

2201 Rowland Avenue Savannah, GA 31404 P (912) 629-4000 F (912) 629-4001 Terracon.com

September 25, 2023

Georgia Department of Natural Resources Coastal Resource Division 1 Conservation Way Brunswick, GA 31520

Attn: Mr. Josh Noble, Marsh and Shore Management Program Manager E: Josh.Noble@dnr.ga.gov

Re: Cumberland Harbour Tatnall Lane Lot Assembly Camden County, Georgia CMPA Permit Applications Terracon Project No. ES227124 - ES227127

Dear Mr. Noble:

On behalf of multiple landowners within the Cumberland Harbour Subdivision, Terracon Consultants, Inc. (Terracon) is submitting the enclosed Coastal Marshlands Protection Act (CMPA) Permit application materials for a proposed bank stabilization project in St. Mary's, Camden County, Georgia.

The proposed project area consists of six lots along Point Peter Creek that belong to four separate landowners. Please see the below tables outlining the landownership within the project area, as well as the address of each landowner:

Landowner	Parcels
Mr. William Young (Lot 1)	160C 572 and 160C 573
Mr. Mark Butterworth (Lot 2)	160C 574
Mr. Russell Nelson (Lot 3)	160C 575 and 160 576
Mr. Rodney Rice (Lot 4)	160C 577

During our pre-application coordination with Georgia Department of Natural Resources, Coastal Resource Division staff, we were advised to submit a single submittal package that contains a CMPA Permit application for each of the above-listed landowners for the construction of a bulkhead within their parcels. Although



the attached application materials are specific to each landowner, the bulkhead will be installed within all of the parcels at the same time, by the same contractor.

At your earliest convenience, we respectfully request that you review the following CMPA Permit applications for each lot for the proposed impact to jurisdictional salt marsh. In advance, we thank you for your timely review of this project and if you have any questions or require additional information, please do not hesitate to call.

Sincerely, Terracon Consultants, Inc.

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Aaron Valenti Staff Scientist

Mike DeMell Department Manager II

Huisten Deason

Kristen Deason Group Manager

Attachments: Lot 1 CMPA Permit Application Materials Lot 2 CMPA Permit Application Materials Lot 3 CMPA Permit Application Materials Lot 4 CMPA Permit Application Materials

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N:\Environmental Planning\Projects\2022\Cumberland Harbour Combined Permitting Folder May 2023 <u>Lot 1</u>

CMPA Permit Application Materials



2201 Rowland Avenue Savannah, GA 31404 P (912) 629-4000 F (912) 629-4001 Terracon.com

September 25, 2023

Georgia Department of Natural Resources Coastal Resource Division 1 Conservation Way Brunswick, GA 31520

Attn: Mr. Josh Noble, Marsh and Shore Management Program Manager E: Josh.Noble@dnr.ga.gov

Re: 107 Tattnal Lane Bank Stabilization Lot 1 CMPA Application Materials Camden County, GA 31588 Terracon Project No. ES227127

Dear Mr. Noble:

The following letter provides support documentation for the proposed impacts to jurisdictional marsh within parcel #160C 572 (Lot 2) associated with the construction of a bulkhead along Point Peter Creek. Within this parcel, 800.4 sq. ft. of jurisdictional marsh will be disturbed in order to complete this bank stabilization project.

1.0 PROJECT SUMMARY

The proposed bulkhead project spans 141.0 feet across Lot 1. The bulkhead will be constructed as a single and complete structure with consistent construction methodology throughout its entire length. The attached site plans (Appendix 1B) illustrate the placement of the bulkhead in relation to the Coastal Marshlands Protection Act (CMPA) Jurisdictional Determination (JD) line (See Appendix 1A). The JD for this line is included as part of this submittal within Appendix 1E. The Georgia Department of Natural Resources, Coastal Resources Division (GADNR-CRD) visited the site on November 30, 2022 and verbally agreed to the delineation. The purpose of this proposed bulkhead is to provide bank stabilization for the bluff located along this parcel. The erosion along this lot caused by Point Peter Creek is resulting in drastic loss of real estate for the landowners and is contributing to increased turbidity within the creek.

In order to construct the bulkhead, the contractors will enter the project area from Tattnal Lane. Construction equipment to be used includes an excavator or backhoe,



dump trucks and skid steers to deliver materials to the site from the paved road, through the uplands, to the work area. The contractors will work from the upland area west of the CMPA jurisdictional line in order to install fiberglass reinforced plastic (FRP) sheet piles and helical soil anchors, before backfilling the bulkhead with select granular material and topsoil. Please see the cross-sectional drawings within the site plans for further detail (Appendix 1B).

2.0 MARSHLAND COMPONENT

The marshland component of the proposed project is the bulkhead. No additional structures are proposed to be constructed within the project area. Existing structures within the marshland component of this parcel include a private recreational dock. In order to construct the bulkhead, the fixed walkway will need to be temporarily removed to install the sheet piles and soil anchors. After construction the walkway will be replaced in the same configuration as present. Please see the attached survey and site plans for further detail (Appendices 1A and 1B).

3.0 UPLAND COMPONENT

There is no upland component for this project that serve or augment the functioning of the marshlands component of the project. No structures or features are proposed to be constructed within the uplands. Please see the cross-sectional drawings within the site plans for further detail (Appendix 1B).

4.0 MARSHLANDS BUFFER FOR UPLAND COMPONENT

The marshlands buffer area consists of a partially undisturbed and naturally vegetated area west of the existing CMPA jurisdictional line. The naturally vegetated area of the marshlands buffer consists of saw palm (*Serenoa repens*) and live oaks (*Quercus virginiana*), while the un-vegetated portion of the buffer contains mowed and maintain landscaping, fencing, a concrete walkway and a portion of the wooden boardwalk constructed for dock access. (See photo sheet)

No permanent modification to the marshlands buffer are proposed. However, temporary disturbance to the marshlands buffer resulting from this proposed project will occur within an approximate twenty foot wide area of uplands directly west of the proposed bulkhead. The marine engineer for this project has estimated that this twenty foot wide corridor is all the space that the contractor will need in order to access the proposed bulkhead location and complete construction of the bank stabilization project.



Temporary disturbance within the buffer area include limited vegetation clearing as needed to provide access to the construction area. Use of matting over vegetation roots will be recommended to contractors in an attempt to preserve the canopy trees. After construction is completed, the disturbed area will be re-planted with native vegetation and restored to its current state.

5.0 STORMWATER MANAGEMENT STANDARDS FOR THE UPLAND COMPONENT

There is no upland component associated with this project. Therefore, there will be no discharge of untreated stormwater from the upland component. Stormwater management during construction will follow standard best management practices. The landward side of the wall will be backfilled with a vertical sand bed to facilitate infiltration at the wall. The sand is granulated and wrapped in geotextile fabric, allowing migration of tidal waters and infiltrated run-off through weep holes in the bulkhead, ultimately equalizing the hydrostatic pressure on each side of the wall.

