in) has value of 3 or less and chroma of 1 or less and in which the lower 10cm (4in) has the same colors as those described above or any other color that has chroma of 2 or less.

Notes: The thickness requirements may be slightly less than those for an umbric epipedon.

Soils mapped within the proposed restoration area have dark colored soil ten or more inches thick with a matrix of 3 or less and chroma 1 or less in the upper six inches and in which the lower four inches has the same colors or any other color with chroma 2 or less within the soil profile meeting the F13 criteria. Soils mapped within the proposed restoration area are hydric and are further described in the representative soil borings. (Attached Soil Borings).

Overall, it is my professional opinion the project area proposed and investigated has hydric soils with hydric soil characteristics suitable for wetland restoration (re-establishment) most similar to Portsmouth series soils.

Further, the areas investigated for the presence of hydric soils considered for wetland restoration consist predominantly of hydric soils, are devoid of hydric vegetation, and wetland hydrology, and are not currently jurisdictional wetlands, as defined by the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual and the 2010 USACE Atlantic Gulf and Coastal Plain Regional Supplement.

Please let us know if you have any questions concerning the enclosed soil data and site investigation report. We look forward to working with you further on this project.

Sincerely,

Scott J. Frederick, EI, NCLSS #1236
Environmental Scientist
Soil, Water, & Environment Group
sjfrederick@swegrp.com
Encl: figures, soils data, and photos

References

Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and Soil Survey Staff. 2002. Field book for describing and sampling soils, Version 2.0. Natural Resources Conservation Service, National Soil Survey Center, Lincoln, NE.

United States Department of Agriculture, Natural Resources Conservation Service. 2018. Field Indicators of Hydric Soils in the United States. A Guide for Identifying and Delineating Hydric Soils, V. 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils.

United States Department of Agriculture, Soil Conservation Service. 2020. GIS Web Soil Survey of Edgecombe County, North Carolina.

United States Department of Agriculture, Soil Conservation Service. 1979. Soil Survey of Edgecombe County, North Carolina.

Attachments

Soil Descriptions/Photos
Figure 1: USGS Vicinity
Figure 2: Soil Boring Locations
Figure 3: NRCS Soil Map

Soil, Water, & Environment Group

Soil Investigation Data Sheet

Soil Boring:	SB1 hydric (F13)		
Location:	Colonial Farms	Date:	10/20/20
County:	Edgecombe NC	Investigator(s):	SJF
Lat./Long.:	35.854167, -77.550000	Elev.:	45 ft

Parent Material:	Loamy marine sediments	Drainage (Wetness) Class:	very poorly drained effective drainage in place
Moisture Status:	moist	Slope (%):	< 2%
Classification:	Fine-loamy over sandy or sandy-skeletal, mixed, semiactive, thermic Typic	Vegetative Cover:	row crops
Soil Series:	Portsmouth fine sandy loam	Water Table:	>24"
Aspect:	SE	SHWT:	<12 "
Landscape Position:	flat		

					Structure						
Horiz.	**Depth (in.)**	**Main Colors (moist)**	**Mottles**	**Texture**	**Grade**	**Class**	**Type**	**Moist & Wet Consist.**	**Ped Coatings**	**Hoizon Boundary**	**Other Remarks**
Ap	0-14	black (10YR 2/1)		fs loam	weak	med	granular	v. friable	-	-	fine roots, disturbed
Eg	14-20	gray (10YR 5/1)		fs loam	weak	med	granular	v. friable	-	abrubt	evidence of water movement
Beg	20-24+	gray (10YR 5/1)	prom (10YR 5/8)	fs loam	weak	med	sub. blk.	friable, stk/plst	-	-	

License Seal:

Date: 10/22/20

Soil, Water, & Environment Group

Soil Investigation Data Sheet

Soil Boring:	SB2 hydric (F13)		
Location:	Colonial Farms	Date:	10/22/20
County:	Edgecombe NC	Investigator(s):	SJF
Lat./Long.:	35.853056, -77.548611	Elev.:	44 ft

Parent Material:	Loamy marine sediments	Drainage (Wetness) Class:	very poorly drained effective drainage in place
Moisture Status:	moist	Slope (%):	< 2%
Classification:	Fine-loamy over sandy or sandy-skeletal, mixed, semiactive, thermic Typic	Vegetative Cover:	row crops
Soil Series:	Portsmouth fine sandy loam	Water Table:	>24"
Aspect:	W	SHWT:	<12 "
Landscape Position:	flat		

					Structure						
Horiz.	**Depth (in.)**	**Main Colors (moist)**	**Mottles**	**Texture**	**Grade**	**Class**	**Type**	**Moist & Wet Consist.**	**Ped Coatings**	**Hoizon Boundary**	**Other Remarks**
Ap	0-10	black (10YR 2/1)		fs loam	weak	med	granular	v. friable	-	-	fine roots, highly disturbed Ap
Eg	10-20	gray (10YR 5/1)		fs loam	weak	med	granular	v. friable	-	abrubt	evidence of water movement
Beg	20-24+	gray (10YR 5/1 and 4/1)	>2%, prom (10YR 5/8)	fs loam	weak	med	sub. blk.	friable, stk/plst	-	-	

License Seal:

Date: 10/22/20

Soil, Water, & Environment Group

Soil Investigation Data Sheet

Soil Boring:	SB3 hydric (F13)		
Location:	Colonial Farms	Date:	10/22/20
County:	Edgecombe NC	Investigator(s):	SJF
Lat./Long.:	35.853056, -77.550556	Elev.:	44 ft

Parent Material:	Stratified loamy, sandy, and clayey sediment	Drainage (Wetness) Class:	very poorly drained effective drainage in place
Moisture Status:	moist	Slope (%):	< 2%
Classification:	Fine-loamy, mixed, semiactive, acid, thermic Cumulic Humaquepts	Vegetative Cover:	row crops
Soil Series:	Ballahack fine sandy loam	Water Table:	>24"
Aspect:	E	SHWT:	<12"
Landscape Position:	flat		

					Structure						
Horiz.	**Depth (in.)**	**Main Colors (moist)**	**Mottles**	**Texture**	**Grade**	**Class**	**Type**	**Moist & Wet Consist.**	**Ped Coatings**	**Hoizon Boundary**	**Other Remarks**
Ap	0-12	black (10YR 2/1)		fs loam	weak	med	granular	v. friable	-	-	fine roots, disturbed
Eg	12-20	gray (10YR 5/1)		fs loam	weak	med	granular	v. friable	-	abrubt	evidence of water movement
Beg	20-24+	gray (10YR 5/1)	prom (10YR 5/8)	fs loam	weak	med	sub. blk.	friable, stk/plst	-	-	

License Seal:

Date: 10/22/20

SB1

SB2

SB3

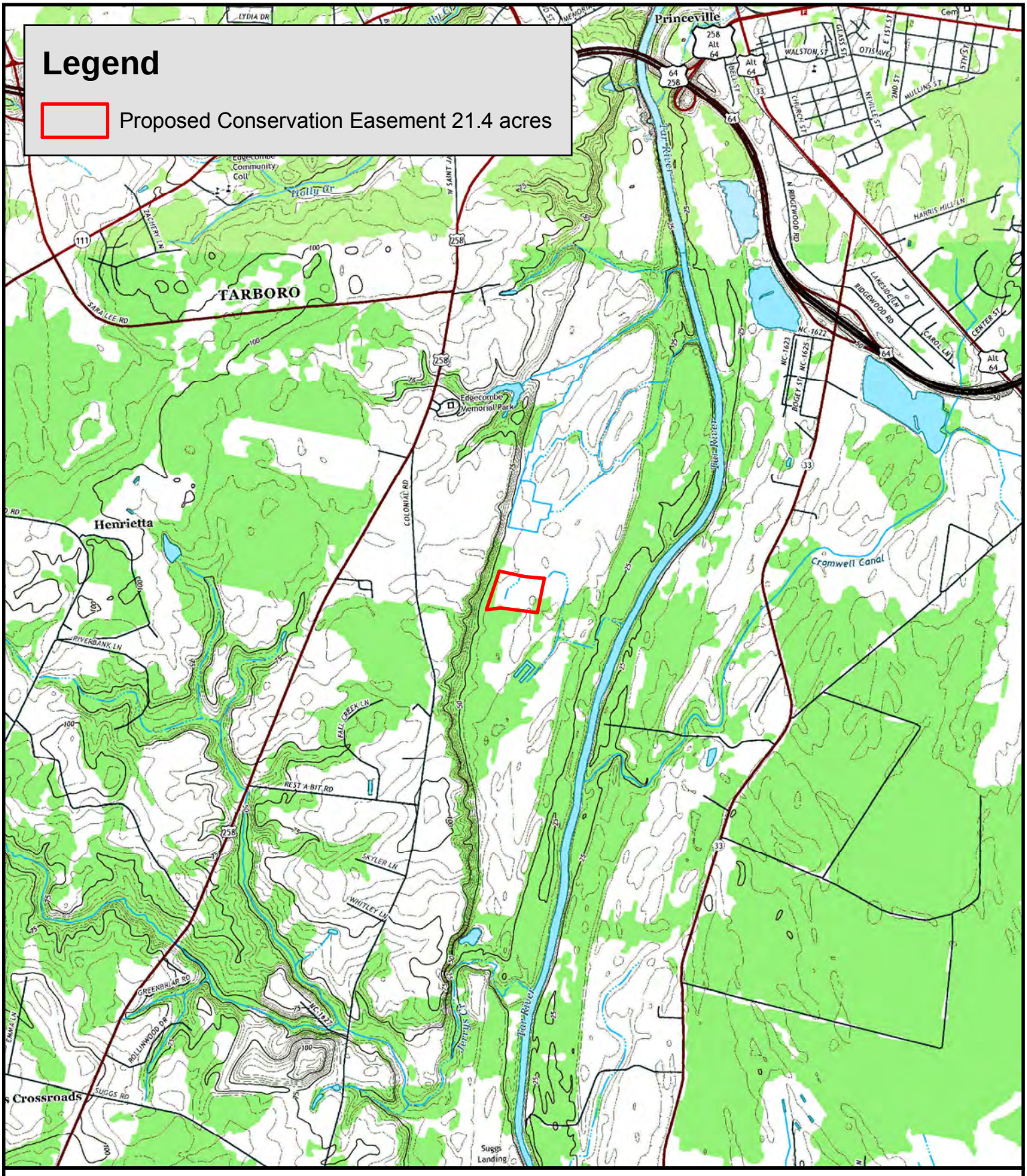


Figure 1 Vicinity Map
Colonial Bluff Wetland Mitigation Site
Tar-Pam 03020103
Edgecombe County, North Carolina
October 2020

2013 USGS Quadrangle Old Sparta

Soil, Water, & Environment Group

3,000 1,500 0 3,000
Feet

N

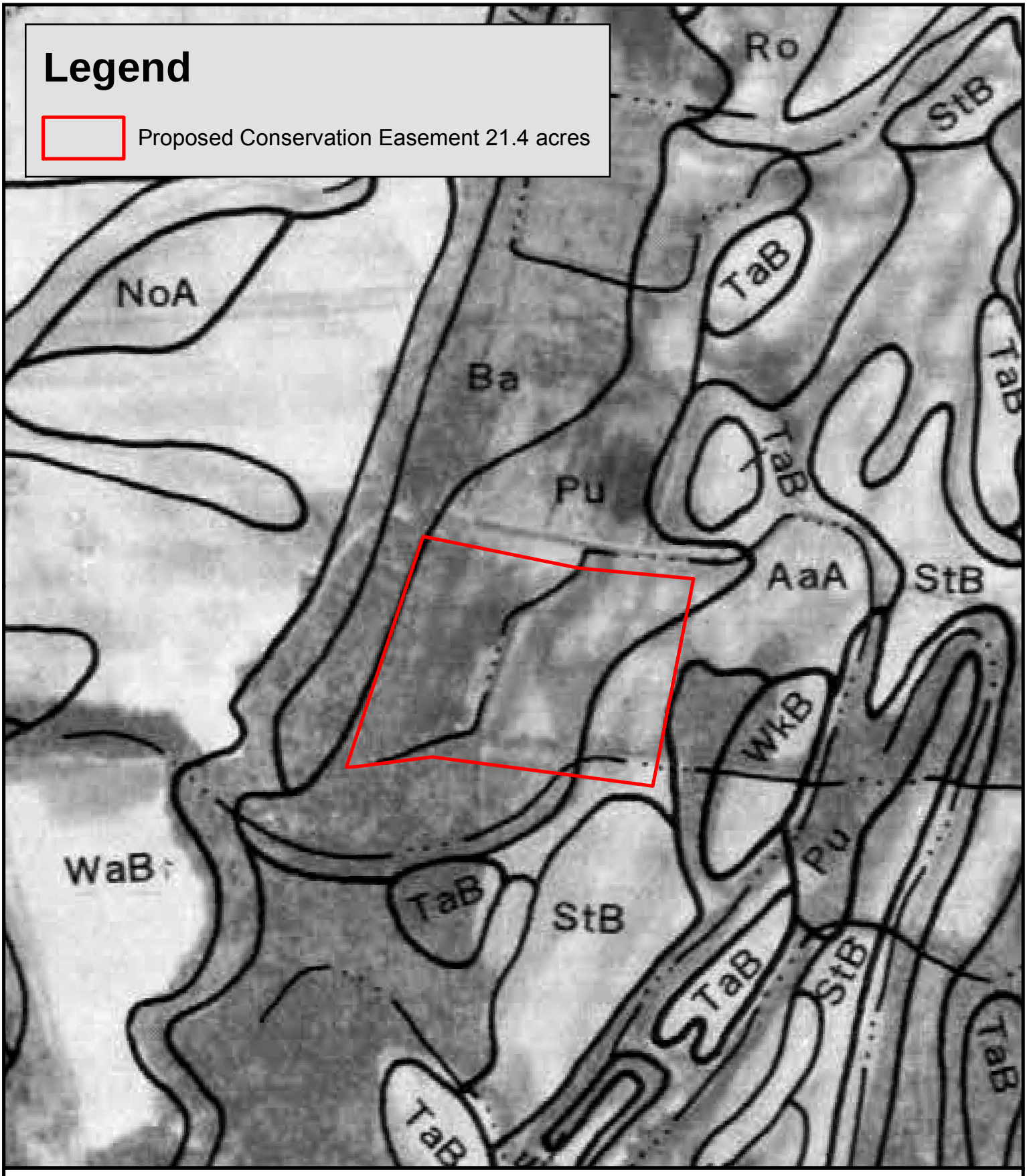
Soil, Water, & Environment Group

Figure 2 Soil Boring Map
Colonial Bluff Wetland Mitigation Site
Tar-Pam 03020103
Edgecombe County, North Carolina
October 2020

NC Onemap 2017 Aerial

200 100 0 200
Feet

N



Soil, Water, & Environment Group

Figure 3 Soil Survey
Colonial Bluff Wetland Mitigation Site
Tar-Pam 03020103
Edgecombe County, North Carolina
October 2020

500 250 0 500
Feet

1979 NRCS Soil Survey Map Sheet 26

Appendix E

Memo of Purchase and Sale Agreement

Doc ID: 003410050007 Type: CRP
Recorded: 10/22/2020 at 11:40:59 AM
Fee Amt: $26.00 Page 1 of 7
EDGECOMBE COUNTY, NORTH CAROLINA
Vila R. Anderson Register of Deeds
BK 1720 PG 557-563

Cross Reference:
Deed Book ___, Page __
Register of Deeds
Edgecombe County, NC

File/Return to: Ted Griffith
Eco Terra Partners
1117 Peachtree Walk NE
Suite 126
Atlanta, GA 30309

MEMORANDUM OF AGREEMENT

STATE OF NORTH CAROLINA
COUNTY OF EDGECOMBE

THIS MEMORANDUM OF AGREEMENT (this "Memorandum") is hereby made this 22nd day of October, 2020, by and between **ECO TERRA PARTNERS, LLC**, a Georgia limited liability company, whose mailing address is 1117 Peachtree Walk NE, Suite 126, Atlanta, GA 30309 (herein "Buyer") and Quincy Farms Family Limited Partnership ("Seller").

1. For good and valuable consideration, Seller and Buyer have entered into that certain Agreement for Purchase and Sale of Conservation Easement of even date herewith (the "Agreement").

2. Pursuant to the Agreement, Seller has agreed to sell and Buyer has agreed to purchase a permanent conservation easement containing approximately **26.02** acres, more or less, over a portion of the Seller's real property located in Edgecombe County, State of North Carolina. The Seller's property (the "Property") is described on **Exhibit A**. The portion of the Seller's Property which consists of the easement property is also set forth on **Exhibit A** (the "Easement Property"); the Easement Property is more particularly depicted on **Exhibit A-1**. The final legal description for the property encumbered by the proposed conservation easement shall be determined by a survey and, upon consummation of the Agreement, incorporated into a Deed of Conservation Easement to be conveyed by Seller and recorded in the Register of Deeds.

3. Seller and Buyer have agreed to execute and record this Memorandum in accordance with the terms of the Agreement to give public notice of the Agreement and this Memorandum shall not supersede or in any way modify the terms and conditions of the Agreement.

The Agreement shall run with the land and shall be binding upon and inure to the benefit of the parties hereto, their respective heirs, legal representatives, administrators, successors, and assigns.

4. This Memorandum shall expire, and the Agreement shall no longer run with the land, or be considered a cloud upon title, upon the earlier to occur of (i) a termination of the Agreement by Buyer (subject, however, without limiting any rights Buyer may retain which survive a termination of the Agreement); (ii) the conveyance and subsequent recording of the Deed of Conservation Agreement from Seller as contemplated by the Agreement; or (iii) the date that is one (2) years from the day and year first above written.

[*Signature pages follow*]

BUYER:

ECO TERRA PARTNERS, LLC

By: _____ (SEAL)
Name: Luther Theodore Griffith, Jr.
Title: Vice-President

Date: 21 Oct 2020

STATE OF NORTH CAROLINA

COUNTY OF CHATHAM

On this 21st day of October, 2020, before me personally appeared Luther Theodore Griffith, Jr., to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed the same as his free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal in the County and State aforesaid, the day and year above written.

_____
Notary Public

My Commission Expires:
My Commission Expires 5-25-2025

D NORTON WEBSTER NOTARY PUBLIC CHATHAM COUNTY, NC

SELLER:

By: _____ (SEAL)
Name: Thomas P Quincy
Title: Partner

Date: 22 Oct 2020

By: _____ (SEAL)
Name: Hunter T Quincy
Title: 22 Oct 2020 Partner

Date: 22 Oct 2020

By: _____ (SEAL)
Name: Stacy P Quincy
Title: Partner

Date: 22 Oct 2020

STATE OF NORTH CAROLINA

COUNTY OF EDGECOMBE

On this 22nd day of October, 2020, before me personally appeared Thomas P Quincy, Hunter T Quincy, Stacy P Quincy, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed the same as his free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal in the County and State aforesaid, the day and year above written.

