PLEASE PRINT OR TYPE ALL ANSWERS. If a question does not apply to your project, please print N/A (not applicable) in the space provided. ***If additional space is needed, attach extra 8 ½ x 11 inch sheets of paper.***

CHECK ONE, if applicable:	Pre-Construction Notification (PCN) ☐ (*For Nationwide Permits ONLY*)	SPGP ☒

1. PROJECT LOCATION INFORMATION
(Attach a copy of a detailed map, such as a USGS topographic map or street map showing the site location and project boundary, so that it may be located for inspection. Include an arrow indicating the north direction.)

Address	City/County
2712 Saint Brides Road West	Chesapeake
Subdivision	Lot/Block/Parcel #
none	0850000000460

Name of water body(ies) within project boundaries and drainage area (acres or square miles)

n/a

Tributary(ies) to: Northwest River

Basin: _____ Subbasin: _____

(*Example: Basin: James River Subbasin: Middle James River*)

Special Standards (based on DEQ Water Quality Standards 9VAC25-260 et seq.):

_____

Project type (check one)

_☐_ Single user (private, non-commercial, residential)

_☒_ Multi-user (community, commercial, industrial, government)

Latitude and longitude at center of project site: 36 - 38 - 56.8 / 76 - 14 - 32.41

USGS topographic map name: Fentress, VA

8- digit USGS Hydrologic Unit Code (HUC) for your project site (See www.epa.gov/surf/): 03010205

If known, indicate the 10-digit and 12-digit USGS HUCs (see http://www.dcr.virginia.gov/soil_&_water/hu.shtml):

_____ _____

Name of your project (*Example: Water Creek driveway crossing*) Hickory Manor Phase II

Is there an access road to the project? ☒ Yes ☐ No. If yes, check all that apply: ☒ public ☐ private ☒ improved ☐ unimproved

Provide driving directions to your site, giving distances from the best and nearest visible landmarks or major intersections:

From HWY 464, proceed straight onto Hwy 168. Take first Hillcrest Parkway exit. Turn right at light onto Hillcrest Parkway. Turn left onto Edinburgh Parkway. Site is on the right at the corner of Edinburgh Parkway and Saint Brides.

Does your project site cross boundaries of two or more localities (i.e. cities/counties/towns)? ☐ Yes ☒ No

If so, name those localities:

FOR AGENCY USE ONLY

	Notes:
JPA#	

2. APPLICANT, AGENT, PROPERTY OWNER, AND CONTRACTOR INFORMATION

The applicant(s) is/are the legal entity to which the permit may be issued. The applicant(s) can either be the property owner(s) or the person/people/company(ies) that intend(s) to undertake the activity. The agent is the person or company that is representing the applicant(s). If a company, please use the company name that is registered with the State Corporation Commission (SCC), or indicate no registration with the SCC.

Applicant(s) (For a company, use SCC-registered name)			Agent (if applicable) (For a company, use SCC-registered name)		
Dragas Management Corporation			Bay Environmental, Inc. Attn: Amy Conley		
Mailing address 4538 Bonney Road			Mailing address 648 Independence Parkway, Suite 100		
City Virginia Beach	State VA	Zip Code 23462	City Chesapeake	State VA	Zip Code 23320
Phone number w/area code (757) 499-4303	Fax		Phone number w/area code (757) 436-5900	Fax (757) 436-5909	
Mobile/pager	E-mail BKokoska@dragas.com		Mobile/pager (757) 816-4997	E-mail amy@bay-environmental.com	
State Corporation Commission ID number (if applicable) 54-1809196			State Corporation Commission ID number (if applicable) N/A		

Certain permits or permit authorizations may be provided via electronic mail. If the applicant wishes to receive their permit via electronic mail, please provide an e-mail address here: BKokoska@dragas.com; amy@bay-environmental.com

Property owner(s), if different from applicant (For a company, use SCC-registered name)			Contractor, if known (For a company, use SCC-registered name)		
Hickory Manor Associates, L.C.			unknown at this time		
Mailing address 4538 Bonney Road			Mailing address		
City Virginia Beach	State VA	Zip code 23462	City	State	Zip code
Phone number w/area code (757) 499-4303	Fax		Phone number w/area code	Fax	
Mobile/pager	E-mail BKokoska@dragas.com		Mobile/pager	E-mail	
State Corporation Commission ID number (if applicable) 47-2070639			State Corporation Commission ID number (if applicable)		

3. PROVIDE A DESCRIPTION OF THE PROJECT, PROJECT PRIMARY AND SECONDARY PURPOSES, PROJECT NEED, INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

- The purpose must include any new development or expansion of an existing land use and/or proposed future use of residual land
- Describe the physical alteration of surface waters
- Include a description of alternatives considered to avoid or minimize impacts to surface waters, including wetlands, to the maximum extent practicable. Include factors such as, but not limited to, alternative construction technologies, alternative project layout and design, alternative locations, local land use regulations, and existing infrastructure
- For utility crossings, include both alternative routes and alternative construction methodologies considered
- For major surface water withdrawals, public surface water supply withdrawals, or projects that will alter instream flows, include the water supply issues that form the basis of the proposed project.

The Hickory Manor Phase I was permitted through WP4-16-0704. Phase II of the development proposes to construct 83 detached condominiums and associated infrastructure on 19.64 acres of land. The resources to be impacted on the property include a PEM wetland that is 10,116 acres and 30,081 sq ft of farm ditches that were used for irrigation when the property was a tree farm. The USACE called these ditches linear wetlands because the ditches had not been maintained, vegetation had grown in some of them, and they held water. All wetlands within the project boundary will be impacted due to the layout of the homes and geometry of the site. It is not preferable to leave a ditch running through the center of a neighborhood due to safety concerns. The proposed stormwater BMPs will contain and treat stormwater better than the existing ditches on the property. All wetlands will be mitigated except Impacts 7a, 7b, 8, 9 that lack vegetation. The applicant will purchase 0.499 wetland credits from a mitigation bank within the HUC.

