LAND TECH
LAND PLANNING, LLC

Landscape Architecture
New Urbanism Design
Land Use Planning/Permitting
Community Design
Prime Consultant – Project Management

Constance C. Holland, AICP, Director
The Delaware Office of State Planning Coordination
122 William Penn Street, Suite 302
Haslet Building, Third Floor
Dover, DE 19901

March 12, 2013

RE: PLUS review – 2012-12-03; Castaways Massey's Landing

Dear Mrs. Holland:

On December 19, 2012, Land Tech Land Planning presented a proposed land use master plan to the State and agency planners at a scheduled PLUS meeting. On January 18, 2013, comments in connection with the Castaways Massey's Landing project were received. As noted in your January 18th letter, ……..***the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.*** Following the format of your January 18, 2013 letter, we offer the following response:

Strategies for State Policies and Spending

- This project is located in Investment Level 3 according to the Strategies for State Policies and Spending. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. State investments may support future growth in these areas, but please be advised that the State has other priorities for the near future. We encourage you to design the site with respect for the environmental features which are present.

The Faucett family (applicant) has owned and/or maintained a residence on the proposed development site since 1938 when it was purchased from Garry and Nora Massey. The Faucett's have a long history of donating and selling valuable water fronting lands to the State of Delaware and others for the expressed purpose of perpetual conservation of land for enjoyment by future generations. One example is the land sale to the State which has become a public boat launch and fishing pier facility at the end of Long Neck Road.

The entire property where the campground is proposed will remain in Faucett family ownership indefinitely and is planned as a multi-generational land use project.

We as land use planners and the Faucett family as land owners both acknowledge the environmental sensitivity of this valuable water fronting property. The future use of the land as planned respects both the preservation and the enhancement of those environmentally significant features as will be demonstrated with the responses that follow.

The design program adopted outlines a clear intent to identify important boundaries, habitats and site specific features to not only be preserved for future generations of campers to enjoy, but also enhance the physical and ecological systems throughout the developed site using campground revenues, staff, equipment and other resources to fund those efforts properly.

A Master Land Use Conceptual Site Plan encompassing the entire Faucett family property was submitted for PLUS agency review and comment. The initial development phase of Faucett lands will not include the +/- 6 acre home place property or the existing manufactured home rental community known as Massey's Landing Park situated on the south side of Long Neck Road. There is no schedule to develop either of those two tracts of land at this time.

The zoning application for this project will propose a change from MR - Medium Density Residential zoning district to AR – Agricultural Residential zoning district for the initial development phase of the property. The zoning application shall also request a Conditional Use approval for the development of a 322 site campground with associated campground amenities. A copy of the Castaways Massey's Landing Preliminary Site Plan that will become the subject of public hearings before both the Sussex County Planning & Zoning Commission and County Council is attached (APPENDIX A).

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There is a known cultural resource on this parcel, the Masseys Landing North Site (S-627, 7S-G-020), an important prehistoric period site. There is also a known dwelling (S-3047) just west of the parcel near Long Neck Road (Route 23). The USGS Topographic Map of Rehoboth Beach, 1918, does show this house. However, it appears to be heavily altered today. According to the Pomeroy and Beers Atlas of 1868, there was a dwelling or structure of some type on this parcel south of Long Neck Rd that was associated with J. R. Burton and another one at the end of the road associated with S. Boon, both of which also appear on the topographic map. With this in mind, the developer should definitely be aware of Delaware's Unmarked Human Burials and Human Skeletal Remains Law, which is outlined in Chapter 54 of Title 7 of the Delaware Code.

- Abandoned or unmarked family cemeteries are very common in the State of Delaware, but prehistoric sites may also have burials associated with them. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers the Delaware's Unmarked Human Burials and Human Skeletal Remains Law (Delaware Code Title 7, Chapter 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there is a discovery of any unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area, to the full extent, to see if there is any unmarked cemetery, graves, or burial sites. In the event of such a discovery, the Division of Historical & Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of the cemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner association or development. If you need or would like to read more information in reference to unmarked human remains, burials or cemeteries, please go to the following websites for additional information:

  www.history.delaware.gov/preservation/umhr.shtml

  www.history.delaware.gov/preservation/cemeteries.shtml

- Prior to any demolition or ground disturbing activities, the developer should consider hiring an archaeological consultant to examine the parcel for potential historic or cultural resources, such as a potential archaeological site, a cemetery or unmarked human remains. Furthermore, if there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Any preconstruction activities

without adherence to these stipulations may jeopardize the issuance of a permit or receipt of funding if it is determined that such opportunity to comment has been foreclosed. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at:

In November of 2004, the Faucett family employed Edward Otter, Ph. D. to perform a cultural resource assessment of their property. A copy of Dr. Otter's report is attached to this response (APPENDIX B).

The property owner has been advised as to the proper course of action following Delaware's Unmarked Human Burials and Human Skeletal Remains Law (Delaware Code Title 7, Chapter 54).

Department of Transportation – Contact Bill Brockenbrough 760-2109

- As previously discussed with the applicant's representatives, there are several different land use scenarios of interest, in that there is an existing mobile home park on part of the property, a Traffic Impact Study (TIS) was done in 2005 for a mix of houses and townhouses on another part of the property and a different plan (houses only, no townhouses) was approved for that area. Using standard rates and equations from the Institute of Transportation Engineers' (ITE) Trip Generation report, the existing and projected trip generation of development on the subject land is estimated as follows:

	Land Use	ITE Land Use Code	Average Daily Traffic (vpd)	AM Pk Hr (vph)	PM Pk Hr (vph)
A	Existing (100-unit Mobile Home Pk)	240	630	44	59
B	55 houses + 75 townhouses	210 230	1,107	89	108
A+B	Future per TIS		1,737	133	167
C	120 houses	210	1,242	94	124
A+C	Future per currently approved plan		1,872	138	183
D	Proposed Future (575-unit RV Pk)	260* 416	1,817	121	155

* Because ITE has no data on the daily trip generation of RV Parks, we treated them as Recreational Homes for this purpose.

- While the proposed development meets DelDOT's volume-based criteria for recommending that a TIS be required (400 vehicle trips per day or 50 vehicle trips per hour) we find that conditions in the study area have not changed substantively since the 2005 study was done and that the development now proposed would be similar in its trip generation. Therefore our findings and recommendations based on the TIS, contained in a letter dated November 4, 2005, are applicable to the current development proposal as well and a new TIS is not necessary. The one significant change is that the intersection of Long Neck Road (Delaware Route 23) and Banks Road and School Lane (both Sussex Road 298) has been improved.

- Based on the 2005 TIS, DelDOT would recommend that the County impose the following requirements as part of their conditional use approval if they find the rezoning and conditional use to be appropriate:

    - The developer should enter into an agreement with DelDOT to fund an equitable portion of the installation of a single lane roundabout at the intersection of Delaware Route 23 and Pot Nets Road (Sussex Road 22C). The agreement should be worded such that DelDOT may utilize the funding contribution for the installation of a traffic signal at this intersection, should a roundabout be determined to be infeasible, at DelDOT's discretion. The agreement should include pedestrian signals, crosswalks, and interconnection at DelDOT's discretion.

The developer agrees to this condition being placed upon the approval for a campground land use.

    - The following items should be incorporated into the site design, should be reflected on the record plan, and should be completed during or prior to the first phase of the development:

        - A minimum of a five-foot bicycle lane should be striped along Delaware Route 23 (in addition to any required turn lanes) along the development frontage in order to facilitate safe and unimpeded bicycle travel.

The developer agrees to install all improvements as required and detailed on the final approved State Highway Access Plan.

- Regulatory/warning signage should be added to any forthcoming plans to this project in order to alert motorists to the presence of bicycle traffic.

The developer agrees to install all improvements as required and detailed on the final approved State Highway Access Plan.

- Any utility covers should be moved outside of the designated bicycle lane or be flush with the pavement.

The developer agrees to install all improvements as required and detailed on the final approved State Highway Access Plan.

- A minimum of a five-foot sidewalk (with a minimum of a five-foot buffer from the roadway) that meets current AASHTO and ADA standards should be included along the site frontage of the proposed development along Delaware Route 23.

The developer agrees to install all improvements as required and detailed on the final approved State Highway Access Plan.

- Internal sidewalks to promote walking as a viable transportation alternative should be constructed.

We are not supportive of the recommendation for an internal sidewalk system as it creates a significant added paved surface requirement for storm water management purposes. The campground operator is offering electric golf carts as a viable transportation alternative with an ample supply of smaller, golf cart scaled parking spaces throughout the facility.

The typical interior drive proposed consists of a twenty (20) foot wide improved travel-way within a thirty (30) foot wide access-way. This typical cross section allows for two (2) five (5) foot wide pedestrian paths on each side of the access-way throughout the entire facility.

- The developer should provide accommodations for a bus stop with pedestrian access for the DART Bus Route 207. This bus stop should include a pad and shelter, at the Delaware Transit Corporation's discretion.

We are in total agreement with this recommendation, have initiated a site design dialog with Lisa Collins at DART and hope a regularly scheduled stop within Castaways Massey's Landing is found to be desirable by the Delaware Transit Corporation.

- The following comments pertain to the site plan and entrance plan that will need to be prepared and submitted if the County approves the rezoning and the conditional use approval that are now being sought:

  - While an entrance plan was approved for the Massey's Landing subdivision on July 14, 2009, the proposed RV park represents a change in use, as Section 8.6 of the Standards and Regulations for Subdivision Streets and State Highway Access, so a new entrance plan would be required.

The owner/developer will prepare a new entrance plan for the campground.

  -

  - All site access points must be designed in accordance with Del-DOT's Standards and Regulations for Subdivision Streets and State Highway Access, which is available at:

    http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf.

Understood and agreed.

  - In accordance with Section 3.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, a site plan shall be prepared prior to issuing "Letter of No Objection". The following information will be required for the "Letter of No Objection" review:

    Initial Stage Fee Calculation Form
    Initial Stage Review Fee
    Gate-Keeping Checklist – Site Plan
    Design Checklist – Record Plan
    Owners and Engineer's name and e-mail address
    Six (6) signed & sealed paper sets of the Site Plan by the owner and engineer
    Conceptual Entrance Plan
    CD with a pdf of the Site Plan

The complete DelDOT "Letter of No Objection" application will be filed for review in early March.

- Please refer to Appendix D - Plan Review Checklist, of the Standards and Regulations for Subdivision Street and State Highway Access, pages D-2 through D-39, for the new checklists for all types of plan submittals.

Understood and agreed.

- In accordance with Section 3.6.5 and Figure 3-3 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require dedication of right-of-way along the site's frontage on Long Neck Road to provide a minimum of 40 feet of right-of-way from the centerline.

The attached DelDOT letter (APPENDIX C) dated November 7, 2012 states in part……."due to the low traffic counts and the site being located near the end of Route 23……..The local road standards shall be applied to this section of Route 23 for 11' wide travel lanes and 5' wide shoulders".

In accordance with Section 3.6.5 and Figure 3-3 as referenced above, the minimum dedicated right-of-way along the site's frontage for local roads shall be 30 feet of right-of-way from the centerline.

The Massey's Landing subdivision plat recorded in Book 180, Page 63 on January 11, 2013 provided for the dedication of additional right-of-way in the amount of five (5) feet along the site's frontage. Therefore, the current Long Neck Road right-of-way is 30 feet measured from the centerline as required by DelDOT.

- In accordance with Section 3.10 of the Standards and Regulations for Subdivision Streets and State Highway Access, the off-site improvements and/or agreements that are determined to be necessary shall be shown on the site plan by note or illustration.

Understood and agreed.

- In accordance with Sections 4.3 and 4.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, a subdivision plan or an entrance plan shall be prepared prior to DelDOT issuing subdivision/entrance approval. The following information will be required for Subdivision/Entrance Plan review;

  Construction Stage Fee Calculation Form
  Construction Review Fee
  Gate-Keeping Checklist – Entrance Plan

Design Checklist – Entrance Plan
Three (3) paper sets of the Entrance Plan
SWM Report and Calculations (If applicable)
CD with a pdf of the Entrance Plan

Understood and agreed.

Department of Natural Resources and Environmental Control
Contact Kevin Coyle 739-9071

Wetlands

- State regulated wetlands ARE located on this property based on a review of the State wetland map numbers 38 and 39. The property shows significant tidal wetlands on the east portion of the property. State regulated wetlands are those wetlands identified on the State's official State Regulated Wetland Maps. Any activity in State regulated wetlands may require a permit from DNREC's Wetlands and Subaqueous Lands Section. We suggest a state jurisdictional determination and a joint permit processing meeting to review plans. Additional information about State regulated wetlands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or on line at:

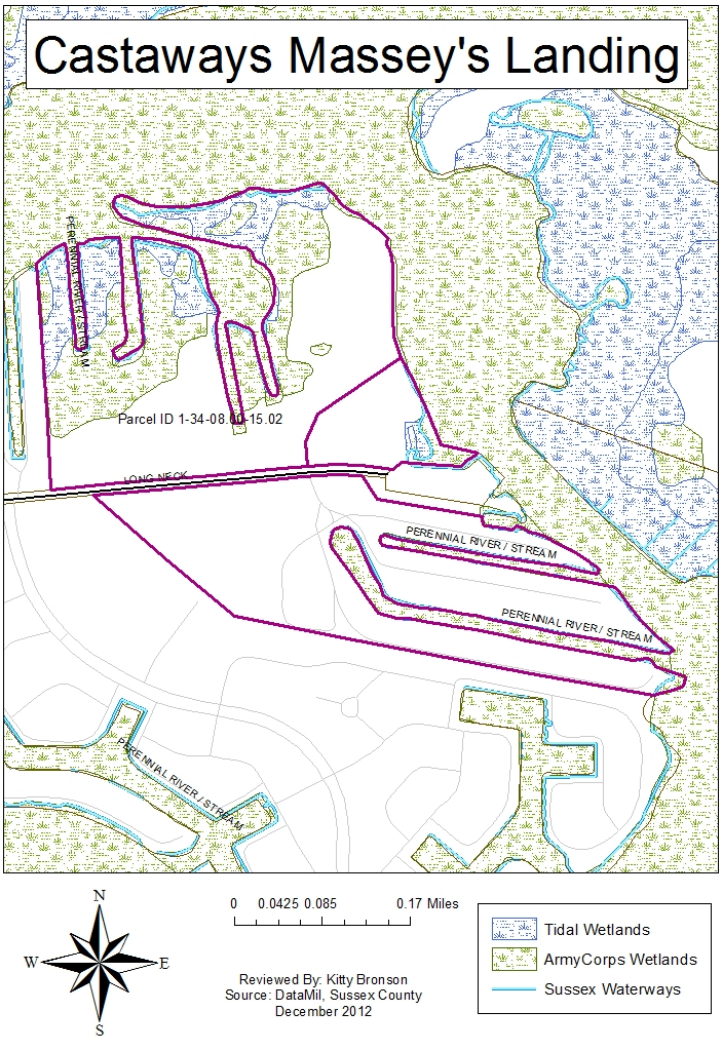
  http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx.

- State regulated subaqueous lands ARE located on this property based on a review of aerial photographs, State Wetland Mapping Project (SWMP) maps, Soil Surveys and USGS topographic maps. State subaqueous lands include all tidal waters (up to the mean high water line), most non-tidal rivers, streams, lakes, ponds, bays and inlets (up to the ordinary high water line), most perennial streams and ditches and many intermittent streams and ditches. An on-site inspection by a representative of the Wetlands and Subaqueous Lands Section or an environmental consultant is recommended to determine the limits of jurisdictional State subaqueous lands. Upon review of the GIS layers, Perennial River/Streams are located at the edge of the property. Additional information about State regulated subaqueous lands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or on line at:

  http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx.

The Faucett family engaged Mr. Kelly Pierson, a professional environmental consultant with Back Creek Environmental Consulting, to conduct an on-site inspection of their property to determine the limits of Federal and State of Delaware jurisdictional wetlands and State subaqueous lands. The attached plan (APPENDIX D) illustrates the results of those findings as mapped by True North Land Surveying and certified by Mr. Pierson. Also attached (APPENDIX E) is a letter dated September 28, 2012 from the U.S. Army Corps of Engineers which states that the plan depicts the extent of Federal jurisdiction on the subject property.

The proposed campground land use plan identifies several amenities that are water dependant which will require the issuance of permits from DNREC, the U.S. Army Corps of Engineers and other Federal regulatory agencies. Amenities proposed include fishing/crabbing piers, small non-motorized water craft rentals, elevated walkways and a swimming beach. Additionally, the campground project proposes shoreline stabilization, beach sand replenishment, the control of invasive plant species and aquatic/upland revegetation measures to be undertaken in an effort to protect the current degraded shoreline and enhance near shore wetlands into a more sustainable and ecologically productive habitat.



Flood Management

- A portion of this rezoning application is located in the floodplain. Sussex County has specific requirements for recreational vehicles located in the floodplain. They must be road ready and in place for less than 180 days OR must meet the construction requirements for manufactured homes (elevated, anchored, etc.) This area lacks an evacuation route which lies above the floodplain. This could make the evacuation of 575 RV's difficult during a storm event and also pose a risk to any necessary emergency personnel getting to this location.

The Flood Insurance Rate Maps (panels 10005C0505J and 10005C0365J) show the interior of the campground property as Zone X. The balance of the property approaching the shoreline is in an AE Zone having base elevations of 7' and 8' with a small patch of Zone VE on the northeastern most tip with a base flood elevation of 8'.

The "Park Model" and other recreational vehicles sited in Castaways Massey's Landing shall all meet ANSI A119.5 and will be in place at their individual site(s) for less than 180 days. At the expiration of the maximum time limit, the "Park Model" cottages will be re-located to an area outside of the flood hazard zone.

The Long Neck Road area is home to over a thousand permanent and transient manufactured housing residents together with the supporting retail, food service and medical business community that meets the needs of those living there. We recognize the need for a detailed evacuation plan to be followed in the event of a hurricane force storm occurring during the summer camping season. A draft plan has been prepared, is attached (APPENDIX F) and will be refined into a Castaways Massey's Landing working plan with the assistance of local emergency response personnel contributing to the content.

TMDLs

- The project is located in the low nutrient reduction zone of the greater Inland Bays watershed. In this watershed, Total Maximum Daily Load (TMDL) pollutant reduction targets have been developed by the State of Delaware (under the auspices of Section 303(d) of the 1972 Federal Clean Water Act) for nutrients (e.g., nitrogen, phosphorus), and bacteria. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; State of Delaware Surface Water Quality Standards, as amended July 11, 2004) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. The TMDL for the low reduction zone of the Inland Bays watershed calls for 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 40 percent reduction in bacteria from baseline conditions.

- A nutrient management plan is required under the Delaware Nutrient Management law (3 Del. Chapter 22) for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project's open space may exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at 739-4811 for further information concerning compliance requirements or view the following web link for additional information:

  http://dda.delaware.gov/nutrients/index.shtml.

The adopted Inland Bays Pollution Control Strategy regulation was published in the Delaware Register of Regulations on November 11, 2008 and is now an enforceable regulatory directive. A Pollution Control Strategy (PCS) is an implementation strategy that identifies the actions necessary (regulatory and non-regulatory) to systematically reduce the pollutant loading to a given water body, and meet the TMDL reduction requirements specified for that water body. These regulations can be reviewed at:

http://regulations.delaware.gov/documents/November2008c.pdf
and background information, guidance documents, and mapping tools can be retrieved from:

http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib_pcs.htm.

Understood and agreed. The project civil engineer shall initiate the necessary contacts to learn how the PCS applies to the Castaways Massey's Landing project.