_____
Notary Public

My Commission Expires:

My Commission Expires 5-25-2025

D NORTON WEBSTER NOTARY PUBLIC CHATY JUNTY

Exhibit A

Legal Description of the Property

As to property owned by Quincy Farms Family Limited Partnership dated May 18, 2018, that property identified with Parcel No. 472689809100 and conveyed pursuant to that certain Deed recorded at Deed Book 1679, Page 0092 in the Register of Deeds, Edgecombe County, North Carolina.

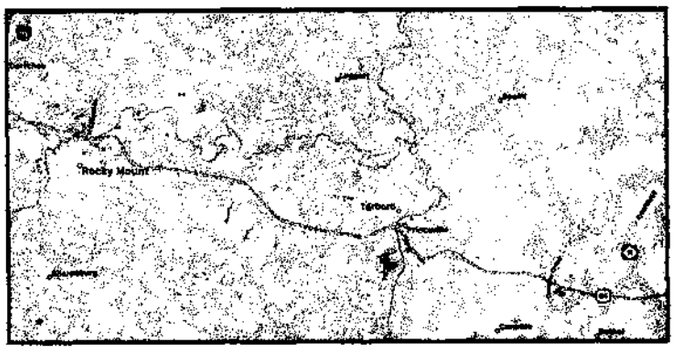
Exhibit A-1

[See Attached Map]
Legal Description of the Easement Property

1720 0563

Owner:	Quincy Family Farms Limited Partnership
County:	Edgecombe
Parcel ID:	4726898091
Property Location:	35°51'13.56"N 77°32'57.83"W

Jamey O'Shaughnessey
404 697 6967
jamey@ecoterra.com
EcoTerra.com

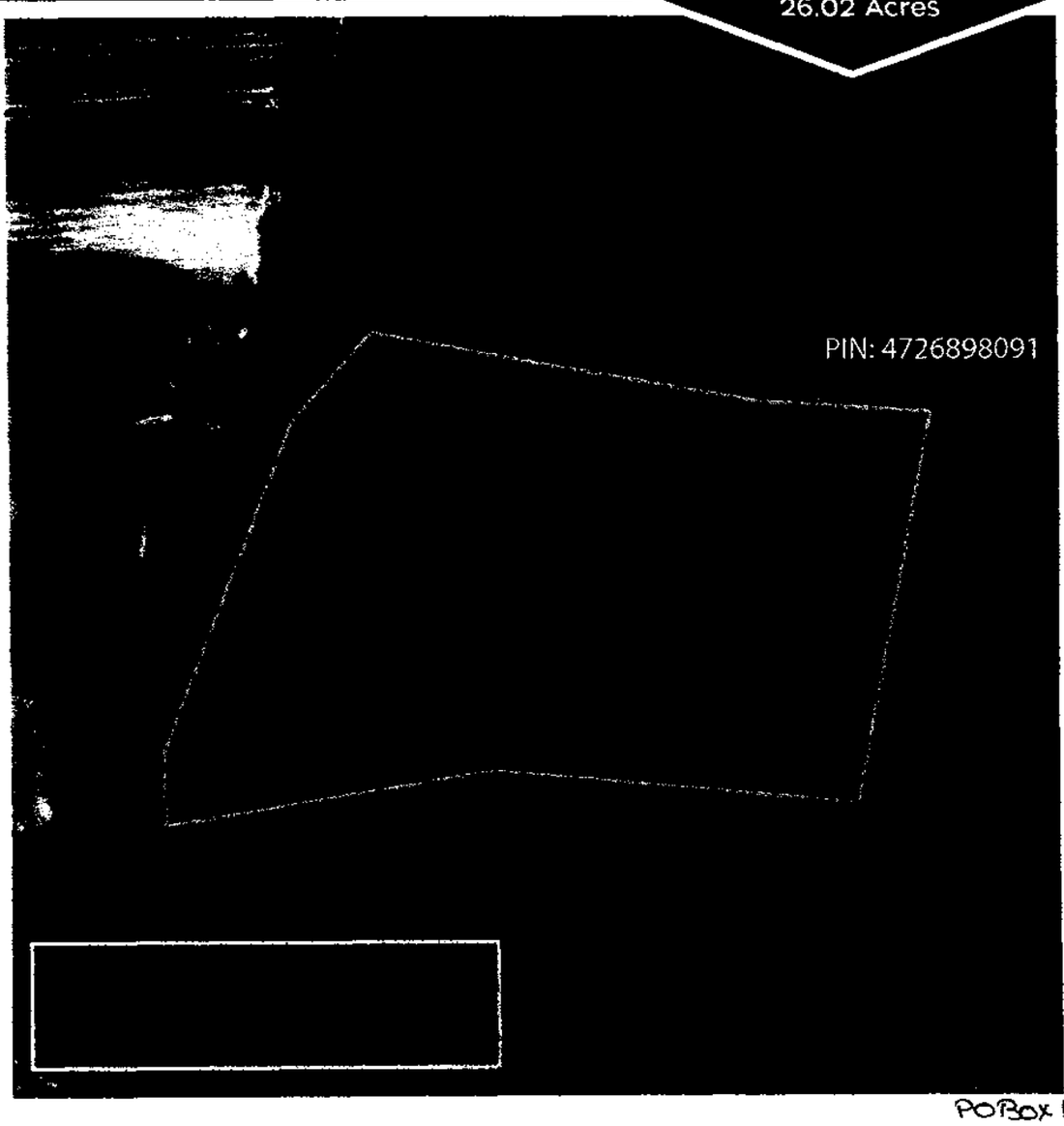


Map Legend

Property Line

Conservation Easement Area

26.02 Acres



(7)
$26.00
m-Vinson
Bridgers
PO Box 1161, Tarboro NC

Appendix F

Financial Assurances

NORTH CAROLINA
Environmental Quality

Compensatory Mitigation Performance Bond

DATE EXECUTED (the "Effective Date"): 12/06/2021	**BOND NUMBER:** 3802946
PENAL SUM OF BOND: $301,125	
SURETY: Attn: Bond Division Claims Great American Insurance Company 301 E. 4th Street Cincinnati, OH 45202	
OBLIGEE (the "Contracting Body"): North Carolina Department of Environmental Quality Division of Mitigation Services 217 West Jones Street Raleigh, NC 27603	
NAME OF PROJECT: Colonial Farms Mitigation Site – Option 1	
CONTRACT EFFECTIVE DATE: 02/02/2021	**CONTRACT NUMBER:** 200207-01

PRINCIPAL: Eco Terra Partners, LLC 1328 Dekalb Ave. NE Atlanta, GA 30307
TYPE OF ORGANIZATION (Mark one "X")
___Individual ___Partnership ___Joint Venture ___Corporation _X_Limited Liability Corporation
STATE OF INCORPORATION: Georgia

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL AND SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into a certain contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Notwithstanding the provisions of the Contract, the term of this bond shall apply from the Effective Date listed above and end with the approval of Task 6 Baseline Monitoring Report (including As-Built Drawings) by the Contracting Body but may be extended by Surety with a continuation certificate. However, neither failure of Surety to provide a continuation certificate, nor failure or inability of Principal to file a replacement bond in the event Surety does not provide a continuation certificate, shall itself constitute a loss to the Contracting Body recoverable under this bond or any continuation thereof. The liability of Surety under this bond or any continuation certificate issued in connection with it shall not be cumulative and in no event shall exceed the amount set forth in this bond or in any continuation certificate properly issued by Surety.

The Principal and Surety have executed this performance bond and have affixed their seals on the date set forth above.

PRINCIPAL	
Name & Address Eco Terra Partners, LLC 1328 Dekalb Ave. NE Atlanta, GA 30307	
Signature	
Name & Title Michael Beinenson, President	
AGENT FOR CORPORATE SURETY	
Name & Address Great American Professional Risk Insurance Services 11325 N Community House Rd., Suite 200 Charlotte, NC 28277	
Signature	
Name & Title James Callis, Vice President	
CORPORATE SURETY	
Name & Address Great American Insurance Company 301 E. 4th Street Cincinnati, OH 45202	State of Incorporation Ohio
Signature (Seal)	Witness Signature
Name & Title David V. Ferron, Vice President & Attorney-in-Fact	Witness Name & Title Julie L. Roberts, Assistant Vice President

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than TWO

No. 0 21217

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name	Address	Limit of Power
DAVID FERRON	BOTH OF	BOTH
LYLE CLEM	CINCINNATI, OH	UNLIMITED

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 2ND day of NOVEMBER , 2018 .

Attest

GREAT AMERICAN INSURANCE COMPANY

Assistant Secretary

Divisional Senior Vice President

MARK VICARIO (877-377-2405)

STATE OF OHIO, COUNTY OF HAMILTON - ss:

On this 2ND day of NOVEMBER , 2018 , before me personally appeared MARK VICARIO, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.

Susan A. Kohorst
Notary Public, State of Ohio
My Commission Expires 05-18-2020

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisonal Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this day of

Assistant Secretary

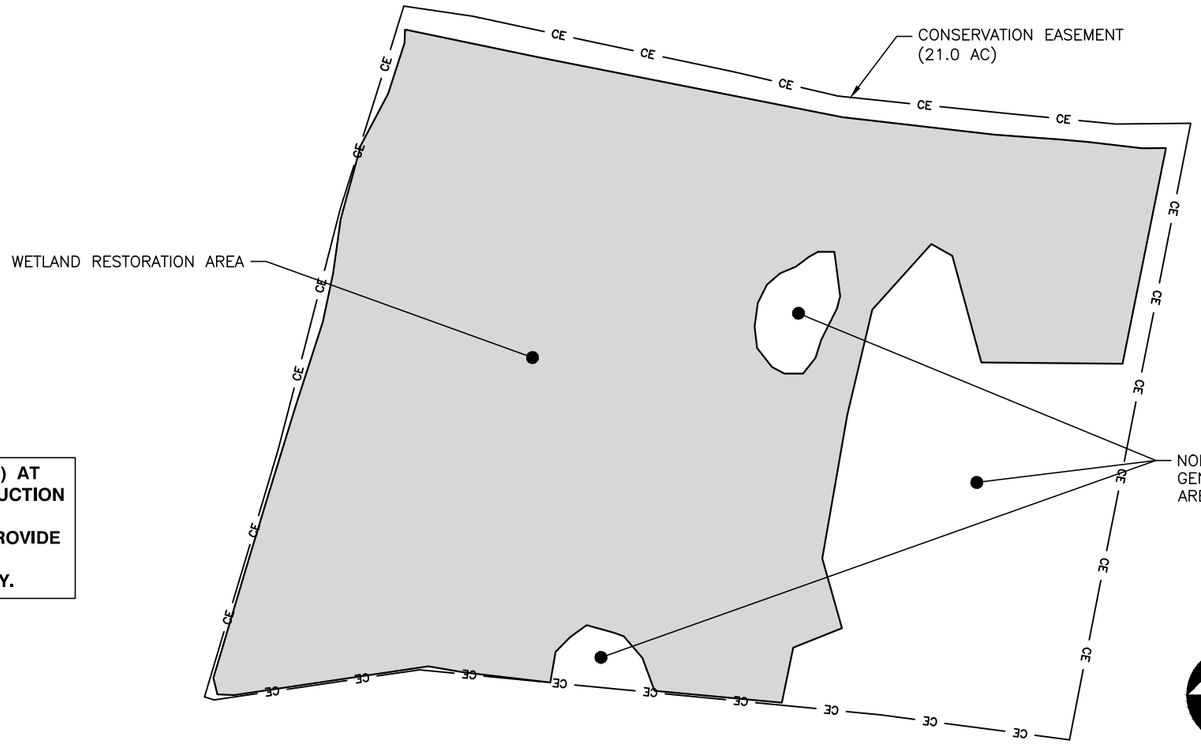
Appendix G

Site Plan

COLONIAL MITIGATION SITE
TAR-PAMLICO 03020103 RIVER BASIN

CONSTRUCTION PLANS
DWR Project No. 20210399

EDGECOMBE COUNTY, NORTH CAROLINA
DATE: OCTOBER 21, 2021

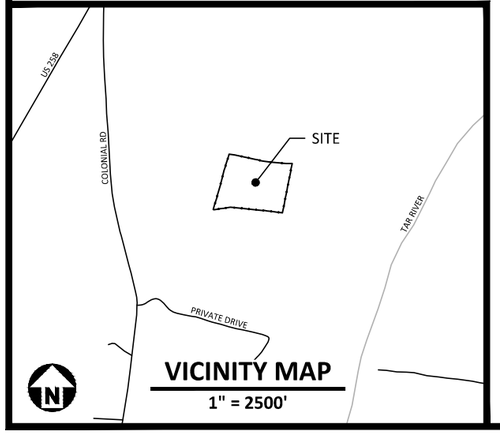


SHEET INDEX

811
Know what's below.
Call before you dig.

CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

TOTAL DISTURBED AREA = 21.8 AC.



VICINITY MAP
1" = 2500'

N

GRAPHIC SCALE
0 100 200 400
1 inch = 200 ft.

The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

ECO TERRA PARTNERS, LLC
1328 DEKALB AVE. NE
ATLANTA, GA 30307
CONTACT: NORTON WEBSTER
PHONE: 919.548.0949

NORTH CAROLINA PROFESSIONAL SEAL 049073 ENGINEER REBECCA STUBBS

PRELIMINARY NOT FOR CONSTRUCTION

LEGEND AND SYMBOLS

LD LD — LIMITS OF DISTURBANCE

CE CE — PROPOSED CONSERVATION EASEMENT

PROPERTY LINE

250 — EXISTING MAJOR CONTOUR

EXISTING MINOR CONTOUR

EXISTING DITCH CENTERLINE

EXISTING TREE LINE

FEMA 100–YR FLOODPLAIN

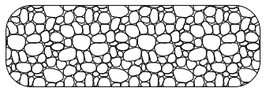
FEMA 500–YR FLOODPLAIN

PROPOSED DRAINAGE DITCH

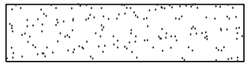
PROPOSED FILL

PROPOSED VERNAL POOL

EROSION CONTROL LEGEND



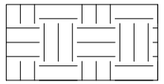
CONSTRUCTION ENTRANCE



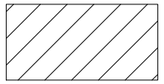
HAUL ROAD

SF SF SF — SILT FENCE

TP TP TP — TREE PROTECTION FENCE



STAGING/STOCKPILE AREA



DITCH PLUG

TEMPORARY CROSSING – LOG MAT

NORTH CAROLINA PROFESSIONAL SEAL 049073 ENGINEER REBECCA STUBBS

PRELIMINARY NOT FOR CONSTRUCTION

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www.mcadamsco.com

COLONIAL MITIGATION SITE

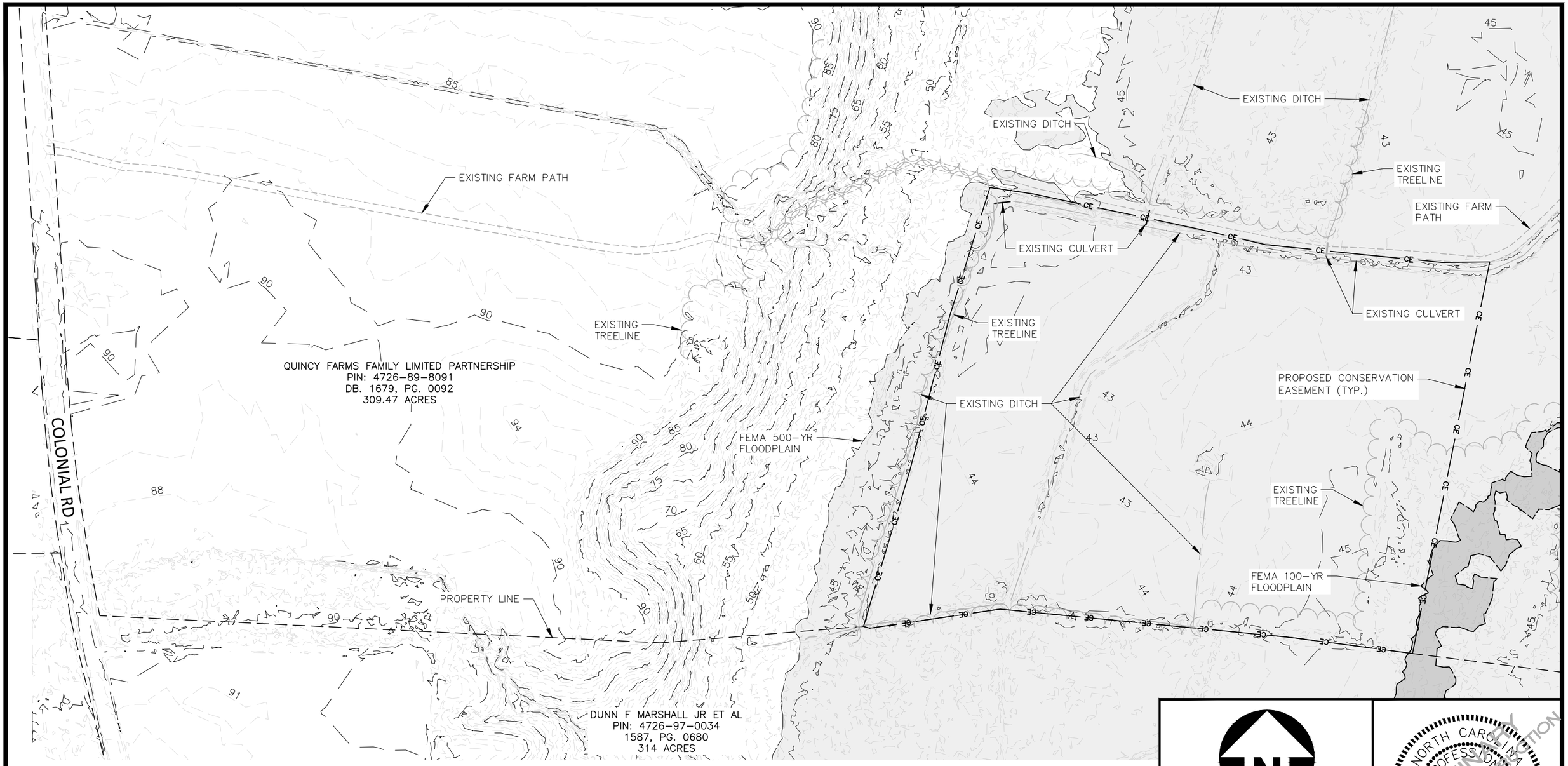
CONSTRUCTION PLANS

EDGECOMBE COUNTY, NORTH CAROLINA

PLAN INFORMATION	
PROJECT NO.	ECT2101.01
FILENAME	ECT2101.01-XC
CHECKED BY	RAS
DRAWN BY	RHW
SCALE	
DATE	10.21.2021

EXISTING CONDITIONS
LEGEND AND SYMBOLS

C1.00



EXISTING CONDITION NOTES:

1. TOPOGRAPHIC SURVEY IS BASED ON NC QL2 LIDAR DATA, DATUM NAD83.
2. SITE FEATURES WERE LOCATED USING AERIAL IMAGERY PROVIDED BY NC ONE MAP.