6.0 IMPERVIOUS SURFACE CALCULATIONS OF UPLAND COMPONENT

This project does not have an upland component. Within the marshlands buffer currently, there are no impervious surfaces. Post-construction of the proposed bank stabilization project, there will be a 0% increase in impervious surfaces located within the marshlands buffer.

7.0 ADJOINING LANDOWNERS

Direction from Parcel	Adjoining Landowner	Address
North	Mrs. Kathleen Greghty	105 Tattnal Lane, St. Mary's, GA 31588
South	Mr. Mark Butterworth	111 Tattnal Lane, St. Mary's, GA 31588

The adjoining landowners to this parcel are listed below:



8.0 ALTERNATIVE ANALYSIS

The below sections will outline the various alternatives to the proposed bank stabilization outlined in the attached site plans (Appendix 1B).

8.1 No Action Alternative

The first alternative to be considered is the no action alternative. Following this alternative, the erosion caused by Point Peter Creek would continue unchecked. This would result in the continued loss of real estate from the landowners, eventually reaching the residential structures, and continued introduction of additional sediment into Point Peter Creek.

8.2 Rip-Rap Alternative

A potential alternative to the proposed bulkhead project that was considered was the installation of rip-rap to limit further erosion and stabilize the bank within this lot. However, the rip-rap has not been installed due to numerous factors. These include the costs associated with larger stone required to adequately protect against the fast currents in Point Peter Creek and project longevity concerns due to design limitations.

8.3 Original Bulkhead Design

The initial bulkhead design for this project was drafted in order to fit within the Nationwide Permit #13 parameters for bank stabilization. The placement of the initial bulkhead approximately followed the top of bank of Point Peter Creek that was established in 2002. The amount of fill within jurisdictional saltmarsh area was originally limited to the allotted one cubic yard of fill, below the high tide line, per foot of bulkhead installation. However, the State policy changed making bank stabilization projects non-exempt from the CMPA. At that time, Terracon staff completed a site visit with CRD staff to ascertain if the placement of the bulkhead would be supported by the CRD under a CMPA permit application.

After receiving feedback from the CRD, the original bulkhead placement may be contrary to the public interest and could be construed as reclaiming land. Therefore, this design was edited by the marine engineer to ensure the goal of stabilizing the bank along Point Peter Creek within this parcel, while minimizing disturbance to jurisdictional marshlands where possible.



8.4 Preferred Alternative (Proposed Bulkhead Installation)

The preferred alternative for this project is represented in the attached site plans (Appendix 1B). This plan has been reviewed in the field with CRD staff and minimizes impacts to coastal marshlands by placing the bulkhead generally along the existing escarpment while achieving the goal of bank stabilization. This bulkhead placement will not result in reclaiming land lost by the landowners, but will sufficiently alleviate the ongoing erosion within this parcel's lot frontage.

9.0 EROSION AND SEDIMENTATION STATEMENT

Erosion control on the site will be completed in phases – initial, intermediate, and final. The impacted area is less than one acre, so an NPDES permit for construction activities is not required. The project will, however, employ BMPs during each phase as if it were required, with the exception of monitoring. The initial phase will use a combination of silt fence and construction entrance stabilization. The intermediate phase will continue use of silt fencing to the best extent possible while driving the sheet piles and installing the anchor systems. The final phase involves stabilizing the disturbed areas with sod or native vegetation. In all phases, best management practices will be used to control debris and trash. The site will be temporarily stabilized if construction activities are delayed more than 24 hours.

10.0 PUBLIC INTEREST STATEMENT

The proposed project has been designed to meet the specific project purpose, while minimizing adverse impacts to surrounding ecosystems wherever possible. The below information is provided to discuss how the project is not contrary to the public interest. Pursuant to the Coastal Marshlands Protection Act 12-5-286. (12) (g), the following public interest considerations are considered:

10.1 Navigational Waters

Whether or not unreasonably harmful obstruction to or alteration of the natural flow of navigational water within the affected area will arise as a result of the proposal.

The construction of this proposed bulkhead will not impede or otherwise impact the navigability of Point Peter Creek. There is no proposed work within the navigable channel of Point Peter Creek associated with this proposed project. Therefore, there will be no unreasonably harmful obstruction to or alteration of the natural flow of navigational waters.

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10.2 Erosion

Whether or not unreasonably harmful or increased erosion, shoaling of channels, or stagnant areas of water will be created.

The goal of the proposed bulkhead project is to ensure bank stabilization within the above described parcel. Currently, the bank within this parcel is being rapidly eroded, depositing sediment into Point Peter Creek. The proposed bulkhead will not only stabilize the bank within this parcel, but will ultimately result in less sedimentation within Point Peter Creek due to erosion. Therefore, the construction of this proposed bulkhead will <u>not</u> result in the unreasonably harmful or increased erosion, shoaling of channels, or creation of stagnant water

10.3 Conservation of Marine Life

Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, wildlife, or other resources, including but not limited to water and oxygen supply.

The proposed project includes the installation of a bulkhead comprised of fiberglass reinforced plastic (FRP) sheet piles and helical soil anchors generally located along the existing escarpment along Point Peter Creek. The installation will be performed from the land side of the project. Terracon has reviewed the site using the Information for Planning and Consultation (IPaC) tool from the U.S. Fish and Wildlife Service. Using the list of threatened and endangered species created by the IPaC, Terracon also implemented the Effects Determination Guidance for Endangered & Threatened Species (EDGES) tool provided by the U.S. Army Corps of Engineers to review the impact this project may have on these species. The only species to receive "May Affect – Not Likely to Adversely Affect," determinations were the wood stork and the West Indian manatee. The above-mentioned bulkhead installation minimizes work in aquatic resources thereby minimizing the potential of affect to the West Indian manatee. Also, the proposed work does not involve lands occupied by wood stork.

No negative impacts to water quality or marine habitat are anticipated. Therefore, the construction of this proposed bulkhead will not unreasonably interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, wildlife, or other resources, including but not limited to water and oxygen supply.



We hope you find the above information helpful in your review of this CMPA permit application.

Sincerely, Terracon Consultants, Inc.

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Aaron Valenti Staff Scientist

Mike DeMell Department Manager II

Attachments:

- Appendix 1A: Project Survey, prepared by AKM Surveying, dated July 14, 2023
- Appendix 1B: Project Plans, prepared by Ball Maritime Group, dated August 9, 2023
- Appendix 1C: Joint Application Form
- Appendix 1D: Revocable License Request
- Appendix 1E: CRD JDR Request Package
- Appendix 1F: Property Deed and Plat
- Appendix 1G: Zoning Letter
- Appendix 1H: Landfill and Hazardous Waste Documents

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Huisten Deason

Kristen Deason Group Manager

<u>Lot 2</u>

CMPA Permit Application Materials



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September 25, 2023

Georgia Department of Natural Resources Coastal Resource Division 1 Conservation Way Brunswick, GA 31520

Attn: Mr. Josh Noble, Marsh and Shore Management Program Manager E: Josh.Noble@dnr.ga.gov

Re: 111 Tattnal Lane Bank Stabilization Lot 2 CMPA Application Materials Camden County, GA 31588 Terracon Project No. ES227124

Dear Mr. Noble:

The following letter provides support documentation for the proposed impacts to jurisdictional marsh within parcel #160C 574 (Lot 2) associated with the construction of a bulkhead along Point Peter Creek. Within this parcel, 288.7 sq. ft. of jurisdictional marsh will be disturbed in order to complete this bank stabilization project.