3. PROVIDE A DESCRIPTION OF THE PROJECT (Continued)

Date of proposed commencement of work (MM/DD/YYYY) Fall 2016	Date of proposed completion of work (MM/DD/YYYY) summer 2017
Are you submitting this application at the direction of any State, local, or Federal agency? _____Yes xxx No	Has any work commenced or has any portion of the project for which you are seeking a permit been completed? _____ Yes xxx No

If you answered "yes" to either question above, give details stating when the work was completed and/or when it commenced, who performed the work, and which agency (if any) directed you to submit this application. In addition, you will need to clearly differentiate between completed work and proposed work on your project drawings.

Are you aware of any unresolved violations of environmental law or litigation involving the property? _____Yes xxxx No
(If yes, please explain)

4. PREVIOUS SITE VISITS AND/OR PERMITS RELATED TO THE PROPOSED WORK (Include all Federal, State, and Local pre-application coordination or previous permits)

Agency	Activity	Permit/Project number, and explanation of non-reporting Nationwide permits previously used	Action taken ** and Date of Action	If denied, give reason for denial
USACOE	Jurisdictional Determination	NAO-2015-0730	6/15/15	issued

** Issued, denied, site visit

5. PROJECT COSTS

Approximate cost of the entire project, including materials and labor: $75 million

Approximate cost of only the portion of the project affecting State waters (below mean low water in tidal areas and below ordinary high water mark in nontidal areas): $ 250,000

6. PUBLIC NOTIFICATION (Attach additional sheets if necessary)

- Complete information for all property owners adjacent to the project site and across the waterway, if the waterway is less than 500 feet in width. If your project is located within a cove, you will need to provide names and mailing addresses for all property owners within the cove.
- If you own the adjacent lot, provide the requested information for the first adjacent parcel beyond your property line.

Property owner's name	Mailing address	City	State	Zip code
N/A for general permit				

Name of newspaper having general circulation in the area of the project: n/a

Address and phone number (including area code) of newspaper n/a

Have adjacent property owners been notified with forms in Appendix A? _____Yes n/a No (attach copies of distributed forms)

7. THREATENED AND ENDANGERED SPECIES INFORMATION

Please provide any information concerning the potential for your project to impact state and/or federally threatened and endangered species (listed or proposed). Attach correspondence from agencies and/or reference materials that address potential impacts, such as database search results or your Corps' waters and wetlands delineation confirmation. Contact information for the Virginia Department of Game and Inland Fisheries and the Virginia Department of Conservation and Recreation, Division of Natural Heritage can be found on page 4 of this package.

8. HISTORIC RESOURCES INFORMATION

Note: Historic properties include but are not limited to archeological sites, battlefields, Civil War earthworks, graveyards, buildings, bridges, canals, etc. Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant.

Are any historic properties located within or adjacent to the project site? ____ Yes ____ No
xxxx Uncertain
If Yes, please provide a map showing the location of the historic property within or adjacent to the project site.

Are there any buildings or structures 50 years old or older located on the project site? ____ Yes ____ No xxxx Uncertain
If Yes, please provide a map showing the location of these buildings or structures on the project site.

Is your project located within a historic district? ____ Yes xxxx No ____ Uncertain
If Yes, please indicate which district: _____

8. HISTORIC RESOURCES INFORMATION (Continued)

Has a survey to locate archeological sites and/or historic structures been carried out on the property?
___ Yes ___ No XXX Uncertain

If Yes, please provide the following information: Date of Survey: _____

Name of firm: _____

Is there a report on file with the Virginia Department of Historic Resources? ____ Yes ____ No XXX Uncertain

Title of Cultural Resources Management (CRM) report: _____

Was any historic property located? ____ Yes ____ No __ Uncertain

9. WETLANDS, WATERS, AND DUNES/BEACHES IMPACT INFORMATION

Report each impact site in a separate column. If needed, attach additional sheets using a similar table format. Please ensure that the associated project drawings clearly depict the location and footprint of each numbered impact site. For dredging, mining, and excavating projects, use Section 18.

	Impact site number 1	Impact site number 2	Impact site number 3
Impact description (use all that apply): F=fill EX=excavation S=Structure T=tidal NT=non-tidal TE=temporary PE=permanent PR=perennial IN=intermittent SB=subaqueous bottom DB=dune/beach IS=hydrologically isolated V=vegetated NV=non-vegetated MC=Mechanized Clearing of PFO	*Example: F, NT, PE, V* See Attached Spreadsheet		
Wetland/waters impact area (square feet)			
Dune/beach impact area (square feet)			
Stream dimensions at impact site (length and average width in linear feet, and area in sq. ft.)			
Volume of fill below Mean High Water or Ordinary High Water (cubic yards)			
Cowardin classification of impacted wetland/water or geomorphological classification of stream	*Example wetland: PFO* *Example stream: wide; bank eroding; braided channel* *Example stream: 'C' channel*		
Average stream flow at site (flow rate under normal rainfall conditions) (cubic feet per second)			
Contributing drainage area (acres or square miles)			

BAY ENVIRONMENTAL, INC.
Environmental Consulting Services

Hickory Manor
Phase II
Impact Summary

Impact Site Number	Wetland/water impact description	Impact Area (ft²)	Cowardin Classification	Stream/ waters dimensions	Contributing drainage area
7a	F, PE, NV	5,429	PUB in ditch	n/a	<5
7b	F, PE, NV	5,902	PUB in ditch	n/a	<5
8	F, PE, NV	809	PUB in ditch	n/a	<5
9	F, PE, NV	5,989	PUB in ditch	n/a	<5
10	F, PE, V	11,952	PEM in ditch	n/a	<5
13	F, PE, V	10,116	PEM	n/a	<5
	TOTAL	40,197			

The Great Dismal Swamp RestorationBank, LLC

P. O. Box 6186
Chesapeake, VA 23323

Phone (757) 487-3441
Fax (757) 487-8680

September 21, 2016

Ms. Amy Conley
Bay Environmental, Inc.
648 Independence Parkway, Suite 100
Chesapeake, Virginia 23320