Water Supply

- The project information sheets state water will be provided to the project by Long Neck Water Company via a public water system. Our records indicate that the project is located within the public water service area granted to Long Neck Water Company under Certificate of Public Convenience and Necessity 94-CPCN-29.

A meeting with the Long Neck Water Company on February 5, 2013 introduced a conceptual design of the project to water company management and their consulting engineer.

- Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

Understood and agreed.

- All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Understood and agreed.

- Potential Contamination Sources exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case there is an Underground Storage Tank associated with Massey Landing Boat Ramp located within 1,000 feet of the proposed project.

Understood and agreed.

Sediment and Stormwater Program

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a project application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post- development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101)

A meeting on January 29, 2013 introduced a conceptual design of the project to Jessica Watson and James Elliott; staff engineers with the Susssex Conservation Distict.

Hazardous Waste Sites

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

Understood and agreed.

Tank Management Branch. Please be aware:

- If a release of a Regulated Substance occurs at the proposed project site, compliance of 7 Del.C., Chapter 60, 7 Del.C., Chapter 74 and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) is required.

Understood and agreed.

- Per the **UST Regulations: Part E, § 1. Reporting Requirements**:

  - Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:

    - The Department's 24-hour Release Hot Line by calling 800-662-8802; and
    - The DNREC, Tank Management Section by calling 302-395-2500.

Understood and agreed.

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

- Fire Protection Water Requirements:

  - Where a water distribution system is proposed for single-family dwellings (including Manufactured/Mobile Homes), it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.

  - The infrastructure for fire protection water shall be provided, including the size of water mains.

- Accessibility:
  - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from the main thoroughfare must be constructed so fire department apparatus may negotiate it.
  - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
  - Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans.
  - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
  - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.
  - Gas Piping and System Information:
  - Provide type of fuel proposed, and show locations of bulk containers on plan.
  - Required Notes:
  - Provide a note on the final plans submitted for review to read " All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
  - Name of Water Supplier
  - Proposed Use
  - Provide Road Names, even for County Roads

A meeting on January 28, 2013 introduced a conceptual design of the project to Duane Fox, the Sussex County Fire Protection Specialist.

A meeting on February 8, 2013 introduced a conceptual design to Mr. Mike Mock, Chief of the Indian River Fire Department serving Long Neck.

Recommendations/Additional Information

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. These suggestions do not represent State code requirements. They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped (but in no way required) that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- On June 27, 2012, a letter was sent out explaining the changes in the way checks should be submitted to DelDOT. A copy of the letter is available at:

  http://www.deldot.gov/information/business/subdivisions/PaymentProcedure.pdf.

- DelDOT recommends that the developer have their site engineer contact our Subdivision Manager for this part of Sussex County, Mr. John Fiori, for a pre-submittal meeting prior to submitting a site plan for review and approval. A checklist of requirements for pre-submittal meetings and a Meeting Request Form are available on DelDOT's website at:

  http://www.deldot.gov/information/business/.

  As necessary, Mr. Fiori can be reached at (302) 760-2260.

Department of Natural Resources and Environmental Control – Contact Kevin Coyle 739-9071

Soils Assessment

- Based on soils survey mapping update, following soil mapping units were mapped on subject parcel (grouped on the basis of drainage class):

  1) Excessively well drained – Evesboro (EvB & EvD), Runclint (RuA)
  2) Moderately well drained – Hammonton (HmA)
  3) Somewhat poorly drained (potentially hydric)- Klej (KsA)
  4) Very poorly drained (hydric) – Broadkill mucky peat (Br)
  5) Variable drainage (extensively modified by cutting, filling & grading) – Brockatonorton Urban land complex (BuA)

- Based on the soil survey mapping, Klej and Broadkill mucky peat are the soil mapping units most likely to have the most limitations for development on this site. Klej is a somewhat poorly-drained mapping unit that occurs in transitional zones between wetlands and upland environments, and may or may not be hydric and/or suitable for development. Broadkill is a very poorly-drained wetland associated (hydric) soil mapping unit that has severe limitations for development (considered unsuitable for development). We strongly recommend a certified and licensed soil scientist (ARCPACs certified and Class D licensed) to make a site-specific evaluation of the soils in this area. Please contact the Underground Discharges Branch at 739-9948 for a list of soil scientists.

The Faucett family has employed Mr. Laf P. Erickson, CPSS/SC with Atlantic Resource Management, Inc. as the project soils scientist to make site specific soil evaluations and recommendations for storm water management and all other construction design purposes.

- The Statewide Wetland Mapping Project (SWMP) often uses the soil survey as the basis for mapping and delineating wetlands The presence of a hydric soil is one of three parameters that must be met in order to meet jurisdictional wetland requirements (as specified by the USACOE). The other parameters are hydrophytic vegetation and hydrology. That is, the occurrence of hydric soils is a correlate with wetland presence. Building on hydric soils is likely to increase the potential for on-site and off-site flooding potentials (See figure 1). We strongly recommend avoiding areas containing hydric and potentially hydric soil mapping units. We also recommend that the applicant avoid those areas where slopes exceed 10% slope (likely a significant portion of the EvD soil mapping unit).

Understood and agreed.

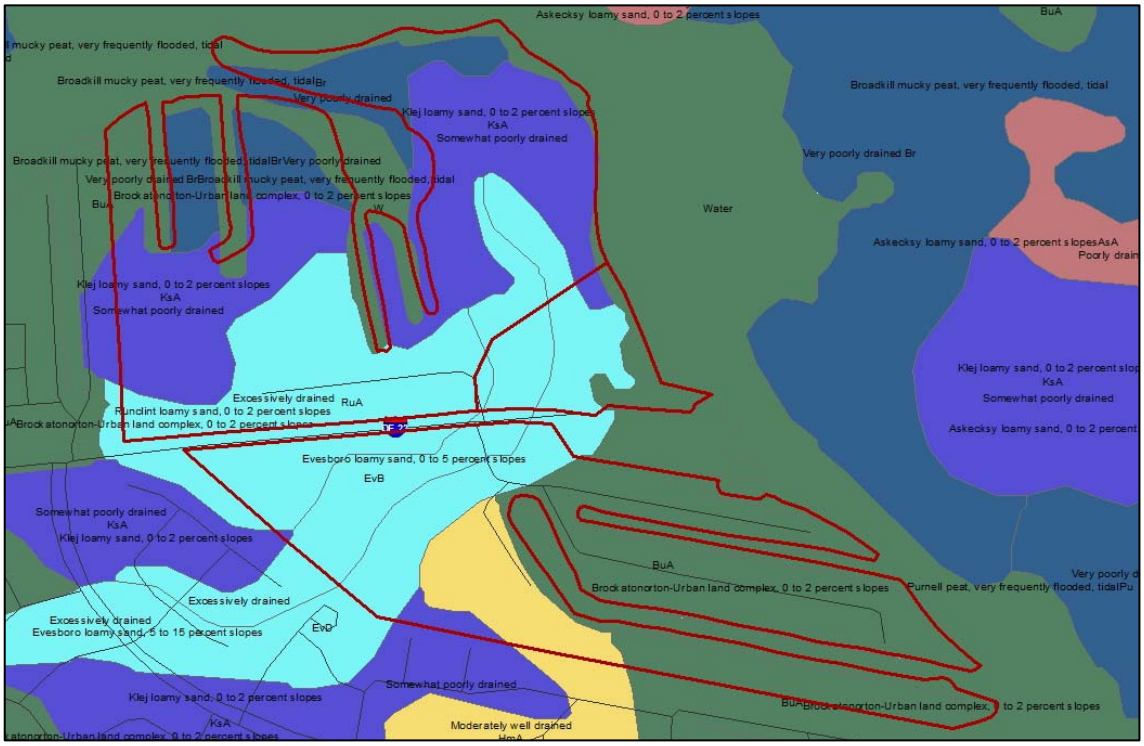


Figure 1: NRCS soil survey mapping update in the vicinity of the proposed construction.

Additional information on TMDLs and water quality

- A United States Corps of Engineers (USACE) approved wetlands delineation is strongly recommended. According to information presented in the PLUS application, an approved wetlands delineation was conducted - however, it was not made available to DNREC at the time of review.

See attached copy of the USACOE approval letter and approved jurisdiction delineation plan (APPENDIX D & E).

- Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. Wetland and Stream Buffer Requirements – A Review. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands (field delineated and approved by the USACE).

- Removal of forest cover to accommodate stormwater management structures is strongly discouraged. It is also apparent that the applicant intends to remove much of the existing forest cover which will likely increase nutrient runoff or discharge into both surface and ground waters. Much of the parcel of the parcel is forested (Figure 2).

The conceptual storm water management planning underway by the project civil engineer does not envision the removal of any existing forest cover to accommodate storm water management structures.

This project proposes the use of pervious pavements wherever travel ways, recreational vehicle parking or automobile/golf cart parking is planned to occur on site. Impervious surfaces are limited to the maximum extent possible and will be confined to rooftops, swimming pool decking, piers and docks.

Existing forest cover will be selectively and professionally thinned or removed only as needed to install the access ways to individual camping sites and parking spaces for recreational vehicles, bath houses and other amenities. The Faucett family recognizes the importance of maintaining as much forest cover as possible to enhance the camping experience and maintain this valuable resource that was originally planted by members of their own family.

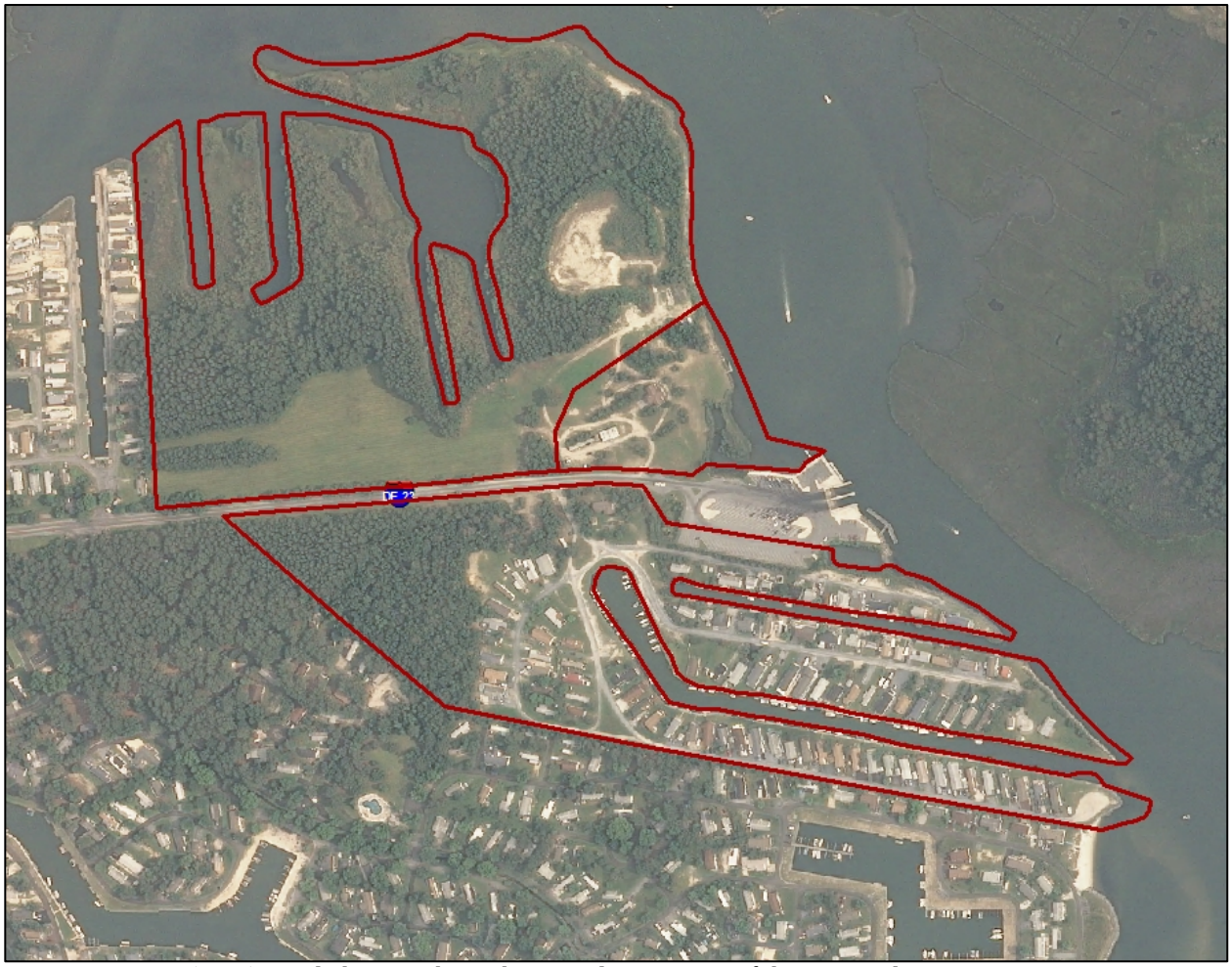


Figure 2: USDA (2009) aerial photography in the immediate vicinity of the proposed project.

- DNREC recommends that the applicant calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, and roads) included in the calculation.

The project civil engineer is required to compute the volume of post construction runoff as a part of the application for sediments, erosion control and storm water management construction approval from the Sussex Conservation District.

- Since this project that will likely generate large amounts of impervious cover, we advise, wherever practicable, the use of pervious paving materials (instead of conventional asphalt and concrete) as a BMP(s) to reduce the impacts from all forms of created surface imperviousness.

This project proposes the use of pervious pavements wherever travel ways, recreational vehicle parking or automobile/golf cart parking is planned to occur on site. Impervious surfaces are limited to the maximum extent possible and will be confined to rooftops, swimming pool decking, piers and docks.

- DNREC encourages the use of rain gardens, and green-technology storm water management structures (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant impacts via runoff from impervious surfaces.

The conceptual storm water management planning underway by the project civil engineer does envision the use of rain gardens and green-technology storm water structures to manage nutrient and bacterial pollutant runoff impacts from those limited impervious surfaces on site. Rain garden management structures are planned for rooftop generated storm water for bath houses, pavilions, offices, general store and nature center while pervious pavements and planted biofilters throughout the site will manage water quality for parking and access ways.

- The applicant should voluntarily assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the "Nutrient Load Assessment protocol." The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project's impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact the Watershed Assessment Section at 302-739-9939 for more information on the protocol.

The conceptual storm water management planning underway by the project civil engineer will assess the nutrient loading changes that result from the agricultural land uses being converted to the campground land use.

Site Visit Request

- Division of Fish and Wildlife scientists have not surveyed the project area and in order to provide more informed comments, we request the opportunity to conduct a survey to evaluate habitat and map vegetation communities. Please note that our scientists have extensive knowledge of the flora and fauna of the state. The survey will be conducted at no expense to the landowner. In the event that authorizations will be needed from DNREC's Coastal Management Program and/or Wetlands and Subaqueous Lands Section, they will require complete and up to date info from the Natural Heritage and Endangered Species Program as part of their review. Therefore, allowing access to the site will also increase the

efficiency of the State authorization process. Please contact Edna Stetzar at (302) 735-8654 or at Edna.Stetzar@state.de.us if the landowner will grant a site visit.

The Faucett family has authorized a site visit by staff from the Natural Heritage and Endangered Species Program. A copy of the report from that agency is attached (APPENDIX G). A question was raised in the Natural Heritage report about the nesting area for a local eagle pair. A letter prepared by the project environmental consultant addresses this matter and identifies the nest location on an off-shore island lying 1,200'+ east of the project site (APPENDIX H).

Wildlife Habitat/DEN

- The site plan as designed will result in clearing and fragmentation of at least 32 acres of forest for 575 RV campsites (and various amenities). According to GIS data, part of this forest is mapped as wetlands and the remaining upland forest is providing an ecologically important buffer for those wetlands. We highly recommend that forested areas at this site, especially north of Long Neck Rd be left intact. It would be best if the site plan could be reconfigured to better preserve the forest and wetlands on this side of the road.

- In addition, this forest has been identified as ecologically important core habitat by the Delaware Ecological Network (DEN). The DEN, although non-regulatory, is a statewide conservation network developed using GIS and field collected datasets that help to identify and prioritize ecologically important areas for natural resource protection. The DEN includes areas such as forests, wetlands, streams, and habitat that support rare species and areas of especially high quality. The DEN includes the following key elements: 1) core areas- contain relatively intact natural ecosystems, and provide high-quality habitat for native plants and animals, 2) hubs-slightly fragmented aggregations of core areas, plus contiguous natural cover and 3) corridors-link core areas together, allowing wildlife movement and seed and pollen transfer between them.

  Bald Eagle Nest

  There is an active Bald Eagle (Haliaeetus leucocephalus) nest on an island adjacent to the project area. Bald eagles and their nests are protected under the federal Bald and Golden Eagle Protection Act (BGEPA). The U.S. Fish and Wildlife Service (USFWS) developed National Bald Eagle Management Guidelines, to help landowners and others minimize impacts to eagles, including disturbance, which is prohibited by the BGEPA. The guidelines focus on minimizing disturbance through the use of suggested buffer zones (330 ft. to 660 ft. from a nest) and time-of-year restrictions for certain activities in several categories.

  The project area is just over 660 feet from this nest. Further consultation is not

necessary at this time, but this information is provided in the event the applicant is planning future shoreline stabilization (rip-rap) or shoreline amenities (such as docks/piers, beach replenishment) which are mentioned in the PLUS application. If this is the case, the applicant will need to contact us for further guidance.

The Faucett family engaged Mr. Kelly Pierson, a professional environmental consultant with Back Creek Environmental Consulting, to conduct an on-site inspection of their property to determine the limits of Federal and State of Delaware jurisdictional wetlands and State subaqueous lands. The attached plan (APPENDIX D) illustrates the results of those findings as mapped by True North Land Surveying and certified by Mr. Pierson. Also attached (APPENDIX E) is a letter dated September 28, 2012 from the U.S. Army Corps of Engineers which states that the plan depicts the extent of Federal jurisdiction on the subject property.

The proposed campground land use plan identifies several amenities that are water dependant which will require the issuance of permits from both DNREC, the U.S. Army Corps of Engineers and other Federal regulatory agencies. Amenities proposed include fishing/crabbing piers, small non-motorized water craft rentals, elevated walkways and a swimming beach. Additionally, the campground project proposes shoreline stabilization, beach sand replenishment, control of invasive plant species and aquatic/upland revegetation measures to be undertaken in an effort to protect the current degraded shoreline and enhance near shore wetlands into a more sustainable and ecologically productive habitat.

Fourspine Stickleback

There were indications on the PLUS application that there may be shoreline stabilization (rip-rap) or shoreline amenities (such as docks/piers, beach replenishment) associated with this project, therefore, the following is provided for future planning purposes: A population of the state-rare fish, Apeltes quadracus (fourspine stickleback), was observed adjacent to this project site during surveys conducted in 1970. Subsequent surveys have not been conducted; therefore, it is unknown if it still persists at this location. If habitat conditions have remained relatively stable the population likely still persists. Because this species is dependent on calm, shallow, heavily vegetated waters for spawning, efforts should be made to avoid direct impacts to submerged aquatic vegetation (if present) and to decrease sedimentation during project activities. If aquatic vegetation is prevalent in the project area, then a spawning window of April 1 to May 30 should be considered.

The Faucett family has authorized a site visit by staff from the Natural Heritage and Endangered Species Program and a copy of the report from that agency is attached (APPENDIX G).