1.0 PROJECT SUMMARY

The proposed bulkhead project spans 75.7 feet across Lot 2. The bulkhead will be constructed as a single and complete structure with consistent construction methodology throughout its entire length. The attached site plans (Appendix 2B) illustrate the placement of the bulkhead in relation to the Coastal Marshlands Protection Act (CMPA) Jurisdictional Determination (JD) line (See Appendix 2A). The JD for this line is included as part of this submittal within Appendix 1E. The Georgia Department of Natural Resources, Coastal Resources Division (GADNR-CRD) visited the site on November 30, 2022 and verbally agreed to the delineation. The purpose of this proposed bulkhead is to provide bank stabilization for the bluff located along this parcel. The erosion along this lot caused by Point Peter Creek is resulting in drastic loss of real estate for the landowners and is contributing to increased turbidity within the creek.



In order to construct the bulkhead, the contractors will enter the project area from Tattnal Lane. Construction equipment to be used includes an excavator or backhoe, dump trucks and skid steers to deliver materials to the site from the paved road, through the uplands, to the work area. The contractors will work from the upland area west of the CMPA jurisdictional line in order to install fiberglass reinforced plastic (FRP) sheet piles and helical soil anchors, before backfilling the bulkhead with select granular material and topsoil. Please see the cross-sectional drawings within the site plans for further detail (Appendix 2B).

2.0 MARSHLAND COMPONENT

The marshland component of the proposed project is the bulkhead. No additional structures are proposed to be constructed within the project area. Existing structures within the marshland component of this parcel include a private recreational dock. In order to construct the bulkhead, the fixed walkway will need to be temporarily removed to install the sheet piles and soil anchors. After construction the walkway will be replaced in the same configuration as present. Please see the attached survey and site plans for further detail (Appendices 2A and 2B).

3.0 UPLAND COMPONENT

There is no upland component for this project that serve or augment the functioning of the marshlands component of the project. Existing structures landward of the CMPA jurisdictional line and within the fifty-foot marshlands buffer include only typical landscaping an existing concrete walkway, and a portion of the wooden walkway constructed for dock access. No additional structures or features are proposed to be constructed within the uplands. Please see the cross-sectional drawings within the site plans for further detail (Appendix 2B).

4.0 MARSHLANDS BUFFER FOR UPLAND COMPONENT

The marshlands buffer area consists of a partially undisturbed and naturally vegetated area west of the existing CMPA jurisdictional line, as well as a maintained lawn. The naturally vegetated area of the marshlands buffer consists of saw palm (*Serenoa repens*) and live oaks (*Quercus virginiana*), while the un-vegetated portion of the buffer contains mowed and maintain landscaping, fencing, a concrete walkway and a portion of the wooden boardwalk constructed for dock access. (See photo sheet)



No permanent modification to the marshlands buffer is proposed. However, temporary disturbance to the marshlands buffer resulting from this proposed project will occur within an approximate twenty foot wide area of uplands directly west of the proposed bulkhead. The marine engineer for this project has estimated that this twenty foot wide corridor is all the space that the contractor will need in order to access the proposed bulkhead location and complete construction of the bank stabilization project.

Temporary disturbance within the buffer area includes limited vegetation clearing as needed to provide access to the construction area. Use of matting over vegetation roots will be recommended to contractors in an attempt to preserve the canopy trees. After construction is completed, the disturbed area will be re-planted with native vegetation and restored to its current state.

5.0 STORMWATER MANAGEMENT STANDARDS FOR THE UPLAND COMPONENT

There is no upland component associated with this project. Therefore, there will be no discharge of untreated stormwater from the upland component. Stormwater management during construction will follow standard best management practices. The landward side of the wall will be backfilled with a vertical sand bed to facilitate infiltration at the wall. The sand is granulated and wrapped in geotextile fabric, allowing migration of tidal waters and infiltrated run-off through weep holes in the bulkhead, ultimately equalizing the hydrostatic pressure on each side of the wall.

6.0 IMPERVIOUS SURFACE CALCULATIONS OF UPLAND COMPONENT

This project does not have an upland component. Within the marshlands buffer currently, the only impervious surface is the concrete walkway that accesses the residential dock facility, which accounts for roughly 3.5% of the total buffer area (137 sqft./3,930 sqft.). Post-construction of the proposed bank stabilization project, there will be a 0% increase in impervious surfaces located within the marshlands buffer.

7.0 ADJOINING LANDOWNERS

The adjoining landowners to this parcel are listed below:



Direction from Parcel	Adjoining Landowner	Address
North	Mr. William Young	107 Tattnal Lane, St. Mary's, GA 31588
South	Mr. Russell Nelson	115 Tattnal Lane, St. Mary's, GA 31588

8.0 ALTERNATIVE ANALYSIS

The below sections will outline the various alternatives to the proposed bank stabilization outlined in the attached site plans (Appendix 2B).

8.1 No Action Alternative

The first alternative to be considered is the no action alternative. Following this alternative, the erosion caused by Point Peter Creek would continue unchecked. This would result in the continued loss of real estate from the landowners, eventually reaching the residential structures, and continued introduction of additional sediment into Point Peter Creek.

8.2 Rip-Rap Alternative

Under a previous Nationwide Permit #13 for bank stabilization, site plans for the installation of rip-rap along Point Peter Creek within this parcel were approved by the GADNR-CRD. However, the rip-rap has not been installed due to numerous factors. These include the costs associated with larger stone required to adequately protect against the fast currents in Point Peter Creek and project longevity concerns due to design limitations.

It should be noted, that although permissible, the use of rip-rap at this site results in a larger footprint of disturbance within the jurisdictional area verses the proposed wall design.

8.3 Original Bulkhead Design

The initial bulkhead design for this project was drafted in order to fit within the Nationwide Permit #13 parameters for bank stabilization. The placement of the initial bulkhead approximately followed the top of bank of the Point Peter Creek that was established in 2002. The amount of fill within jurisdictional saltmarsh area was



originally limited to the allotted one cubic yard of fill, below the high tide line, per foot of bulkhead installation. However, the State policy changed making bank stabilization projects non-exempt from the CMPA. At that time, Terracon staff completed a site visit with CRD staff to ascertain if the placement of the bulkhead would be supported by the CRD under a CMPA permit application.

After receiving feedback from the CRD, the original bulkhead placement may be contrary to the public interest and could be construed as reclaiming land. Therefore, this design was edited by the marine engineer to ensure the goal of stabilizing the bank along Point Peter Creek within this parcel, while minimizing disturbance to jurisdictional marshlands where possible.