DEMOLITION NOTES:

1. ALL MATERIAL TO BE DEMOLISHED SHALL BE REMOVED FROM THE SITE AND DIPOSED OF AT A PERMITTED SITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL LAWS.

TOTAL DISTURBED AREA = 21.8 AC.

GRAPHIC SCALE
0 100 200 400
1 inch = 200 ft.

NORTH CAROLINA PROFESSIONAL SEAL 049073 ENGINEER REBECCA STUBBS
PRELIMINARY NOT FOR CONSTRUCTION

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COLONIAL MITIGATION SITE

CONSTRUCTION PLANS

EDGECOMBE COUNTY, NORTH CAROLINA

ecoterra

PLAN INFORMATION	
PROJECT NO.	ECT2101.01
FILENAME	ECT2101.01-XC
CHECKED BY	RAS
DRAWN BY	RHW
SCALE	1" = 200'
DATE	10.21.2021

EXISTING CONDITIONS

C1.01

GENERAL NOTES:

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY LICENSES AND PERMITS REQUIRED TO COMPLETE THE WORK INCLUDED IN THE CONTRACT DOCUMENTS AT THE CONTRACTOR'S EXPENSE.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTOR'S HAVE THE CORRECT/MOST UP-TO-DATE PLANS AVAILABLE.
3. CONTRACTOR SHALL GIVE MINIMUM 72 HOURS NOTICE TO THE PROPERTY OWNER AND PROJECT ENGINEER PRIOR TO CONSTRUCTION.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
5. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING BUFFER VEGETATION AND CONSTRUCTION CORRIDOR TO THE MAXIMUM EXTENT PRACTICAL.
6. THERE MAY BE EXISTING WETLANDS WITHIN THIS SITE. IT IS THE OWNER'S RESPONSIBILITY FOR WETLANDS JURISDICTION AND PERMIT DISTURBANCE PRIOR TO ANY GRADING ACTIVITY.
7. IF THE CONTRACTOR, IN THE COURSE OF WORK, FINDS ANY DISCREPANCIES IN THE PLANS OR NOTES GIVEN BY THE PROJECT ENGINEER, IT SHALL BE HIS/HER DUTY IMMEDIATELY INFORM THE PROJECT ENGINEER, IN WRITING, AND THE PROJECT ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTOR'S RISK.
8. ANY DAMAGE TO PRIVATE PROPERTY AND/OR EXISTING UTILITIES INCURRED DURING CONSTRUCTION ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL MECHANIZED EQUIPMENT OPERATED NEAR SURFACE WATERS SHALL BE INSPECTED AND MAINTAINED REGULARLY TO PREVENT CONTAMINATION OF SURFACE WATERS FROM FUELS, LUBRICANTS, HYDRAULIC FLUIDS, OR OTHER TOXIC MATERIALS. CONSTRUCTION SHALL BE STAGED IN ORDER TO MINIMIZE THE EXPOSURE OF EQUIPMENT TO SURFACE WATERS TO THE MAXIMUM EXTENT PRACTICABLE. FUELING, LUBRICATION, AND GENERAL EQUIPMENT MAINTENANCE SHALL BE PERFORMED IN A MANNER TO PREVENT, TO THE MAXIMUM EXTENT PRACTICABLE, CONTAMINATION OF SURFACE WATERS BY FUELS AND OILS.
10. HEAVY EQUIPMENT WORKING IN WETLANDS SHALL BE PLACED ON MATS OR OTHER MEASURES SHALL BE TAKEN TO MINIMIZE SOIL DISTURBANCE.

CONSTRUCTION SEQUENCE:

1. OBTAIN GRADING PERMIT FROM LOCAL AND STATE AGENCIES.
2. INSTALL TEMPORARY CONSTRUCTION ENTRANCE, SILT FENCING, ACCESS ROADS, AND OTHER MEASURES SHOW ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
3. INSTALL RAIN GAGE ON SITE. CONTRACTOR SHALL PROVIDE A LOG BOOK AT THE PROJECT SITE AND SHALL READ AND RECORD RAIN AMOUNTS AT THE SAME TIME DAILY.
4. CONTACT LOCAL SOIL EROSION AUTHORITY OR STATE FOR ON-SITE INSPECTION BY ENVIRONMENTAL INSPECTOR AND OBTAIN CERTIFICATE OF COMPLIANCE.
5. CLEAR EXISTING WOODY VEGETATION ALONG THE SOUTH AND WEST DITCH OVERBURDEN. REMOVE WOODY MATERIAL AND STOCKPILE. MAINTAIN DEVICES AS NECESSARY.
6. BEGIN DITCH NETWORK FILL IN USING GRADED MATERIAL FROM HIGHER ELEVATION AREAS NOTED ON PLANS, STARTING AT THE SOUTHEAST CORNER OF THE SITE AND MOST EASTERN DITCH PLUG, LEAVING ~100' OF UNFILLED DITCH TO ACCOUNT FOR DITCH PLUG PLACEMENT. CONTINUE CLOCKWISE, FILLING IN DITCHES WITH OVERBURDEN ALONG DITCHES AND DESIGNATED VERNAL POOL BARROW AREAS, LEAVING ~100' FOR REMAINING DITCH PLUGS UNFILLED. MOST GRADING WILL BE 6-12" IN DEPTH. NO GRADING SHALL EXCEED 12" IN DEPTH ANYWHERE ONSITE. DESIGNATED VERNAL POOL BARROW AREAS SHALL BE 6-12" IN DEPTH.
7. TEMPORARY OR PERMANENT GROUND COVER STABILIZATION SHALL OCCUR WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY, WITH THE FOLLOWING EXCEPTIONS IN WHICH TEMPORARY OR PERMANENT GROUND COVER SHALL BE PROVIDED WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY:
   - SLOPES BETWEEN 2:1 AND 3:1, WITH A SLOPE LENGTH OF 10 FEET OR LESS
   - SLOPES 3:1 OR FLATTER, WITH A SLOPE LENGTH OF 50 FEET OR LESS
   - SLOPES 4:1 OR FLATTER
8. IF NECESSARY, MOW ALL HERBACEOUS VEGETATION AND ROUGHEN THE SOIL USING A DISC PLOW METHOD, NOT DEEP RIPPING.
9. ALL GRADED AREAS MUST BE SEEDED, STRAW-MULCHED, AND MATTED AT THE END OF EACH DAY. FOR THIS REASON, DAILY DISTURBANCE IS LIMITED TO THE LENGTH OF DITCH THE CAN BE COMPLETED WITHIN DAILY WORK HOURS.
10. CONSTRUCT DITCH PLUGS, STABILIZE WITH SEED AND STRAW-MULCHED.
11. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL FOR INSPECTION BY ENVIRONMENTAL INSPECTOR.
12. IF SITE IS APPROVED, REMOVE SILT FENCING, OTHER MEASURES, ETC. AND SEED OUT ANY RESULTING BARE AREAS.
13. ESTABLISH WOODY VEGETATION.
14. WHEN VEGETATION HAS BEEN ESTABLISHED, CALL FOR FINAL SITE INSPECTION BY ENVIRONMENTAL INSPECTOR.

EROSION & SEDIMENT CONTROL NOTES:

1. GRADING AND EROSION CONTROL METHODS SHALL ADHERE TO THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NC DEQ) DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES (NC DEMLR) STANDARDS AND SPECIFICATIONS.
2. EROSION AND SEDIMENT CONTROL (E & SC) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBANCE ACTIVITIES.
3. WHEN PROJECT IS COMPLETE, THE PERMITEE SHALL VISIT DEQ.NC.GOV/NCG01 TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (E-NOT). A $100 ANNUAL GENERAL FEE WILL BE CHARGED UNTIL THE E-NOT HAS BEEN FILLED OUT.
4. E & SC DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR SHALL CALL FOR AN INSPECTION BY NC DEMLR ONCE INITIAL MEASURES ARE IN PLACE.
5. A COPY OF THE APPROVED EROSION CONTROL PLAN MUST BE ON FILE AT THE JOB SITE AT ALL TIMES. FAILURE TO FOLLOW THE APPROVED PLAN SEQUENCE AND DETAILS COULD SUBJECT THE CONTRACTOR TO FINES AND PENALTIES ISSUED BY NC DEMLR.
6. CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GRADING CONTRACTOR UNLESS OTHERWISE NOTED.
7. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE APPROVED EROSION CONTROL PLAN AND IS SUBJECT TO A FINE BY THE NC DEMLR.
8. DISTURBANCE OUTSIDE OF THE SITE PROPERTY LIMITS OR PUBLIC R/W SHALL ONLY BE ALLOWED BY SIGNED GRADING AGREEMENTS AND/OR EASEMENTS BETWEEN THE DEVELOPER AND OFFSITE PROPERTY OWNER.
9. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SAFE OPEN ACCESS TO ALL PROPERTIES ALONG ADJACENT PROPERTIES DURING CONSTRUCTION PERIOD FOR IMPROVEMENTS.
10. STAGING AREAS, STOCKPILE AREAS, CONSTRUCTION ENTRANCES, AND ACCESS ROAD WILL BE IDENTIFIED AND LOCATED ACCORDING TO THE EROSION CONTROL PLANS AND LANDOWNER. VARIANCES WILL BE ALLOWED ASSUMING BOTH THE CONTRACTOR AND THE ENGINEER VERBALLY AGREE.
11. CONTRACTOR SHALL SEED AND STABILIZE ALL STEEP SLOPES (GREATER THAN 3H:1V) WITHIN 7 DAYS, 10 DAYS FOR MODERATE SLOPES (3H:1V OR LESS) AND WITHIN 14 CALENDAR DAYS EVERYWHERE ELSE ACCORDING TO THE TEMPORARY SEEDING SCHEDULE ON EC1.01.
12. FOR ANY LAND DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER (SHEET EC1.01) SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER COMPLETING THE WORK. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE ON THE PLAN.
13. THE EROSION CONTROL INSPECTOR MAY REQUIRE ADDITIONAL FIELD MEASURES AS NECESSARY TO PROVIDE ADEQUATE PROTECTION FROM RECEIVING WATER COURSES.
14. PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE STRIPPING OF TOPSOIL OR LOWERING OF EXISTING GRADE AROUND A TREE, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA AND SHALL BE POSTED ON THE PROTECTION FENCE. A PROTECTION FENCE CONSTRUCTED OF MATERIAL RESISTANT TO DEGRADATION BY SUN, WIND, AND MOISTURE FOR THE DURATION OF THE CONSTRUCTION, SHALL BE INSTALLED AT THE SAME TIME AS THE EROSION CONTROL MEASURES AND SHALL BE IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE (SEE DETAIL ON SHEET D1.03).
15. A CONSTRUCTION SEQUENCE HAS BEEN PROVIDED (SEE THIS SHEET). INSTALLATION OF ALL PROPOSED E & SC MEASURES IN THE SEQUENCE(S) PROVIDED AND MAINTENANCE OF THOSE DEVICES IS REQUIRED. THE CONTRACTOR MAY BE ALLOWED, WITH PRIOR APPROVAL FROM THE OWNER, TO COORDINATE CHANGES TO THE PLAN WITH THE ON-SITE E & SC INSPECTOR AND THE ENGINEER.
16. CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION CONTROL DEVICES AT LEAST ONCE PER WEEK AND AFTER EVERY SIGNIFICANT RAINFALL EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
17. CONTRACTOR WILL FIELD LOCATE SILT FENCE OUTLETS AT LOW POINTS IN SILT FENCE AND/OR A MINIMUM OF EVERY 100 LINEAR FEET OF SILT FENCE AS REQUIRED TO PROVIDE RELIEF FROM CONCENTRATED FLOWS. SILT FENCE OUTLETS SHOWN ON THESE PLANS ARE BASED ON THE BEST TOPOGRAPHIC INFORMATION AVAILABLE AT THE TIME OF DESIGN. CONTRACTOR TO FIELD VERIFY AND ADJUST LOCATIONS OF SILT FENCE OUTLETS AND/OR PLACE ADDITIONAL OUTLETS TO INSURE THAT ALL LOW SPOTS ALONG THE SILT FENCE HAVE AN OUTLET.
18. WASHED STONE AND WIRE BACKING SHALL BE USED WITH SILT FENCE WHENEVER SILT FENCE IS PLACE AT THE TOE OF A SLOPE >10' VERTICAL OR ALONG ANY CHANNEL OR WATER COURSE WHERE 50' OF BUFFER IS NOT PROVIDED.
19. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
20. NO DEBRIS SHALL BE TRACKED ONTO PUBLIC RIGHT OF WAY. IF THE SITUATION OCCURS WHERE MUD, ROCKS AND DEBRIS IS TRACKED ONTO PAVEMENT, THE CONTRACTOR SHALL CLEAN THE PAVEMENT AND INSTALL ADDITIONAL MEASURES TO PREVENT FUTURE OCCURRENCES.
21. INSTALL SILT FENCE FOR ALL STAGING AND STOCKPILE AREAS (SEE DETAIL ON SHEET D1.03). ANY STOCKPILE AREAS SHALL USE TWO (2) ROWS OF SILT FENCE.
22. IF CONCRETE WASHOUTS ARE UTILIZED, THESE AREAS ARE TO BE WITHIN THE LIMITS OF DISTURBANCE AND SHOULD BE LOCATED AT LEAST 50 FT. AWAY FROM STORM DRAIN INLETS AND SURFACE WATER.

EROSION & SEDIMENT CONTROL MAINTENANCE PLAN:

1. QUALIFIED PERSONNEL, ON A DAILY BASIS WILL EVALUATE ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES FOR STABILITY AND OPERATION.
2. INSPECT AND MAINTAIN ALL EROSION CONTROL MEASURES EVERY 7 DAYS AND AFTER EACH SIGNIFICANT RAINFALL (0.5" OR GREATER) AND DOCUMENT WITH INSPECTION REPORTS AND WRITTEN LOGS SHALL BE KEPT.
3. ANY REPAIRS NEEDED WILL BE PERFORMED IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF TEMPORARY ON-SITE E & SC MEASURES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND FOLLOWING THE APPROVED E & SC PLAN.
6. A COPY OF THE COMBINED SELF-INSPECTION MONITORING FORM CAN BE FOUND ON THE NC DEMLR WEBSITE AT:
   HTTPS://DEQ.NC.GOV/ABOUT/DIVISIONS/ENERGY-MINERAL-LAND-RESOURCES/EROSION-SEDIMENT-CONTROL/FORMS

NORTH CAROLINA PROFESSIONAL SEAL 049073 ENGINEER REBECCA STUBBS
PRELIMINARY NOT FOR CONSTRUCTION

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COLONIAL MITIGATION SITE
CONSTRUCTION PLANS
EDGECOMBE COUNTY, NORTH CAROLINA

ecoterra

PLAN INFORMATION	
PROJECT NO.	ECT2101.01
FILENAME	ECT2101.01-EC
CHECKED BY	RAS
DRAWN BY	RHW
SCALE	
DATE	10.21.2021

EROSION CONTROL PLAN NOTES

EC1.00

Table 6.24d Permanent Seeding Recommendations -- Coastal Plain Region

Common Name	Scientific Name	Cultivars	Type*	Percentage of Mix	Optimal Planting Dates	Soil Drainage Adaptation	Shade Tolerance	Height
Switchgrass	Panicum virgatum	**Blackwell --** well drained **Shelter --** well drained **Kanlow --** poorly drained **Carthage --** well drained	Warm Season	10-15%	Dec. 1 - Apr. 1	Cultivar Dependent	Poor	6
Switchgrass	Panicum virgatum	**Alamo --** poorly-drained	Warm Season	10-15%	Dec. 1 - May 1	Cultivar Dependent	Poor	6
Indiangrass*	Sorghastrum nutans*	**Rumsey, Osage, Cheyenne**	Warm Season	10-30%	Dec. 1 - Apr. 1	Well-drained to Droughty	Poor	6
Indiangrass*	Sorghastrum nutans*	**Lometa**	Warm Season	10-30%	Dec. 1 - May 1	Well-drained to Droughty	Poor	6
Big Bluestem	Andropogon gerardii	**Earl**	Warm Season	10-30%	Dec. 1 - Apr. 1	Well-drained to Droughty	Poor	6
Little Bluestem	Schizachyrium scoparium	**Cimarron**	Warm Season	10-30%	Dec. 1 - Apr. 1	Well-drained to Droughty	Poor	4
Sweet Woodreed	Cinna arundinacea		Warm Season	1-10%	Dec. 1 - Apr. 1	Poorly-drained to Well-drained	Moderate	5
Rice Cutgrass	Leersia oryzoides		Warm Season	5-25%	Dec. 1 - Apr. 1	Poorly-drained	Poor	5
Redtop Panicgrass	Panicum rigidulum		Warm Season	10-20%	Dec. 1 - Apr. 1	Well-drained	Poor	3.5
Beaked Panicgrass	Panicum anceps		Warm Season	10-20%	Dec. 1 - Apr. 1	Poorly–drained	Moderate	3.5
Eastern Gammagrass	Tripsacum datyoides		Warm Season	5-10%	Dec. 1 - Apr. 1	Well-drained to Poorly-drained	Poor	4.5
Purple top	Tridens flavus		Warm Season	5-10%	Dec. 1 - Apr. 1	Well-drained to Droughty	Poor	2.5
Indian Woodoats	Chasmanthium latifolium		Cold Season	1-10%	Feb. 15 - Mar. 20, Sep. 1 - Nov. 1	Well-drained to Droughty	Moderate	4
Virginia Wildrye	Elymus virginicus		Cold Season	5-25%	Feb. 15 - Mar. 20, Sep. 1 - Nov. 1	Well-drained to Droughty	Moderate	3
Rough Bentgrass	Agrostis scabra		Cold Season	10-20%	Feb. 15 - Mar. 20, Sep. 1 - Nov. 1	Poorly-drained	Poor	2.5
Soft Rush	Juncus effusus		Wetland	1-10%	Dec. 1 - Apr. 15	Poorly-drained	Poor	4
Shallow Sedge	Carex lurida		Wetland	1-10%	Dec. 1 - Apr. 15	Poorly-drained	Poor	3
Fox Sedge	Carex vulpinoidea		Wetland	1-10%	Dec. 1 - Apr. 15	Poorly-drained	Poor	3
Leathery Rush	Juncus coriaceus		Wetland	2-5%	Dec. 1 - Apr. 15	Poorly-drained	Poor	2

* Only Lometa in eastern coastal plain (Plant Hardiness Zone 8).
* Pick at least four species, including one from each type.