Massey's Landing Public Boat Access

- This project is adjacent to the Massey's Landing Boating Access Area at the end of Long Neck Road and the state is concerned about potential user conflicts. It should be disclosed to users of your project area that is an existing public access area. Conflicts could generate complaints regarding after hour use, trash, noise, and extra boat traffic. If you have any questions about this access area, please get in touch with Rob Gano, Regional Wildlife Area Manager, at (302) 539-3160 or Robert.Gano@state.de.us.

Noted

Additional information on hazardous waste sites

- SIRS strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (including a title search to identify environmental covenants) in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

- Additional remediation may be required if the project property or site is re-zoned by the county.

- Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions.

Additional information on tank management

- The following confirmed leaking underground storage tank (LUST) projects are located within the boundaries of the proposed project:

    - Massey's Landing Boat Ramp, Facility: 5-000632
        - Project: S9108169 (Inactive)—550 GALLON GASOLINE TANK REMOVED. COMPOSITE SAMPLES BOTH ND, PIT BOTTOM ND TPH, 2 PPM BTEX (XYLENE). NFA LETTER 8/15/91
        - S9205152 (Inactive)—6/17/92--SOIL VAPOR SURVEY ON 5/21/92 SHOWED AREA OF CONTAMINATION. SOILS OVEREXCAVATED AND MOVED TO ADJACENT PROPERTY

FOR BIOREMEDIATION. 1/3/97--SOIL PILE BIOREMEDIATION COMPLETE. NFA LETTER ISSUED 1/3/97.

- Massey's Landing c/o J Peotack, Facility (Hardscrapple Store): 5-000128
  - Project: S9205145 (Inactive)—LUST DEN notes indicate that that contaminated soils were disposed in April 1992.

The sites listed as "confirmed leaking underground storage tank projects" are NOT located within the boundaries of the proposed project. The sites listed are lands owned by the State of Delaware adjacent to the proposed project.

- The following confirmed leaking underground storage tank (LUST) projects are located within a quarter mile from the proposed project area:

  - Indian Landing Store, Facility: 5-000189, Projects (both Inactive): S9202047, S9203063

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

- Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

A meeting on January 28, 2013 introduced a conceptual design of the project to Duane Fox.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

A copy of this written response is being filed simultaneously with both the Office of State Planning Coordination and the Sussex County Planning and Zoning Department.

We appreciate this opportunity to introduce the Castaways Massey's Landing proposed land use design. The time and effort devoted to supplying these regulatory responses is acknowledged and will be taken into consideration as this project moves through the entitlement process.

As always, if you have questions regarding any aspect of this matter, please do not hesitate to contact our office accordingly.

Sincerely,

Land Tech Land Planning, LLC

Jeffrey A. Clark, RLA
jeffc@landtechllc.com

file: Castaways Massey's Landing PLUS Response
enclosures: Noted
cc: Mr. Linford P. Faucett, III with enclosures
James Fuqua, Esquire with enclosures
Lawrence Lank with enclosures
Michael Riemann, P.E. with enclosures
Kelly Pierson with enclosures
Laf Erickson with enclosures

ATTACHMENTS

APPENDIX A – Preliminary Site Plan

APPENDIX B – Cultural Resource Assessment, Dr. Otter

APPENDIX C – November 7, 2012 DelDOT Letter

APPENDIX D – USACOE Wetlands Plat

APPENDIX E – USACOE Wetlands Letter

APPENDIX F – Draft Emergency Response Plan

APPENDIX G – Natural Heritage Report

APPENDIX H – Environmental Consultant Eagle Report

CULTURAL RESOURCE ASSESSMENT OF THE FAUCETT PROPERTY, MASSEY'S LANDING, INDIAN RIVER HUNDRED, SUSSEX COUNTY, DELAWARE

November 16, 2004

Prepared for:
Landtech
118 Atlantic Ave
Ocean View, Delaware 19970

Prepared by:
Edward Otter, Ph. D.
Archaeologist
1704 Camden Avenue
Salisbury, Maryland 21801

CULTURAL RESOURCE ASSESSMENT OF THE FAUCETT PROPERTY, MASSEY'S LANDING, INDIAN RIVER HUNDRED, SUSSEX COUNTY, DELAWARE

November 16, 2004

Prepared for

Landtech
118 Atlantic Ave
Ocean View, Delaware 19970

Prepared by

Edward Otter, Ph. D.
Archaeologist
1704 Camden Avenue
Salisbury, Maryland 21801

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

This project was conducted for Landtech, LLC as part of a due-diligence process. The Faucett Property is located on the north side of Long Neck Road on the south side of Roman T Pond (Figure 1). In order to understand the historic resources that may be present on the property archival research was conducted. This was not a Phase I archaeological survey. The only field work conducted for this project was a cursory reconnaissance. Examination of courthouse records, historic maps and aerial photographs, and state and federal registers were examined during this work. Edward Otter, archaeologist conducted this study.

PROJECT DESCRIPTION

Purpose

The goal of this project is to provide information about potential historical and archaeological issues that may arise during property development. Historic structures and archaeological sites can be impediments to property development from a financial and scheduling viewpoint. Cemeteries also provide a development issue in that they occupy land that would otherwise be buidable.

The National Historic Preservation Act of 1966, as amended states that all federal agencies will consider the impacts of their actions on historic resources. Historic resources are those defined as listed on or eligible for listing on the National Register of Historic Places. Thus, before a federal permit can be issued or funds spent for a project, a process for identifying historic resources must be completed. Impacts to any eligible sites must be mitigated before the federal action (permit or funds) can be taken.

In land development, the most common form of federal action is the issuance of a wetland permit. When a permit application is made, the Army Corps of Engineers notifies the State Historic Preservation Office (SHPO). It is the SHPO that oversees compliance of the legislation.

Section 106 of the National Historic Preservation Act establishes a staged approach to cultural resource investigations. The initial step is a Phase I survey. The goal of such a survey is to identify all cultural resources within the area to be affected by the federal action. Phase II work looks at resources identified during the Phase I survey and determines whether or not the sites are eligible for inclusion on the National Register of Historic Places. Any negative effects to sites determined to be eligible for inclusion must be mitigated.

The Delaware State Historic Preservation Office (SHPO) oversees compliance of the National Historic Preservation act. When a federal permit is requested, the SHPO is notified and a consultation process initiated. Considering the potential archaeological characteristics as outlined above, the SHPO will request a Phase I archaeological survey. This survey will seek to identify the locations of all archaeological sites on the property.

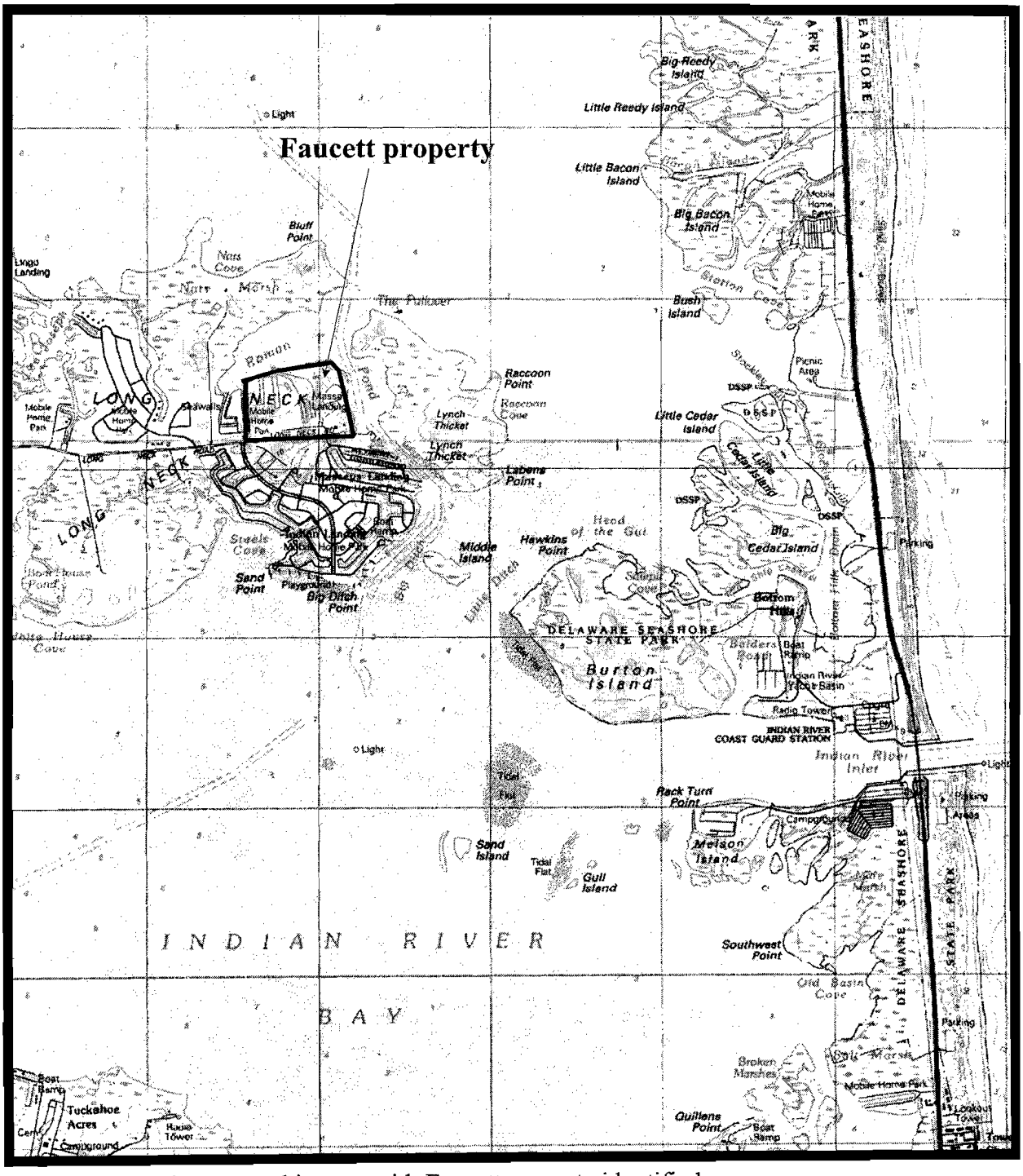


Figure 1. USGS topographic map with Faucett property identified.

The goal of a Phase I study is to determine the locations of any archaeological sites. On this property, this work could consist largely of a pedestrian reconnaissance after a fresh plowing. A shovel test is a small excavation about as big around as a shovel: roughly one foot.

Phase II work on any site identified during the Phase I study will include close interval shovel tests (perhaps 20' intervals) and some larger excavation units. This work is designed to determine site boundaries and if intact deposits are present. The types of artifacts will provide information about the site age and function. All of this information is requested on National Register nomination forms. Any site that has intact deposits has the potential to provide scientific information about the past. This is a threshold for determining whether a site is or is not eligible for the National Register.

If a site is determined to be eligible for the National Register of Historic Places discussions about protection or study of the site are required. If the site can not be protected from human disturbance in perpetuity then archaeological study of the site is required. This level of work, Phase III, can be very expensive. It involves large scale excavation of the site.

Cemeteries are regulated with state laws that prohibit destruction. Moving a grave can be difficult because of notification requirements and the fact that only heirs can grant permission. The prudent approach is to mark off cemetery limits and then conduct an archaeological delineation of the cemetery. Thus tested, a cemetery would be left in place.

Project Area

The project area is located in Indian River Hundred on the north side of Long Neck Road and south of Roman T Pond (Figure 1). There is minor topographic relief with elevations ranging from sea level to about ten feet above sea level.

Research Design

Studies of this nature are primarily archival with a limited amount of field reconnaissance. Records for the property are researched at the courthouse for indications of past land use. These include land records, wills, orphans court documents, and any other records identified. Specific types of land use and the presence of occupation at different times in the past can be learned from these records. Other document sources include historic maps, aerial photographs, and the Delaware State Cultural Resource files maintained by the Delaware Historic Preservation Office.

Because of archaeological work conducted over the last three decades in Delaware and surrounding states, the environmental settings of prehistoric sites have been recognized. It has been recognized that prehistoric peoples settled on particular locations because of environmental conditions. The presence of water and well drained soils appear to have been important factors in settlement locations. Armed with this information, it is possible, in general terms, to predict

where prehistoric archaeological sites can be found. While not fool-proof, such predictions can be helpful in future land use planning.

CULTURE HISTORY

The study of cultural resources, archaeological sites and historic buildings, has as its goal the understanding of human existence. It is not the things themselves that are of interest, it is what we can learn about the people that left the remains. All cultural resources, then, are important only within a context of what we know and how they increase our body of knowledge.

Humans have occupied the Delaware for at least 15,000 years. Human occupation of North America is divided into two eras, prehistoric and historic. The historic era is equivalent to the time of Euro-American occupation and the prehistoric era on Delmarva is divided into the Paleo-Indian, Archaic, Woodland I and Woodland II periods. The Woodland I period is further divided into complexes based on sets of artifacts that indicate particular adaptations within temporal and spatial limits (Custer 1989:14).

Prehistoric Era

Periods of the prehistoric past are known from prior archaeological study. The periods are defined on the basis of artifacts recovered in context and dated through radio-carbon analysis.

Paleo-Indian Period (13000 B.C. - 8000 B.C.)

The diagnostic tools of the Paleo-Indian period are the fluted Clovis point, and the Kirk, and Palmer point types. Paleo-Indian sites are centered around sources of cryptocrystalline rocks suitable for working into tools (Gardner 1974, 1977). There are no primary outcrops of cryptocrystalline rocks on the Delmarva Peninsula south of Newark, Delaware. However, there are areas on the western side of the Peninsula where good quality stone (for making tools) are found. Associated with these cobble sources are Paleo-Indian sites such as Paw-Paw Cove (Lowery 1989). In general, however, there are few known Paleo-Indian sites on the Delmarva Peninsula. Fluted point finds from Delmarva are primarily surface finds, including two from the Nanticoke drainage (Custer 1989a:94).

For years, the subsistence of these first people was believed to be based on the hunting of Pleistocene megafauna such as mammoth and mastodon. This assumption was based on the similarity of projectile points across the country and the association of these early tools with megafauna in sites located in the Midwest and west. Evidence from sites in the east also suggest hunting of smaller animals such as deer, birds, and fish (Dent & Kaufman 1985; Ebright 1992).

Archaic (8000 B.C. - 3000 B.C.)

During the Archaic period, the vegetation changed from the spruce woodland to a mixed coniferous/deciduous forest with a large increase in the amount of white pine noted (Carbone 1976). By around 7,000 B.C. the forest changed to the Oak-Chestnut forest characteristic of the region until the chestnut blight (Carbone 1973). Essentially modern floral and faunal patterns became established during this episode (Carbone 1973; Custer 1989). Throughout this time sea level was rising as the ice caps melted. Sea level was rise was rapid and it is likely that estuarine resources in the Chesapeake and Delaware Bays had not yet become established.

Archaic sites are identified by the presence of bifurcate based points of various names and by Morrow Mountain projectile points. Points of this period are found on the Delmarva Peninsula but little is known about local settlement patterns. Custer (1989a) notes the highest concentration of bifurcate based points is along the mid-peninsular drainage divide. The introduction of ground stone tools (Coe 1964), generally plant processing tools, indicates the increased importance of vegetable foods at this time.

Woodland I (3000 B.C. - A.D. 1000).

The Woodland I is divided into four complexes (Table 1). These are temporally and spatially definable based on sets of artifacts related to particular adaptations (Custer 1994, 1989). Woodland I sites are more numerous in southwestern Delaware than for any other period (Custer 1989b:33). Sites are found in a variety of locations indicating a refined subsistence pattern incorporating seasonal movements geared toward collecting a variety of food resources. Areas with well-drained soils along streams are good locations for sites of this period. The largest sites of this period are associated with well-drained soil along major waterways.

PERIOD	COMPLEX
3000 B.C. - 500 B.C.	Barker's Landing
500 B.C. - A.D. 1	Wolfe Neck/Delmarva Adena
A.D. 1 - A.D. 500	Carey
A.D. 500 - A.D. 1000	Late Carey

Table 1. Woodland I Complexes

Settlement during the Woodland I has been interpreted to be characterized by family oriented camps. Winter base camps were located along major waterways (Custer 1994:84) with procurement camps spread across various ecozones.

Barker's Landing Complex (3000 B.C. - 500 B.C.)

Projectile points characteristic of the Barker's Landing Complex include the Savannah River, Bare Island and fishtail types, among others. Custer (1994) has divided the Barker's Island Complex into three periods (I, II, and III). In the Barker's Island I (3000 B.C. - 2000 B.C.) small stemmed points were used. During the Barker's Island II (2000 B.C. - 1200 B.C.) small stemmed points and broadspears were used. Steatite bowls were also included in the material culture at this period. The Barker's Island III period includes fishtail points and steatite tempered pottery and Dames Quarter ceramics (Custer 1994).

Wolfe Neck/Delmarva Adena Complex (500 B.C. - A.D. 1)

Around 500 B.C. Wolf Neck ceramics replace the earlier forms. Across the eastern United States at this time, ceramics were sand and crushed quartz tempered with cord or net marked exteriors and Wolf Neck is the local variety of this pattern. Custer regards Wolfe Neck and Delmarva Adena complexes to be coexisting cultures. The most significant difference is the burial ceremonialism, including exotic non-local artifacts, associated with Delmarva Adena. Custer relates the rise of Delmarva Adena to increased social organization.

Carey Complex (A.D. 1 - A.D. 500)

Custer notes that the most dramatic marker for the emergence of the Carey Complex is the cessation of Delmarva Adena (Custer 1989a:276). Mockley ceramics (tempered with crushed shell) and Rossville projectile points are characteristic artifact types.

Late Carey Complex (A.D. 500 - A.D. 1000)

During this period there is a reduction in the number of sites in the Nanticoke area (Custer 1989b:40). Hell Island ceramics and Jacks Reef projectile points are diagnostic of the period. The presence of Hell Island pottery is believed due to an intrusion from the north (Custer 1989b:41)

Woodland II (A.D. 1000 - A.D. 1600)

The Woodland II is characterized by essentially modern climatic conditions. A minor perturbation, the Little Ice Age, occurred between A.D. 1200 and A.D. 1600. This appears to have been a period of cooler temperatures and decreased precipitation (Otter 1989). The effects of the little ice age were recorded across Europe as well as North America (Wigley, Ingram & Farmer 1981).

Two complexes are recognized in Delaware for the Late Woodland II period (Custer 1989). The Minguannan Complex is mostly restricted to the northern part of the state although occasional pieces of mingunannan ceramics may be found in Sussex County.

In the lower part of the state, from central Kent County south through Sussex County, the Slaughter Creek Complex is found. This complex is characterized by triangular projectile points and Townsend/Rappahanock ceramics. A major distinction between Townsend/Rappahanock pottery and Mockley pottery, besides surface treatment, is that Townsend/Rappahanock pots were better made. Paddling seems more thorough resulting in thinner vessel walls and fewer breaks along coil lines. Sites associated with Slaughter Creek complex are often large suggesting sedentary villages.

Maize agriculture was clearly present in the Middle Atlantic during this period. Corn has been found at the Rosenstock and Thomas Point sites in Maryland, and at the Great Neck site in Virginia Beach, Virginia. There is little justification for believing maize was not present in Delaware. Hunting and the gathering of wild plant foods was also clearly an important component of Woodland II life.