RE: Hickory Manor
Chesapeake, VA

Dear Ms. Conley:

The following information is provided in reply to your request to purchase approximately 1.389 wetland mitigation credits from The Great Dismal Swamp RestorationBank - Davis Wetland Bank for your project. **These credits are available for purchase from our Davis Wetland Bank, which serves the subject watershed HUC 03010205.**

The cost of 0.882 credits will be Seventeen Thousand, Three Hundred, Sixty-Two Dollars ($ 17,362.00). This letter of availability will expire on December 31, 2016. To complete this transaction we will need payment, and the following information:

DEQ Project #:
Waterway:
Permittee Name:
Locality of Impact:
Permit action:
Impacts (acres/linear feet):
Impacts NWI classification:
Impacts Hydrologic Unit Code: 03010205

Mitigation Bank, Permittee, and Consultant agree not to discuss with any other party the details and/or pricing of this agreement, unless necessary for regulatory matters. Information contained herein shall be held in the strictest confidence.

Thank you for allowing us to quote on this project. We look forward to working with you.

Sincerely,

Beverly M. White
Manager – Accounting/Sales
GDSRB

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1096

Reply to
Attention of

June 15, 2015

PRELIMINARY JURISDICTIONAL DETERMINATION

Eastern Virginia Regulatory Section
NAO-2015-0730 (St. Brides Ditch)

Greenbrier Farms Land LLC
1105 Madison Plaza
Suite 110
Chesapeake, Virginia 23320

Dear Mr. Thrasher:

This letter is in regard to your request for a preliminary jurisdictional determination for waters of the U.S. (including wetlands) on an approximate 120.49 acre parcel known as Greenbrier Farms in Chesapeake, Virginia (tax map parcel # 0850000000470 & 0850000000460).

The map entitled "Greenbrier Farms", by Bay Environmental dated 5/28/2015 and Corps date stamped as received 5/28/2015 (*copy enclosed)* provides the location(s) of waters and/or wetlands on the property listed above. The basis for this delineation includes application of the Corps' 1987 Wetland Delineation Manual (*and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region*) and the positive indicators of wetland hydrology, hydric soils, and hydrophytic vegetation and the presence of an ordinary high water mark.

Discharges of dredged or fill material, including those associated with mechanized landclearing, into waters and/or wetlands on this site may require a Department of the Army permit and authorization by state and local authorities including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC) and/or a permit from your local wetlands board. This letter is a confirmation of the Corps preliminary jurisdiction for the waters and/or wetlands on the subject property and does not authorize any work in these areas. Please obtain all required permits before starting work in the delineated waters/wetland areas.

This is a preliminary jurisdictional determination and is therefore not a legally binding determination regarding whether Corps jurisdiction applies to the waters or wetlands in question. Accordingly, you may either consent to jurisdiction as set out in this preliminary jurisdictional determination and the attachments hereto if you agree with the determination, or you may request and obtain an approved jurisdictional determination. This preliminary jurisdictional determination and associated wetland delineation map may be submitted with a permit application.

Enclosed is a copy of the "Preliminary Jurisdictional Determination Form". Please review the document, sign, and return one copy to Dan Bacon, of my staff, either via email (danny.r.bacon@usace.army.mil) or via standard mail to US Army Corps of Engineers, Regulatory Office, and ATTN: Dan Bacon, 803 Front Street Norfolk, Virginia 23510 within 30 days of receipt and keep one for your records. This delineation of waters and/or wetlands is valid for a period of five years from the date of this letter unless new information warrants revision prior to the expiration date.

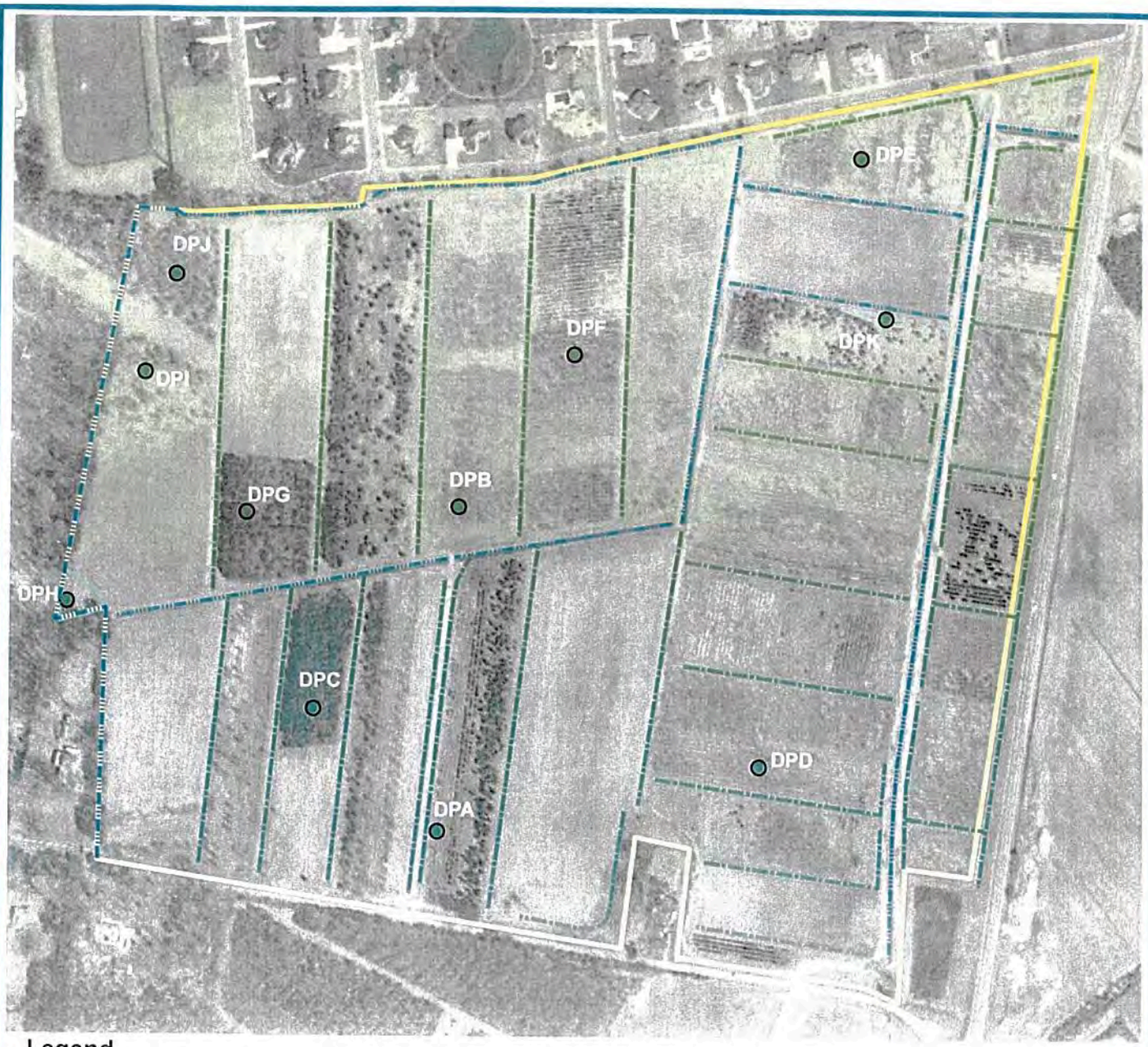
If you have any questions, please contact Dan Bacon, of my staff, either via telephone at (757) 201-7060 or via email at danny.r.bacon@usace.army.mil