PERMANENT SEEDING SCHEDULE:

PLANT MATERIAL SELECTION

1. REFER TO TABLE 6.24D (LEFT) FOR APPROPRIATE SELECTIONS OF NATIVE PERMANENT SEEDS.
2. PERMANENT SEED INCLUSION IN THE MIXTURE SHOULD TOTAL 15 LBS OF PURE LIVE SEED (PLS) PER ACRE DRILLED OR 15-20 LBS pls/AC BROADCAST APPLIED.
3. AT LEAST 4 SPECIES SHOULD BE SELECTED FOR THE MIXTURE INCLUDING ONE SPECIES FROM EACH TYPE (WARM SEASON, COLD SEASON, WETLAND). SELECTION OF MORE THAN 4 SPECIES IS RECOMMENDED FOR INCREASING CHANCES OF SUCCESSFUL VEGETATION ESTABLISHMENT.
4. IF OTHER SPECIES SUCH AS WILDFLOWERS ARE ADDED TO THE MIX, THEY SHOULD NOT BE COUNTED IN THE MINIMUM SEEDING RATE FOR GRASSES.

SEEDBED PREPARATION

1. DISTURBED SOILS WITHIN RIPARIAN AREAS MUST BE AMENDED TO PROVIDE AN OPTIMUM ENVIRONMENT FOR SEED GERMINATION AND SEEDLING GROWTH.
2. THE pH OF THE SOIL MUST BE SUCH THAT IT IS NOT TOXIC AND NUTRIENTS ARE AVAILABLE.
3. SOIL ANALYSIS SHOULD BE PERFORMED TO DETERMINE NUTRIENT AND LIME NEEDS OF EACH SITE.
4. APPROPRIATE pH LEVELS ARE BETWEEN 5.5 AND 7.0.
5. RIPARIAN BUFFERS REGULATED FOR NUTRIENT MANAGEMENT MAY BE LIMITED TO A SINGLE APPLICATION OF FERTILIZER.
6. SUITABLE MECHANICAL MEANS SUCH AS DISKING, RAKING, OR HARROWING MUST BE EMPLOYED TO LOOSEN COMPACTED SOIL PRIOR TO SEEDING.

PLANTING

1. APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DROP-TYPE SPREADER, DRILL, OR HYDROSEEDER ON A FIRM, FRIABLE SEEDBED.
2. IN FINE SOILS, SEEDS SHOULD BE DRILLED 0.25 - 0.5 INCHES. IN COARSE SANDY SOILS, SEEDS SHOULD BE PLANTED NO DEEPER THAN 0.75 INCHES.

MULCH

1. MULCH ALL PLANTINGS IMMEDIATELY AFTER SEEDING.
2. IF PLANTING ON STREAM BANKS STEEPER THAN 10% OR AREAS SUBJECT TO FLOODING, A BIODEGRADABLE ROLLED EROSION CONTROL PRODUCT IS RECOMMENDED TO HOLD SEED AND SOIL IN PLACE.

MAINTENANCE

1. THE RECOMMENDED PERMANENT GRASS SPECIES MAY REQUIRE TWO YEARS FOR ESTABLISHMENT, DEPENDING ON SITE CONDITIONS.
2. INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS, SOIL AMENDMENTS, AND RE-SEEDINGS.
3. IF WEEDY EXOTIC SPECIES HAVE TAKEN OVER THE AREAS AFTER THE FIRST GROWING SEASON, THE INVASIVE SPECIES MUST BE ERADICATED TO ALLOW NATIVE SPECIES TO GROW.
4. MONITOR THE SITE UNTIL LONG-TERM STABILITY HAS BEEN ESTABLISHED.

TEMPORARY SEEDING SCHEDULE:

TEMPORARY SEEDING SHALL BE APPLIED AS NEEDED DURING CONSTRUCTION TO STABILIZE BARE OR DISTURBED AREAS OF SOIL AND AT THE COMPLETION OR ALL GRADING AND EARTHWORK ACTIVITIES WITHIN A PARTICULAR AREA OF THE SITE. PERMANENT SEED MAY BE DISTRIBUTED WITH TEMPORARY SEED UPON THE FINAL APPLICATION OF TEMPORARY SEED.

SEEDING DATE	SEEDING MIXTURE	APPLICATION RATE
AUG 15 - APRIL 15	RYE (GRAIN)	30 LBS/AC
AUG 15 - APRIL 15	WHEAT	30 LBS/AC
APRIL 15 - AUG 15	GERMAN MILLET	10 LBS/AC
APRIL 15 - AUG 15	BROWNTOP MILLET	10 LBS/AC

SEEDING METHODS

1. EVENLY APPLY SEED USING A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. THIS MUST BE DONE WITHIN 48 HOURS OF LAND DISTURBING ACTIVITIES.
2. MULCH WITH CLEAN WHEAT STRAW.
3. AFTER SEEDING, APPLY MULCH TO AREAS UNDER HARSH CONDITIONS SUCH AS AREAS THAT HAVE BEEN GRADED, OR THOSE WHICH WILL RECEIVE CONCENTRATED FLOWS. AREAS CONSIDERED TO BE UNDER HARSH CONDITIONS WILL BE CONSIDERED THE AREAS GRADED FOR THE WETLAND VALLEY.
4. RESEED AND MULCH AREAS WHERE SEEDLING EMERGENCE IS LESS THAN 80% COVERAGE, OR WHERE EROSION OCCURS, AS SOON AS POSSIBLE. DO NOT MOW. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE.

NOTES

1. TEMPORARY ANNUAL SEED SELECTION SHOULD BE BASED ON SEASON OF PROJECT INSTALLATION.
2. A SINGLE SPECIES FOR TEMPORARY COVER IS ACCEPTABLE
3. IN SOME CASES WHERE SEASONS OVERLAP, A MIXTURE OF TWO OR MORE SPECIES MAY BE NECESSARY. HOWEVER, APPLICATION RATES SHOULD NOT EXCEED THE TOTAL RECOMMENDED RATE PER ACRE.
4. TEMPORARY SEED SHOULD BE MIXED AND APPLIED SIMULTANEOUSLY WITH THE PERMANENT SEED MIX IF OPTIMAL PLANTING DATES ALLOW.

NORTH CAROLINA PROFESSIONAL SEAL 049073 ENGINEER REBECCA STUBBS
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COLONIAL MITIGATION SITE
CONSTRUCTION PLANS
EDGECOMBE COUNTY, NORTH CAROLINA

ecoterra

PLAN INFORMATION

PROJECT NO.	ECT2101.01
FILENAME	ECT2101.01-EC
CHECKED BY	RAS
DRAWN BY	RHW
SCALE	
DATE	10.21.2021

EROSION CONTROL PLAN
SEEDING NOTES

EC1.01

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

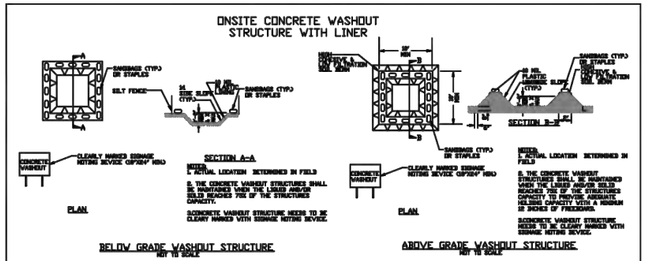
PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

NORTH CAROLINA Environmental Quality



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NORTH CAROLINA PROFESSIONAL SEAL 049073 ENGINEER REBECCA STUBBS
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NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

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COLONIAL MITIGATION SITE

CONSTRUCTION PLANS

EDGECOMBE COUNTY, NORTH CAROLINA

ecoterra

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EROSION CONTROL PLAN NOTES

EC1.02

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible.*** The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NORTH CAROLINA *Environmental Quality*

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19

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CONSTRUCTION PLANS
EDGECOMBE COUNTY, NORTH CAROLINA

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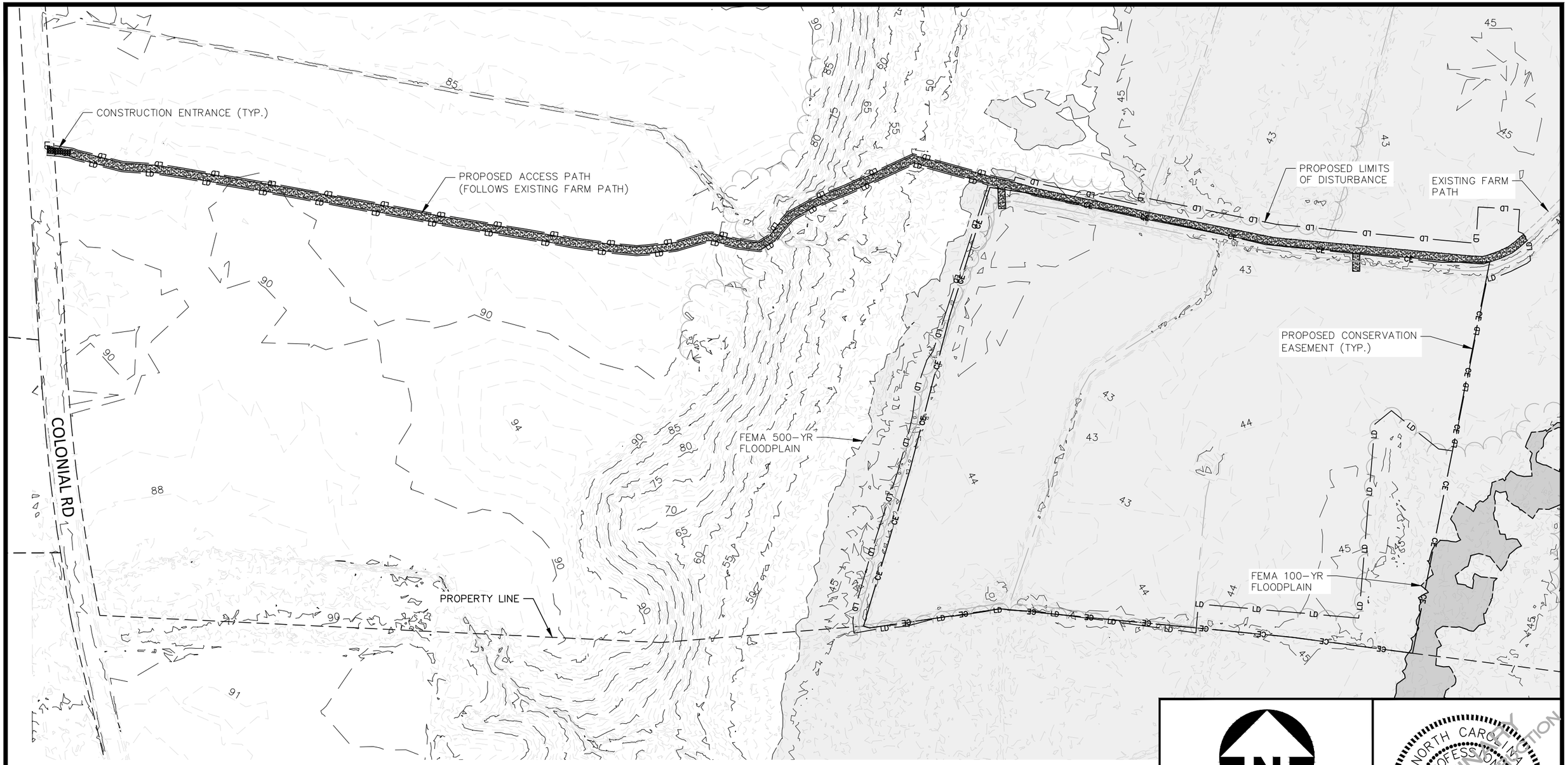
EROSION CONTROL PLAN NOTES

EC1.03



LOD OFFSET 1' FROM EXISTING FARM PATH

TOTAL DISTURBED AREA = 21.8 AC.

GRAPHIC SCALE

0 100 200 400

1 inch = 200 ft.

NORTH CAROLINA PROFESSIONAL SEAL 049073 ENGINEER REBECCA STUBBS

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COLONIAL MITIGATION SITE

CONSTRUCTION PLANS

EDGECOMBE COUNTY, NORTH CAROLINA

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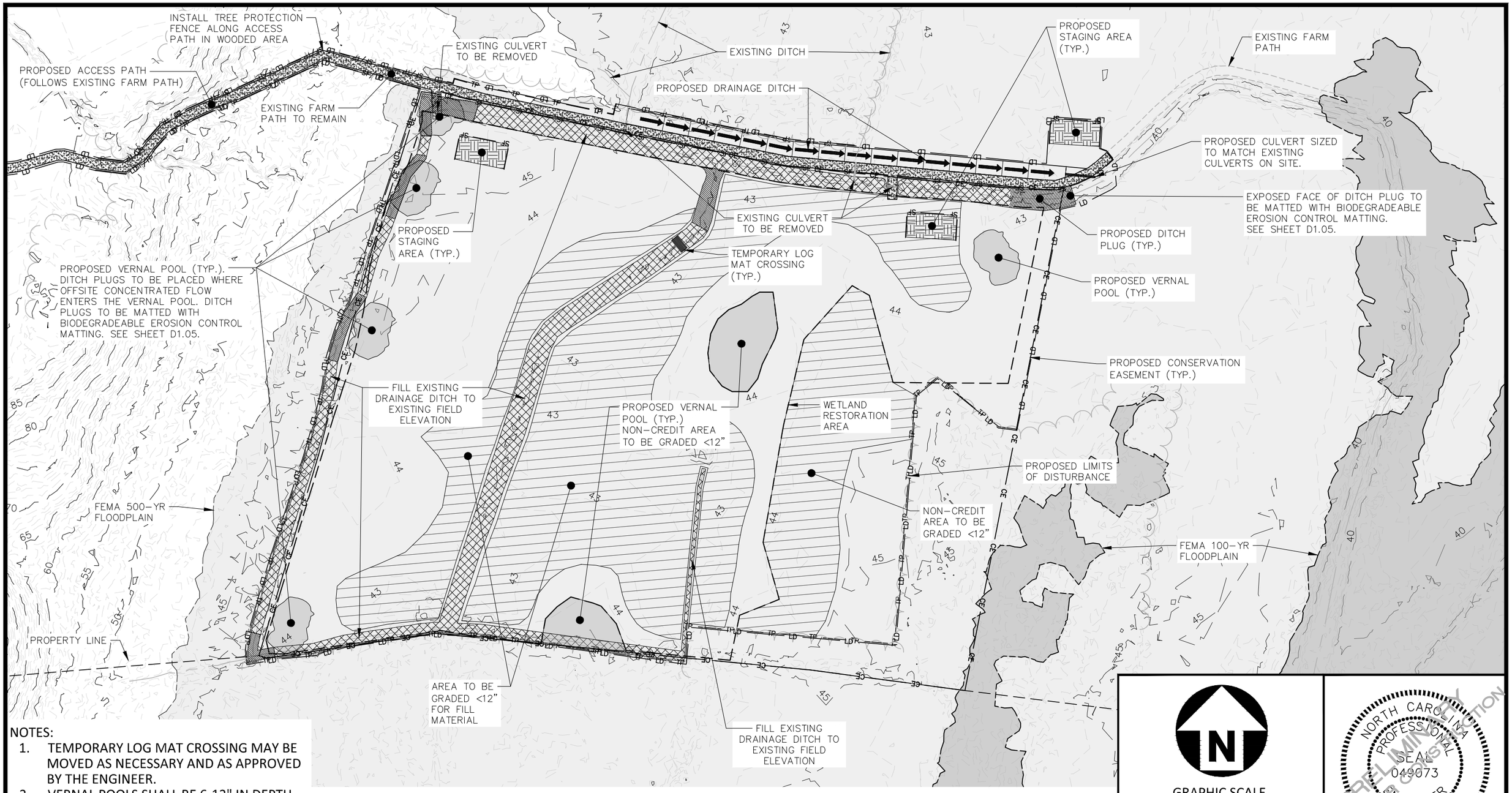
SCALE	1" = 200'
DATE	10.21.2021

EROSION CONTROL PLAN

CONSTRUCTION ACCESS

EC2.00



NOTES:

1. TEMPORARY LOG MAT CROSSING MAY BE MOVED AS NECESSARY AND AS APPROVED BY THE ENGINEER.
2. VERNAL POOLS SHALL BE 6-12" IN DEPTH.
3. VERNAL POOLS SHALL BE GRADED TO PROVIDE DIFFUSE FLOW TO THE WETLAND RESTORATION AREA.

TOTAL DISTURBED AREA = 21.8 AC.

GRAPHIC SCALE

0 75 150 300

1 inch = 150 ft.