Historic Era

Exploration and Frontier Settlement (1630 - 1730) (Contact Period)

European settlement of the Delmarva Peninsula began in Virginia about 1628, at Lewes (Swanandael) about 1630 and along the upper Chesapeake Bay about 1633. The Delaware settlements were contested between the Swedes, Dutch, and English. By 1674 the English had gained complete control of the region. Maryland claimed as far north as the Indian River with some patents of land made as far north as Lewes. After William Penn was granted the Delaware counties in 1682 the economic focus became centered around Philadelphia. Lewes was the largest settlement in Sussex County.

The Dutch encountered a group of natives they called the Siconesse living in the area around Lewes. During the Late 17th century the natives along the Pocomoke River, including the Manokin, Nassawatix, Assateague, Perrihawkins, and others consolidated and moved to a reservation near Snow Hill, Maryland. They were displaced by European encroachment and moved to the south side of the Indian River eventually fading away as a political entity in the early 18th century. Indians along the Nanticoke were at first on the Chicoane Reservation near Vienna and later moved to the Broad Creek Reservation near Laurel. Indian groups along north of the Indian River appear to have moved toward the river and faded into the European population. During the mid-1700s many left to live with other native groups in other parts of the country.

A significant factor in the disappearance of the Native American lifestyles was the introduction of European diseases which the Americans were not physically equipped to fend off. Between the fighting, diseases, and discrimination, the Native Americans either left the region or hid themselves either in small groups or assimilated as best as possible into the new European styled society. However, during the early 20th century there was enough of a Native American community that they were the subject of anthropological study (Speck 1915). Native American descendants survive to the present day. The largest groups are on the north side of the Indian

River and in the Cheswold area of Kent County. These groups are gaining a political voice, becoming more outspoken in regards to the destruction of their burial grounds.

Early historic period economics in lower Delaware centered around the production of corn, cattle, and hogs. These products were marketed in Philadelphia. Perhaps because of the economic interests, settlements during this period were located along navigable streams. Most sites are located within 12 miles of the Delaware Bay or Atlantic Ocean and within 300 feet of a navigable stream (De Cunzo & Catts 1990:36).

Intensified and Durable Occupation (1730 - 1770)

The population of lower Delmarva grew steadily during this period. Life was centered around agrarian pursuits. Farm products reached foreign markets through Philadelphia. Iron forges came into existence along the Nanticoke, and presumably along other waterways, about 1760 and were largely gone by the Revolution. Road networks were developed and settlers moved further inland. Small hamlets developed at this time, mostly along river crossings (De Cunzo & Catts 1990:44).

Transformation from Colony to State (1770 - 1830)

The Revolution altered foreign markets. Food produced on Delmarva was sold in Baltimore and Philadelphia instead of Europe or the West Indies. These economic ties continued until the Civil War. Rapid population growth after the Revolution led to the clearing and tilling of marginal lands (De Cunzo & Catts 1990:53). By the 1820s many were heading west for better land. There was also an increase in industrialization. In 1810 more than 70% of the textile mills of Delaware were in Sussex County. Flax and wool were major crops in the county.

Industrialization and Capitalization (1830 - 1880)

The rise of Baltimore as an important overseas port siphoned Delmarva goods away from Philadelphia. Railroads reached the lower peninsula around 1850 and improved transportation. This allowed farmers to raise more perishable, and lucrative, crops such as peaches. Canning also developed after the Civil War and became an important industry. Corn and wheat remained the major crops.

Urbanization and Sub-urbanization (1880 - 1940)

The term for this period is somewhat misleading for southern Delaware. Little urbanization occurred. The most significant changes of this period in southern Delaware were improvements in transportation and a shift to truck crops and poultry as major farm products. The modern poultry industry that quickly raises and markets chickens was developed in Sussex County. The need to satisfy feeding requirements of the birds shifted crops from truck items to

feed crops. The land now included in the Georgetown Airport was occupied by farms during this time.

RESULTS

Historic research

An attempt was made to examine all deeds involving the land back to the initial land patents in the late 17th century or early 18th century. This is done by working backwards in the land records. In the process, wills, and other documents are identified and read for information about land use and habitation. This work helps in determining the extent and types of land use that has occurred on the property through the years. It is not uncommon to find references to houses that no longer stand and in some cases cemeteries.

Historic Register survey

The state archaeological site files identifies a prehistoric archaeological site (7-S-G-20) within the property (Figure 2) as well as a historic structure (s3047). The prehistoric site was collected in 1972 and there is a collection of material on repose with the Delaware State museum. Wolfe Neck, Coulbourne, and Mockley ceramics are identified as coming from this site. These ceramic types date between 1 A.D and 500 A.D., part of the Woodland I Wolfe Neck/Delmarva Adena complex and Carey Complex.

There is no real information about the historic house. Based on information presented later, it is believed that this house is actually on the parcel to the west of the Faucett property.

Archival Research

The Faucett property is currently owned by Faucett heirs LLC. The land was acquried from Lemford and Ida Faucett (2438/36). Lemford and Ida bought the land from L.P. Faucett in 1999 (2432/15). L.P. Faucett acquired the land from L.P. Faucett, Inc. in 1972 (680/102) and L.P. Faucett Inc. bought the land from Garry and Nora Massey in 1938 (312/361).

Garrey Massey bought the land i 1907 from Joshua Massey. This was a 60.5 acre parcel (160/449). Joshua Massey received title from his father William H. Massey and William Massey bought the land in 1868 from Stephen C. Boone (78/203). The location of Stephen Boone's house is shown on the 1868 Beers Atlas (Figure 2). Boone acquired the land from the sale of the estate of William T. Burton ((78/201).

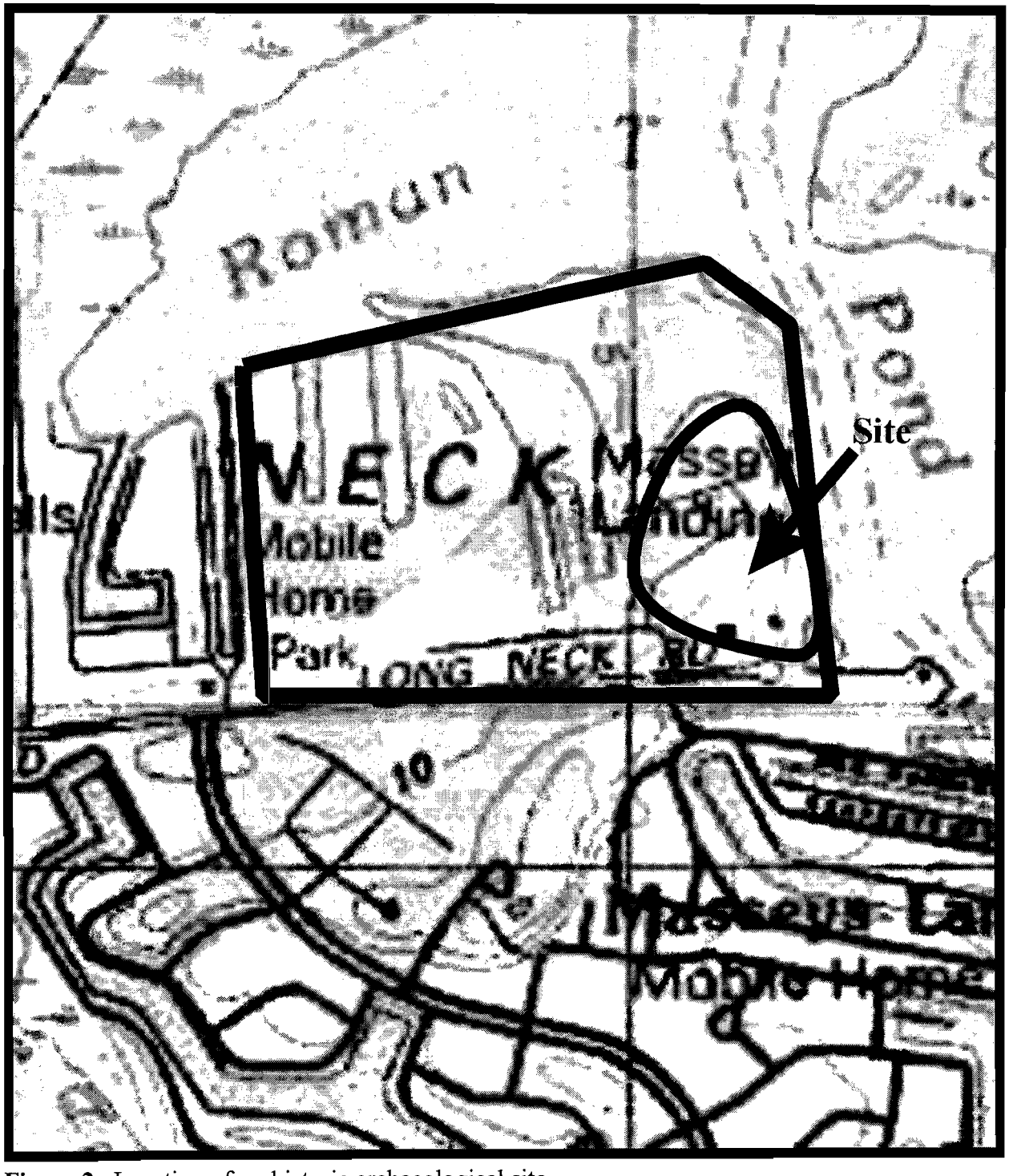


Figure 2. Location of prehistoric archaeological site

At this point, the land tenure history becomes obscure. The Burton family was large, held vast amounts of land including most of the northern shore of the Indian River and Rehoboth Bay up to and including Herring Creek. An 1840 orphans court plat (Figure 3) of the lands of Isaiah Burton shows the southern side of Long Neck indicating that the land where the property is located was in the possession of Elizabeth Kollock.

It could not be determined if Elizabeth Kollock bought the land or inherited it. What is clear is that in 1751 the property of Woolsey Burton that comprised all of Long Neck east of the northern branch of Steele's Cove was divided between his two sons Woolsey and Isaiah. Isaiah was given the southern portion and Woolsey the northern part (will dated 1751). This is part of the land the Woolsey received from his father, Woolsey by will in 1728 and that he inherited from his father William Burton. William Burton patented the land in 1675 and was the first European land holder of this land.

The earliest direct evidence for occupation on the property is 1847 in the form of the U.S. Coast and Geodetic survey map (Figure 3). This may have been a slave or tenant occupation. Considering the date, this would have been owned by Elizabeth Kollock. The location of the house is the same as that for Stephen Boone as shown on the Beer's atlas of 1868 (Figure 4). The location of that building is also seen on the 1880 Coast and Geodetic map (Figure 5) and the 1918 U.S.G.S. topographic map (Figure 6). This location appears to be the same place as the current house.

Topography is likely the key element in house location on this tract. For this reason, if any houses existed before 1847, it likely would have been in this same location. Also, prehistoric archaeological sites would be on the higher ground.

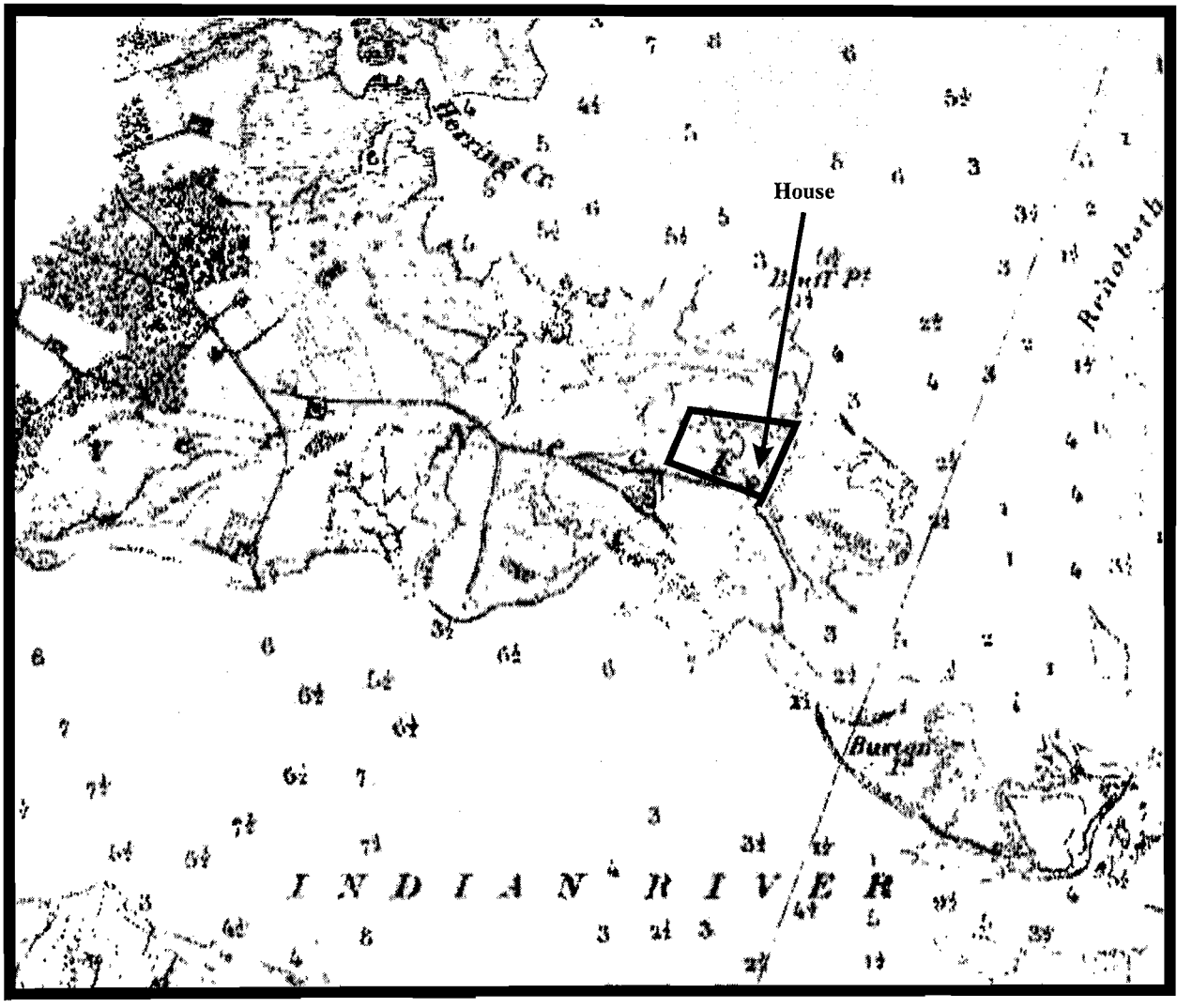


Figure 3. 1847 U.S. Coast and Geodetic Survey map.

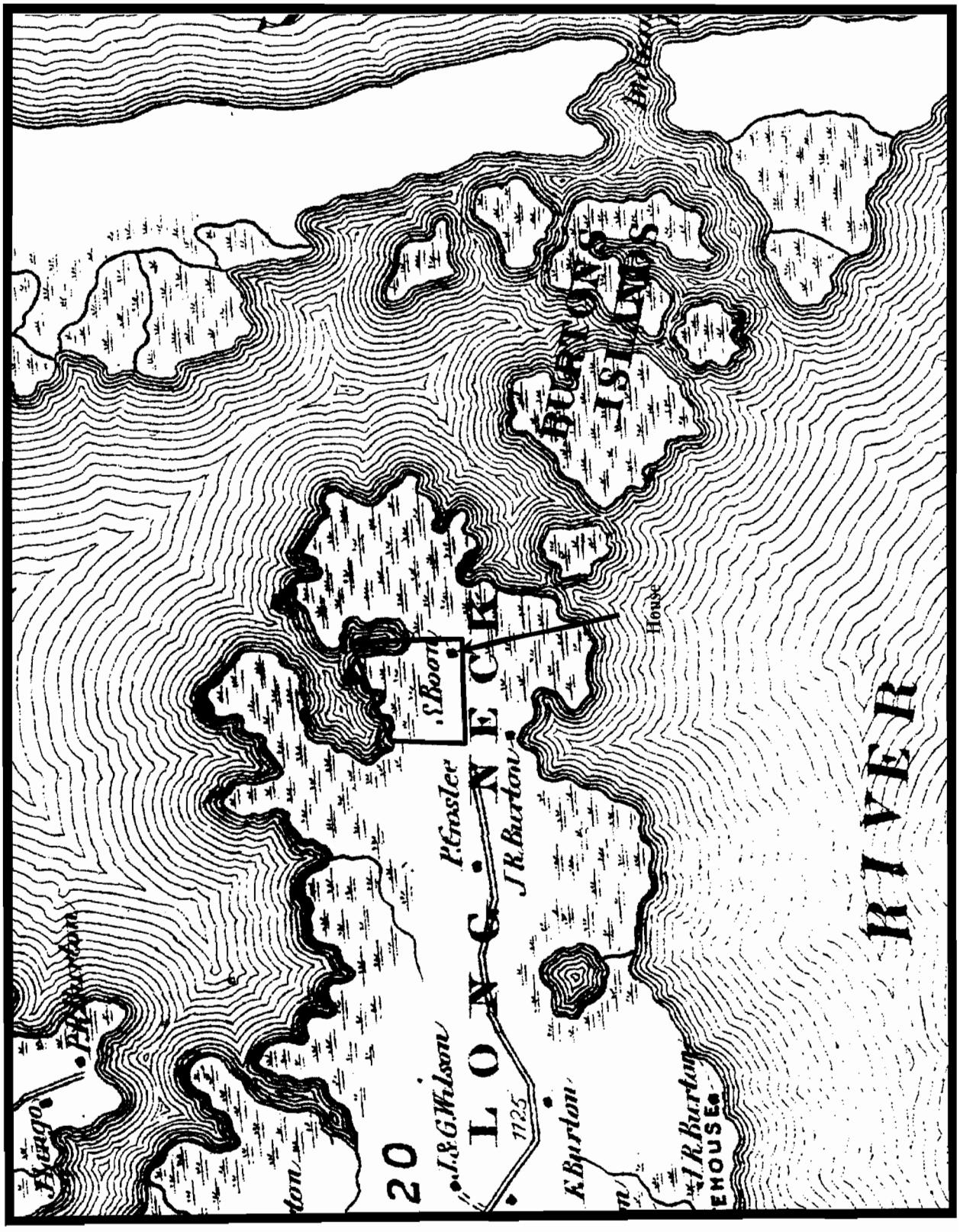


Figure 4, 1868 Beer's Atlas.