Sincerely,

Pete Kube
Chief, Eastern Virginia
Regulatory Section

Enclosure(s)

Cc: Agent
Virginia Department of Environmental Quality
Dragas Management Group
City of Chesapeake



Legend

Property Boundary ~ 120.491 acres

Wetlands - approximately 0.29 acre

Linear Wetlands - approximately 0.79 acre

Non-jurisdictional ditches

Data Point Locations

N W E S

0 100 200 400 600 800 Feet

Source: City of Chesapeake Parcel Data and USGS 2013 Orthophotograph; Wetlands marked by Trimble GeoXT.

Scale:1 in = 400 ft
Bay #:14-204-01
Date: 5/28/15
Prepared by: AJLC
VA PWD # 3402000113

Figure 2: Site Conditions
Greenbrier Farms
Wetland Delineation
Chesapeake, Virginia

BAY ENVIRONMENTAL, INC.
Environmental Consulting Services

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION:

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):
Monday, June 15, 2015

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Greenbrier Farms Land LLC
1105 Madison Plaza
Suite 110
Chesapeake, Virginia 23320

C. DISTRICT OFFICE: Norfolk District (CENAO-REG)

FILE NAME: Greenbrier Farms

FILE NUMBER: NAO-2015-0730

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: **VIRGINIA** County/parish/borough: Chesapeake City:

Center coordinates of site (lat/long in degree decimal format):

Latitude: 36.648904 ° N Longitude: -76.241005 ° W

Universal Transverse Mercator: 18

Name of nearest waterbody: Saint Brides Ditch to Northwest River

Identify (estimate) amount of waters in the review area:

Non-wetland waters: linear feet; width (ft); and/or acres.

Cowardin Class:

Stream Flow:

Wetlands: 1.08 acres

Cowardin Class: PFO, PEM and WOUS

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal:

Non-Tidal:

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s): May 20, 2015

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

3. This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA:

Data reviewed for preliminary JD (check all that apply) - checked items should be included in case file and, where checked and requested, appropriately reference sources below.

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☒ Office concurs with data sheets/delineation report. Dated May 28, 2015

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

☐ Data sheets prepared by the Corps:

☐ Corps navigable waters' study:

☒ U.S. Geological Survey Hydrologic Atlas: 2002 City of Chesapeake Parcel Data

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name: 2013 Orthophotograph

☒ USDA Natural Resources Conservation Service Soil Survey.

Citation: 1993

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

☐ State/Local wetland inventory map(s):

☐ FEMA/FIRM maps:

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

☐ Photographs: ☒ Aerial (Name & Date): 1937, 1958, 1973, 1981, 1990, 1994, 1998

or ☐ Other (Name & Date):

☐ Previous determination(s):

File no. and date of response letter:

☒ Other information (please specify): Chesapeake 2-foot elevations, LiDAR

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

_____	_____
Signature Regulatory Project Manager (REQUIRED)	Signature of person requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)
_____	_____
Date	Date

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1096

Reply to
Attention of

JUNE 15, 2015

Supplemental Preapplication Information

Project Number: NAO-2015-0730
Applicant: Greenbrier Farms Land LLC
Project Location: Chesapeake, Virginia

1. A search of the Virginia Department of Historic Resources data revealed the following:

   ☒ No known historic properties are located on the property.

   ☐ The following known architectural resources are located on the property:

   ☐ The following known archaeological resources are located on the property:

   ☐ The following known historic resources are located in the vicinity of the property (potential for effects to these resources from future development):

NOTE:

1) *The information above is for planning purposes only. In most cases, the property has not been surveyed for historic resources. Undiscovered historic resources may be located on the subject property or adjacent properties and this supplemental information is not intended to satisfy the Corps' requirements under Section 106 of the National Historic Preservation Act (NHPA).*
2) *Prospective permittees should be aware that Section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant.*

2. A search of the data supplied by the U.S. Fish & Wildlife Service, the Virginia Department of Conservation and Recreation and the Virginia Department of Game and Inland Fisheries revealed the following:

   ☐ No known populations of threatened or endangered species are located on or within the vicinity of the subject property.