8.4 **Preferred Alternative (Proposed Bulkhead Installation)**

The preferred alternative for this project is represented in the attached site plans (Appendix 2B). This plan has been reviewed in the field with CRD staff and minimizes impacts to coastal marshlands by placing the bulkhead generally along the existing escarpment while achieving the goal of bank stabilization. This bulkhead placement will not result in reclaiming land lost by the landowners, and will sufficiently alleviate the ongoing erosion within this parcel's lot frontage.

9.0 EROSION AND SEDIMENTATION STATEMENT

Erosion control on the site will be completed in phases – initial, intermediate, and final. The impacted area is less than one acre, so an NPDES permit for construction activities is not required. The project will, however, employ BMPs during each phase as if it were required, with the exception of monitoring. The initial phase will use a combination of silt fence and construction entrance stabilization. The intermediate phase will continue use of silt fencing to the best extent possible while driving the sheet piles and installing the anchor systems. The final phase involves stabilizing the disturbed areas with sod or native vegetation. In all phases, best management practices will be used to control debris and trash. The site will be temporarily stabilized if construction activities are delayed more than 24 hours.

10.0 PUBLIC INTEREST STATEMENT

The proposed project has been designed to meet the specific project purpose, while minimizing adverse impacts to surrounding ecosystems wherever possible. The below information is provided to discuss how the project is not contrary to the public



interest. Pursuant to the Coastal Marshlands Protection Act 12-5-286. (12) (g), the following public interest considerations are considered:

10.1 Navigational Waters

Whether or not unreasonably harmful obstruction to or alteration of the natural flow of navigational water within the affected area will arise as a result of the proposal.

The construction of this proposed bulkhead will not impede or otherwise impact the navigability of Point Peter Creek. There is no proposed work within the navigable channel of Point Peter Creek associated with this proposed project. Therefore, there will be no unreasonably harmful obstruction to or alteration of the natural flow of navigational waters.

10.2 Erosion

Whether or not unreasonably harmful or increased erosion, shoaling of channels, or stagnant areas of water will be created.

The goal of the proposed bulkhead project is to ensure bank stabilization within the above described parcel. Currently, the bank within this parcel is being rapidly eroded, depositing sediment into Point Peter Creek. The proposed bulkhead will not only stabilize the bank within this parcel, but will ultimately result in less sedimentation within Point Peter Creek due to erosion. Therefore, the construction of this proposed bulkhead will <u>not</u> result in the unreasonably harmful or increased erosion, shoaling of channels, or creation of stagnant water.

10.3 Conservation of Marine Life

Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, wildlife, or other resources, including but not limited to water and oxygen supply.

The proposed project includes the installation of a bulkhead comprised of fiberglass reinforced plastic (FRP) sheet piles and helical soil anchors generally located along the existing escarpment along Point Peter Creek. The installation will be performed from the land side of the project. Terracon has reviewed the site using the Information for Planning and Consultation (IPaC) tool from the U.S. Fish and Wildlife Service. Using the list of threatened and endangered species created by the IPaC,



Terracon also implemented the Effects Determination Guidance for Endangered & Threatened Species (EDGES) tool provided by the U.S. Army Corps of Engineers to review the impact this project may have on these species. The only species to receive "May Affect – Not Likely to Adversely Affect," determinations were the wood stork and the West Indian manatee. The above-mentioned bulkhead installation minimizes work in aquatic resources thereby minimizing the potential of affect to the West Indian manatee. Also, the proposed work does not involve lands occupied by wood stork.

No negative impacts to water quality or marine habitat are anticipated. Therefore, the construction of this proposed bulkhead will not unreasonably interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, wildlife, or other resources, including but not limited to water and oxygen supply.

We hope you find the above information helpful in your review of this CMPA permit application.

Sincerely, Terracon Consultants, Inc.

Aaron Valenti Staff Scientist

Mike DeMell Department Manager II

Attachments:

- Appendix 2A: Project Survey, prepared by AKM Surveying, dated July 14, 2023
- Appendix 2B: Project Plans, prepared by Ball Maritime Group, dated August 9, 2023
- Appendix 2C: Joint Application Form
- Appendix 2D: Revocable License Request
- Appendix 2E: CRD JDR Request Package

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Huisten Deason

Kristen Deason Group Manager

<u>Lot3</u>

CMPA Permit Application Materials



2201 Rowland Avenue Savannah, GA 31404 P (912) 629-4000 F (912) 629-4001 Terracon.com

September 25, 2023

Georgia Department of Natural Resources Coastal Resource Division 1 Conservation Way Brunswick, GA 31520

Attn: Mr. Josh Noble, Marsh and Shore Management Program Manager E: Josh.Noble@dnr.ga.gov

Re: 115 Tattnal Lane Bank Stabilization Lot 3 CMPA Application Materials Camden County, GA 31588 Terracon Project No. ES227126

Dear Mr. Noble:

The following letter provides support documentation for the proposed impacts to jurisdictional marsh within parcel #160C 575 (Lot 3) associated with the construction of a bulkhead along Point Peter Creek. Within this parcel, 537.7 sq. ft. of jurisdictional marsh will be disturbed in order to complete this bank stabilization project.

1.0 PROJECT SUMMARY

The proposed bulkhead project spans 158.6 feet across Lot 3. The bulkhead will be constructed as a single and complete structure with consistent construction methodology throughout its entire length. The attached site plans (Appendix 3B) illustrate the placement of the bulkhead in relation to the Coastal Marshlands Protection Act (CMPA) Jurisdictional Determination (JD) line (See Appendix 3A).). The JD for this line is included as part of this submittal within Appendix 1E. The Georgia Department of Natural Resources, Coastal Resources Division (GADNR-CRD) visited the site on November 30, 2022 and verbally agreed to the delineation. The purpose of this proposed bulkhead is to provide bank stabilization for the bluff located along this parcel. The erosion along this lot caused by Point Peter Creek is resulting in drastic loss of real estate for the landowners and is contributing to increased turbidity within the creek.



In order to construct the bulkhead, the contractors will enter the project area from Tattnal Lane. Construction equipment to be used includes an excavator or backhoe, dump trucks and skid steers to deliver materials to the site from the paved road, through the uplands, to the work area. The contractors will work from the upland area west of the CMPA jurisdictional line in order to install fiberglass reinforced plastic (FRP) sheet piles and helical soil anchors, before backfilling the bulkhead with select granular material and topsoil. Please see the cross-sectional drawings within the site plans for further detail (Appendix 3B).

2.0 MARSHLAND COMPONENT

The marshland component of the proposed project is the bulkhead. No additional structures are proposed to be constructed within the project area. Existing structures within the marshland component of this parcel include a private recreational dock. In order to construct the bulkhead, the fixed walkway will need to be temporarily removed to install the sheet piles and soil anchors. After construction the walkway will be replaced in the same configuration as present. Please see the attached survey and site plans for further detail (Appendices 3A and 3B).