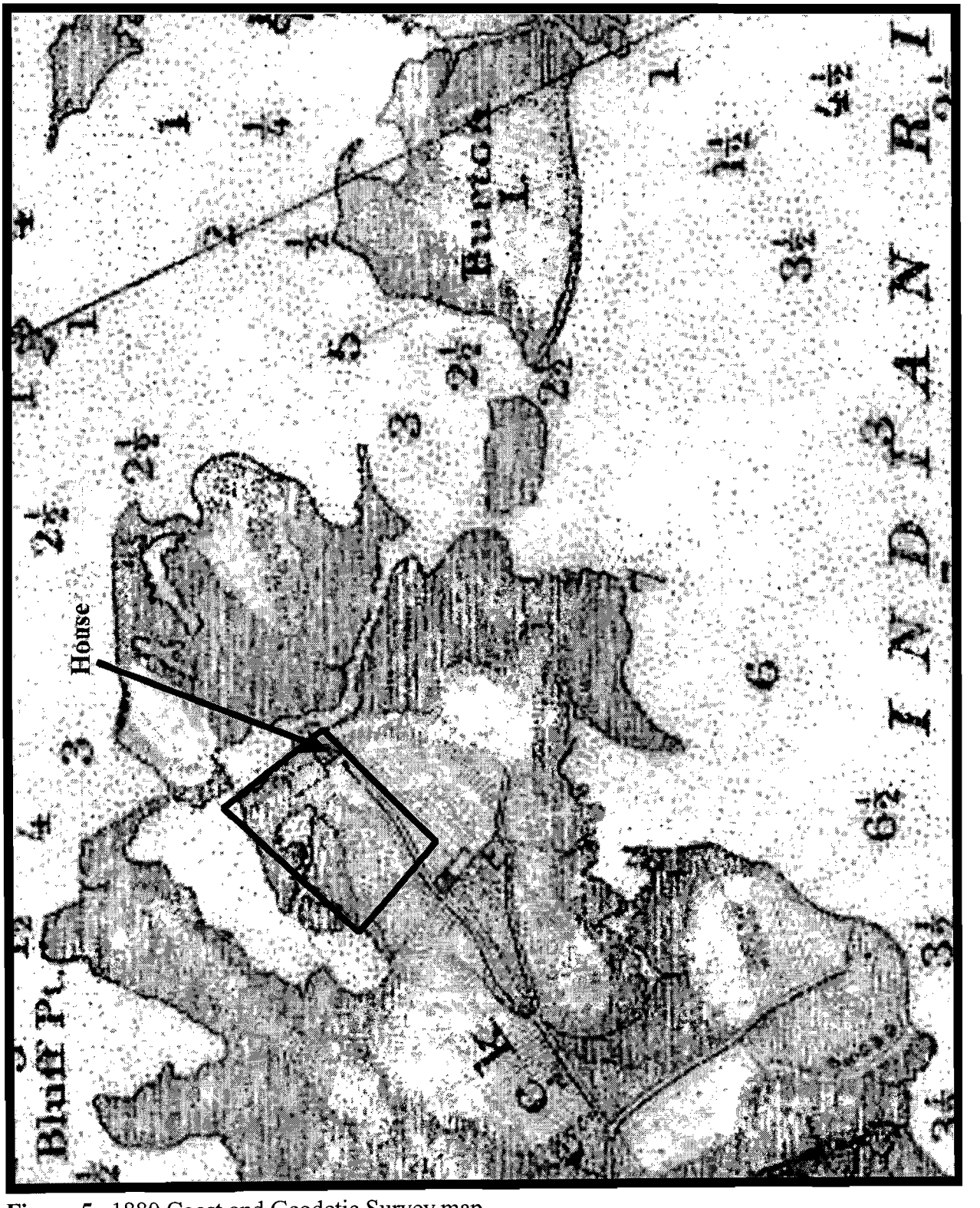


Figure 5. 1880 Coast and Geodetic Survey map

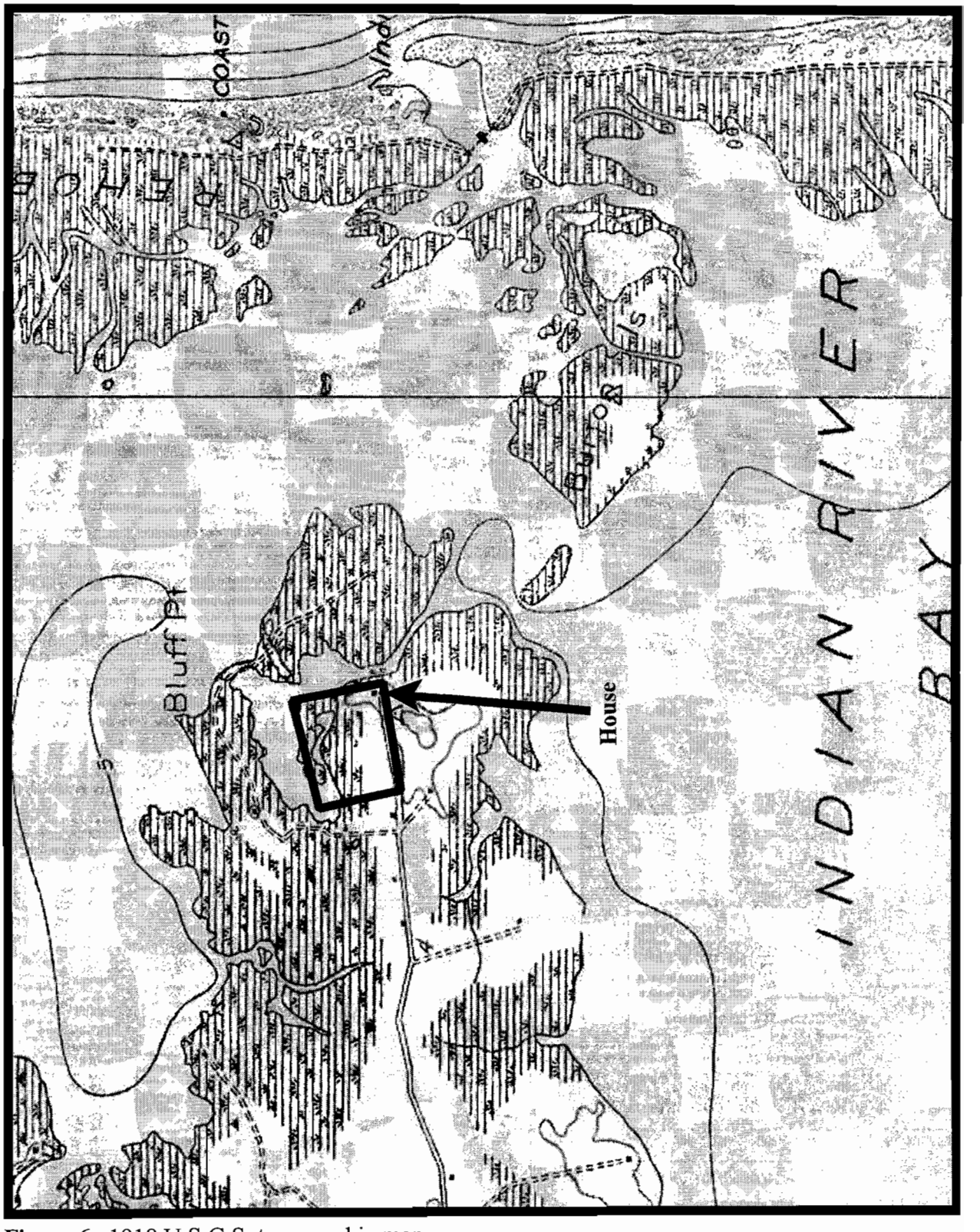


Figure 6. 1918 U.S.G.S. topographic map.

CONCLUSION

The Faucett Property has a long history of occupation. It is known that a prehistoric archaeological site exists on the parcel. This site dates from around 1 A.D. and likely continues until the historic period. It is a real possibility that burials may exist in this site. The locations of these cannot be predicted.

In the historic period the land was owned by William Burton and his heirs from 1675 until sometime after 1751. There may have been a tenant or slave dwelling on the property during this time. However, the earliest clear evidence for a house on the property dates to 1841. In 1868 the property passed into the hands of the Massey family. It is not clear where the Massey owners were buried and it is possible they are on the property. Occupation apparently has been consistent since the early 1800's.

Throughout the historic period, this land would have been marsh and agricultural land. The high ground was used for the house site. This is seen as a constant from 1841 to the present. If there was earlier occupation, it was likely on this part of the tract..

The house that is shown on the State register is actually on the next tract to the west of the Faucett property. This was possibly the house of Peter Goslee who purchased part of the William Burton estate at the same time Stephen Boone bought the Faucett property. The building that currently stands on the east end of the property appears to be of 20th century construction. The older buildings were apparently razed. There would be archaeological deposits associated with these earlier buildings depending on the amount of disturbance resulting from subsequent land use.

REFERENCES

Carbone, Victor
1976 Environment and Prehistory in the Shenandoah Valley of Virginia. Ph.D. dissertation, Catholic University of America, Washington D.C.

Coe, Joeffre
1964 Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society new series 54*

Custer, Jay F.
1989a Prehistoric Cultures of the Delmarva Peninsula. University of Delaware Press, Newark, De.

1989b A Management Pland for the Prehistoric Resources of Southwestern Delaware. University of Delaware Center for Archaeological Research Monograph no. 6

1994 Stability, Storage, and Cultural Change in Prehistoric Delaware: The Woodland I Period (3000 B.C. - A.D. 1000).

Custer, J. F. and Glen Mellin
1987 Archaeological Survey and Test Excavations in the Atlantic Coastal Zone of Delaware. *Bulletin of the Archaeological Society of Delaware. 24:1-78.*

DeCunzo, LuAnne & Wade P. Catts
1990 Management Plan for Delawares Historical Archaeological Resources

Dent, Richard J. & B. E. Kaufman
1985 Aboriginal Subsistence and site ecology as interpreted from microflaural and faunal remains. In: *Shawnee Minisink: A Stratified PaleoIndian-Archaic Site in the upper Delaware Valley of Pennsylvania.* Edited by Charles McNett. Academic Press

Ebright, Carol
1992 Early Native American Prehistory on the Maryland Western Shore: Archaeological Investigations at the Higgins Site. Maryland State Highways Project Planning Diviion Environmental Evaluation Section Archaeological Report Number 1.

Gardner, Williams M
1974 Flint Run PaleoIndian Complex: Pattern and Process during the Paleo-Indiand to Early Archaic. In: The Flint Run Paleo-Indian Complex: A Preliminary Report 1971-1973. Edited by William M. Gardner. *Occasional Publications No. 1, Catholic University Archaeological Laboratories, Washington, D.C.*

Gardner, William M.
1977 Flint Run Paleo-Indian Complex and its implications for eastern North American prehistory. *Annals of the New York Academy of Sciences 288:257-263.*

Lowery, Darin
1989 Paw Paw Cove Paleo-Indian Complex, Talbot County, Md. Archeology of Eastern North America 17:143-163

Otter, Edward
1989 Archaeological Analysis of the Faunal Material from Two Cabin Run Sites (44WR3 & 44WR300) Warren County, Virginia. Masters thesis, Catholic University of America, Washington, D.C.

Otter, Edward
1997 Principal Investigator - Bethany Dunes, Ocean View, Delaware. Phase I/II archaeological assessment.

Otter, Edward
1999 Principal Investigator - Bear Trap, Sussex County, Delaware. Phase I survey of 75 acres required for Army Corps wetland permit

Speck, Frang G.
1915 The Nanticoke Community of Delaware. Contributions from the Museum of the American Indian Heye Foundation. Vol. II, Number 4.

Wigley, T.M.C., M.J. Ingram & G. Farmer
1981 Climate and History: Studies in Past Climates

Wholey, Heather A. and William M. Gardner
1999 Testing Archaeological Site Boundaries with Soil Chemical Chemistry at Six Sites in Sussex County, Delaware.

U·P·N·E

◀Index | Cart

University Press of New England

Shopping cart contents
Previous page

Your order number is **118219**. Please refer to this number in case of any questions.

Clear your shopping basket

Email questions about this site to WWW team.

STATE OF DELAWARE

DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

SHAILEN P. BHATT
SECRETARY

November 7, 2012

Mr. Lawrence B. Lank
Director, Sussex County Planning & Zoning Commission
Sussex County Administration Building
P.O. Box 417
Georgetown, DE 19947

DelDOT
NO OBJECTION
TO RECORDATION

SUBJECT: **SSR 4256; Massey's Landing**
Tax Parcel #2-34-25.00-31.00, 31.02 & 31.04
Route 23 (Long Neck Road)
Sussex County

Dear Mr. Lank:

The Department of Transportation has reviewed the Site Plan, dated November 1, 2012, for the above referenced site, and has no objection as shown on the enclosed drawings and noted below. **This letter is for entrance location only and does not authorize the commencement of entrance construction.**

Note:

Based on the meeting minutes, dated August 26, 2008, due to the low traffic counts and the site being located near the end of Route 23, the following was determined by DelDOT;

- **The local road standards shall be applied to this section of Route 23 for 11' wide travel lanes and 5' wide shoulders.**
- **An additional 5' of right-of-way shall be dedicated to public use along Route 23.**
- **A 10' wide permanent easement for a future multi modal path shall be established.**
- **The multi modal path shall be 10' wide and be placed a minimum 14' from the road's northern pavement edge line.**
- **Curb and Gutter along the site's frontage will not be required.**
- **The 20' buffer for the SWM pond is not required.**
- **No auxiliary turn lanes are warranted along Route 23.**

As per the approved Traffic Impact Study letter dated November 23, 2005, the developer shall enter into an agreement with DelDOT to fund an equitable portion of the installation of a single lane roundabout at the intersection of Delaware Route 23 and Pots Net Road (Sussex Road 22C). The agreement shall be worded such that DelDOT may utilize the funding contribution for the installation of a traffic signal at this intersection, should a roundabout be determined to be infeasible, at DelDOT's discretion.

The entrance plan was approved on July 14, 2009. Prior to any construction work on this site, the entrance plan shall be revised to current DelDOT standards and regulations and submitted for review, comment or re-approval.

DelDOT shall require a copy of the **recorded Site Plan** showing all appropriate signatures, seal and Plot Book and Page, be provided to DelDOT, which is consistent with the DelDOT "No Objection to Recordation" stamped plan, prior to issuing the entrance permit.

Furthermore, the owner must obtain an entrance permit from the DelDOT South District Public Works Section (302-853-1340) any time the property is subdivided, sold, leased, or the change of use of the property will significantly alter the flow or volume of traffic and/or drainage (at the sole discretion of the Department) and/or the owner transfers the interest in the property.

This "No Objection to Recordation" approval shall be valid for a period of **five (5) years**. If the site plan is not recorded and an entrance permit obtained prior to the expiration of the "No Objection to Recordation", the applicant shall be required to start a new application for a "No objection to Recordation" letter.

The recordation of this no objection plan only satisfies DelDOT requirements and does not constitute the approval or imply final site plan approval by the local land use agency.

This "No Objection to Recordation" letter is not a DelDOT endorsement of the project discussed above. Rather, it is a recitation of the transportation improvements, which the applicant may be required to make as a pre-condition to recordation steps and deed restrictions as required by the respective county/municipality in which the project is located. If transportation investments are necessary, they are based on an analysis of the proposed project, its location, and its estimated impact on traffic movements and densities. The required improvements conform to DelDOT's published rules, regulations and standards. Ultimate responsibility for the approval of any project rests with the local government in which the land use decisions are authorized. There may be other reasons (environmental, historic, neighborhood composition, etc.) which compel that jurisdiction to modify or reject this proposed plan even though DelDOT has established that these enumerated transportation improvements are acceptable.

If I can be of any further assistance, please call me at 760-2266.

Very truly yours,

Marc Coté
Subdivision Engineer, Development Coordination

MC/jtf
Enclosure (1)
Cc: James Osborne, South District Subdivision Manager (1)
Jessica L. Watson, Sussex Conservation District
Jeffrey A. Clark, Land Tech Land Planning, L.L.C. (3)
File (1)

WETLANDS LINES

LINE	BEARING	DISTANCE
L1	N 58°43'32" E	33.77'
L2	N 70°01'49" E	37.91'
L3	N 51°54'30" E	51.61'
L4	N 36°22'00" E	20.44'
L5	N 03°24'58" E	38.70'
L6	N 86°19'58" E	23.21'
L7	S 59°40'52" E	11.67'
L8	S 89°47'53" E	50.99'
L9	N 77°58'49" E	60.81'
L10	N 48°42'55" E	12.90'
L11	S 37°38'22" E	67.87'
L12	S 76°43'08" W	19.69'
L13	N 37°43'17" W	18.77'
L14	S 54°50'53" W	16.20'
L15	N 68°22'01" W	26.66'
L16	S 11°00'13" W	29.78'
L17	S 71°41'22" E	16.64'
L18	S 17°17'08" E	63.26'
L19	S 40°59'57" E	84.74'
L20	N 72°14'07" E	19.48'
L21	N 31°52'14" E	26.12'
L22	S 32°47'41" E	34.69'
L23	N 82°31'39" E	49.80'
L24	S 84°11'20" E	33.66'
L25	N 17°06'43" E	31.16'
L26	N 59°25'23" W	30.54'
L27	N 31°45'58" W	40.08'
L28	N 19°22'15" W	65.30'
L29	N 59°11'24" E	39.58'
L30	N 55°57'13" E	48.46'
L31	N 46°21'58" E	24.95'
L32	N 13°07'01" E	11.13'
L33	N 13°32'10" E	18.03'
L34	N 07°47'56" W	20.96'
L35	N 07°00'43" E	26.12'
L36	N 18°11'02" W	27.74'
L37	N 04°25'28" W	64.75'
L38	N 08°47'06" W	35.19'
L39	N 06°10'24" W	51.77'
L40	N 05°33'03" W	22.19'
L41	N 04°51'52" W	48.36'
L42	N 03°03'49" W	46.28'
L43	N 07°19'23" W	31.61'
L44	N 02°39'46" W	36.22'
L45	N 03°54'57" E	43.87'
L46	N 04°21'53" W	41.92'
L47	N 69°31'50" E	24.76'
L48	S 56°33'26" E	29.86'
L49	S 00°00'19" W	43.95'
L50	S 23°11'42" E	33.16'
L51	S 55°06'19" E	69.59'
L52	S 02°52'58" E	19.40'
L53	S 31°00'38" E	41.28'
L54	S 22°23'12" E	33.76'
L55	S 57°34'27" E	11.89'
L56	S 46°06'38" E	12.80'
L57	S 32°16'00" W	22.65'
L58	S 21°29'41" E	40.25'
L59	S 20°28'00" W	41.60'
L60	S 08°02'29" W	62.33'
L61	S 00°22'56" W	30.55'
L62	S 32°56'49" E	34.60'
L63	S 57°06'13" E	61.99'
L64	S 60°35'55" E	28.37'
L65	N 74°41'07" E	42.43'
L66	N 36°55'20" E	43.15'
L67	N 78°21'17" E	65.68'
L68	S 10°14'24" E	67.59'
L69	S 08°51'15" E	45.81'
L70	S 15°09'04" E	46.28'
L71	S 24°33'12" E	17.79'
L72	S 07°04'43" E	56.95'
L73	S 13°37'41" E	72.41'
L74	S 09°57'57" E	38.46'
L75	S 09°34'27" E	66.12'
L76	S 12°03'35" E	54.76'
L77	S 23°12'42" E	52.87'
L78	S 82°13'34" E	34.35'
L79	N 73°25'43" E	17.19'
L80	N 41°30'52" E	17.94'
L81	N 02°55'16" W	22.07'
L82	N 10°55'52" W	63.00'
L83	N 11°07'44" W	18.80'
L84	N 10°02'40" W	67.32'
L85	N 09°09'59" W	37.27'
L86	N 13°49'58" W	40.94'
L87	N 12°56'05" W	26.45'
L88	N 11°42'27" W	91.77'
L89	N 12°18'05" W	57.13'
L90	N 03°27'43" W	71.57'
L91	N 18°11'15" E	9.36'
L92	N 75°51'50" E	13.59'
L93	S 77°42'36" E	18.75'
L94	S 58°12'22" E	30.56'
L95	S 84°44'20" E	23.93'
L96	S 49°24'52" E	22.74'
L97	S 01°36'31" E	34.62'
L98	S 26°28'06" E	29.06'
L99	S 16°34'57" E	63.35'
L100	S 00°20'43" E	43.80'
L101	S 32°18'14" E	22.75'
L102	S 19°04'03" E	42.57'
L103	S 18°28'53" E	54.52'
L104	S 12°57'32" E	50.39'