NORTH CAROLINA PROFESSIONAL SEAL 049073 ENGINEER REBECCA STUBBS

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COLONIAL MITIGATION SITE

CONSTRUCTION PLANS

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DATE	10.21.2021

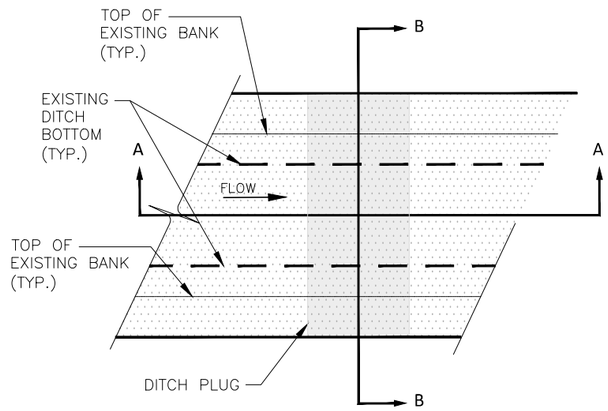
EROSION CONTROL PLAN

GRADING PLAN AND PROPOSED CONDITIONS

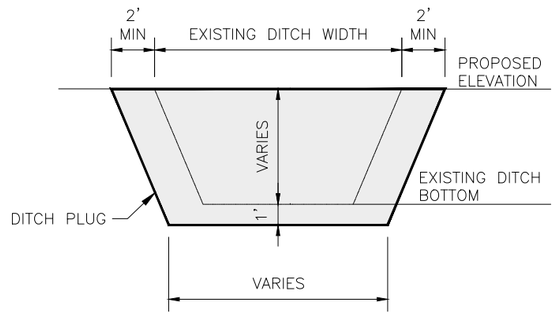
EC2.01

DITCH PLUG NOTES:

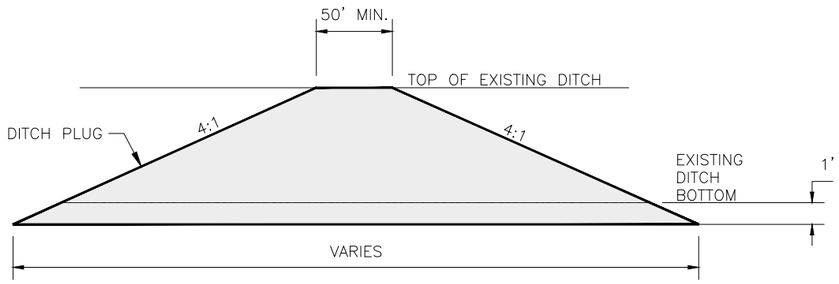
1. DITCH PLUGS TO BE LOCATED AS SHOWN ON PLAN SHEET EC2.01 AND AT OTHER LOCATIONS AS DIRECTED BY THE CONSTRUCTION MANAGER.
2. DITCH PLUG MATERIAL SHALL BE CLAY SOIL HARVESTED ON SITE OR BROUGHT INTO THE SITE.
3. DITCH PLUG MATERIAL SHALL BE FREE OF ALL VISIBLE ORGANIC DEBRIS SUCH AS ROOTS AND LIMBS. SOILS WITH ORGANIC MATTER CONTENT EXCEEDING 5% BY WEIGHT SHALL NOT BE USED.
4. ROCKS AND STONES WITH A DIAMETER GREATER THAN 3 INCHES (IN ANY DIRECTION) SHALL BE REMOVED FROM FILL PRIOR TO COMPACTION.
5. FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO THE SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REWORKED AND REPLACED WITH ACCEPTABLE MATERIALS.
6. TOPSOIL SHALL BE PLACED ON TOP OF THE SOIL LIFTS IN THE SAME MANOR AS THE REST OF THE GRADED CONSTRUCTION SITE
7. DITCH PLUGS WILL BE PLANTED ACCORDING TO THE PLANTING PLAN ON SHEETS EC1.01 AND L1.01.
8. MINIMUM DITCH PLUG LENGTH TO BE 100 LINEAR FEET.



PLAN VIEW



SECTION B-B'



SECTION A-A'

IMPERVIOUS DITCH PLUG

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COLONIAL MITIGATION SITE

CONSTRUCTION PLANS

EDGECOMBE COUNTY, NORTH CAROLINA

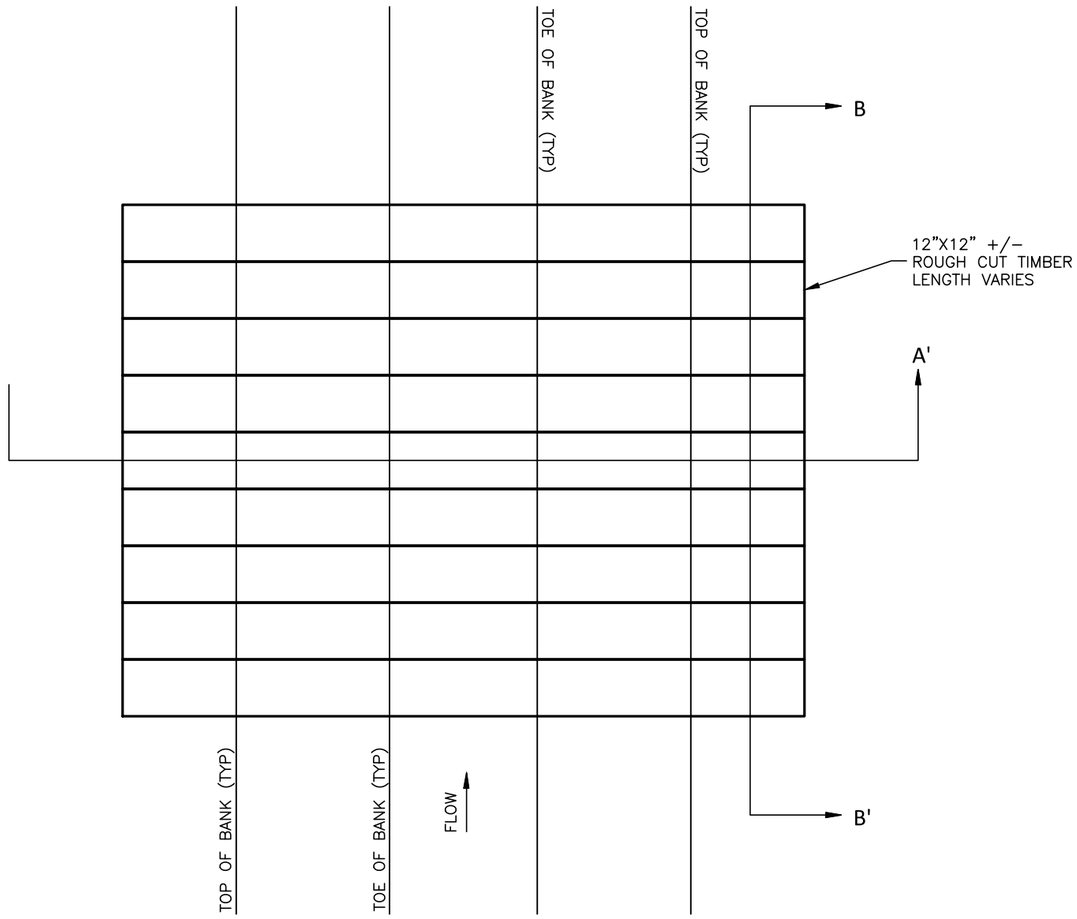
ecoterra

PLAN INFORMATION

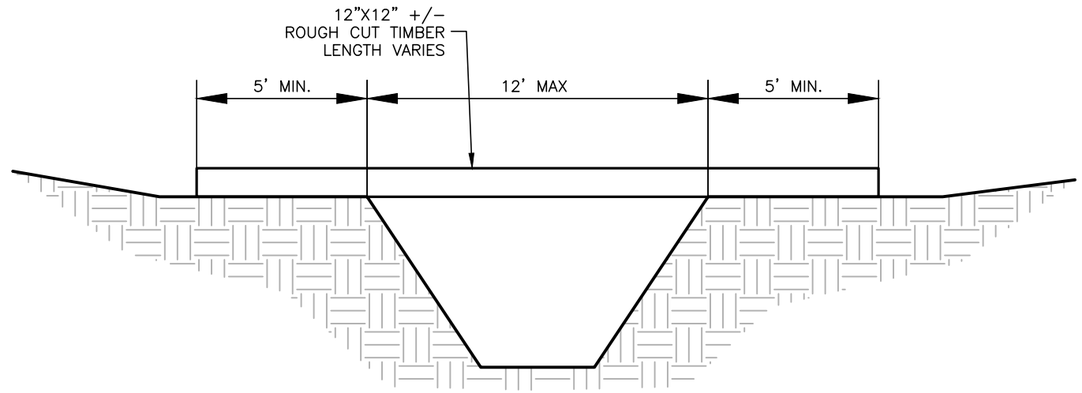
PROJECT NO.	ECT2101.01
FILENAME	ECT2101.01-D1
CHECKED BY	RAS
DRAWN BY	RHW
SCALE	
DATE	10.21.2021

DETAILS

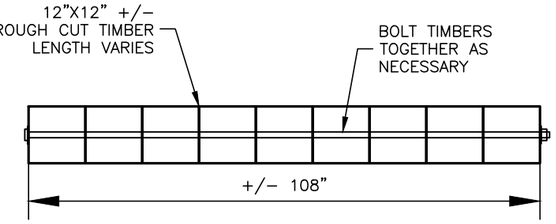
D1.00



PLAN VIEW



SECTION A - A'



SECTION B - B'

NOTE:
DETAIL PROVIDED FOR INFORMATIONAL PURPOSES.
USE OF LOG MAT IS AT THE CONTRACTORS DISCRETION.

LOG MAT
N.T.S.

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PLAN INFORMATION

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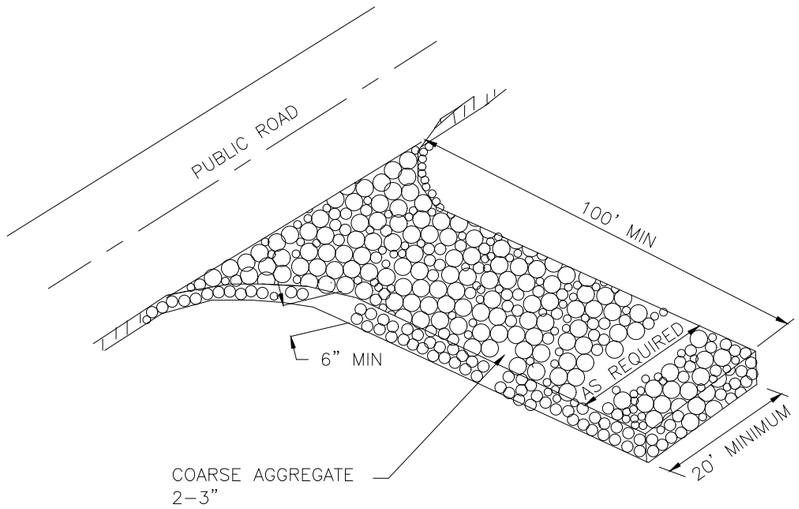
SCALE	
DATE	10.21.2021

DETAILS

D1.01



NOTES

1. GRAVEL PAD TO BE 20'X 100' AND 6" THICK MINIMUM.
2. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
3. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
4. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOP DRESSING WITH STONE SILL BE NECESSARY; KEEP SOME HANDY.
5. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.
6. APPLICABLE AT ALL POINTS OF INGRESS & EGRESS UNTIL SITE IS STABILIZED, FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.

MAINTENANCE

1. MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2–INCH STONE.
2. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY.
3. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

TEMPORARY CONSTRUCTION ENTRANCE/EXIT

N.T.S.

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PLAN INFORMATION

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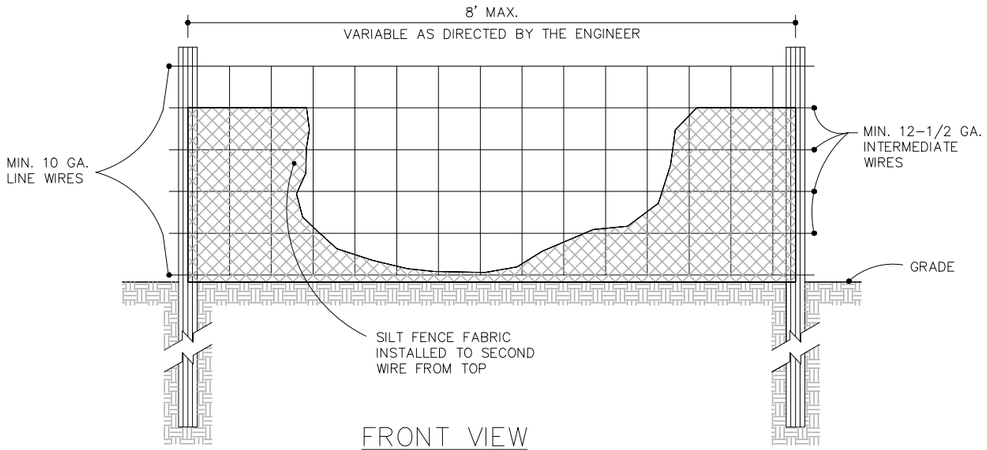
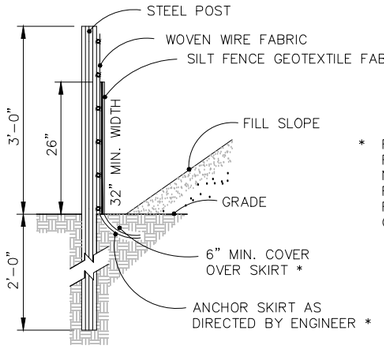
SCALE	
DATE	10.21.2021

DETAILS

D1.02



FRONT VIEW



SIDE VIEW

* FOR REPAIR OF SILT FENCE FAILURES, USE No. 57 WASHED STONE. FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

NOTES

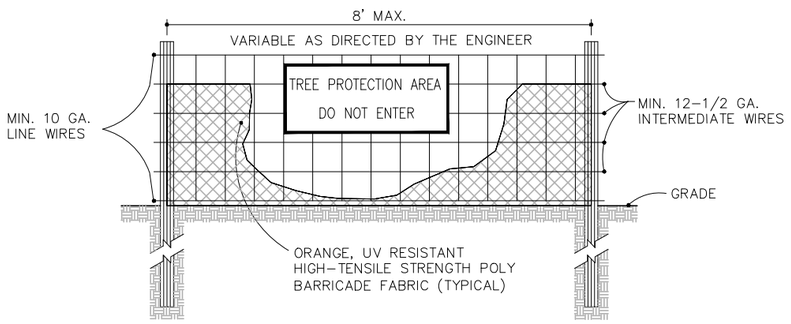
1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW
2. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.

MAINTENANCE

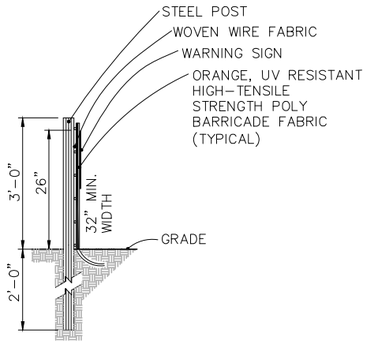
1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE

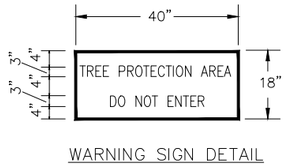
N.T.S.



FRONT VIEW



SIDE VIEW



WARNING SIGN DETAIL

WARNING SIGN DETAIL

NOTES

1. INSTALL FENCING AS SHOWN ON THESE PLANS.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.
4. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. ADDITIONAL SIGNS MAY BE REQUIRED BY GOVERNMENT ENTITIES BASED ON ACTUAL FIELD CONDITIONS.
5. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES REPAIR ANY DAMAGE TO THE CROWN, TRUNK OR ROOT SYSTEM IMMEDIATELY. REFER TO THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL CHAPTER 6 SECTIONS 6.05B AND 6.05C FOR DIRECTIONS ON WOUND REPAIR AND PRUNING OF DAMAGED TREES.
6. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.

MAINTENANCE

1. INSPECT TREE PROTECTION FENCES AT LEAST ONCE A WEEK. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

TREE PROTECTION FENCE

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COLONIAL MITIGATION SITE

CONSTRUCTION PLANS

EDGECOMBE COUNTY, NORTH CAROLINA

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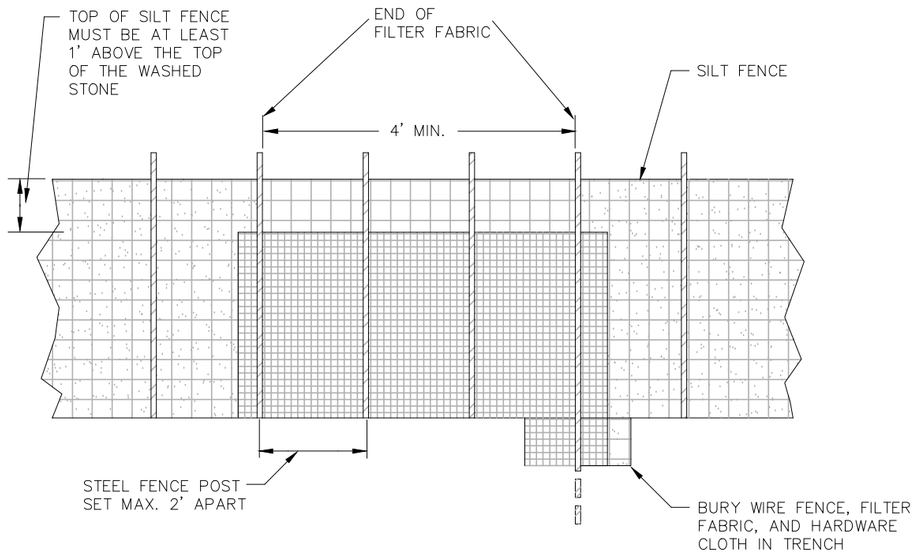
PLAN INFORMATION

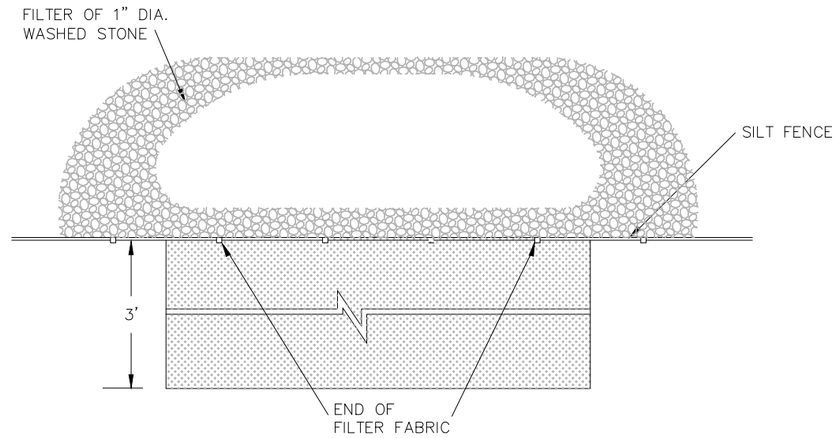
PROJECT NO.	ECT2101.01
FILENAME	ECT2101.01-D1
CHECKED BY	RAS
DRAWN BY	RHW
SCALE	
DATE	10.21.2021

DETAILS

D1.03



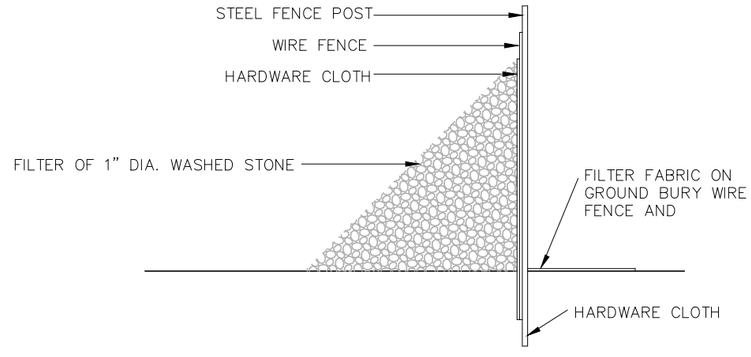
FRONT VIEW



PLAN VIEW

MAINTENANCE

1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.
3. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY
4. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
5. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
6. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



SECTION

SILT FENCE GRAVEL OUTLET

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PLAN INFORMATION

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CHECKED BY	RAS
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SCALE	
DATE	10.21.2021