   ☒ The following federally-listed species may occur within the vicinity of the subject property: Northern long-eared bat (Myotis septentrionnalis)

   ☐ The following state-listed (or other) species may occur within the vicinity of the subject property:

Please note this information is being provided to you based on the preliminary data you submitted to the Corps relative to project boundaries and project plans. Consequently, these findings and recommendations are subject to change if the project scope changes or new information becomes available and the accuracy of the data.

Legend

- Property Boundary ~ 120.491 acres
- Wetlands - approximately 0.29 acre
- Linear Wetlands - approximately 0.79 acre
- Non-jurisdictional ditches
- Data Point Locations

N
W E
S

0 100 200 400 600 800
Feet

Source: City of Chesapeake Parcel Data and USGS 2013 Orthophotograph; Wetlands marked by Trimble GeoXT.

Scale:1 in = 400 ft
Bay #:14-204-01
Date: 5/28/15
Prepared by: AJLC
VA PWD # 3402000113

Figure 2: Site Conditions
Greenbrier Farms
Wetland Delineation
Chesapeake, Virginia

BAY ENVIRONMENTAL, INC.
Environmental Consulting Services

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/23/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPA

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°38'48.840"N Long: 76°14'32.719"W Datum: _____

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _ ✓ _ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _ ✓ _ No _____	**Is the Sampled Area within a Wetland?** Yes _ ___ No _ ✓ _
Hydric Soil Present?	Yes _ ✓ _ No _ ___	
Wetland Hydrology Present?	Yes _ ___ No _ ✓ _	

Remarks:

The wetland hydrology parameter was not met. This area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ ___	No _ ✓ _	Depth (inches): n/a
Water Table Present?	Yes _ ___	No _ ✓ _	Depth (inches): >24"
Saturation Present? (includes capillary fringe)	Yes _ ___	No _ ✓ _	Depth (inches): >24"

Wetland Hydrology Present? Yes _____ No _ ✓ _

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of hydrology were observed. The wetland hydrology parameter was not met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPA

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Planted Ornamental Holly	40.0	Yes	
2.			
3.			
4.			
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 30-foot radius)			
1. Andropogon virginicus	60	Yes	FAC
2. Setaria pumila	50	Yes	FAC
3. Digitaria sanguinalis	15	No	FACU
4. Daucus carota	10	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	135 = Total Cover		
50% of total cover: 67.5	20% of total cover: 27		
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

The dominance test was met. The hydophytic vegetation parameter is met.

SOIL

Sampling Point: DPA

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 7	10 YR 4/2	100						silt loam
7 to 18+	10 YR 5/1	100	10 YR 4/1	10				silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _ ✓ _ **No** _ _ _

Remarks:

The depleted matrix (F3) hydric soil indicator was observed. The hydric soil criteria is met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/23/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPB

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°38'57.518"N Long: 76°14'31.767"W Datum: _____

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _ ✓ _ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No _ ✓ _	**Is the Sampled Area within a Wetland?** Yes _ ___ No _ ✓ _
Hydric Soil Present?	Yes _ ✓ _ No _ ___ _	
Wetland Hydrology Present?	Yes _ ___ _ No _ ✓ _	

Remarks:

The hydrophytic vegetation and wetland hydrology parameters were not met. This area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ ___ _ No _ ✓ _	Depth (inches): n/a
Water Table Present?	Yes _ ___ _ No _ ✓ _	Depth (inches): 15"
Saturation Present? (includes capillary fringe)	Yes _ ___ _ No _ ✓ _	Depth (inches): 15"

Wetland Hydrology Present? Yes _____ No _ ✓ _

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Water level was as noted above on 3/25/15 & 4/13/15. Only filled in to 18" on 3/13/15 after waiting approximately 1 hour.

Remarks:

No indicators of hydrology were observed. The wetland hydrology parameter was not met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPB

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Planted Platanus occidentalis	40.0	Yes	FACW
2.			
3.			
4.			
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30-foot radius)			
1. Ligustrum sinense	20	Yes	FAC
2. Prunus serotina	30	Yes	FACU
3.			
4.			
5.			
6.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		
Herb Stratum (Plot size: 30-foot radius)			
1. Lonicera japonica	80	Yes	FACU
2. Allium vineale	25	Yes	FACU
3. Juniperus virginiana	4	No	FACU
4. Magnolia grandiflora	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	111 = Total Cover		
50% of total cover: 56	20% of total cover: 22		
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 40	x 2 = 80
FAC species 22	x 3 = 66
FACU species 139	x 4 = 556
UPL species	x 5 =
Column Totals: 201 (A)	702 (B)

Prevalence Index = B/A = 0 3.49

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

The dominance test and prevalence index were not met. The hydophytic vegetation parameter is not met.

SOIL

Sampling Point: DPB

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 14	10 YR 5/1	100						silt loam
14 to 18+	10 YR 7/1	100	10 YR 4/6	10				silty clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _ ✓ _ No _ _

Remarks:

The depleted matrix (F3) hydric soil indicator was observed. The hydric soil criteria is met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/23/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPC

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°38'52.277"N Long: 76°14'36.737"W Datum: _____

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _ ✓ _ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _ ✓ _ No _____	**Is the Sampled Area within a Wetland?** Yes _ ___ No _ ✓ _
Hydric Soil Present?	Yes _ ✓ _ No _____	
Wetland Hydrology Present?	Yes _ ___ No _ ✓ _	

Remarks:

The wetland hydrology parameters was not met. This area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ ___	No _ ✓ _	Depth (inches): n/a
Water Table Present?	Yes _ ___	No _ ✓ _	Depth (inches): >24"
Saturation Present? (includes capillary fringe)	Yes _ ___	No _ ✓ _	Depth (inches): >24"

Wetland Hydrology Present? Yes _____ No _ ✓ _

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of hydrology were observed. The wetland hydrology parameter was not met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPC

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	20.0	Yes	FAC
2. Ilex opaca	25	Yes	FAC
3. Ligustrum sinense	40	Yes	FAC
4. Prunus serotina	5	No	FACU
5.			
6.			
	90	= Total Cover	

50% of total cover: 45 20% of total cover: 18

Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: 30-foot radius)			
1. Ligustrum sinense	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
	20	= Total Cover	

50% of total cover: 25 20% of total cover: 10

Herb Stratum (Plot size: 30-foot radius)			
1. Ilex opaca	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30	= Total Cover	

50% of total cover: 56 20% of total cover: 22

Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (If observed, list morphological adaptations below).