LINE	BEARING	DISTANCE
L105	S 38°39'12" E	18.20'
L106	N 87°20'53" E	25.79'
L107	N 70°46'18" E	20.24'
L108	N 46°38'35" E	13.30'
L109	N 53°02'40" E	10.89'
L110	N 14°04'59" W	54.71'
L111	N 13°43'41" W	42.96'
L112	N 12°20'59" W	49.75'
L113	N 14°17'43" W	63.72'
L114	N 71°57'07" E	13.50'
L115	N 03°13'18" E	11.86'
L116	N 44°56'27" W	24.82'
L117	N 17°05'18" W	54.08'
L118	N 44°01'53" E	26.07'
L119	S 84°23'27" E	17.87'
L120	S 05°16'55" E	36.64'
L121	N 25°57'41" E	43.50'
L122	N 21°03'19" E	22.19'
L123	N 06°18'50" E	56.44'
L124	N 11°37'17" E	55.19'
L125	S 77°19'22" E	28.44'
L126	N 05°06'58" E	24.02'
L127	N 55°07'17" W	26.68'
L128	N 21°12'24" E	34.18'
L129	N 43°24'47" W	61.26'
L130	N 10°09'51" W	56.20'
L131	S 83°42'49" W	19.05'
L132	N 36°03'37" W	40.42'
L133	S 82°05'22" W	12.31'
L134	N 12°01'48" W	41.07'
L135	N 12°15'26" E	47.28'
L136	N 10°23'19" W	37.79'
L137	N 38°14'29" E	26.84'
L138	N 33°50'21" E	82.14'
L139	N 22°47'09" E	55.44'
L140	N 30°32'44" E	61.79'
L141	N 80°10'13" E	64.42'
L142	S 13°21'29" W	25.39'
L143	S 74°22'46" E	24.94'
L144	S 68°36'01" E	41.76'
L144A	N 40°28'08" E	56.62'
L144B	S 69°58'24" E	45.30'
L144C	S 43°16'55" E	40.83'
L145	S 65°29'41" E	30.53'
L146	S 81°22'45" E	139.76'
L147	S 48°14'52" E	35.45'
L148	S 55°54'35" E	77.18'
L149	S 19°59'23" E	10.71'
L150	S 13°27'56" W	25.88'
L151	S 24°30'19" E	66.72'
L152	S 23°01'47" E	37.39'
L153	S 11°48'26" E	28.90'
L154	S 01°30'59" E	55.46'
L155	S 02°13'49" W	50.75'
L156	S 01°17'32" W	83.18'
L157	S 02°11'41" E	60.77'
L158	S 08°44'33" E	55.82'
L159	S 06°30'59" W	25.34'
L160	S 18°28'56" E	38.72'
L161	S 18°10'26" E	33.71'
L162	S 27°06'44" E	19.42'
L163	S 16°15'36" E	24.32'
L164	S 08°44'01" E	65.02'
L165	S 18°32'19" E	83.49'
L166	S 20°10'37" E	37.18'
L167	S 48°42'46" E	29.66'
L168	S 19°26'43" E	80.01'
L169	S 08°01'48" E	23.05'
L170	S 31°23'07" W	17.75'
L171	S 16°45'01" W	31.07'
L172	S 51°31'38" W	20.62'
L173	N 78°34'36" W	26.33'
L174	S 72°08'57" W	11.37'
L175	S 02°02'26" E	35.69'
L176	S 08°15'59" E	58.26'
L177	S 18°03'05" W	65.29'
L178	S 05°04'46" W	37.02'
L179	S 44°02'04" E	17.26'
L180	N 27°53'44" W	74.43'
L181	N 75°17'24" W	48.06'
L182	N 76°14'15" W	39.70'
L183	N 14°23'30" W	26.30'
L184	N 77°30'38" E	43.60'
L185	S 86°14'27" E	38.53'
L186	S 80°56'35" E	112.20'
L187	N 82°25'16" E	17.59'
L188	S 37°23'37" E	41.85'
L189	S 36°57'27" W	19.92'
L190	S 82°45'37" W	20.69'
L191	S 86°12'51" W	37.94'
L192	S 42°02'36" W	38.97'
L193	S 76°49'41" W	50.06'
L194	N 70°31'24" W	42.29'
L195	N 06°49'21" E	67.49'
L196	N 40°39'33" E	15.31'
L197	N 70°17'32" E	19.52'
L198	S 84°11'48" E	35.46'
L199	S 49°08'20" E	29.35'
L200	S 30°02'14" E	41.64'
L201	N 08°35'06" E	45.46'
L202	S 37°41'20" E	7.61'
L203	S 10°21'26" E	18.90'
L204	S 39°57'27" E	56.31'
L205	S 37°40'15" W	10.72'
L206	N 86°16'59" W	28.59'
L207	N 72°13'54" W	20.87'
L208	N 09°41'55" E	23.42'

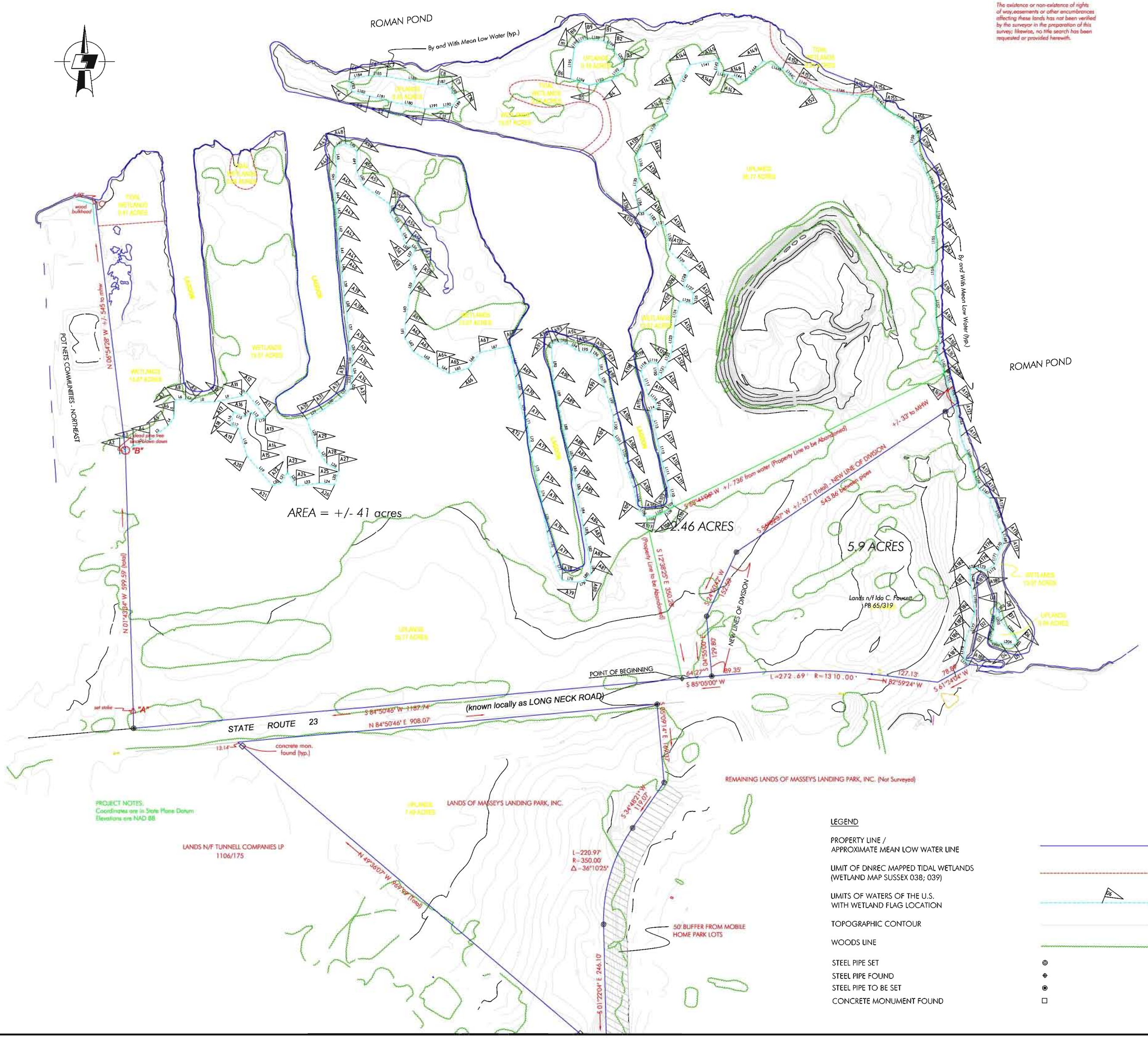
Wetlands Certification

I, Kelly James Pierson, do hereby state to the best of my professional judgment, that the information contained on this plan has been prepared and is in accordance with acceptable environmental research methods, is true and correct, and has been prepared in accordance with the U.S. Army Corps Wetlands Manual (1987), the Atlantic and Gulf Coastal Plain Interim Regional Supplement (2008), the DNREC Wetlands Act of 1973, and the Regulations Governing the use of Subaqueous Lands in accordance with the provisions of 7 Del. C. 7212.

Date: _____

Kelly James Pierson
Senior Environmental Scientist
Bock Creek Environmental Consulting, LLC

"This Wetlands Boundary Survey is solely based on a plat entitled "LIMITS OF WATERS OF THE UNITED STATES INCLUDING WETLANDS SUBJECT TO THE CORPS OF ENGINEERS REGULATORY PROGRAM; LANDS OF FAUCETT HEIRS, LLC., prepared by Compass Point Associates, Inc., dated September, 2005. True North Land Surveying, Inc. is not responsible for existing wetlands lines, existing waterline and existing perimeter property lines as depicted and established on the aforesaid survey.



The existence or non-existence of rights of way,easements or other encumbrances affecting these lands has not been verified by the surveyor in the preparation of this survey; likewise, no title search has been requested or provided herewith.

LEGEND

- PROPERTY LINE / APPROXIMATE MEAN LOW WATER LINE
- LIMIT OF DNREC MAPPED TIDAL WETLANDS (WETLAND MAP SUSSEX 038; 039)
- LIMITS OF WATERS OF THE U.S. WITH WETLAND FLAG LOCATION
- TOPOGRAPHIC CONTOUR
- WOODS LINE
- STEEL PIPE SET
- STEEL PIPE FOUND
- STEEL PIPE TO BE SET
- CONCRETE MONUMENT FOUND

TRUE NORTH
LAND SURVEYING
118 ATLANTIC AVENUE, SUITE 202
OCEAN VIEW, DE 19970
DE: 302-539-2488
MD: 410-430-2092
FX: 302-539-2499
WEB: TRUENORTHLS.COM

professional seal

LIMITS OF WATERS OF THE UNITED STATES INCLUDING WETLANDS SUBJECT TO SECTION 404 OF THE CLEAN WATER ACT AND SECTION 10 OF THE RIVERS AND HARBORS ACT OF 1899.

LANDS OF FAUCETT HEIRS, LLC

NEAR MASSEYS LANDING, INDIAN RIVER HUNDRED, SUSSEX COUNTY, DELAWARE

Project:

Notes:
Deed Ref.: B 2438, P 36
Tax Map: 2-34-25-31.02
Surveyed by:
Drawn by:
Checked by:
Class: "C" Survey
Project: 040302

Date: September, 2012

Scale: 1" = 100'

1 of 1

DEPARTMENT OF THE ARMY

PHILADELPHIA DISTRICT CORPS OF ENGINEERS
WANAMAKER BUILDING, 100 PENN SQUARE EAST
PHILADELPHIA, PENNSYLVANIA 19107-3390

REPLY TO
ATTENTION OF

SEP 28 2012

Regulatory Branch
Applications Section I

SUBJECT: CENAP-OP-R-2012-944-23 (JD)
Project Name: Masseys Landing Community SX

Kelly J. Pierson
Back Creek Environmental Consulting, LLC
78 Shorty Lane
Smyrna, Delaware 19977

Dear Mr. Pierson:

The plan identified on the following page depicts the extent of Federal jurisdiction on the subject property. The basis of our determination of jurisdiction is also provided (Enclosure 1).

Pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, a Department of the Army permit is required for work or structures in navigable waters of the United States and the discharge of dredged or fill material into waters of the United States including adjacent wetlands. Any proposal to perform the above activities within the area of Federal jurisdiction requires the prior approval of this office.

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

This letter is valid for a period of five (5) years. However, this jurisdictional determination is issued in accordance with current Federal regulations and is based upon the existing site conditions and information provided by you in your application. This office reserves the right to reevaluate and modify the jurisdictional determination at any time should the existing site conditions or Federal regulations change, or should the information provided by you prove to be false, incomplete or inaccurate.

This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. Enclosed you will find a combined Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form (Enclosure 2). If you request to appeal this

determination, you must submit a completed RFA form to the North Atlantic Division Office at the following address:

Michael G. Vissichelli
Regulatory Appeals Review Officer
North Atlantic Division, U.S. Army Corps of Engineers
Fort Hamilton Military Community
General Lee Avenue, Building 301
Brooklyn, NY 11252-6700
EMAIL: Michael.G.Vissichelli@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 November 28, 2012.

It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

If you should have any questions regarding this matter, please contact me at 302-736-9763 between the hours of 1:00 and 3:30 p.m. or write to the above address.

Sincerely,

John Brundage
Biologist, Regulatory Branch

****

SUBJECT PROPERTY: A 56.81 acre site, known as Masseys Landing Community, Tax Map 2-34-25.00, Parcels 31.00, 31.02, and 31.04, Indian River Hundred, Sussex County, Delaware.

****

SURVEY DESCRIPTION: Plan prepared by True North, Inc., dated September 2012, entitled: *Limits of Waters of the United States Including Wetlands Subject to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Lands of Faucett Heirs, LLC, Near Masseys Landing, Indian River Hundred, Sussex County, Delaware*, one sheet.

****

Enclosures

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): Sept. 28, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:CENAP-OP-R-2012-944, Masseys Landing CommunitySX

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State:Delaware County/parish/borough: Sussex County City:
Center coordinates of site (lat/long in degree decimal format): Lat. 38-37-29.39° , Long. -75-06-18.47° .
Universal Transverse Mercator:
Name of nearest waterbody: Roman T Pond
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Roman T Pond
Name of watershed or Hydrologic Unit Code (HUC): Atlantic Ocean
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
■ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☒ Waters subject to the ebb and flow of the tide.
☒ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: Roman T Pond is a portion of Rehoboth Bay, a tidal, navigable-in-fact waterway which has been and is used by commercial fisherman. .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There ■■■ "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.
   a. Indicate presence of waters of U.S. in review area (check all that apply): [1]
      ☒ TNWs, including territorial seas
      ☒ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. Identify (estimate) size of waters of the U.S. in the review area:
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: 14.03 acres.

   c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):[3]
   ■ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: Roman T Pond.

Summarize rationale supporting determination: Use by commercial fisherman.

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": The wetlands are contiguous(328.3a7 adjacent) with and abutting the tidal waters of Roman T Pond.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: Pick List
Drainage area: Pick List
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☐ Tributary flows through [redacted] tributaries before entering TNW.

Project waters are Pick List river miles from TNW.
Project waters are Pick List river miles from RPW.
Project waters are Pick List aerial (straight) miles from TNW.
Project waters are Pick List aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW[5]:

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: [redacted].

Primary tributary substrate composition (check all that apply):
☐ Silts ☐ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: Pick List
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: [redacted]
Estimate average number of flow events in review area/year: [redacted]
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: [redacted]. Characteristics: .

Subsurface flow: [redacted]. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):
☐ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☐ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
[redacted] High Tide Line indicated by: [redacted] Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):
- ☐ Riparian corridor. Characteristics (type, average width):
- ☐ Wetland fringe. Characteristics:
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings:
  - ☐ Other environmentally-sensitive species. Explain findings:
  - ☐ Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Pick List. Explain:

Surface flow is: [redacted]

Characteristics:

Subsurface flow: [redacted]. Explain findings:

- ☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain:
  - ☐ Ecological connection. Explain:
  - ☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are Pick List river miles from TNW.

Project waters are Pick List aerial (straight) miles from TNW.

Flow is from: Pick List.

Estimate approximate location of wetland as within the [redacted] floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width):
- ☐ Vegetation type/percent cover. Explain:
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings:
  - ☐ Other environmentally-sensitive species. Explain findings:
  - ☐ Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: [redacted]

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☒ TNWs: linear feet width (ft), Or, acres.
   - ☒ Wetlands adjacent to TNWs: 14.03 acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- [ ] Tributary waters: linear feet width (ft).
- [ ] Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - [ ] Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - [ ] Tributary waters: linear feet width (ft).
   - [ ] Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - [ ] Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - [ ] Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
     - [ ] Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - [ ] Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - [ ] Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.**[9]
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - [ ] Demonstrate that impoundment was created from "waters of the U.S.," or
   - [ ] Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - [ ] Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
- [ ] which are or could be used by interstate or foreign travelers for recreational or other purposes.
- [ ] from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- [ ] which are or could be used for industrial purposes by industries in interstate commerce.
- [ ] Interstate isolated waters. Explain: .
- [ ] Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

---

[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

Provide estimates for jurisdictional waters in the review area (check all that apply):
- [ ] Tributary waters: linear feet width (ft).
- [ ] Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- [ ] Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
- [ ] If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- [ ] Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - [ ] Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- [ ] Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- [ ] Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
- [ ] Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- [ ] Lakes/ponds: acres.
- [ ] Other non-wetland waters: acres. List type of aquatic resource: .
- [ ] Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
- [ ] Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- [ ] Lakes/ponds: acres.
- [ ] Other non-wetland waters: acres. List type of aquatic resource: .
- [ ] Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
- [x] Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:Plan by Compass Point Associates, dated September 2005.
- [x] Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - [x] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report.
- [ ] Data sheets prepared by the Corps: .
- [x] Corps navigable waters' study: Philadelphia District List of Navigable Waters.
- [ ] U.S. Geological Survey Hydrologic Atlas: .
  - [ ] USGS NHD data.
  - [ ] USGS 8 and 12 digit HUC maps.
- [x] U.S. Geological Survey map(s). Cite scale & quad name:Rehoboth Beach.
- [x] USDA Natural Resources Conservation Service Soil Survey. Citation:Sussex County, DE.
- [x] National wetlands inventory map(s). Cite name:Rehoboth Beach.
- [ ] State/Local wetland inventory map(s): .
- [ ] FEMA/FIRM maps: .
- [ ] 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- [ ] Photographs: [ ] Aerial (Name & Date): .
  - or [ ] Other (Name & Date): .
- [ ] Previous determination(s). File no. and date of response letter: .
- [ ] Applicable/supporting case law: Rapanos ET UX., ET AL. v. United States, 547 U.S. 04-1034 and 04-1384 (2006)(Rapanos)
- [ ] Applicable/supporting scientific literature: .
- [ ] Other information (please specify): Regulatory Guidance Letters 07-01 (Documentation of JD's - JDIS Guidebook) .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Masseys Landing Community	File: CENAP-OP-R-2012-944	Date:28 Sept. 2012
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
X	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 http://usace.army.mil/inet/functions/cw/cecwo/reg or 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 Philadelphia 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 (JD) 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 Philadelphia District Engineer. Your objections must be received by the Philadelphia 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 Philadelphia 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 Philadelphia 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 Philadelphia 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 North Atlantic Division Engineer, ATTN: CENAD-ET-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Philadelphia District Engineer.

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 North Atlantic Division Engineer, ATTN: CENAD-ET-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Philadelphia District Engineer.

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 North Atlantic Division Engineer, ATTN: CENAD-ET-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Philadelphia District Engineer.