DETAILS

D1.04

ROLLMAX™
ROLLED EROSION CONTROL

Specification Sheet
BioNet® C125BN™ Erosion Control Blanket

DESCRIPTION

The long-term double net erosion control blanket shall be a machine-produced mat of 100% coconut fiber with a functional longevity of up to 24 months. *(NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation)*. The blanket shall be of consistent thickness with the coconut evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with 100% biodegradable woven natural organic fiber netting. The netting shall consist of machine directional strands formed from two intertwined yarns with cross directional strands interwoven through the the twisted machine strands (commonly referred to as Leno weave) to form an approximate 0.50 x 1.0 in (1.27 x 2.54 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

The C125BN shall meet Type 4 specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17

Material Content		
Matrix	100% Coconut Fiber	0.5 lbs/sq yd (0.27 kg/sm)
Netting	Leno Woven 100% biodegradable jute	9.3 lbs/1000 sq ft (4.5 kg/100 sm)
	100% Biodegradable jute	7.7 lb/1000 sq ft (3.76 kg/100 sm)
Thread	Biodegradable	

Standard Roll Sizes		
Width	6.67 (2.03 m)	8.0 ft (2.4 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)
Weight ± 10%	52.22 lbs (23.69 kg)	65.25 lbs (29.61 kg)
Area	80 sq yd (66.9 sm)	100 sq yd (83.61 sm)
	Leno weave top only	Leno weave top and bottom

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.23 in. (5.84 mm)
Resiliency	ECTC Guidelines	85%
Water Absorbency	ASTM D1117	365%
Mass/Unit Area	ASTM 6475	9.79 oz/sy (333 g/sm)
Swell	ECTC Guidelines	40%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	0.11 oz-in
Light Penetration	ASTM D6567	16.2%
Tensile Strength - MD	ASTM D6818	206.4 lbs/ft (3.06 kN/m)
Elongation - MD	ASTM D6818	15.3%
Tensile Strength - TD	ASTM D6818	145.2 lbs/ft (2.15 kN/m)
Elongation - TD	ASTM D6818	12.9%
Biomass Improvement	ASTM 7322	473%

Design Permissible Shear Stress	
Unvegetated Shear Stress	2.35 psf (112 Pa)
Unvegetated Velocity	10.0 fps (3.05 m/s)

Slope Design Data: C Factors			
	Slope Gradients (S)		
Slope Length (L)	≤ 3:1	3:1 - 2.1	≥ 2:1
≤ 20 ft (6 m)	0.0001	0.018	0.050
20-50 ft	0.003	0.040	0.060
≥ 50 ft (15.2 m)	0.007	0.070	0.070

Roughness Coefficients – Unveg.	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.022
0.50 - 2.0 ft	0.022-0.014
≥ 2.0 ft (0.60 m)	0.014

NORTH AMERICAN GREEN®

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4609 E. Boonville-New Harmony Rd.
Evansville, IN 47725

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800-772-2040

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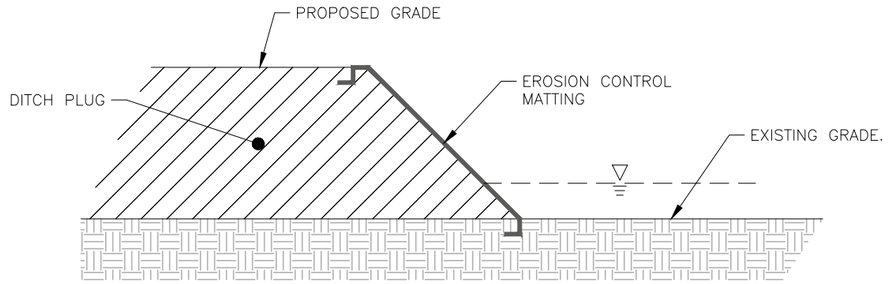

NOTES:
1. CONTRACTOR TO INSTALL EROSION CONTROL MATTING PER THE MANUFACTURES SPECIFICATIONS.

EROSION CONTROL MATTING
N.T.S.

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CONSTRUCTION PLANS
EDGECOMBE COUNTY, NORTH CAROLINA

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PLAN INFORMATION

PROJECT NO.	ECT2101.01
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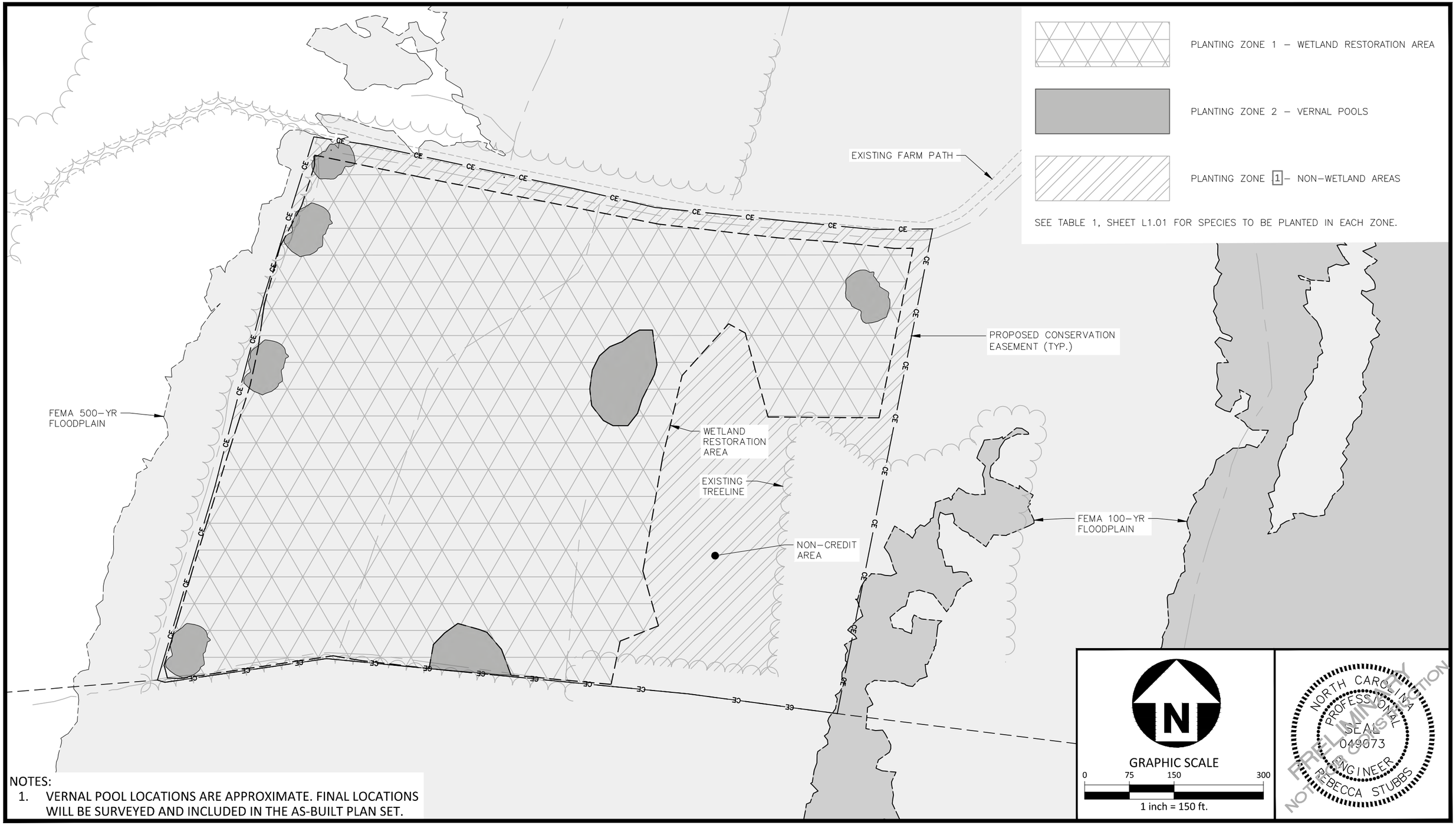
CHECKED BY	RAS
DRAWN BY	RHW
SCALE	
DATE	10.21.2021

DETAILS

D1.05



NOTES:

1. VERNAL POOL LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS WILL BE SURVEYED AND INCLUDED IN THE AS-BUILT PLAN SET.

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PLAN INFORMATION	
PROJECT NO.	ECT2101.01
FILENAME	ECT2101.01-L1
CHECKED BY	RAS
DRAWN BY	RHW
SCALE	1" = 150'
DATE	10.21.2021

PLANTING PLAN

L1.00

PLANTING NOTES:

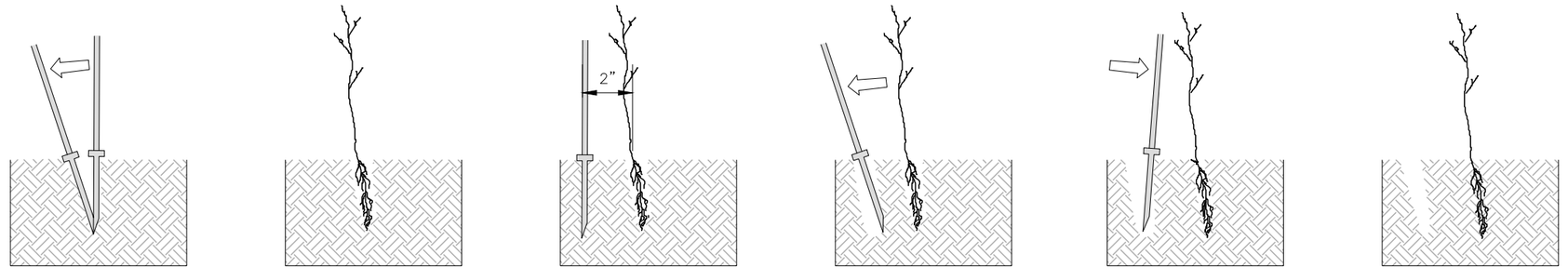
1. OBTAIN APPROPRIATE BARE-ROOT SEEDLINGS (18-24") AS AVAILABLE FROM VENDOR AND MIX ACCORDING TO EACH ZONE SPECIFIED IN TABLE 1 (RIGHT).
2. MAINTAIN SEEDLING INTEGRITY WITH ON-SITE OR OFF-SITE COOLING AS NECESSARY.
3. PLANT ACCORDING TO OPTIMAL WEATHER AND SOIL MOISTURE. PLANTING SHOULD NOT BE DONE DURING FREEZING (<32F) OR HIGH WIND (>10 MPH) CONDITIONS. MECHANICAL PLANTING SHOULD NOT OCCUR WITHIN 24 HOURS OF ANTECEDENT RAINFALL OR IF SITE CONDITIONS WILL RESULT IN RUTTING AND COMPACTION FROM PLANTING EQUIPMENT. SATURATED AREAS SHOULD BE HAND-PLANTED.
4. PLANTING SHALL OCCUR WITH A MECHANICAL PLANTER OR MANUALLY WITH TREE SPADES.
5. HERBICIDING WILL BE COMPLETED BY AN NC LICENSED APPLICATOR ACCORDING TO SITE CONDITIONS. AQUATIC-SAFE HERBICIDES WILL BE USED IF NECESSARY IN THE VICINITY OF SURFACE WATERS AND DITCHES.

TABLE 1: BARE-ROOT PLANTING

Scientific Name	Common Name	Vegetative Strata	Zone	Wetland Indicator Status	%
Quercus michauxii	Swamp chestnut oak	Canopy	1	FACW	10
Gordonia lasianthus	Loblolly bay	Understory	2	FACW	<5
Quercus pagoda	Cherrybark oak	Canopy	1	FACW	10
Carpinus caroliniana	Ironwood	Understory	1	FACW	<5
Quercus phellos	Willow oak	Canopy	2	FACW	15
Quercus laurifolia	Laurel oak	Canopy	1	FACW	15
Quercus nigra	Water oak	Canopy	1	FAC	15
Nyssa biflora	Swamp blackgum	Canopy	2	OBL	15
Magnolia virginiana	Sweetbay magnolia	Understory	2	FACW	<5
Ulmus americana	American elm	Canopy	1	FAC	<5
Persea palustris	Swamp bay	Understory	2	FACW	<5
Platanus occidentalis	Sycamore	Overstory	2	FACW	<5
Taxodium distichum	Bald cypress	Overstory	1	OBL	<5
Nyssa aquatica	Water tupelo	Overstory	1	FACW	<5
Quercus lyrata	Overcup oak	Overstory	2	OBL	10
Betula nigra	RIver Birch	Overstory	1	FACW	10
Cephalanthus occidentalis	Buttonbush	Understory	2	OBL	<5
Fraxinus pennsylvanica	Green ash	Overstory	1	FACW	<5
Quercus shumardii	Shumard oak	Overstory	1	FAC	10
Liriodendron tulipifera	Yellow poplar	Overstory	1	FACU	<5

NOTES:

1. THE SITE SHALL BE PLANTED WITH BARE ROOTS SPECIES LISTED IN TABLE 1 (ABOVE). SEE SHEET L1.00 FOR PLANTING ZONES.
2. DURING PLANTING, SEEDLINGS SHALL BE KEPT IN A MOIST CANVAS BAG OR SIMILAR CONTAINER TO PREVENT ROOT SYSTEMS FROM DRYING.
3. PLANTING BAR SHALL HAVE A BLADE WITH A TRIANGULAR CROSS SECTION, AND SHALL BE 12 INCHES LONG, 4 INCHES WIDE AND 1 INCH THICK AT CENTER.
4. ALL SEEDLINGS SHALL BE ROOT PRUNED, IF NECESSARY, SO THAT NO ROOTS EXTEND MORE THAN 10 INCHES BELOW THE ROOT COLLAR.



1. INSERT PLANTING BAR 12" INTO THE GROUND AS SHOWN AND PULL HANDLE TOWARD PLANTER.
2. REMOVE PLANTING BAR AND PLACE SEEDING AT CORRECT DEPTH.
3. INSERT PLANTING BAR 2 INCHES TOWARD PLANTER FROM SEEDING.
4. PULL HANDLE OF BAR TOWARD PLANTER, FIRMING SOIL AT BOTTOM.
5. PUSH HANDLE FORWARD FIRMING SOIL AT TOP
6. LEAVE COMPACTION HOLE OPEN WATER THOROUGHLY.

BARE ROOT PLANTING DETAIL

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COLONIAL MITIGATION SITE

CONSTRUCTION PLANS

EDGECOMBE COUNTY, NORTH CAROLINA

ecoterra

PLAN INFORMATION

PROJECT NO.	ECT2101.01
FILENAME	ECT2101.01-L1
CHECKED BY	RAS
DRAWN BY	RHW
SCALE	
DATE	10.21.2021

PLANTING DETAILS

L1.01

Appendix H

Conservation Easement

Doc ID: 003889540012 Type: CRP
Recorded: 02/14/2022 at 04:44:04 PM
Fee Amt: $26.00 Page 1 of 12
EDGECOMBE COUNTY, NORTH CAROLINA
Vila R. Anderson Register of Deeds
BK 1751 PG 124-135

STATE OF NORTH CAROLINA

DEED OF CONSERVATION EASEMENT AND RIGHT OF ACCESS PROVIDED PURSUANT TO FULL DELIVERY MITIGATION CONTRACT

EDGECOMBE COUNTY

SPO File Number: 33-LA-148
DMS Project Number: 100191

Prepared by: Office of the Attorney General
Property Control Section
Return to: NC Department of Administration
State Property Office
1321 Mail Service Center
Raleigh, NC 27699-1321

THIS DEED OF CONSERVATION EASEMENT AND RIGHT OF ACCESS, made this 14th day of February, 2022 by **Quincy Farms Family Limited Partnership,** (**"Grantor"**), whose mailing address is 3016 Harts Mill Run Rd. Tarboro, NC 27886, to the State of North Carolina, (**"Grantee"**), whose mailing address is State of North Carolina, Department of Administration, State Property Office, 1321 Mail Service Center, Raleigh, NC 27699-1321. The designations of Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine, or neuter as required by context.

WITNESSETH:

WHEREAS, pursuant to the provisions of N.C. Gen. Stat. § 143-214.8 et seq., the State of North Carolina has established the Division of Mitigation Services (formerly known as the Ecosystem Enhancement Program and Wetlands Restoration Program) within the Department of Environmental Quality (formerly Department of Environment and Natural Resources), for the purposes of acquiring, maintaining, restoring, enhancing, creating and preserving wetland and riparian resources that contribute to the protection and improvement of water quality, flood prevention, fisheries, aquatic habitat, wildlife habitat, and recreational opportunities; and

WHEREAS, this Conservation Easement from Grantor to Grantee has been negotiated, arranged and provided for as a condition of a full delivery contract between **Eco Terra Partners, LLC,** whose mailing address is 1328 Dekalb Ave Atlanta, GA 30307 and the North Carolina Department of Environmental Quality, to provide stream, wetland and/or buffer mitigation pursuant to the North Carolina Department of Environmental Quality Purchase and Services Contract Number **200207-01**.

WHEREAS, The State of North Carolina is qualified to be the Grantee of a Conservation Easement pursuant to N.C. Gen. Stat. § 121-35; and

WHEREAS, the Department of Environment and Natural Resources and the United States Army Corps of Engineers, Wilmington District entered into a Memorandum of Understanding, (MOU) duly executed by all parties on November 4, 1998. This MOU recognized that the Wetlands Restoration Program was to provide effective compensatory mitigation for authorized impacts to wetlands, streams and other aquatic resources by restoring, enhancing and preserving the wetland and riparian areas of the State; and

WHEREAS, the Department of Environment and Natural Resources, the North Carolina Department of Transportation and the United States Army Corps of Engineers, Wilmington District entered into a Memorandum of Agreement, (MOA) duly executed by all parties in Greensboro, NC on July 22, 2003, which recognizes that the Division of Mitigation Services (formerly Ecosystem Enhancement Program) is to provide for compensatory mitigation by effective protection of the land, water and natural resources of the State by restoring, enhancing and preserving ecosystem functions; and

WHEREAS, the Department of Environment and Natural Resources, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the North Carolina Wildlife Resources Commission, the North Carolina Division of Water Quality, the North Carolina Division of Coastal Management, and the National Marine Fisheries Service entered into an agreement to continue the In-Lieu Fee operations of the North Carolina Department of Natural Resources' Division of Mitigation Services (formerly Ecosystem Enhancement Program) with an effective date of 28 July, 2010, which supersedes and replaces the previously effective MOA and MOU referenced above; and

WHEREAS, the acceptance of this instrument for and on behalf of the State of North Carolina was granted to the Department of Administration by resolution as approved by the Governor and Council of State adopted at a meeting held in the City of Raleigh, North Carolina, on the 8th day of February 2000; and

WHEREAS, the Division of Mitigation Services in the Department of Environmental Quality (formerly Department of Environment and Natural Resources), which has been delegated the authority authorized by the Governor and Council of State to the Department of Administration, has approved acceptance of this instrument; and

WHEREAS, Grantor owns in fee simple certain real property situated, lying, and being in 01 Township, Edgecombe County, North Carolina (the "**Property**"), and being more particularly described as that certain parcel of land containing approximately **309.47 acres (deeded)** and being conveyed to the Grantor by deed as recorded in **Deed Book 1679 at Page 0092** of the Edgecombe County Registry, North Carolina; and

WHEREAS, Grantor is willing to grant a Conservation Easement and Right of Access over the herein described areas of the Property, thereby restricting and limiting the use of the areas of the Property subject to the Conservation Easement to the terms and conditions and purposes hereinafter set forth, and Grantee is willing to accept said Easement and Access Rights. The Conservation Easement shall be for the protection and benefit of the waters of the **Tar-Pamlico River.**

NOW, THEREFORE, in consideration of the mutual covenants, terms, conditions, and restrictions hereinafter set forth, Grantor unconditionally and irrevocably hereby grants and conveys unto Grantee, its successors and assigns, forever and in perpetuity, a Conservation Easement and Right of Access together with an access easement to and from the Conservation Easement Area described below.