The dominance test was met. The hydophytic vegetation parameter is met.

SOIL

Sampling Point: DPC

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 9	10 YR 4/1	100						silt loam
9 to 18+	10 YR 5/1	85	10 YR 6/6	15				silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _ ✓ _ No _ _ _

Remarks:

The depleted matrix (F3) hydric soil indicator was observed. The hydric soil criteria is met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/23/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPD

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°38'50.56"N Long: 76°14'21.72"W Datum: _____

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes __✓_ No _ __

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes __✓_ No _____	**Is the Sampled Area within a Wetland?** Yes _ ___ No __✓__
Hydric Soil Present?	Yes __✓_ No _ ___	
Wetland Hydrology Present?	Yes _ ___ No _✓__	

Remarks:

The wetland hydrology parameter was not met. This area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ ___	No _✓_	Depth (inches): n/a
Water Table Present?	Yes _ ___	No _✓_	Depth (inches): >24"
Saturation Present? (includes capillary fringe)	Yes _ ___	No _✓_	Depth (inches): >24"

Wetland Hydrology Present? Yes _____ No __✓__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of hydrology were observed. The wetland hydrology parameter was not met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPD

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Planted Quercus virginiana	60.0	Yes	FACU
2.			
3.			
4.			
5.			
6.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30-foot radius)			
1. Ligustrum sinense	15	Yes	FAC
2. Liquidamabar styraciflua	5	Yes	FAC
3.			
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Herb Stratum (Plot size: 30-foot radius)			
1. Eupatorium capillifolium	45	Yes	FACU
2. Andropogon virginicus	40	Yes	FAC
3. Setaria pumila	15	No	FAC
4. Ranunculus spp.	20	No	
5. Allium vineale	15	No	FACU
6. Digitaria sanguinalis	20	No	FACU
7.			
8.			
9.			
10.			
11.			
	155 = Total Cover		
50% of total cover: 78	20% of total cover: 31		
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

The dominance test was met. The hydophytic vegetation parameter is met.

SOIL

Sampling Point: DPD

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 5	10 YR 4/1	100						silt loam
5 to 15	10 YR 5/1	100						silt loam
15 to 21+	10 YR 5/1	85	10 YR 5/8	15				clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _ ✓ _ **No** _ _ _

Remarks:

The depleted matrix (F3) hydric soil indicator was observed. The hydric soil criteria is met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/25/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPE

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°39'6.59"N Long: 76°14'18.25"W Datum: _____

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _ ✓ _ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _ ✓ _ No _____	**Is the Sampled Area within a Wetland?** Yes _ ___ No _ ✓ _
Hydric Soil Present?	Yes _ ✓ _ No _____	
Wetland Hydrology Present?	Yes _ ___ No _ ✓ _	

Remarks:

The wetland hydrology parameter was not met. This area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ ___	No _ ✓ _	Depth (inches): n/a
Water Table Present?	Yes _ ___	No _ ✓ _	Depth (inches): >24"
Saturation Present? (includes capillary fringe)	Yes _ ___	No _ ✓ _	Depth (inches): >24"

Wetland Hydrology Present? Yes _____ No _ ✓ _

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of hydrology were observed. The wetland hydrology parameter was not met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPE

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Planted Platanus occidentalis	40.0	Yes	FACW
2.			
3.			
4.			
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30-foot radius)			
1. Ligustrum sinense	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 25	20% of total cover: 10		
Herb Stratum (Plot size: 30-foot radius)			
1. Eupatorium capillifolium	50	Yes	FACU
2. Lonicera japonica	20	No	FACU
3. Andropogon virginicus	40	Yes	FAC
4. Ranunculus spp.	25	No	
5. Juniperus virginiana	5	No	FACU
6. Symphyotrichum spp.	15	No	
7. Pinus taeda	5	No	FAC
8. Baccharis halimifolia	5	No	FACW
9. Persea borbonia	5	No	FACW
10.			
11.			
	170 = Total Cover		
50% of total cover: 85	20% of total cover: 34		
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

The dominance test was met. The hydophytic vegetation parameter is met.

SOIL

Sampling Point: DPE

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 6	10 YR 4/2	100						silt loam
6 to 18+	10 YR 5/1	80	10 YR 4/1	15				clay loam
			10 YR 6/8	5				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _ ✓ _ **No** _____

Remarks:

The depleted matrix (F3) hydric soil indicator was observed. The hydric soil criteria is met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/25/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPF

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°39'01.18"N Long: 76°14'27.84"W Datum: _____

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes __✓_ No _ __

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes __✓_ No _____	**Is the Sampled Area within a Wetland?** Yes _ ___ No __✓__
Hydric Soil Present?	Yes __✓_ No _ ___	
Wetland Hydrology Present?	Yes _ ___ No _✓__	

Remarks:

The wetland hydrology parameter was not met. This area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ ___	No _✓_	Depth (inches): n/a
Water Table Present?	Yes _ ___	No _✓_	Depth (inches): >24"
Saturation Present? (includes capillary fringe)	Yes _ ___	No _✓_	Depth (inches): >24"

Wetland Hydrology Present? Yes _____ No __✓__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of hydrology were observed. The wetland hydrology parameter was not met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPF

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Planted Ornamental Holly	55.0	Yes	
2.			
3.			
4.			
5.			
6.			
	55 = Total Cover		
50% of total cover: 28	20% of total cover: 11		
Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30-foot radius)			
1. Pinus taeda	35	Yes	FAC
2. Baccharis halimifolia	15	Yes	FACW
3. unknown tree	2	No	
4.			
5.			
6.			
	52 = Total Cover		
50% of total cover: 26	20% of total cover: 10		
Herb Stratum (Plot size: 30-foot radius)			
1. Eupatorium capillifolium	50	Yes	FACU
2. Pinus taeda	10	No	FAC
3. Andropogon virginicus	35	Yes	FAC
4. Acer rubrum	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: (If observed, list morphological adaptations below).