3.0 UPLAND COMPONENT

There is no upland component for this project that serve or augment the functioning of the marshlands component of the project. Existing structures landward of the CMPA jurisdictional line and within the fifty-foot marshlands buffer include only typical landscaping, an existing brick paver walkway, and a portion of the wooden walkway constructed for dock access. No additional structures or features are proposed to be constructed within the uplands. Please see the cross-sectional drawings within the site plans for further detail (Appendix 3B).

4.0 MARSHLANDS BUFFER FOR UPLAND COMPONENT

The marshlands buffer area consists of a partially undisturbed and naturally vegetated area west of the existing CMPA jurisdictional line, as well as a maintained lawn. The naturally vegetated area of the marshlands buffer consists of saw palm (*Serenoa repens*) and live oaks (*Quercus virginiana*), while the un-vegetated portion of the buffer contains mowed and maintain landscaping, fencing, a brick paver walkway and a portion of the wooden boardwalk constructed for dock access. (See photo sheet)



No permanent modification to the marshlands buffer is proposed. However, temporary disturbance to the marshlands buffer resulting from this proposed project will occur within an approximate twenty foot wide area of uplands directly west of the proposed bulkhead. The marine engineer for this project has estimated that this twenty foot wide corridor is all the space that the contractor will need in order to access the proposed bulkhead location and complete construction of the bank stabilization project.

Temporary disturbance within the buffer area includes limited vegetation clearing as needed to provide access to the construction area. Use of matting over vegetation roots will be recommended to contractors in an attempt to preserve the canopy trees. After construction is completed, the disturbed area will be re-planted with native vegetation and restored to its current state.

5.0 STORMWATER MANAGEMENT STANDARDS FOR THE UPLAND COMPONENT

There is no upland component associated with this project. Therefore, there will be no discharge of untreated stormwater from the upland component. Stormwater management during construction will follow standard best management practices. The landward side of the wall will be backfilled with a vertical sand bed to facilitate infiltration at the wall. The sand is granulated and wrapped in geotextile fabric, allowing migration of tidal waters and infiltrated run-off through weep holes in the bulkhead, ultimately equalizing the hydrostatic pressure on each side of the wall.

6.0 IMPERVIOUS SURFACE CALCULATIONS OF UPLAND COMPONENT

This project does not have an upland component. Within the marshlands buffer currently, the only impervious surface is the brick paver walkway that accesses the residential dock facility and surrounds the existing greenhouse, which accounts for roughly 2.6% of the total buffer area. Post-construction of the proposed bank stabilization project, there will be a 0% increase in impervious surfaces located within the marshlands buffer.

7.0 ADJOINING LANDOWNERS

The adjoining landowners to this parcel are listed below:



Direction from Parcel	Adjoining Landowner	Address
North	Mr. Mark Butterworth	111 Tattnal Lane, St. Mary's, GA 31588
South	Mr. Rodney Rice	117 Tattnal Lane, St. Mary's, GA 31588

8.0 ALTERNATIVE ANALYSIS

The below sections will outline the various alternatives to the proposed bank stabilization outlined in the attached site plans (Appendix 3B).

8.1 No Action Alternative

The first alternative to be considered is the no action alternative. Following this alternative, the erosion caused by Point Peter Creek would continue unchecked. This would result in the continued loss of real estate from the landowners, eventually reaching the residential structures, and continued introduction of additional sediment into Point Peter Creek.

8.2 **Rip-Rap Alternative**

Under a previous Nationwide Permit #13 for bank stabilization, site plans for the installation of rip-rap along Point Peter Creek within this parcel were approved by the GADNR-CRD. However, the rip-rap has not been installed due to numerous factors. These include the costs associated with larger stone required to adequately protect against the fast currents in Point Peter Creek and project longevity concerns due to design limitations.

It should be noted, that although permissible, the use of rip-rap at this site results in a larger footprint of disturbance within the jurisdictional area verses the proposed wall design.

8.3 Original Bulkhead Design

The initial bulkhead design for this project was drafted in order to fit within the Nationwide Permit #13 parameters for bank stabilization. The placement of the initial bulkhead approximately followed the top of bank of the Point Peter Creek that was



established in 2002. The amount of fill within jurisdictional saltmarsh area was originally limited to the allotted one cubic yard of fill, below the high tide line, per foot of bulkhead installation. However, the State policy changed making bank stabilization projects non-exempt from the CMPA. At that time, Terracon staff completed a site visit with CRD staff to ascertain if the placement of the bulkhead would be supported by the CRD under a CMPA permit application.

After receiving feedback from the CRD, the original bulkhead placement may be contrary to the public interest and could be construed as reclaiming land. Therefore, this design was edited by the marine engineer to ensure the goal of stabilizing the bank along Point Peter Creek within this parcel, while minimizing disturbance to jurisdictional marshlands where possible.

8.4 **Preferred Alternative (Proposed Bulkhead Installation)**

The preferred alternative for this project is represented in the attached site plans (Appendix 3B). This plan has been reviewed in the field with CRD staff and minimizes impacts to coastal marshlands by placing the bulkhead generally along the existing escarpment while achieving the goal of bank stabilization. This bulkhead placement will not result in reclaiming land lost by the landowners, and will sufficiently alleviate the ongoing erosion within this parcel's lot frontage.

9.0 EROSION AND SEDIMENTATION STATEMENT

Erosion control on the site will be completed in phases – initial, intermediate, and final. The impacted area is less than one acre, so an NPDES permit for construction activities is not required. The project will, however, employ BMPs during each phase as if it were required, with the exception of monitoring. The initial phase will use a combination of silt fence and construction entrance stabilization. The intermediate phase will continue use of silt fencing to the best extent possible while driving the sheet piles and installing the anchor systems. The final phase involves stabilizing the disturbed areas with sod or native vegetation. In all phases, best management practices will be used to control debris and trash. The site will be temporarily stabilized if construction activities are delayed more than 24 hours.

10.0 PUBLIC INTEREST STATEMENT

The proposed project has been designed to meet the specific project purpose, while minimizing adverse impacts to surrounding ecosystems wherever possible. The below information is provided to discuss how the project is not contrary to the public



interest. Pursuant to the Coastal Marshlands Protection Act 12-5-286. (12) (g), the following public interest considerations are considered:

10.1 Navigational Waters

Whether or not unreasonably harmful obstruction to or alteration of the natural flow of navigational water within the affected area will arise as a result of the proposal.

The construction of this proposed bulkhead will not impede or otherwise impact the navigability of Point Peter Creek. There is no proposed work within the navigable channel of Point Peter Creek associated with this proposed project. Therefore, there will be no unreasonably harmful obstruction to or alteration of the natural flow of navigational waters.

10.2 Erosion

Whether or not unreasonably harmful or increased erosion, shoaling of channels, or stagnant areas of water will be created.