The Conservation Easement Area consists of the following:

Tracts Number **472689809100** containing a total of 21.82 **acres** as shown on the plats of survey entitled "Final Plat, Conservation Easement for North Carolina Division of Mitigation Services, Project Name: **Colonial Farms Wetland Mitigation Site,** SPO File No. **33-LA-148,** DMS Site No. **100191,** Property of **Quincy Farms Family Limited Partnership,**" dated February 14, 2022 by **Gordon Strout,** PLS Number **L-2984** and recorded in the Edgecombe County, North Carolina Register of Deeds at **Plat Book** _____ **Pages** _____.

See attached "**Exhibit A**", Legal Description of area of the Property hereinafter referred to as the "Conservation Easement Area"

The purposes of this Conservation Easement are to maintain, restore, enhance, construct, create and preserve wetland and/or riparian resources in the Conservation Easement Area that contribute to the protection and improvement of water quality, flood prevention, fisheries, aquatic habitat, wildlife habitat, and recreational opportunities; to maintain permanently the Conservation Easement Area in its natural condition, consistent with these purposes; and to prevent any use of the Easement Area that will significantly impair or interfere with these purposes. To achieve these purposes, the following conditions and restrictions are set forth:

I. DURATION OF EASEMENT

Pursuant to law, including the above referenced statutes, this Conservation Easement and Right of Access shall be perpetual and it shall run with, and be a continuing restriction upon the use of, the Property, and it shall be enforceable by the Grantee against the Grantor and against Grantor's heirs, successors and assigns, personal representatives, agents, lessees, and licensees.

II. ACCESS EASEMENT

[GENERAL LOCATION OPTION] Grantor hereby grants and conveys unto Grantee, its employees, agents, successors and assigns, a perpetual, non-exclusive easement for ingress and egress over and upon the Property at all reasonable times and at such location as practically necessary to access the Conservation Easement Area for the purposes set forth herein ("Access Easement"). This grant of easement shall not vest any rights in the public and shall not be construed as a public dedication of the Access Easement. Grantor covenants, represents and warrants that it is the sole owner of and is seized of the Property in fee simple and has the right to grant and convey this Access Easement.

III. GRANTOR RESERVED USES AND RESTRICTED ACTIVITIES

The Conservation Easement Area shall be restricted from any development or usage that would impair or interfere with the purposes of this Conservation Easement. Unless expressly reserved as a compatible use herein, any activity in, or use of, the Conservation Easement Area by the Grantor is prohibited as inconsistent with the purposes of this Conservation Easement. Any rights not expressly reserved hereunder by the Grantor have been acquired by the Grantee. Any rights not expressly reserved hereunder by the Grantor, including the rights to all mitigation credits, including, but not limited to, stream, wetland, and riparian buffer mitigation units, derived from each site within the area of the Conservation Easement, are conveyed to and belong to the Grantee. Without limiting the generality of the foregoing, the following specific uses are prohibited, restricted, or reserved as indicated:

A. Recreational Uses. Grantor expressly reserves the right to undeveloped recreational uses, including hiking, bird watching, hunting and fishing, and access to the Conservation Easement Area for the purposes thereof.

B. Motorized Vehicle Use. Motorized vehicle use in the Conservation Easement Area is prohibited except within a Crossing Area(s) or Road or Trail as shown on the recorded survey plat.

C. Educational Uses. The Grantor reserves the right to engage in and permit others to engage in educational uses in the Conservation Easement Area not inconsistent with this Conservation Easement, and the right of access to the Conservation Easement Area for such purposes including organized educational activities such as site visits and observations. Educational uses of the property shall not alter vegetation, hydrology or topography of the site.

D. **Damage to Vegetation.** Except within Crossing Area(s) as shown on the recorded survey plat and as related to the removal of non-native plants, diseased or damaged trees, or vegetation that destabilizes or renders unsafe the Conservation Easement Area to persons or natural habitat, all cutting, removal, mowing, harming, or destruction of any trees and vegetation in the Conservation Easement Area is prohibited.

E. Industrial, Residential and Commercial Uses. All industrial, residential and commercial uses are prohibited in the Conservation Easement Area.

F. Agricultural Use. All agricultural uses are prohibited within the Conservation Easement Area including any use for cropland, waste lagoons, or pastureland.

G. New Construction. There shall be no building, facility, mobile home, antenna, utility pole, tower, or other structure constructed or placed in the Conservation Easement Area.

H. **Roads and Trails.** There shall be no construction or maintenance of new roads, trails, walkways, or paving in the Conservation Easement.

All existing roads, trails and crossings within the Conservation Easement Area shall be shown on the recorded survey plat.

I. Signs. No signs shall be permitted in the Conservation Easement Area except interpretive signs describing restoration activities and the conservation values of the Conservation Easement Area, signs identifying the owner of the Property and the holder of the Conservation Easement, signs giving directions, or signs prescribing rules and regulations for the use of the Conservation Easement Area.

J. Dumping or Storing. Dumping or storage of soil, trash, ashes, garbage, waste, abandoned vehicles, appliances, machinery, or any other material in the Conservation Easement Area is prohibited.

K. Grading, Mineral Use, Excavation, Dredging. There shall be no grading, filling, excavation, dredging, mining, drilling, hydraulic fracturing; removal of topsoil, sand, gravel, rock, peat, minerals, or other materials.

L. Water Quality and Drainage Patterns. There shall be no diking, draining, dredging, channeling, filling, leveling, pumping, impounding or diverting, causing, allowing or permitting the diversion of surface or underground water in the Conservation Easement Area. No altering or tampering with water control structures or devices, or disruption or alteration of the restored, enhanced, or created drainage patterns is allowed. All removal of wetlands, polluting or discharging into waters, springs, seeps, or wetlands, or use of pesticide or biocides in the Conservation Easement Area is prohibited. In the event of an emergency interruption or shortage of all other water sources, water from within the Conservation Easement Area may temporarily be withdrawn for good cause shown as needed for the survival of livestock on the Property.

M. Subdivision and Conveyance. Grantor voluntarily agrees that no further subdivision, partitioning, or dividing of the Conservation Easement Area portion of the Property owned by the Grantor in fee simple ("fee") that is subject to this Conservation Easement is allowed. Any future transfer of the Property shall be subject to this Conservation Easement and Right of Access and to the Grantee's right of unlimited and repeated ingress and egress over and across the Property to the Conservation Easement Area for the purposes set forth herein.

N. Development Rights. All development rights are permanently removed from the Conservation Easement Area and are non-transferrable.

O. Disturbance of Natural Features. Any change, disturbance, alteration or impairment of the natural features of the Conservation Easement Area or any intentional introduction of non-native plants, trees and/or animal species by Grantor is prohibited.

The Grantor may request permission to vary from the above restrictions for good cause shown, provided that any such request is not inconsistent with the purposes of this Conservation Easement, and the Grantor obtains advance written approval from the Division of Mitigation Services, 1652 Mail Services Center, Raleigh, NC 27699-1652.

IV. GRANTEE RESERVED USES

A. Right of Access, Construction, and Inspection. The Grantee, its employees, agents, successors and assigns, shall have a perpetual Right of Access over and upon the Conservation Easement Area to undertake or engage in any activities necessary to construct, maintain, manage, enhance, repair, restore, protect, monitor and inspect the stream, wetland and any other riparian resources in the Conservation Easement Area for the purposes set forth herein or any long-term management plan for the Conservation Easement Area developed pursuant to this Conservation Easement.

B. Restoration Activities. These activities include planting of trees, shrubs and herbaceous vegetation, installation of monitoring wells, utilization of heavy equipment to grade, fill, and prepare the soil, modification of the hydrology of the site, and installation of natural and manmade materials as needed to direct in-stream, above ground, and subterraneous water flow.

C. Signs. The Grantee, its employees and agents, successors or assigns, shall be permitted to place signs and witness posts on the Property to include any or all of the following: describe the project, prohibited activities within the Conservation Easement, or identify the project boundaries and the holder of the Conservation Easement.

D. Fences. Conservation Easements are purchased to protect the investments by the State (Grantee) in natural resources. Livestock within conservations easements damages the investment and can result in reductions in natural resource value and mitigation credits which would cause financial harm to the State. Therefore, Landowners (Grantor) with livestock are required to restrict livestock access to the Conservation Easement area. Repeated failure to do so may result in the State (Grantee) repairing or installing livestock exclusion devices (fences) within the conservation area for the purpose of restricting livestock access. In such cases, the landowner (Grantor) must provide access to the State (Grantee) to make repairs.

E. Crossing Area(s). The Grantee is not responsible for maintenance of crossing area(s), however, the Grantee, its employees and agents, successors or assigns, reserve the right to repair crossing area(s), at its sole discretion and to recover the cost of such repairs from the Grantor if such repairs are needed as a result of activities of the Grantor, his successors or assigns.

V. ENFORCEMENT AND REMEDIES

A. Enforcement. To accomplish the purposes of this Conservation Easement, Grantee is allowed to prevent any activity within the Conservation Easement Area that is inconsistent with

the purposes of this Conservation Easement and to require the restoration of such areas or features in the Conservation Easement Area that may have been damaged by such unauthorized activity or use. Upon any breach of the terms of this Conservation Easement by Grantor, the Grantee shall, except as provided below, notify the Grantor in writing of such breach and the Grantor shall have ninety (90) days after receipt of such notice to correct the damage caused by such breach. If the breach and damage remains uncured after ninety (90) days, the Grantee may enforce this Conservation Easement by bringing appropriate legal proceedings including an action to recover damages, as well as injunctive and other relief. The Grantee shall also have the power and authority, consistent with its statutory authority: (a) to prevent any impairment of the Conservation Easement Area by acts which may be unlawful or in violation of this Conservation Easement; (b) to otherwise preserve or protect its interest in the Property; or (c) to seek damages from any appropriate person or entity. Notwithstanding the foregoing, the Grantee reserves the immediate right, without notice, to obtain a temporary restraining order, injunctive or other appropriate relief, if the breach is or would irreversibly or otherwise materially impair the benefits to be derived from this Conservation Easement, and the Grantor and Grantee acknowledge that the damage would be irreparable and remedies at law inadequate. The rights and remedies of the Grantee provided hereunder shall be in addition to, and not in lieu of, all other rights and remedies available to Grantee in connection with this Conservation Easement.

B. Inspection. The Grantee, its employees and agents, successors and assigns, have the right, with reasonable notice, to enter the Conservation Easement Area over the Property at reasonable times for the purpose of inspection to determine whether the Grantor is complying with the terms, conditions and restrictions of this Conservation Easement.

C. Acts Beyond Grantor's Control. Nothing contained in this Conservation Easement shall be construed to entitle Grantee to bring any action against Grantor for any injury or change in the Conservation Easement Area caused by third parties, resulting from causes beyond the Grantor's control, including, without limitation, fire, flood, storm, and earth movement, or from any prudent action taken in good faith by the Grantor under emergency conditions to prevent, abate, or mitigate significant injury to life or damage to the Property resulting from such causes.

D. Costs of Enforcement. Beyond regular and typical monitoring expenses, any costs incurred by Grantee in enforcing the terms of this Conservation Easement against Grantor, including, without limitation, any costs of restoration necessitated by Grantor's acts or omissions in violation of the terms of this Conservation Easement, shall be borne by Grantor.

E. No Waiver. Enforcement of this Easement shall be at the discretion of the Grantee and any forbearance, delay or omission by Grantee to exercise its rights hereunder in the event of any breach of any term set forth herein shall not be construed to be a waiver by Grantee.

VI. MISCELLANEOUS

A. This instrument sets forth the entire agreement of the parties with respect to the Conservation Easement and supersedes all prior discussions, negotiations, understandings or agreements relating to the Conservation Easement. If any provision is found to be invalid, the remainder of the provisions of the Conservation Easement, and the application of such provision

to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

B. Grantor is responsible for any real estate taxes, assessments, fees, or charges levied upon the Property. Grantee shall not be responsible for any costs or liability of any kind related to the ownership, operation, insurance, upkeep, or maintenance of the Property, except as expressly provided herein. Upkeep of any constructed bridges, fences, or other amenities on the Property are the sole responsibility of the Grantor. Nothing herein shall relieve the Grantor of the obligation to comply with federal, state or local laws, regulations and permits that may apply to the exercise of the Reserved Rights.

C. Any notices shall be sent by registered or certified mail, return receipt requested to the parties at their addresses shown herein or to other addresses as either party establishes in writing upon notification to the other.

D. Grantor shall notify Grantee in writing of the name and address and any party to whom the Property or any part thereof is to be transferred at or prior to the time said transfer is made. Grantor further agrees that any subsequent lease, deed, or other legal instrument by which any interest in the Property is conveyed is subject to the Conservation Easement herein created.

E. The Grantor and Grantee agree that the terms of this Conservation Easement shall survive any merger of the fee and easement interests in the Property or any portion thereof.

F. This Conservation Easement and Right of Access may be amended, but only in writing signed by all parties hereto, or their successors or assigns, if such amendment does not affect the qualification of this Conservation Easement or the status of the Grantee under any applicable laws, and is consistent with the purposes of the Conservation Easement. The owner of the Property shall notify the State Property Office and the U.S. Army Corps of Engineers in writing sixty (60) days prior to the initiation of any transfer of all or any part of the Property or of any request to void or modify this Conservation Easement. Such notifications and modification requests shall be addressed to:

Division of Mitigation Services Program Manager
NC State Property Office
1321 Mail Service Center
Raleigh, NC 27699-1321

and

General Counsel
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403

G. The parties recognize and agree that the benefits of this Conservation Easement are in gross and assignable provided, however, that the Grantee hereby covenants and agrees, that in the event it transfers or assigns this Conservation Easement, the organization receiving the interest will be a qualified holder under N.C. Gen. Stat. § 121-34 et seq. and § 170(h) of the Internal Revenue Code, and the Grantee further covenants and agrees that the terms of the transfer or assignment will be such that the transferee or assignee will be required to continue in perpetuity the conservation purposes described in this document.

VII. QUIET ENJOYMENT

Grantor reserves all remaining rights accruing from ownership of the Property, including the right to engage in or permit or invite others to engage in only those uses of the Conservation Easement Area that are expressly reserved herein, not prohibited or restricted herein, and are not inconsistent with the purposes of this Conservation Easement. Without limiting the generality of the foregoing, the Grantor expressly reserves to the Grantor, and the Grantor's invitees and licensees, the right of access to the Conservation Easement Area, and the right of quiet enjoyment of the Conservation Easement Area,

TO HAVE AND TO HOLD, the said rights and easements perpetually unto the State of North Carolina for the aforesaid purposes,

AND Grantor covenants that Grantor is seized of the Property in fee and has the right to convey the permanent Conservation Easement herein granted; that the same is free from encumbrances and that Grantor will warrant and defend title to the same against the claims of all persons whomsoever.

IN TESTIMONY, WHEREOF, the Grantor has hereunto set his hand and seal, the day and year first above written.

QUINCY FARMS FAMILY LIMITED PARTNERSHIP

_____ (SEAL)
THOMAS P. QUINCY, President of Quincy Farms, Inc., General Partner

NORTH CAROLINA
COUNTY OF EDGECOMBE

I, Phyllis Annette Mueller, a Notary Public in and for the County and State aforesaid, do hereby certify that **Thomas P Quincy**, Grantor, personally appeared before me this day and acknowledged that he is the PRESIDENT of QUINCY FAMMS, INC., a North Carolina corporation which is the General Partner of QUINCY FARMS FAMILY LIMITED PARTNERSHIP, a North Carolina partnership, and that as PRESIDENT, being authorized to do so, executed the foregoing on behalf of the Partnership.

IN WITNESS, WHEREOF, I have hereunto set my hand and Notary Seal this the 14th day of February, 2022.

_____
Notary Public

My commission expires:

12-29-2024

PHYLLIS ANNETTE MUELLER
NOTARY PUBLIC
Edgecombe County, North Carolina
My Commission Expires December 29, 2024

IN TESTIMONY, WHEREOF, the Grantor has hereunto set his hand and seal, the day and year first above written.

QUINCY FARMS FAMILY LIMITED PARTNERSHIP

_____ (SEAL)
HUNTER T. QUINCY, Limited Partner

NORTH CAROLINA
COUNTY OF EDGECOMBE

I, Phyllis Annette Mueller, a Notary Public in and for the County and State aforesaid, do hereby certify that **Hunter T Quincy**, Limited Partner of Quincy Farms Family Limited Partnership, Grantor, personally appeared before me this day and acknowledged the execution of the foregoing instrument.

IN WITNESS, WHEREOF, I have hereunto set my hand and Notary Seal this the 14th day of February, 2022.