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:	If you only have questions regarding the appeal process you may also contact:
John Brundage U.S. Army Corps of Engineers, Philadelphia District ATTN: CENAP-OP-R Wanamaker Building, 100 Penn Square East Philadelphia, PA 19107-3390 Telephone: 302-736-9763	James W. Haggerty Regulatory Appeals Review Officer North Atlantic Division, U.S. Army Corps of Engineers Fort Hamilton Military Community General Lee Avenue, Building 301 Brooklyn, NY 11252-6700 Telephone: (718) 765-7150 E-mail: James.W.Haggerty@nad02.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.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

Castaways at Massey's Landing RV Resort and Campground

("Castaways")

36625 Long Neck Road

Millsboro, Delaware

Located in Sussex County

Castaways at Massey's Landing RV Campground

Storm Policy

Castaways is committed to the safety of our guests and staff. In the event that Federal, state and/or local authorities issue a hurricane watch/ warning or issue a mandatory evacuation notice, **Castaways** will immediately comply with whatever instructions are given for safe departure from the area. In the event we are put under a Hurricane watch or warning, guests with reservations and/or deposits for their stay will be entitled to have their reservation deposit either refunded or credited toward a future stay. For official information on the status of our local area, please visit the Sussex County Emergency Management Website by following this link: http://www.sussexcountyde.gov/services/storm/

Office: (302) 555-5555

Emergency Plan
for
RV Park & Campground

Guests & Visitors

To obtain a digital copy of this emergency plan please come to the office to fill out a request form and provide email contact information. Copies of this Emergency Preparedness plan are located in the Office.

The office phone is always available during office hours to make emergency calls and if there is a power outage, the office cell phone is also available until such time as our generators are up and running.

The information contained in this **Customer Emergency Preparedness and Response Plan** has been provided as a general guide to logical and safe steps to take in case of an emergency at **Castaways** RV Resort Park grounds. This plan is intended to assist our customers in the event of a Hurricane watch or warning. We care about your safety! Contact us if you would like an electronic copy of this plan.

Please remember to act wisely and in all cases maintain your personal safety and that of your family and other guests with you onsite. Please report any emergency immediately by contacting the office at 555-555-5555 by personally contacting one of the staff persons who live onsite.

This plan was developed to be consistent with guidelines contained in the "Emergency Plans for Mobile Home Parks and Transient RV Parks"

1. As soon as staff is notified of a Voluntary or Mandatory Hurricane Evacuation Emergency, the electronic gate system will be opened and electric power shut off to keep gate open at the entrances to the park.

2. Staff will attempt to contact all onsite daily/weekly guests either verbally or by placing a written notice of the emergency at the camp site.

3. If the emergency warrants it, a megaphone will be used from the office deck to warn all visitors onsite of the nature of the emergency and the appropriate response to make.

4. Please note the park/staff are not responsible for removing either persons or personal belongings out of the park area, but we want to help in any way we can to assure the safety of all of our patrons!

The cooperation of everyone involved is greatly appreciated!

The Atlantic Hurricane Season is from June through November. Sussex County closely monitors all tropical storms and stays in touch with the National Weather Service during any pending storms.

Hurricane Watches and Hurricane Warnings are issued by the National Hurricane Center in Miami. A WATCH is issued for an area that could experience the effects of a hurricane within 48 hours. A WARNING is used for an area that could experience the effects of a hurricane within 36 hours.
Due to population density and the time required to evacuate Long Neck Road during the summer months, evacuation recommendations may begin before a hurricane watch is issued.

Local emergency officials evaluate hurricane information to determine when to order an evacuation. The evacuation order is issued by the Sussex County Council through the Emergency Management Director. An evacuation may be given while the sun is shining. This is because we must move all vulnerable residents to safety prior to the arrival of high winds or flooding roadways.

LEAVE YOUR HOME IMMEDIATELY WHEN ORDERED. When an evacuation order is given it will be issued over local radio and TV stations and on the Government Access Channel of your cable TV. Police, fire and other emergency officials will be notifying people as well.

WHAT ARE SUSSEX COUNTY'S PRIMARY WEATHER THREATS?

Nor' Easters - are low pressure centers that develop and track northeast along our coastline. This is a traditional weather pattern during the winter months.

Problem ? - As these Low pressure centers pass by, northeast wind is experienced in Sussex County. The prolonged easterly flow of wind will pile water up in the Rehoboth and Indian River Bays. The slower the forward speed, the longer we experience that easterly flow of wind. This combined with the intensity can cause significant flooding problems for the Long Neck area, as in the March Storm of 1962.

Tropical Storm/Hurricanes - are powerful low pressure centers that are born in the tropics. These storms can cause massive destruction to coastal areas. The official Hurricane Season (as if weather listens to dates) runs from June 1st thru November 30th. Typically most Hurricanes affect our area in the later part of August, September, tapering off in October.

Problem? The problem is somewhat obvious in that these storms can cause massive destruction to coastal areas. Our first priority is LIFE SAFETY. Sussex County remains ready to ask the residents and visitors of Sussex County to evacuate if necessary.

During the summer months in order to effectively evacuate Long Neck, you may be asked to leave before a Hurricane Watch is issued when weather conditions are warm and sunny**. *PLEASE OBEY ALL RECOMMENDATIONS WHEN THEY ARE GIVEN !***

SUSSEX COUNTY EVACUATION PHASES

If the Sussex County Emergency Director decides it necessary to evacuate Long Neck, the following phases will be used to assist in graduating the traffic exiting the area:

Phase # 1

- Anyone traveling to Sussex County coastal areas is asked to delay their visit until the situation improves.
- Mobile Home Residents and Residents of known flood prone areas should prepare to secure your homes and prepare to evacuate.
- Secure or move all watercraft.
- All persons are asked to tune into their Government Access Channel for further detailed information or advisories.

Phase # 2

- All non-resident property owners, vacationers, and visitors are asked to evacuate.
- All mobile home and low lying area residents are asked to evacuate.
- Public buses will be used for transportation to shelters.

- All persons are asked to tune into their Government Access Channel for further detailed information or advisories.

Phase # 3

- The Emergency Operations Center declares a local State of Emergency.
- The sale of alcohol is banned and all businesses are asked to close immediately..
- Everyone other than emergency personnel, are asked to evacuate.
- Incoming traffic is limited to emergency personnel.
- The public bus service is providing pick up service for evacuation shelters.
- All persons are asked to tune into their Government Access Channel for further detailed information or advisories.

Phase # 4

- The Emergency Operations Center requests a complete evacuation of as quickly as possible.
- All public services and public transportation will be shut down, and all incoming routes to Long Neck will be closed.
- Remaining Sussex County personnel are ordered to seek shelter immediately and button down.
- All persons are asked to tune into their Government Access Channel for further detailed information or advisories.

HURRICANE CATEGORIES

Category 1 Winds: 74-95 mph Storm Surge: 4-5 '
Category 2 Winds: 96-110 mph Storm Surge: 6-8 '
Category 3 Winds: 111-130 mph Storm Surge: 9-12 '
Category 4 Winds: 131-155 mph Storm Surge: 13-18 '
Category 5 Winds: 156 + Storm Surge: 18' +

STAY IN TOUCH

Visitors to the resort area seem to "Unplug" when they arrive. Remember not to let your guard down. Delaware inland bays are a busy area in the summer so keep your eyes and ears open, Stay Safe!

Radio Frequencies:
Emergency Advisory Radio 1670AM

Scanner Frequencies:
Police Patrol North [460.325 MHz]
Vol. Fire Co. Dispatch [158.895 MHz]
NOAA Radio Frequency - Salisbury [162.475 MHz]

Emergency Alerting System (EAS)

Recorded Storm Updates

Assessments of actual incidents reveal that citizens are often the first ones to witness an event, and are first on the scene. With the information in this pamphlet, you will be better prepared in the event of an emergency.

Planning for any emergency can significantly reduce the risk of injury or damage to your property.

We encourage our residents to prepare themselves in the event of an emergency.

During major emergencies it may be up to three days before emergency providers can reach every area in Sussex County. We also encourage our residents to participate in the Community Emergency Response Training by contacting the Volunteer Services Manager at 302-555-5555. This training will help you to assist your family and neighbors in times of emergencies.

Sussex County is available to provide additional emergency preparedness information.

Please read this Guide and implement the steps outlined to make your evacuation and family safer. Help us in our emergency preparedness efforts; planning now will save lives and property.

As always, please follow the direction of your public safety responders and tune to your local media for our emergency press releases and action messages.

IMPORTANT CONTACT INFORMATION

FOR EMERGENCIES ONLY DIAL 9-1-1

COUNTY AND SUPPORT AGENCY NUMBERS

American Red Cross

Delmarva Power 800-898-8045

If emergency includes injury to persons, or the possibility of injury to persons, please call 911 first, and then notify onsite staff and/or office of the emergency.

Life threatening Emergencies call 911 Castaways RV Resort Office (daytime hours)

302-555-5555

Castaways RV Resort FAX 302-555-5555

Important Reminders

- There is just one exit road for the park, Long Neck Road.

- Two way traffic is accessible on the main roads within Castaways Massey's Landing RV Resort

- Make sure you do not block the roadways or Castaways RV Resort. Drive safely when exiting, and if emergency vehicles are incoming, please pull to the side to allow the vehicle(s) to pass.

- Please ONLY use the roads to evacuate the park. Your vehicle could actually get stuck in the lawn area if you drive on the lawns and you would not be able to exit. In addition, you would be responsible for the cost of repairs to the lawns, so stick to the roads unless there is absolutely no other option.

- Note that all RVs must maintain their mobility functions for quick evacuation (i.e. be fully licensed and ready for highway use) in case of an emergency.

Description of Evacuation Procedures:

- Always maintain the safety of yourself and those around you

- Park staff with access to a more detailed emergency response information will be ready to assit in the evacuation process. This team, under the leadership of the Park Manager, is responsible for the following functions:

• Inform each guest of any impending disaster, if any is known. Notice shall be verbal if possible or else by public address using park megaphone located at office.

• If park management is aware of any special needs for fragile, handicapped, elderly or disable individuals within the park, staff will try to assist those persons to the best of our abilities in the particular situation.

- However, it is each person's responsibility to care for him/herself in all cases so we do not advise waiting for staff to arrive to assist in an emergency of disabled person has the assistance of family, friends or onsite care/assistance persons to assist the disable, elderly or handicapped to respond appropriately to the emergency.

• Prior to evacuation remember to shut off your propane, disconnect the electrical and water hookups, lock doors and windows, secure any items you have located outside your unit, and leave immediately to pre-determined locations

• At least once per year, usually in late fall, park management will send a reminder to leaseholders to remove or secure items outside the RV, and management has the option to organize and inform guests of their evacuation route to take in leaving the park in a safe and orderly fashion

• Transportation of park guests and RVs outside the park is NOT done by staff. The most current contact information for local taxi and towing services will be posted at the office for guests to make contact and arrange for transport as needed. In the case of possible harm to persons in an emergency, staff will use best judgment to assist in the transport of persons only (no personal property) off site to a safer location, if available.

• Residents or others onsite who may need special assistance, such as the disabled or immobile elderly persons should advise office staff that he/she is onsite whenever in the park so that staff will make special efforts to contact and assist him/her in cases of emergency. Remember that park management or staff is not responsible for physically evacuating residents from their homes or providing any materials or services during an emergency. However, we will do all we can do to help in the emergency, particularly with transportation of disabled or immobile persons to a location away from the emergency or disaster area, if at all possible. All residents and their family and guests should have their own personal emergency evacuation plans known to each member of the family and any guests onsite visiting resident.

• When rising water threatens, move your RV to higher ground.

• If one escape route is not passable do not waste any time - try another route or back track to higher ground. Use travel routes specified by local officials. Never drive through flooded roadways. Do not bypass or go around barricades.

• Wear life preservers if possible. Wear appropriate clothing and sturdy shoes.

• Avoid any contact with flood water. Flood water may be contaminated and pose health problems. If cuts or wounds come in contact with flood waters, clean the wound as thoroughly as possible.

• Take your Emergency Disaster Supplies Kit with you.

• When you reach a safe place, call your pre-determined family contact person.

After a Storm:

• Return back to your RV site only after authorities say the danger of more flooding is over.

• If fresh food has come in contact with flood waters, throw it out.

• Do not reconnect to water, sewer or electric until park management has authorized you to do so.

March 5, 2013

Environmental Review/Information Request
Delaware Natural Heritage Program
Division of Fish and Wildlife
4876 Hay Point Landing Road
Smyrna, DE 19977

RE: Environmental review response regarding a potential eagle nest on a nearby island to Sussex County TP#2-34-25-P-31.02; 31.04, located at the end of Long Neck Road, Millsboro, DE.

Dear Mrs. Stetzar,

We are responding to your February 28, 2013 report titled **"Vegetation Community Report of the Castaways Project Site",** page 3, item #4 which addresses the possibility of Bald Eagles *(Hailiaeetus leucocephalus)* within the vicinity of a proposed campground project to be known as "Castaways at Massey's Landing".

On March 5th, 2013, I personally conducted a land and water investigation on the subject property and nearby parcels in the immediate vicinity for the purpose of locating bald eagle nest(s). The late morning weather conditions on March 5th, 2013 were light winds out of the east, partly cloudy and the temperature was approximately 42˚ degrees.

Back Creek Environmental Consulting, LLC
78 Shorty Lane, Smyrna, DE. 19977
(P)302.653.1500
(C)302.270.0437
(F)302.653.1506
www.backcreekenviro.com

A part of the site inspection was conducted by boat in order to view both the subject site and adjoining properties and in particular to observe Lynch Thicket Island, which was identified as the previous location of a bald eagle's nest. The remaining areas of my client's property were viewed by walking the site in order to visually check for evidence or signs of a bald eagle nest. The subject parcel (TP#2-34-25-P-31.02; 31.04) does not contain any bald eagle nests nor did I see any evidence of eagles on the property.

An eagle nest was located on Lynch Thicket Island, approximately 1,200 +ft., east, southeast of my client's property. The Castaways at Massey's Landing campground, as proposed, lies at least 1,200+ ft. from the Lynch Thicket nest and well beyond the suggested buffer zones of 330ft. to 660ft. from the nest.

Please find enclosed a map showing the location of the nest in relation to my client's property and measurements from the nest to the proposed Castaways at Massey's Landing campground site. In addition, I have included pictures of the eagle nest and an eagle utilizing the nest.

Please feel free to contact me if you need any additional information.

Sincerely,

Kelly J. Pierson
President/Senior Environmental Scientist

Back Creek Environmental Consulting, LLC
78 Shorty Lane, Smyrna, DE. 19977
(P)302.653.1500
(C)302.270.0437
(F)302.653.1506
www.backcreekenviro.com

Vegetation Community Report of the Castaways Project Site
Sussex County, Delaware

Rehoboth and Indian River Bays Watersheds

Sent to:

Kelly Pierson
Back Creek Environmental Consulting, Inc.
78 Shorty Lane
Smyrna, DE 19977
Kelly@backcreekenviro.com

Completed by:

Robert Coxe, Ecologist
Edna J. Stetzar, Biologist

Delaware Natural Heritage and Endangered Species Program
Wildlife Section, Delaware Division of Fish and Wildlife
Department of Natural Resources and Environmental Control
4876 Hay Point Landing Road
Smyrna, DE 19977

February 28, 2013

Introduction

The Castaways Property, located at the end of Long Neck and west of Masseys Landing, Delaware (Figure 1) was surveyed on February 5, 2013 by Robert Coxe, an ecologist with the Delaware Natural Heritage and Endangered Species Program (DNHESP) within the Delaware Division of Fish and Wildlife, Department of Natural Resources and Environmental Control (DNREC). The site covers 82 acres and is composed of two parcels which are located in the Rehoboth and Indian River Bay Watersheds.

The purpose of the site visit was to classify and map vegetation communities on site and to survey and assess habitat but is not intended to be a thorough, systematic ecological evaluation of the property. February is not the optimum time to conduct surveys for plants as it is outside of the growing season. It is also not the optimum time of year to assess habitat use by animals as it is outside of the breeding, nesting, and migratory periods.

Summary of Findings:

1. **Vegetation Communities:** Ten vegetation communities and nine land covers were identified during the survey (Figure 2). Coastal Loblolly Pine Wetland Forest (18 acres) is the largest vegetation community and impervious surface (13 acres) is the largest land cover. Of the communities that have enough information to assign a state or global rank (see Appendix I) none are considered extremely or very rare in the state. Four of the communities are state ranked as 'rare to uncommon': Coastal Loblolly Pine Wetland forest, Loblolly Pine/Wax-myrtle/Salt Meadow Cordgrass Woodland, Successional Maritime Forest and Salt Panne. The majority of vegetation communities do not have an assigned global rank but of those that do, several are considered globally secure and several are ranked as extremely rare and/or only found within a restricted range or local throughout its entire range because of rarity.

2. **Rare Plants:** Based on the current community descriptions, it is not highly likely that state-rare plant species would occur on this site.

3. **Rare Animals:** As mentioned above, February is not the optimum time of year to assess the presence of animal species of concern as migratory species are not likely present and resident species are more difficult to detect outside of the typical spring/summer breeding season. Based on what can be determined from the vegetation community descriptions, habitat that would support rare bird species is not highly probable. However, there is some potential for long-legged wading birds to nest at this site given the location and presence of relatively tall trees. The presence of other taxa such as amphibians and reptiles is difficult to accurately assess given these species are not active during the winter. Based on what can be determined from the vegetation community descriptions, this site has habitat similar to other sites in which Eastern box turtles (*Terrapene carolina)* have been documented. Although box turtles are generally considered a common species, they are recognized by many herpetologists as a species highly susceptible to extirpation (local extinctions) due primarily to habitat loss and collection pressure. Sandy beach areas have a high potential to support diamondback terrapin which is ranked as "SU" in Delaware, which indicates that it may be a species of conservation concern, but there is inadequate data to determine degree of rarity. The Northeast Wildlife Diversity and Endangered Species Technical Committee consider the

Diamondback terrapin a species of regional concern[1], and one that **may** warrant federal protection in the future.

4. **Bald Eagle:** The eagle nest noted in our December 19, 2012 letter was lost sometime in early 2013 likely due to high winds. At this time, it is unknown if this pair has rebuilt the nest in this same general area or chosen an alternate location. DNHESP should be contacted if a nest is reported to or found by the applicant (or representative). DNHESP will be conducting an aerial survey in March and will observe the area for a new nest structure. If one is located within the project area or within 660 feet of the project area, we will notify you. If a new nest is located in or near the project area you will need to contact the US Fish and Wildlife Service to determine if planned activities would lead to disturbance of the eagles and their nest.

5. Please refer to our original December 19, 2012 letter for recommendations that are still applicable, such as minimizing forest loss by altering the site plan and considering Massey's Landing public boat access.

Methods

Vegetation communities were determined through qualitative analysis by observations made in the field, and through aerial photo-interpretation using 2007 and 2012 imagery. Vegetation communities are named according to the *Guide to Delaware Vegetation Communities*[2] which follows the National Vegetation Classification System (NVCS). The NVCS classifies vegetation on a national scale for the United States and is linked to the international vegetation classification. The NVCS helps provide a uniform name and description of vegetation communities found throughout the country and helps determine relative rarity.

Results

Soils

Major Soils on this property include Klej Loamy Sand (20 acres), Brockatonorton-Urban Land Complex (17 acres), Evesboro Loamy Sand (15 acres) and Runclint Loamy Sand (14 acres). Minor soils include Broadkill Mucky Peat (7 acres) and Hammonton Loamy Sand (5 acres).