The goal of the proposed bulkhead project is to ensure bank stabilization within the above described parcel. Currently, the bank within this parcel is being rapidly eroded, depositing sediment into Point Peter Creek. The proposed bulkhead will not only stabilize the bank within this parcel, but will ultimately result in less sedimentation within Point Peter Creek due to erosion. Therefore, the construction of this proposed bulkhead will <u>not</u> result in the unreasonably harmful or increased erosion, shoaling of channels, or creation of stagnant water.

10.3 Conservation of Marine Life

Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, wildlife, or other resources, including but not limited to water and oxygen supply.

The proposed project includes the installation of a bulkhead comprised of fiberglass reinforced plastic (FRP) sheet piles and helical soil anchors generally located along the existing escarpment along Point Peter Creek. The installation will be performed from the land side of the project. Terracon has reviewed the site using the Information for Planning and Consultation (IPaC) tool from the U.S. Fish and Wildlife Service. Using the list of threatened and endangered species created by the IPaC,



Terracon also implemented the Effects Determination Guidance for Endangered & Threatened Species (EDGES) tool provided by the U.S. Army Corps of Engineers to review the impact this project may have on these species. The only species to receive "May Affect – Not Likely to Adversely Affect," determinations were the wood stork and the West Indian manatee. The above mentioned bulkhead installation minimizes work in aquatic resources thereby minimizing the potential of affect to the West Indian manatee. Also, the proposed work does not involve lands occupied by wood stork.

No negative impacts to water quality or marine habitat are anticipated. Therefore, the construction of this proposed bulkhead will not unreasonably interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, wildlife, or other resources, including but not limited to water and oxygen supply.

We hope you find the above information helpful in your review of this CMPA permit application.

Sincerely, Terracon Consultants, Inc.

Aaron Valenti Staff Scientist

still

Mike DeMell Department Manager II

Attachments:

- Appendix 3A: Project Survey, prepared by AKM Surveying, dated July 14, 2023
- Appendix 3B: Project Plans, prepared by Ball Maritime Group, dated August 9, 2023
- Appendix 3C: Joint Application Form
- Appendix 3D: Revocable License Request
- Appendix 3E: CRD JDR Request Package
- Appendix 3F: Property Deed and Plat

Explore with us

Huisten Deason

Kristen Deason Group Manager

<u>Lot 4</u>

CMPA Permit Application Materials



2201 Rowland Avenue Savannah, GA 31404 P (912) 629-4000 F (912) 629-4001 Terracon.com

September 25, 2023

Georgia Department of Natural Resources Coastal Resource Division 1 Conservation Way Brunswick, GA 31520

Attn: Mr. Josh Noble, Marsh and Shore Management Program Manager E: Josh.Noble@dnr.ga.gov

Re: 117 Tattnal Lane Bank Stabilization Lot 4 CMPA Application Materials Camden County, GA 31588 Terracon Project No. ES227125

Dear Mr. Noble:

The following letter provides support documentation for the proposed impacts to jurisdictional marsh within parcel #160C 577 (Lot 4) associated with the construction of a bulkhead along Point Peter Creek. Within this parcel, 162.8 sq. ft. of jurisdictional marsh will be disturbed in order to complete this bank stabilization project.

1.0 PROJECT SUMMARY

The proposed bulkhead project spans 82.7 feet across Lot 4. The bulkhead will be constructed as a single and complete structure with consistent construction methodology throughout its entire length. The attached site plans (Appendix 4B) illustrate the placement of the bulkhead in relation to the Coastal Marshlands Protection Act (CMPA) Jurisdictional Determination (JD) line (See Appendix 4A). The JD for this line is included as part of this submittal within Appendix 1E. The Georgia Department of Natural Resources, Coastal Resources Division (GADNR-CRD) visited the site on November 30, 2022 and verbally agreed to the delineation. The purpose of this proposed bulkhead is to provide bank stabilization for the bluff located along this parcel. The erosion along this lot caused by Point Peter Creek is resulting in drastic loss of real estate for the landowners and is contributing to increased turbidity within the creek.



In order to construct the bulkhead, the contractors will enter the project area from Tattnal Lane. Construction equipment to be used includes an excavator or backhoe, dump trucks and skid steers to deliver materials to the site from the paved road, through the uplands, to the work area. The contractors will work from the upland area west of the CMPA jurisdictional line in order to install fiberglass reinforced plastic (FRP) sheet piles and helical soil anchors, before backfilling the bulkhead with select granular material and topsoil. Please see the cross-sectional drawings within the site plans for further detail (Appendix 4B).

2.0 MARSHLAND COMPONENT

The marshland component of the proposed project is the bulkhead. No additional structures are proposed to be constructed within the project area. Please see the attached survey and site plans for further detail (Appendices 4A and 4B).

3.0 UPLAND COMPONENT

There is no upland component for this project that serve or augment the functioning of the marshlands component of the project. There are no existing structures landward of the CMPA jurisdictional line as the parcel is comprised of only naturally vegetated and wooded areas. No additional structures or features are proposed to be constructed within the uplands. Please see the cross-sectional drawings within the site plans for further detail (Appendix 4B).

4.0 MARSHLANDS BUFFER FOR UPLAND COMPONENT

The marshlands buffer area consists of a naturally vegetated area west of the existing CMPA jurisdictional line. The naturally vegetated area of the marshlands buffer consists of saw palm (*Serenoa repens*) and live oaks (*Quercus virginiana*), and wax myrtle (*Morella cerifera*) (See photo sheet).

No permanent modification to the marshlands buffer is proposed. However, temporary disturbance to the marshlands buffer resulting from this proposed project will occur within an approximate twenty foot wide area of uplands directly west of the proposed bulkhead. The marine engineer for this project has estimated that this twenty foot wide corridor is all the space that the contractor will need in order to access the proposed bulkhead location and complete construction of the bank stabilization project.



Temporary disturbance within the buffer area will includes limited vegetation clearing as needed to provide access to the construction area. Use of matting over vegetation and roots will be recommended to contractors in an attempt to preserve the canopy trees. After construction is completed, the disturbed area will be re-planted with native vegetation and restored to its current state.

5.0 STORMWATER MANAGEMENT STANDARDS FOR THE UPLAND COMPONENT

There is no upland component associated with this project. Therefore, there will be no discharge of untreated stormwater from the upland component. Stormwater management during construction will follow standard best management practices. The landward side of the wall will be backfilled with a vertical sand bed to facilitate infiltration at the wall. The sand is granulated and wrapped in geotextile fabric, allowing migration of tidal waters and infiltrated run-off through weep holes in the bulkhead, ultimately equalizing the hydrostatic pressure on each side of the wall.

6.0 IMPERVIOUS SURFACE CALCULATIONS OF UPLAND COMPONENT

This project does not have an upland component. Within the marshlands buffer currently, there are no impervious surfaces. Post-construction of the proposed bank stabilization project, there will be a 0% increase in impervious surfaces located within the marshlands buffer.