The dominance test was met. The hydophytic vegetation parameter is met.

SOIL

Sampling Point: DPF

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 4	10 YR 4/1	100						silt loam
4 to 18+	10 YR 5/1	85	10 YR 4/1	10				silt loam
			10 YR 6/8	5				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _ ✓ _ No _ _ _

Remarks:

The depleted matrix (F3) hydric soil indicator was observed. The hydric soil criteria is met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/25/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPG

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°38'57.486"N Long: 76°14'38.902"W Datum: _____

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes __✓_ No _ __

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes __✓_ No _____	**Is the Sampled Area within a Wetland?** Yes _ ___ No __✓__
Hydric Soil Present?	Yes __✓_ No _ ___	
Wetland Hydrology Present?	Yes _ ___ No _✓__	

Remarks:

The wetland hydrology parameter was not met. This area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ ___	No _✓_	Depth (inches): n/a
Water Table Present?	Yes _ ___	No _✓_	Depth (inches): >24"
Saturation Present? (includes capillary fringe)	Yes _ ___	No _✓_	Depth (inches): >24"

Wetland Hydrology Present? Yes _____ No __✓__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of hydrology were observed. The wetland hydrology parameter was not met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPG

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Planted Quercus phellos	40.0	Yes	FACW
2. Pinus taeda	40	Yes	FAC
3. Prunus serotina	10	No	FACU
4. Ligustrum sinense	10	No	FAC
5. Liquidambar styraciflua	5	No	FAC
6.			
	105	= Total Cover	

50% of total cover: 53 20% of total cover: 21

Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: 30-foot radius)			
1. Ligustrum sinense	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
	20	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size: 30-foot radius)			
1. Lonicera japonica	40	Yes	FACU
2. Juniperus virginiana	20	Yes	FACU
3. Ilex opaca	6	No	FAC
4. Ligustrum sinense	10	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	76	= Total Cover	

50% of total cover: 38 20% of total cover: 15

Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (If observed, list morphological adaptations below).

The dominance test was met. The hydophytic vegetation parameter is met.

SOIL

Sampling Point: DPG

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 5	10 YR 4/2	100						silt loam
5 to 18+	10 YR 5/2	85	10 YR 5/6	15				silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _ ✓ _ No _ _ _

Remarks:

The Depleted Matrix hydric soil indicator was observed. The hydric soil criteria is met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/25/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPH

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°38'55.017"N Long: 76°14'44.824"W Datum: _____

Soil Map Unit Name: _____ NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _ ✓ _ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _ ✓ _ No _____	**Is the Sampled Area within a Wetland?** Yes _ ✓ _ No _____
Hydric Soil Present?	Yes _ ✓ _ No _____	
Wetland Hydrology Present?	Yes _ ✓ _ No _____	

Remarks:

All of the three parameters were met. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

✓ Surface Water (A1)	Aquatic Fauna (B13)	Secondary Indicators (minimum of two required)
✓ High Water Table (A2)	Marl Deposits (B15) **(LRR U)**	Surface Soil Cracks (B6)
✓ Saturation (A3)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Water Marks (B1)	✓ Oxidized Rhizospheres along Living Roots (C3)	Drainage Patterns (B10)
Sediment Deposits (B2)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Drift Deposits (B3)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Algal Mat or Crust (B4)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Iron Deposits (B5)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water-Stained Leaves (B9)		Shallow Aquitard (D3)
		✓ FAC-Neutral Test (D5)
		Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ ✓ _ No _____	Depth (inches): 1"
Water Table Present?	Yes _ ✓ _ No _____	Depth (inches): surface
Saturation Present? (includes capillary fringe)	Yes _ ✓ _ No _____	Depth (inches): surface

Wetland Hydrology Present? Yes _ ✓ _ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water, high water table, saturation within 12" , and oxidized rhizospheres were observed. It met the FAC-Neutral test. The wetland hydrology parameter was met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPH

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: 20 20% of total cover: 8

Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: 30-foot radius)			
1. Liquidambar styraciflua	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		

50% of total cover: 3 20% of total cover: 1

Herb Stratum (Plot size: 30-foot radius)			
1. Juncus effusus	45	Yes	OBL
2. Scirpus cyperinus	30	Yes	OBL
3. Symphyotrichum spp.	20	No	
4. Ranunculus spp.	15	No	
5. Eupatorium capillifolium	10	No	FACU
6. Arundinaria tecta	7	No	FACW
7. Andropogon virginicus	5	No	FAC
8.			
9.			
10.			
11.			
	132 = Total Cover		

50% of total cover: 66 20% of total cover: 27

Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (If observed, list morphological adaptations below).

The dominance test was met. The hydophytic vegetation parameter is met.

SOIL

Sampling Point: DPH

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 18+	10 YR 5/1	80	10 YR 6/8	20				silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _ ✓ _ No _ _ _

Remarks:

The depleted matrix hydric soil indicator was observed. The hydric soil criteria is met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/25/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPI

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°39'01.43"N Long: 76°14'41.85"W Datum: _____

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _ ✓ _ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _ ✓ _ No _____	**Is the Sampled Area within a Wetland?** Yes _ ___ No _ ✓ _
Hydric Soil Present?	Yes _ ✓ _ No _ ___	
Wetland Hydrology Present?	Yes _ ___ No _ ✓ _	

Remarks:

The wetland hydrology parameter was not met. This area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ ___	No _ ✓ _	Depth (inches): n/a
Water Table Present?	Yes _ ___	No _ ✓ _	Depth (inches): >24"
Saturation Present? (includes capillary fringe)	Yes _ ___	No _ ✓ _	Depth (inches): >24"