Phyllis Annette Mueller
Notary Public

My commission expires:

12-29-2024

PHYLLIS ANNETTE MUELLER
NOTARY PUBLIC
Edgecombe County, North Carolina
My Commission Expires December 29, 2024

Exhibit A

COLONIAL FARM CONSERVATION EASEMENT
21.82 ACRES +/-

A CERTAIN PART OR PARCEL OF LAND BEING A CONSERVATION EASEMENT, SITUATE IN THE TOWN OF TARBORO, COUNTY OF EDGECOMBE, STATE OF NORTH CAROLINA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING FROM A NATIONAL GEODETIC SURVEY (NGS) MONUMENT DESIGNATED AS "CURING" WITH PUBLISHED NORTH CAROLINA STATE PLANE (NAD 83(2001)) NORTHING OF 774080.06 FEET AND EASTING OF 2428214.35 FEET, PROCEED:
THENCE S14°50'08"E A DISTANCE OF 5,088.78 FEET TO A POINT WITHIN THE LAND NOW OR FORMERLY OWNED BY QUINCY FARMS FAMILY LIMITED PARTNERSHIP (DEED BOOK 1679, PAGE 92-100), SAID POINT ALSO BEING THE POINT OF BEGINNING. DEPARTING THE POINT OF BEGINNING AND PROCEED THROUGH THE AFOREMENTIONED LAND OF QUINCY FARMS FAMILY LIMITED PARTNERSHIP FOR THE FOLLOWING THREE (3) CALLS:

1. THENCE S78°32'07"E A DISTANCE OF 617.05 FEET TO A POINT,
2. THENCE S84°42'13"E A DISTANCE OF 448.84 FEET TO A POINT,
3. THENCE S11°10'54"W A DISTANCE OF 813.96 FEET TO THE COMMON LINE OF THE AFOREMENTIONED LAND OF QUINCY FARMS FAMILY LIMITED PARTNERSHIP, AND LAND NOW OR FORMERLY OWNED BY DUNN F. MARSHALL JR., ET AL (DEED BOOK 1587, PAGE 680-681).

PROCEED ALONG THE AFOREMENTIONED COMMON LINE FOR THE FOLLOWING TWO (2) CALLS:

1. THENCE N85°05'05"W A DISTANCE OF 921.01 FEET TO A POINT,
2. THENCE S79°54'55"W A DISTANCE OF 291.16 FEET TO A.

PROCEED THROUGH THE AFOREMENTIONED LAND OF QUINCY FARMS FAMILY LIMITED PARTNERSHIP FOR THE REMAINDER OF THIS DESCRIPTION:
THENCE N18°22'31"E A DISTANCE OF 984.87 FEET BACK TO THE POINT OF BEGINNING, ALTOGETHER CONTAINING 21.82 ACRES (950,378 SQUARE FEET) OF LAND, MORE OR LESS, AS SHOWN ON "CONSERVATION EASEMENT SURVEY FOR THE STATE OF NORTH CAROLINA, DIVISION OF MITIGATION SERVICES, PROJECT: COLONIAL FARMS (SPO FILE #33-la-148; DMS PROJECT 100191), (DWR#: 2021-0399v1, USACE ACTION ID: SAW-2021-00346)" PREPARED BY GORDON S. STROUT, PLS OF ARCADIS U.S., INC. DATED DECEMBER 8, 2021 (PROJECT NUMBER 30093749). THE CONSERVATION EASEMENT IS ACCESSIBLE FROM COLONIAL FARMS ROAD VIA A FARM ROAD AS SHOWN IN AN INSET DETAIL CALLED "DETAIL OF EASEMENT ACCESS FROM ROAD" ON THE AFOREMENTIONED PLAT BY GORDON S. STROUT, PLS.

PC 13 / Slide 225

LEGEND:

- PROPERTY LINE
- CONSERVATION EASEMENT
- OHC — OVERHEAD POWER
- TOP OF BANK
- FLOW LINE/EDGE OF WATER
- MAJOR CONTOUR
- MINOR CONTOUR
- NGS MONUMENT
- EXISTING CONCRETE MONUMENT
- EXISTING PROPERTY MARKER
- 101 5/8" IRON REBAR WITH CAP SET (SEE NOTE 5)
- POWER POLE
- GUY ANCHOR & WIRE

CONC.	CONCRETE	N/F	NOW OR FORMERLY
℄	CENTERLINE	NO	NUMBER
(D)	DEED MEASUREMENT	PG	PAGE
DB	DEED BOOK	POB	POINT OF BEGINNING
E	EASTING (GRID UNLESS NOTED)	POC	POINT OF COMMENCEMENT
		RCP	REINFORCED CONCRETE PIPE
EL	ELEVATION	STA	STATION
ID	IDENTIFICATION	VAL	VALUATION MAP (SHOWN PER)
(M)	SURVEYED MEASUREMENT		
MP	MILEPOST		
N	NORTHING (GRID UNLESS NOTED)		

NOTES:

1. ALL DISTANCES SHOWN ON THIS PLAT ARE GROUND DISTANCES. COMBINED FACTOR = 0.99995563 PER MONUMENT "LEGGETT RM 3", PID #EY4549. DISTANCES AND COORDINATES ARE SHOWN IN US SURVEY FEET.
2. BASIS OF BEARING IS NORTH CAROLINA STATE PLANE NORTH AMERICAN DATUM OF 1983 (2011).
3. ACCESS TO EASEMENT FROM NC DOT RIGHT-OF-WAY THROUGH GRANTOR OWNED PARCEL VIA FARM PATH AS SHOWN.
4. INFORMATION SHOWN HEREON TAKEN FROM AN ACTUAL FIELD SURVEY PERFORMED BY SURVEY AND MAPPING, LLC (S.A.M.) ON AUGUST 10, 2021.
5. THE CONTRACTOR SHALL SET 5/8" REBAR 30" IN LENGTH WITH 3-1/4" ALUMINUM CAPS ON ALL EASEMENT CORNERS. SURVEY CAPS SHALL MEET DMS SPECIFICATIONS (BERNTSEN RBD5325, IMPRINTED WITH NC STATE LOGO # B9087 OR EQUIVALENT). AFTER INSTALLATION, CAPS SHALL BE STAMPED WITH THE CORRESPONDING NUMBER FROM THE TABLE OF COORDINATES ON THE SURVEY.
6. THE SOUTHERN BOUNDARY OF THE CONSERVATION EASEMENT SHOWN HEREON FOLLOWS THE PROPERTY LINE AS DESCRIBED IN DEED BOOK 1587, PAGE 680-681, AND FURTHER SHOWN ON "MAP OF PROPERTY OF F. MARSHALL DUNN, JR." BY DONALD S. HILHORST, PLS, DATED AUGUST 23, 2013 (UNRECORDED).

   A DISCREPANCY EXISTS BETWEEN DEED BOOK 1679, PAGE 92-100 AND BOOK 1587, PAGE 680-681.

POINT COORDINATE TABLE		
POINT No.	GRID NORTHING	GRID EASTING
1,301	769,160.63	2,429,517.89
1,302	769,037.98	2,430,122.63
1,303	768,996.55	2,430,589.55
1,304	768,198.05	2,430,411.70
1,305	768,276.96	2,429,494.09
1,306	768,225.98	2,429,207.42

REFERENCES:

1. "MAP OF PROPERTY OF F. MARSHALL DUNN, JR." BY DONALD S. HILHORST, PLS, DATED AUGUST 23, 2013 (UNRECORDED).
2. NORTH CAROLINA DEED OF GIFT, DATED SEPTEMBER 11, 2012, RECORDED IN EDGECOMBE COUNTY AT BOOK 1587, PAGES 680-681.
3. DEED, DATED MAY 17, 2018, RECORDED IN EDGECOMBE COUNTY AT BOOK 1679, PAGES 92-100.

REVIEW OFFICER:

I, Kaithin Kuel, REVIEW OFFICER OF EDGECOMBE COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER

2-14-22
DATE

CERTIFICATE OF OWNERSHIP AND DEDICATION:

I (WE) HEREBY CERTIFY THAT I (WE) AM (ARE) THE OWNER(S) OF THE PROPERTY AS SHOWN AND DESCRIBED HEREON, I (WE) ALSO HEREBY ACCEPT AND ADOPT THIS RECORDED PLAT AND CONSERVATION EASEMENT WITH MY (OUR) FREE CONSENT AND DEDICATE ALL EASEMENTS, RIGHTS-OF-WAY, AND ACCESS ROADS TO PUBLIC AND/OR PRIVATE USE AS NOTED ON SAID PLAT.

Thomas Paul Quinn — 2-14-22
OWNER SIGNATURE — DATE

Thomas Paul Quinn
OWNER NAME

2/14/22
OWNER SIGNATURE — DATE

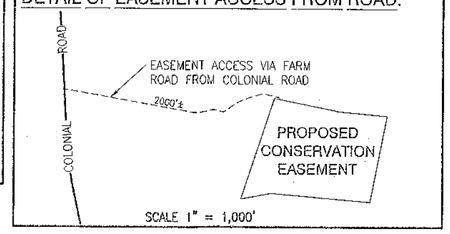
Hunter T. Quinn
OWNER NAME

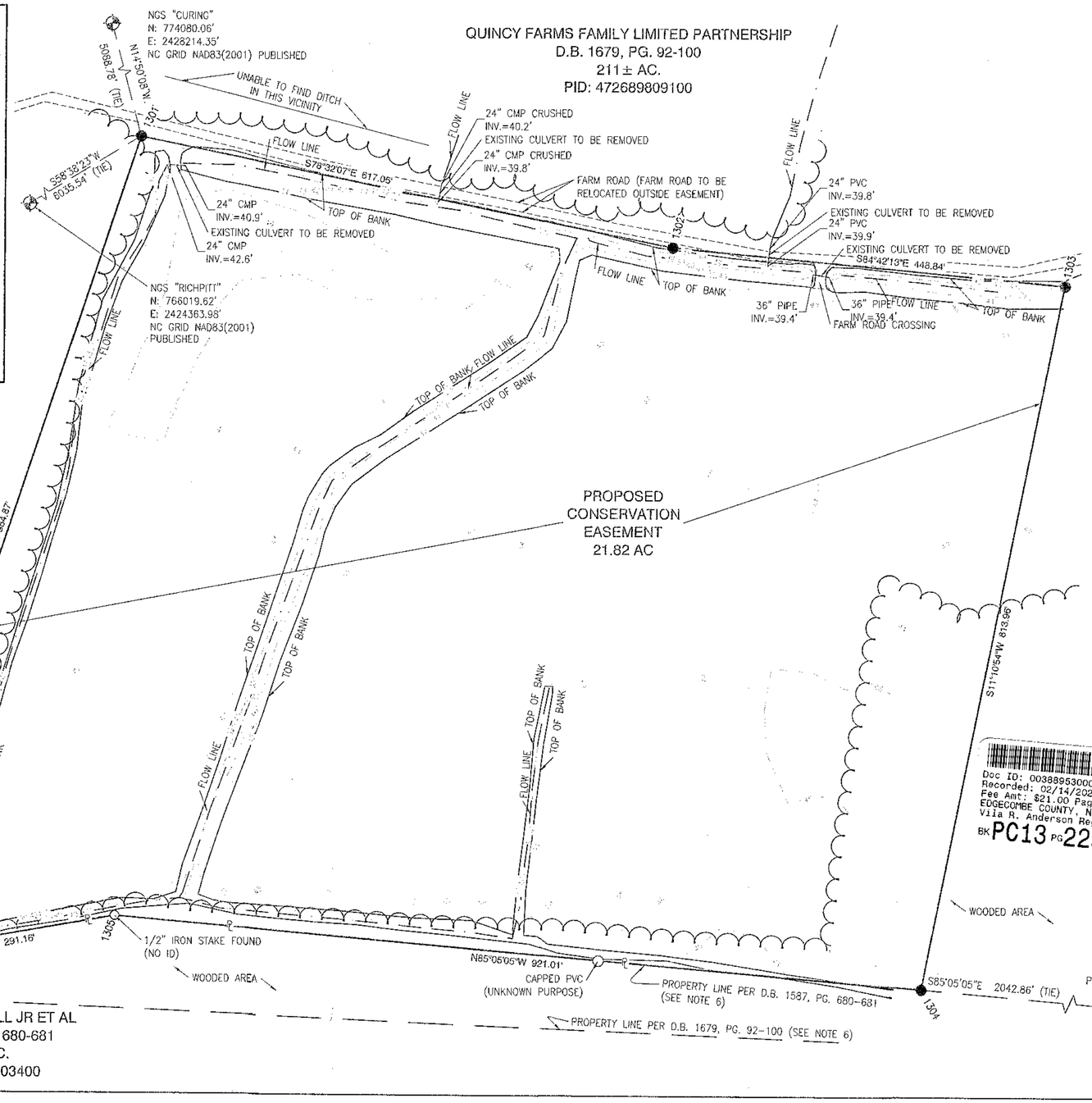
REGISTER OF DEEDS:

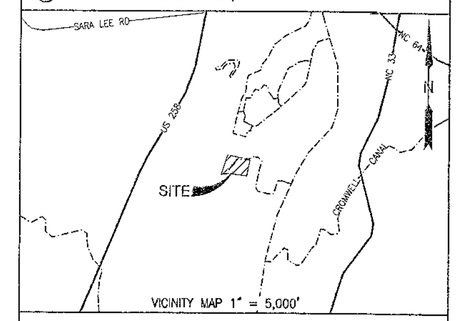
FILED FOR REGISTRATION 2-14, 2022
4:43:36 PM
PLAT CABINET 13 PAGE 225

Vila R. Anderson by:
REGISTER OF DEEDS
EDGECOMBE COUNTY, Register

DETAIL OF EASEMENT ACCESS FROM ROAD:







VICINITY MAP 1" = 5,000'

I, Gordon Strout, certify that this plat was drawn under my supervision in part from an actual survey made under my supervision (see references provided hereon), in part from information provided by others, and in part from deeds and maps of record; that the boundaries not surveyed are clearly indicated as drawn from information found in those references noted hereon; that the ratio of precision as calculated is 1 : 10,000+; that this plat was prepared in accordance with G.S. 47-30 as amended. Witness my original signature, registration number and seal this 14th day of February, 2022.

NORTH CAROLINA PROFESSIONAL L-2984 LAND SURVEYOR GORDON S. STROUT

Gordon Strout, PLS
Registration Number L-2984

This is to certify that this Survey is of an existing parcel or parcels of land and does not create a new street or change an existing street.

Gordon Strout, PLS
Registration Number L-2984

CONSERVATION EASEMENT SURVEY FOR THE STATE OF NORTH CAROLINA DIVISION OF MITIGATION SERVICES

PROJECT: COLONIAL FARMS
(SPO FILE #33-LA-148; DMS PROJECT #100191)
(DWR#: 2021-0399V1, USACE ACTION ID: SAW-2021-00346)
OWNER: QUINCY FAMILY FARMS, LP

100' 0' 100' 200'

SCALE 1" = 100'
DATE: FEBRUARY 14, 2022

ARCADIS
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801 Corporate Center Drive, Suite 300
Raleigh, NC 27607-5073
Tel: 919/854-1282 Fax: 919/854-5448

ecoterra.

REV	ISSUED DATE	DESCRIPTION	BY, CKD

PROJECT MANAGER: GORDON STROUT, PLS	DEPARTMENT MANAGER: GORDON STROUT, PLS
DRAWN BY: STACEY L. BARR, CST-IV	CHECKED BY: GORDON STROUT, PLS
PROJECT NUMBER: 30093749	DRAWING NUMBER: SHEET 1 OF 1

Appendix I

IRT Meeting Minutes

MEETING MINUTES

Colonial Farms Wetland Mitigation Site
Tar Pamlico Basin CU 03020103
NCDMS Contract: 200207-01
NCDMS Project Number: 100191
Re: Post Contract Award IRT Site Visit April 7, 2021

Attendees
Todd Tugwell - USACE
Casey Haywood - USACE
Erin Davis - NCDWR
Lindsay Crocker - NCDMS
Jeremiah Dow - NCDMS
Ted Griffith - Eco Terra Partners
Scott Frederick - SWE Group
Norton Webster - Eco Terra Partners

The following information presents a summary of the in-person meeting that occurred at the project site. The minutes are provided in order according to each attribute discussed.

- Eco Terra Team: Introduction to site and overview of the project from the top of the escarpment
- Erin: Are the ditches modified streams? Norton: No.
- Todd: Will you be digging a ditch on the other side of the road outside the project? Norton: Yes, but being careful with the potential wetlands on the other side. Todd: Suggests building up the road as an alternative option if the hydrology model doesn't support our approach.
- Todd: Which ways do the ditches flow? Scott: clockwise and through the main ditch. Our plugging won't impact the neighbors due to landscape position, soils, and natural drainage of the adjacent parcel to the south.
- Todd: Would like to see how adjacent ditch networks work and how it might impact neighboring land and if they would try to dig more ditches. Explaining and addressing it in the narrative is preferred. Providing Lidar in color would be easiest to see.
- Erin: It would be great to try and treat for privet on the escarpment so it doesn't come into the project.
- Scott: Explanation of why we put monitoring wells out early to collect extra data, which Todd liked.
- Todd: Could you do reference areas from the neighbor? Norton: Likely not them but will ask the Tar River Conservancy.
- Todd: The overall site looks relatively uniform.
- Erin: Include additional performance data if using shrubs vs stems if that makes sense. This will be needed if more than 10% of the site. Make sure we outline what we are expecting especially when things diverge from normal stem counts and densities.
- Todd: There is a concern as to if the ditch is partially a wetland and if the credit type needs to be adjusted. We will also need a nationwide 27 permit to do any manipulation. Need to see what the JD comes back with. From a ratio standpoint, it may be rehab vs reestablishment but still 1:1 with justification in the mitigation plan.

- Todd: What are the plans for fill material? Norton: Use non-hydric soils on site.
- Erin: Make sure to note drainage effects from our work.
- Todd: Depending on how the water budget accounts for adjacent land use, there could be issues if the farmer adjusts ditches outside of the easement. Scott: Topo mitigates a lot of that risk.
- Todd: For areas where you have non-diffuse flow, make sure to address those through BMPs or similar means. Generally, this is more important for stream sites.
- Erin: Need to focus on the adaptive management plan and make sure it isn't just a paragraph and include details.
- Erin: Wants a nearby reference community for vegetation.
- Todd: How uniform or zoned will the planting be? Norton: will have 2-3 zones to adjust vegetation for the wettest portions of the site. Todd: they are encouraging more thought in planting zones and diversity. Don't want to see monoculture. Want to make sure that the wells cover the zones, including fringes and low points.
- Erin: Include a soil profile next to the gauges with a full description.
- Todd: get plants in before March 15. Won't give a pass on later planting like in the last few years. Erin: you can add additional species in year 1 to increase diversity.
- Lindsay: Have Corps conduct PJD. Request assistance to determine if road ditching can occur outside the easement (north of road). Additionally, if the project's center ditch is jurisdictional wetland, Todd recommended calling this area rehabilitation but the ratio would still be 1:1 (provide functional justification at Mitigation Plan).
- Lindsay: Ballahack and Portsmouth soils will have a 12-16% hydrology standard and Todd/Erin suggested this site is relatively uniform when determining number of groundwater gauges for monitoring.

Additional IRT Comments:

- DWR requests the MP to expand on the functional uplift justification beyond the isolated area of restoration to a larger landscape connectivity discussion.
- Wetland gauges: Pre-gauges should be in the same location post construction.

Overall, the IRT agreed with mitigation approach provided at the site visit.