7.0 ADJOINING LANDOWNERS

Direction from Parcel	Adjoining Landowner	Address
North	Mr. Russell Nelson	115 Tattnal Lane, St. Mary's, GA 31588
South	Mr. Dean Sparks	119 Tattnal Lane, St. Mary's, GA 31588

The adjoining landowners to this parcel are listed below:



8.0 ALTERNATIVE ANALYSIS

The below sections will outline the various alternatives to the proposed bank stabilization outlined in the attached site plans (Appendix 4B).

8.1 No Action Alternative

The first alternative to be considered is the no action alternative. Following this alternative, the erosion caused by Point Peter Creek would continue unchecked. This would result in the continued loss of real estate from the landowners, eventually reaching the residential structures, and continued introduction of additional sediment into Point Peter Creek.

8.2 Rip-Rap Alternative

A potential alternative to the proposed bulkhead project that was considered was the installation of rip-rap to limit further erosion and stabilize the bank within this lot. However, the rip-rap has not been installed due to numerous factors. These include the costs associated with larger stone required to adequately protect against the fast currents in Point Peter Creek and project longevity concerns due to design limitations.

8.3 Original Bulkhead Design

The initial bulkhead design for this project was drafted in order to fit within the Nationwide Permit #13 parameters for bank stabilization. The placement of the initial bulkhead approximately followed the top of bank of the Point Peter Creek that was established in 2002. The amount of fill within jurisdictional saltmarsh area was originally limited to the allotted one cubic yard of fill, below the high tide line, per foot of bulkhead installation. However, the State policy changed making bank stabilization projects non-exempt from the CMPA. At that time, Terracon staff completed a site visit with CRD staff to ascertain if the placement of the bulkhead would be supported by the CRD under a CMPA permit application.

After receiving feedback from the CRD, the original bulkhead placement may be contrary to the public interest and could be construed as reclaiming land. Therefore, this design was edited by the marine engineer to ensure the goal of stabilizing the bank along Point Peter Creek within this parcel, while minimizing disturbance to jurisdictional marshlands where possible.



8.4 **Preferred Alternative (Proposed Bulkhead Installation)**

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10.0 PUBLIC INTEREST STATEMENT

The proposed project has been designed to meet the specific project purpose, while minimizing adverse impacts to surrounding ecosystems wherever possible. The below information is provided to discuss how the project is not contrary to the public interest. Pursuant to the Coastal Marshlands Protection Act 12-5-286. (12) (g), the following public interest considerations are considered:

10.1 Navigational Waters

Whether or not unreasonably harmful obstruction to or alteration of the natural flow of navigational water within the affected area will arise as a result of the proposal.

The construction of this proposed bulkhead will not impede or otherwise impact the navigability of Point Peter Creek. There is no proposed work within the navigable channel of Point Peter Creek associated with this proposed project. Therefore, there will be no unreasonably harmful obstruction to or alteration of the natural flow of navigational waters.

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10.2 Erosion

Whether or not unreasonably harmful or increased erosion, shoaling of channels, or stagnant areas of water will be created.

The goal of the proposed bulkhead project is to ensure bank stabilization within the above described parcel. Currently, the bank within this parcel is being rapidly eroded, depositing sediment into Point Peter Creek. The proposed bulkhead will not only stabilize the bank within this parcel, but will ultimately result in less sedimentation within Point Peter Creek due to erosion. Therefore, the construction of this proposed bulkhead will <u>not</u> result in the unreasonably harmful or increased erosion, shoaling of channels, or creation of stagnant water.

10.3 Conservation of Marine Life

Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, wildlife, or other resources, including but not limited to water and oxygen supply.

The proposed project includes the installation of a bulkhead comprised of fiberglass reinforced plastic (FRP) sheet piles and helical soil anchors generally located along the existing escarpment along Point Peter Creek. The installation will be performed from the land side of the project. Terracon has reviewed the site using the Information for Planning and Consultation (IPaC) tool from the U.S. Fish and Wildlife Service. Using the list of threatened and endangered species created by the IPaC, Terracon also implemented the Effects Determination Guidance for Endangered & Threatened Species (EDGES) tool provided by the U.S. Army Corps of Engineers to review the impact this project may have on these species. The only species to receive "May Affect – Not Likely to Adversely Affect," determinations were the wood stork and the West Indian manatee. The above mentioned bulkhead installation minimizes work in aquatic resources thereby minimizing the potential of affect to the West Indian manatee. Also, the proposed work does not involve lands occupied by wood stork.

No negative impacts to water quality or marine habitat are anticipated. Therefore, the construction of this proposed bulkhead will not unreasonably interfere with the conservation of fish, shrimp, oysters, crabs, clams, or other marine life, wildlife, or other resources, including but not limited to water and oxygen supply.



We hope you find the above information helpful in your review of this CMPA permit application.

Sincerely, Terracon Consultants, Inc.

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Ruiston Deason

Kristen Deason Group Manager

Aaron Valenti Staff Scientist

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Mike DeMell Department Manager II

Attachments:

- Appendix 4A: Project Survey, prepared by AKM Surveying, dated July 14, 2023
- Appendix 4B: Project Plans, prepared by Ball Maritime Group, dated August 9, 2023
- Appendix 4C: Joint Application Form
- Appendix 4D: Revocable License Request
- Appendix 4E: CRD JDR Request Package
- Appendix 4F: Property Deed and Plat
- Appendix 4G: Zoning Letter
- Appendix 4H: Landfill and Hazardous Waste Documents



2201 Rowland Avenue Savannah, GA 31404 P (912) 629-4000 F (912) 629-4001 Terracon.com

December 1, 2023

Georgia Department of Natural Resources Coastal Resource Division 1 Conservation Way Brunswick, GA 31520

Attn: Mr. Paul Tobler, Coastal Permit Coordinator E: Paul.Tobler@dnr.ga.gov

Re: Cumberland Harbour Tatnall Lane Lot Assembly Camden County, Georgia CMPA Permit Application Addendum Terracon Project No. ES227124 - ES227127

Dear Mr. Noble:

On behalf of multiple landowners within the Cumberland Harbour Subdivision, Terracon Consultants, Inc. (Terracon) is submitting the enclosed addendum to the previously submitted Coastal Marshlands Protection Act (CMPA) Permit application for a proposed bank stabilization project in St. Mary's, Camden County, Georgia. This CMPA permit application was submitted on September 5, 2023, and Terracon received a request for additional information (RAI) from your office on October 16, 2023. Please see the below bulleted responses to this RAI:

- 1. The \$250 check made payable to the Georgia Department of Natural resources has been sent to the Coastal Resource Division office in Brunswick, Georgia.
- 2. The volume and square footage of fill channelward of the CMPA line is listed on each set of bulkhead plans. For your convenience, these values are included in the below table

Lot Number	Volume of Fill (Cubic Yards)	Square Footage of Fill
Lot 1	15.7	800.4
Lot 2	7.4	288.7
Lot 3	18.4	537.7
Lot 4	1.5	162.8
Total	43.0	1,789.6

3. As stated in Section 4.0 of the previously submitted CMPA application. There is an anticipated 20 ft. corridor landward of the CMPA line that may undergo temporary



impacts to the natural vegetation. These temporary impacts are a function of equipment being moved into position by the contractor to drive the bulkhead sheet piles into place. To generate a rough estimate of the temporary impact area, the frontage of the entire bulkhead may be multiplied by the 20 ft. corridor to create an estimate of 8,548 sq. ft. of temporary impacts.