Geology[3]

The Castaways property is underlain mostly by the Scotts Corners Formation (younger), fill on the west side, and an area of dune deposits. The Scotts Corners Formation is described as "pale-yellow to light gray, gravelly sand grading up to medium to coarse sand, to fine sand, commonly capped by 1 to 3 feet of very fine, sandy, clayey silt." Dune deposits include "White to light-yellow, well-sorted, medium to fine sand." Dredge spoil that occurs on this property is described as "man-made deposits of natural earth material used to extend shore land and/or to fill a low-lying area such as where a road crosses a valley or marsh."

[1] Therres, G.D. 1999. Wildlife species of regional conservation concern in the northeastern United States. Northeastern Wildlife 54:93-100

[2] Coxe, Robert. 2013. Guide to Delaware Vegetation Communities-Winter 2013 Edition. Unpublished report.

[3] Ramsey, Kelvin W. 1990. Geologic Map of the Fairmount and Rehoboth Beach Quadrangles, Delaware. Delaware Geologic Survey, Geologic Map Series No. 16.

Elevation and Land

Elevation of the Castaways property ranges from sea level in Indian River and Rehoboth Bays to about 15 feet towards the eastern end. The dredge spoil pile reaches a higher elevation than 15 feet.

Vegetation Communities

Ten vegetation community and nine land covers were identified during this survey and are described and depicted below (Figure 2). The acreages are based on 2012 aerial imagery. The National Vegetation Classification (NVC) Association number is given with the vegetation community name, along with the approximate acreage each community covers. Names of communities correspond with the common names as given in the NVC and the *Guide to Delaware Vegetation Communities*. State (S) and Global (G) ranks (Appendix I) are listed after the community name in the description.

The vegetation communities include:

1. Coastal Loblolly Pine Wetland Forest (CEGL006137)—18 acres
2. Cultivated Lawn (CEGL006486)—28 acres
3. Early to Mid-Successional Loblolly Pine Forest (CEGL006011)—4 acres
4. Eastern Reed Marsh (CEGL004141)—1 acre
5. Loblolly Pine/Wax-myrtle/Salt Meadow Cordgrass Woodland (CEGL006849)—1 acre
6. North Atlantic High Salt Marsh (CEGL006006)—0.03 acres
7. North Atlantic Low Salt Marsh (CEGL004192)—4 acres
8. Reed Tidal Marsh (CEGL004187)—2 acres
9. Salt Panne (CEGL004308)—0.1 acres
10. Successional Maritime Forest (CEGL006145)—5 acres

The land covers include:

1. Beach—0.4 acres
2. Farm Pond/Artificial Pond—0.1 acres
3. Impervious Surface—13 acres
4. Modified Land—3 acres
5. Riprap—0.2 acres
6. Sand—3 acres
7. Semi-impervious Surface—1 acre
8. Tidal Mudflat—1 acre
9. Water—5 acres

Descriptions of the Vegetation Communities

Coastal Loblolly Pine Wetland Forest **[18 acres (Figure 3)] G3 S3**

This community is located in the northern and northeastern parts of the site. Loblolly pine (*Pinus taeda*) dominates a canopy that overtops an understory of eastern red cedar (*Juniperus virginiana*), persimmon (*Diospyros virginiana*), southern red oak (*Quercus falcata*), American holly (*Ilex opaca*), and a few Virginia pine (*Pinus virginiana*). The shrub and vine layer

is composed of Japanese honeysuckle (*Lonicera japonica*), common greenbrier (*Smilax rotundifolia*), poison ivy (*Toxicodendron radicans*), and a few wax-myrtle (*Morella cerifera*). Few herbs were seen and included speargrass (*Chasmanthium laxum*), switchgrass (*Panicum virgatum*), and common reed (*Phragmites australis*). Snags or dead standing trees with signs of use by a species of woodpecker were noted.

Cultivated Lawn **[28 acres] GNA SNA**

This community is composed of ornamental grasses and shrubs and is adjacent to residences and covers a large field north of Long Neck Road.

Early to Mid-Successional Loblolly Pine Forest **[4 acres (Figure 4)] GNA SNA**

This community is very similar to the Coastal Loblolly Pine Wetland Forest, but is younger and has a denser understory. Otherwise the species composition is the same.

Eastern Reed Marsh **[1 acre (Figure 5)] GNA SNA**

This community occures in depressions in the Coastal Loblolly Pine Wetland Forest. It is dominated entirely by common reed (*Phragmites australis*) in a non-tidal situation.

Loblolly Pine/Wax-myrtle/Salt Meadow Cordgrass Woodland **[1 acre (Figure 6)] GNR S3**

This woodland community is located primarily on islands in the marsh. Canopy associates include loblolly pine (*Pinus taeda*), wild black cherry (*Prunus serotina*), and eastern red cedar (*Juniperus virginiana*). The understory is sparse in some areas and includes persimmon (*Diospyros virginiana*), American holly (*Ilex opaca*), and southern red oak (*Quercus falcata*). A few scattered wax-myrtle were present in the shrub layer and Japanese honeysuckle (*Lonicera japonica*) was the only vine. Herbs included salt meadow hay (*Spartina patens*), which is typical of the community, prickly-pear cactus (*Opuntia humifusa*), switchgrass (*Panicum virgatum*), broom-sedge (*Andropogon virginicus*), and salt meadow cordgrass (*Spartina alterniflora*).

North Atlantic High Salt Marsh **[0.03 acres] G5 S4**

This community is located just above the North Atlantic Low Salt Marsh and is dominated by salt meadow hay (*Spartina patens*), and associated by Carolina lavender (*Limonium caroliniense*), salt grass (*Distichlis spicata*), and salt marsh fleabane (*Pluchea odorata*).

North Atlantic Low Salt Marsh **[4 acres (Figure 7)] G5 S5**

North Atlantic Low Salt Marsh is the lowest elevation community in the tract. It is dominated by salt meadow cordgrass (*Spartina alterniflora*), and associated by glasswort (*Salicornia virginica*), salt marsh fleabane (*Pluchea odorata*), and Carolina lavender (*Limonium caroliniensis*).

Reed Tidal Marsh **[2 acres (Figure 8)] GNA SNA**

Reed Tidal Marsh covers parts of the marshland and is characterized by a monoculture of common reed (*Phragmites australis*).

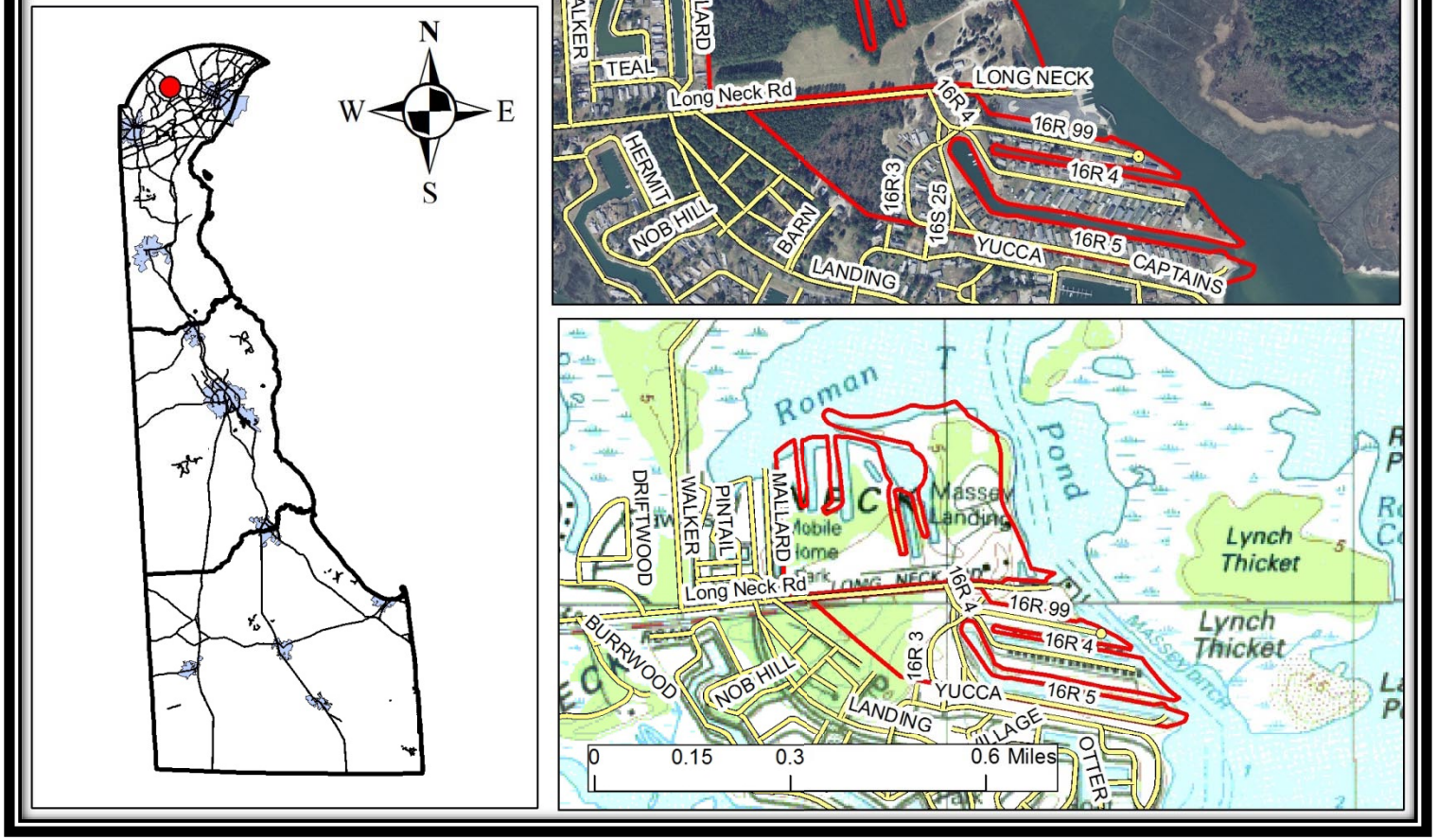
Salt Panne **[0.1 acres] G5 S3**

This community, which is sometimes covered by water, is composed of salt grass (*Distichlis spicata*) and glasswort (*Salicornia virginica*).

Successional Maritime Forest **[5 acres (Figure 9)] G2G3 S3**

Successional Maritime Forest is located south of Long Neck Road next to a young pine forest. Loblolly pine (*Pinus taeda*), northern red oak (*Quercus rubra*), and southern red oak (*Quercus falcata*) compose the canopy. The understory is thick in places and includes smaller members of the canopy plus persimmon (*Diospyros virginiana*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), eastern red cedar (*Juniperus virginiana*), American holly (*Ilex opaca*), wild black cherry (*Prunus serotina*), and dogwood (*Cornus florida*). No shrubs were observed but vines included common greenbrier (*Smilax rotundifolia*), white-leaf greenbrier (*Smilax glauca*), Japanese honeysuckle (*Lonicera japonica*), and poison ivy (*Toxicodendron radicans*). No herbs were noted for this community.

Figure 1. Project Site Location
Castaways Property
Millsboro, Sussex County,
Delaware



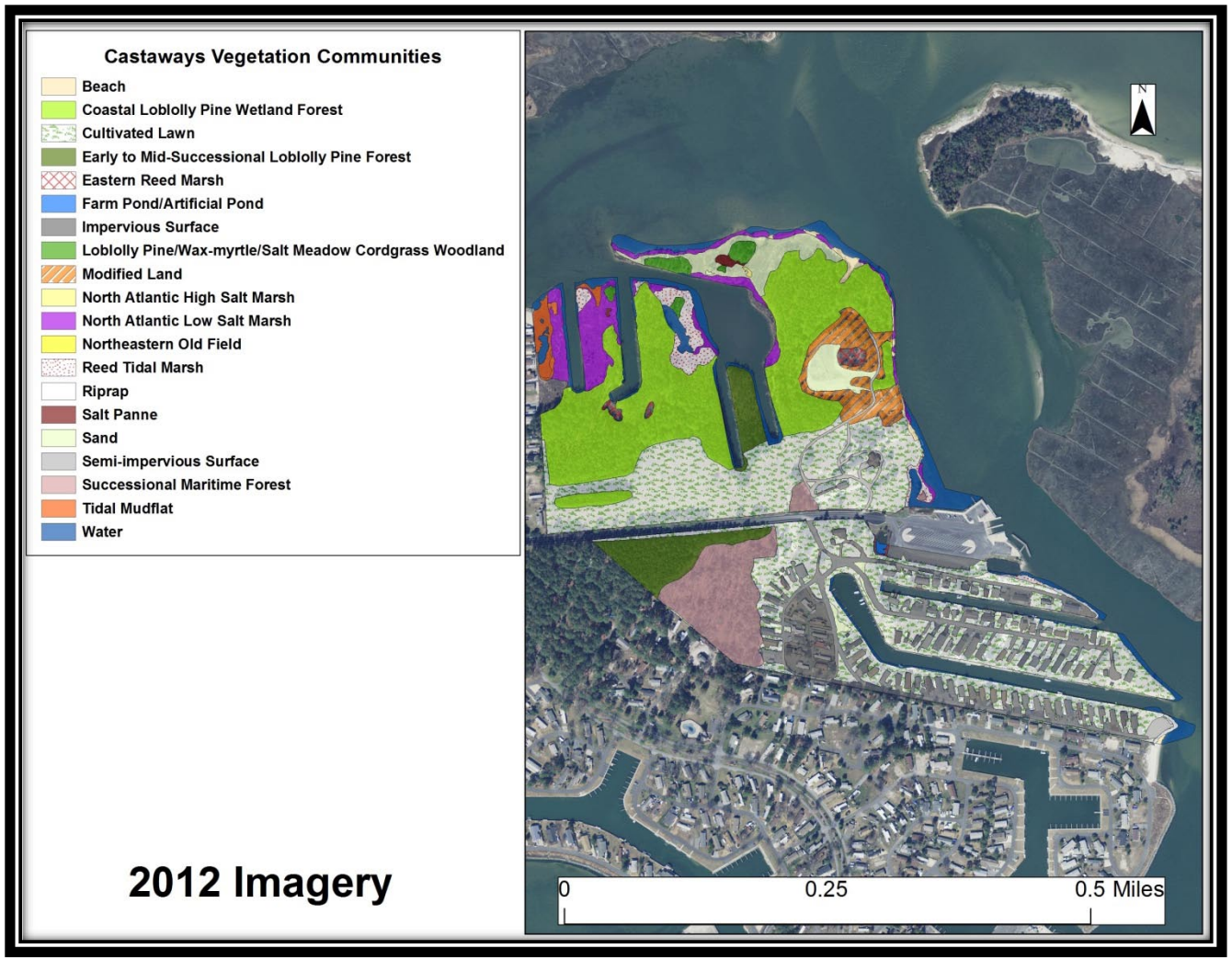


Figure 2. Vegetation Community Map of the Castaways Property surveyed on February 5, 2013.

Figure 3. Coastal Loblolly Pine Wetland Forest observed during the vegetation community survey conducted on February 5, 2013.

Figure 4. Early to Mid-Successional Loblolly Pine Forest observed during the vegetation community survey conducted on February 5, 2013.

Figure 5. Eastern Reed Marsh observed during the vegetation community survey conducted on February 5, 2013.

Figure 6. Loblolly Pine/Wax-Myrtle/Salt Meadow Cordgrass Woodland observed during the vegetation community survey conducted on February 5, 2013.

Figure 7. North Atlantic Low Salt Marsh observed during the vegetation community survey conducted on February 5, 2013.

Figure 8. Reed Tidal Marsh observed during the vegetation community survey conducted on February 5, 2013.

Figure 9. Successional Maritime Forest observed during the vegetation community survey conducted on February 5, 2013.

Appendix I: Natural Heritage Ranking System

The Delaware Natural Heritage Program (DNHP) uses a ranking system developed by The Nature Conservancy. This system is used by natural heritage programs and conservation data centers in all 50 states, Canadian provinces, Latin American Countries, NatureServe, The Nature Conservancy, and their network cooperators worldwide. The system is also recognzied by federal agencies. Natural heritage ranks are assigned to all species. Each species is given a state rank to reflect the degree of rarity within the state, and a global rank to indicate degree of rarity worldwide. Natural heritage ranks are also assigned to natural communities, but because the national community classification is not yet fully developed, global ranks are not available for all communities. State and global ranks are used to prioritize conservation efforts such that the rarest species and natural communities receive more immediate protection. The primary criteria for ranking a species is based on the total number of documented occurrences or populations, with consideration given to the quality of the occurrence (i.e., size and vigor of population, and condition of habitat) and threats to the occurrence. Ranks are determined through field investigations and consensus in the scientific community. The following are definitions of both the state and global ranking systems:

State Rank

S1 Extremely rare (i.e., typically 5 or fewer occurrences statewide), or may be susceptible to extirpation because of other threats to its existence.

S1.1 Only a single occurrence or population of the species is known to occur. (this rank is only applied to plants.)

S2 Very rare, (i.e., typically 6 to 20 occurrences statewide), or may be susceptible to extirpation because other threats to its existence.

S3 Rare to uncommon, not yet susceptible to extirpation but may be if additional populations are destroyed. Approximately 21 to 100 occurrences statewide.

S4 Common, apparently secure in the state under present conditions.

S5 Very common, secure in the state under present conditions.

SH Historically known, but not verified for an extended period (usually 15+ years); there are expectations that the species may be rediscovered.

SX Extirpated or presumed extirpated from the state. All historical locations and/or potential habitat have been surveyed.

SU Status uncertain within the state. Usually an uncommon species which is believed to be of conservation concern, but there is inadequate data to determine the degree of rarity.

SNR Unranked

SNA Not Applicable

SW Weedy vegetation or vegetation dominated by invasive alien species (this rank is only applied to natural communities).

SM Vegetation resulting from management or modification of natural vegetation. It is readily restorable by management or time and/or the restoration of original ecological processes (this rank is only applied to natural communities).

Global Rank

G1 Imperiled globally because of extreme rarity (i.e., typically 5 or fewer occurrences worldwide), or because of other threats to the existence of the species or natural community.

G2 Imperiled globally because of extreme rarity (i.e., typically 6 to 20 occurrences worldwide), or because of other threats that make the species or natural community particularly vulnerable to extinction throughout its range.

G3 Found only locally in a restricted range, or local throughout its entire range because of rarity, or because of other threats that make the species or natural community particularly vulnerable to extinction throughout its range. Approximately 21 to 100 occurrences worldwide.

G4 Apparently globally secure, though quite rare in parts of its range, particularly at the periphery.

G5 Globally secure, but may be uncommon on a local basis.

GH Historically known, but not verified for an extended period (usually 15+ years); there are expectations that the species may be rediscovered.

GX Extinct or presumed extinct. All historical locations and/or potential habitats have been surveyed with no expectation that it will be rediscovered.

GU Status uncertain. Usually an uncommon species which is believed to be of conservation concern, but there is inadequate data to determine the degree of rarity.

GNR Unranked

GNA Not Applicable

GNE Non-native in the United States (introduced through human influence); not a part of the native flora or fauna (e.g., Japanese honeysuckle).

GW Weedy vegetation or vegetation dominated by invasive alien species (this rank is only applied to natural communities).

GM Vegetation resulting from management or modification of natural vegetation. It is readily restorable by management or time and/or the restoration of original ecological processes (this rank is only applied to natural communities).

Q If a taxon is treated as a full species, a "Q" can be added to the global rank to denote its questionable taxonomic assignment.

T Denotes that the infraspecific taxon is being ranked differently than the full species.