Wetland Hydrology Present? Yes _____ No _ ✓ _

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of hydrology were observed. The wetland hydrology parameter was not met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPI

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Planted Prunus x yedoensis	40.0	Yes	
2. Planted Quercus phellos	40	Yes	FACW
3.			
4.			
5.			
6.			
	80	= Total Cover	

50% of total cover: 20 20% of total cover: 8

Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: 30-foot radius)			
1. Rhus copallinum	10	Yes	UPL
2. Pinus taeda	15	Yes	FAC
3. Liquidambar styraciflua	5	No	FAC
4.			
5.			
6.			
	30	= Total Cover	

50% of total cover: 15 20% of total cover: 6

Herb Stratum (Plot size: 30-foot radius)			
1. Andropogon virginicus	40	Yes	FAC
2. Pinus taeda	20	Yes	FAC
3. Liquidambar styraciflua	10	No	FAC
4. Ilex opaca	7	No	FAC
5. Juncus effusus	2	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
	79	= Total Cover	

50% of total cover: 40 20% of total cover: 16

Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks: (If observed, list morphological adaptations below).

The dominance test was met. The hydophytic vegetation parameter is met.

SOIL

Sampling Point: DPI

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 8	10 YR 4/1	100						silt loam
8 to 18+	10 YR 4/1	95	10 YR 6/8	5				clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _ ✓ _ **No** _ _

Remarks:

The depleted matrix (F3) hydric soil indicator was observed. The hydric soil criteria is met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/25/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPJ

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°39'3.75"N Long: 76°14'41.3"W Datum: _____

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes __✓_ No _ __

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No _ ✓ _	**Is the Sampled Area within a Wetland?** Yes _ ___ No __✓__
Hydric Soil Present?	Yes __ _ No _ ✓ __	
Wetland Hydrology Present?	Yes _ __ No _ ✓ __	

Remarks:

None of the three parameters were met. This area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ __	No _ ✓ _	Depth (inches): n/a
Water Table Present?	Yes _ __	No _ ✓ _	Depth (inches): >24"
Saturation Present? (includes capillary fringe)	Yes _ __	No _ ✓ _	Depth (inches): >24"

Wetland Hydrology Present? Yes _____ No _ ✓ __

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of hydrology were observed. The wetland hydrology parameter was not met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPJ

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Planted Quercus phellos	40.0	Yes	FACW
2.			
3.			
4.			
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 30-foot radius)			
1. Ligustrum sinense	20	No	FAC
2. Allium vineale	40	Yes	FACU
3. Lonicera japonica	60	Yes	FACU
4. Pinus taeda	40	Yes	FAC
5. Ilex opaca	7	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	167 = Total Cover		
50% of total cover: 84	20% of total cover: 33		
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 40	x 2 = 80
FAC species 67	x 3 = 201
FACU species 100	x 4 = 400
UPL species	x 5 =
Column Totals: 207 (A)	681 (B)

Prevalence Index = B/A = 0 3.29

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

The dominance test and prevalence index were not met. The hydophytic vegetation parameter is not met.

SOIL

Sampling Point: DPJ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 14	10 YR 4/1	100						silt loam
14 to 18+	10 YR 6/1	80	10 YR 6/6	20				silt loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- _ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _ __ No __ ✓ _

Remarks:

No hydric soil indicators were observed. The hydric soil criteria is not met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Greenbrier Farms - 2712 Saint Brides Road City/County: Chesapeake Sampling Date: 3/25/2015

Applicant/Owner: Dragas Management Corporation / Greenbrier Farms Limited State: VA Sampling Point: DPK

Investigator(s): Bay Environmental, Inc. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: 36°39'02.342"N Long: 76°14'16.989"W Datum: _____

Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ✓ _ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _ ✓ _ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _ ✓ _ No _____	**Is the Sampled Area within a Wetland?** Yes _ ✓ _ No _____
Hydric Soil Present?	Yes _ ✓ _ No _____	
Wetland Hydrology Present?	Yes _ ✓ _ No _____	

Remarks:

All of the three parameters were met. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _ _ No _ ✓ _	Depth (inches): n/a
Water Table Present?	Yes _ ✓ _ No _ _	Depth (inches): 5"
Saturation Present? (includes capillary fringe)	Yes _ ✓ _ No _ _	Depth (inches): 4"

Wetland Hydrology Present? Yes _ ✓ _ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

High water table and saturation within 12" were observed. It met the FAC-Neutral test. The wetland hydrology parameter was met.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: DPK

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Planted Ornamental Holly	50.0	Yes	
2.			
3.			
4.			
5.			
6.			
	50 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Sapling Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 30-foot radius)			
1. Juncus effusus	15	Yes	OBL
2. Rhexia virginica	15	Yes	OBL
3. Symphyotrichum spp.	10	No	
4. Rosa palustris	15	Yes	OBL
5. Lonicera japonica	25	Yes	FACU
6. Dichanthelium acuminatum	20	Yes	FAC
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 27		
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

The vegetation represented in this data sheet was a composite sample within the small wetland area. The dominance test was met. The hydophytic vegetation parameter is met.

SOIL

Sampling Point: DPK

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 6	10 YR 3/1	100						silt loam
6 to 18+	10 YR 5/1	90	10 YR 6/6	10				silty clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Stratified Layers (A5)
- _ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- _ 1 cm Muck (A9) **(LRR P, T)**
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- _ Sandy Mucky Mineral (S1) **(LRR O, S)**
- _ Sandy Gleyed Matrix (S4)
- _ Sandy Redox (S5)
- _ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- _ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- _ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- _ Redox Dark Surface (F6)
- _ Depleted Dark Surface (F7)
- _ Redox Depressions (F8)
- _ Marl (F10) **(LRR U)**
- _ Depleted Ochric (F11) **(MLRA 151)**
- _ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- _ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- _ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- _ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _ ✓ _ No _ _ _

Remarks:

The depleted matrix hydric soil indicator was observed. The hydric soil criteria is met.