The only permanent impacts expected within the 50 ft. marshlands buffer are the impacts resulting from the potential need to implement anchor pile supports within Lot 1. In this lot, the CMPA line geometry may result in the contractor using anchor piles on approximately four (4) of the tie backs (See Sheet 7 of the bulkhead plans prepared by Ball Maritime Group). This is due to the CMPA jutting landward in a small portion of this lot. The permanent impacts that may result from the implementation of the anchor piles include one 6-inch wide trench to bury the 2-inch soil anchor rod for each of the four tiebacks. The anchor piles will be driven via a vibratory hammer and will not require any additional excavation during installation. The soil anchors are approximately 8 ft. long, meaning the permanent impacts caused by the trenches necessary to install all four of them amount to approximately 16 sq. ft.

- 4. The upland component for this project should be considered the entirety of the 50 ft. marshlands buffer associated with each lot. Depending upon the specific lot, the current condition may be completed forested or a combination of a forested fringe parallel to the marsh boundary and maintained lawn. The 50 ft. marshlands buffer and existing improvements are depicted on sheet 5 of 7 for each lot.
- 5. The approximate area of the 50ft. marshlands buffer is listed in each set of bulkhead plans. The total approximate area of the 50 ft. marshlands buffer across the entire project is +/-23,867 square feet. If applicable, the impervious surface calculations are also depicted on sheet 5 of 7 on the plans.
- 6. In addition to the rationale included in the Preferred Alternative section of our original CMPA application materials, Terracon can provide additional justification for the placement of the bulkhead seaward of the CMPA line. The primary need for this bulkhead placement was driven by the need to protect private property belonging to the individual landowners. The shoreline across all the lots involved in this project have experienced prolonged tidal erosion resulting in the loss of multiple feet of property. This bulkhead placement will not result in reclaiming land lost to the erosion but would adequately stabilize the bank to limit future erosion.

The alignment of the bulkhead as presented in this CMPA application was also determined by the engineering necessities required to construct the bulkhead safely and effectively. The geometry of the bulkhead ultimately must create a smooth, arcing surface to allow the flow of Point Peter Creek to continue uninterrupted. Any acute angles within the bulkhead geometry required to remain landward of the CMPA line would create the possibility for eddies or whirlpools that may undermine



the bulkhead's construction or create additional erosion issues up or downstream of the project area.

Another major consideration in the bulkhead placement was the concern over losing the natural native vegetation that exists along the shoreline. Driving the sheet piles landward of the CMPA line would result in the loss of natural native vegetation that currently help stabilize the landscape along the eroded shoreline. Additionally, driving the sheet piles landward of the CMPA line would result in the soil seaward of the sheet piles to be discharged into Point Peter Creek, resulting in large amounts of sedimentation as a result of the project. This project will generally stop future erosion resulting in better water quality once completed.

7. Attached to this correspondence are four Federal Consistency Certification Forms, signed by each of the landowners.

At your earliest convenience, we respectfully request that you review the above addendum to the CMPA permit application submitted for this proposed bank stabilization project. In advance, we thank you for your timely review of this material and if you have any questions or require additional information, please do not hesitate to call.

Sincerely, Terracon Consultants, Inc.

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Aaron Valenti Staff Scientist

Mike DeMell Department Manager II

Attachments:

Federal Consistency Certification Forms

MD/av N:\Environmental Planning\Projects\2022\Cumberland Harbour Combined Permitting Folder Nov. 2023

From:	Valenti, Aaron J	
То:	Tobler, Paul	
Cc:	<u>DeMell, Mike J</u>	
Subject:	RE: CMPA Permit Application - Tattnal Lane Bulkhead Project	
Date:	Monday, February 5, 2024 3:37:38 PM	
Attachments:	image007.png	
	image008.png	
	image009.png	
	image010.png	
	image011.png	
	image012.png	
	image013.png	

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hey Paul,

Mike and I have put our heads together and spoken with the engineer for this project. Below are some simple calculations that should give you all the sq. ft. numbers you need for permanent impacts.

Tieback Anchor Piles	
Pile diameter:	12-inch max
Sq. Ft. per pile:	.79
Impact for 6 piles :	<mark>4.74 sq. ft</mark> .
Auger Piles/Rods	
Rod diameter:	2.5-inch
Max Rod length:	50-foot
Number of Rods:	42
Impact for Rods:	<mark>436.8 sq. ft.</mark>

The 6 tieback anchor piles were determined by reviewing the tieback set ups for Lot 1 (The Young Family Lot) for pile locations that may fall within the marsh area. This brings the total to 441.54 sq. ft. for tieback pilings and the tie back rods.

Please let us know if this gives you everything you need. Feel free to give Mike or I call if you need additional information or context. Talk soon!

Aaron Valenti Staff Scientist | Environmental Department



From: Tobler, Paul <paul.tobler@dnr.ga.gov>
Sent: Friday, February 2, 2024 3:29 PM
To: Valenti, Aaron J <Aaron.Valenti@terracon.com>
Cc: DeMell, Mike J <Mike.DeMell@terracon.com>
Subject: RE: CMPA Permit Application - Tattnal Lane Bulkhead Project

Mike/Aaron,

Please see the sentence below from the draft public notice. This information is all we are missing at this point. Please provide the total number of tie backs and approximate square footage of each of them so we can calculate the total impacts for the upland component/50ft. buffer. Let me know if you have any questions.

The permanent impacts associated with the proposed bulkhead will be XXsq.ft. of tieback pilings and XXXsq.ft. of tie back cables/rods (XXXsq.ft.).

Thanks, Paul D. Tobler Coastal Permit Coordinator Coastal Resources Division (912) 262-3134 | M: (912) 689-6261 Facebook • Twitter • Instagram Buy a hunting or fishing license today!

A division of the GEORGIA DEPARTMENT OF NATURAL RESOURCES

From: Valenti, Aaron J <<u>Aaron.Valenti@terracon.com</u>>
Sent: Monday, January 29, 2024 10:44 AM
To: Tobler, Paul <<u>paul.tobler@dnr.ga.gov</u>>
Cc: DeMell, Mike J <<u>Mike.DeMell@terracon.com</u>>
Subject: RE: CMPA Permit Application - Tattnal Lane Bulkhead Project

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Sounds good, thank you for the update Paul.

Talk soon,

Aaron Valenti Staff Scientist | Environmental Department



2201 Rowland Ave I Savannah, GA 31404 D (912) 200-9116 I **M (908) 770-8866** <u>Aaron.Valenti@terracon.com</u> I <u>Terracon.com</u>