Klebasko Environmental, LLC

January 9, 2012

Maria Broadbent, Director
City of Annapolis
Department of Neighborhood
& Environmental Programs
160 Duke of Gloucester Street, Room 202
Annapolis, Maryland 21401

Re: 733 Annapolis Neck Road, PD2010-004
Forest Stand Delineation Report Supplement

Dear Ms. Broadbent:

The following information is being submitted to your office in order to supplement my *Forest Stand Delineation Report* (dated November 15, 2011) for The Reserve at Quiet Waters project, located on Annapolis Neck Road:

1. Revised Page 5 of the report showing the corrected K-Factors for the mapped soil types on the property. Two of the soil types (Colemantown Fine Sandy Loam and Donlonton Fine Sandy Loam) were erroneously listed with K-Factors of 0.43. Please replace Page 5 in the original November 15, 2011 *Forest Stand Delineation Report* with the attached, revised page.

2. A copy of Gary Jellick's December 1, 2011 letter outlining the results of a detailed study concluding that highly erodible soils do not exist on the property, nor do hydric soils extend beyond the limit of jurisdictional wetlands. For your information, Mr. Jellick is the President of Acorn Environmental, Inc. and a Certified Professional Soil Scientist.

Please review the enclosed information, and do not hesitate to contact me if you have any questions.

Sincerely,

Michael J. Klebasko, P.W.S.
President

cc:
Jonathan Mayers, *QW Properties, LLC*
Doug Cann, *QW Properties, LLC*

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ACORN
ENVIRONMENTAL INC.
708 Laurel Lane
Severna Park, MD 21146
410-274-0622

December 1, 2011

Mr. Douglas Cann
Chesapeake Realty Partners
4750 Owings Mills Blvd.
Owings Mills, MD 21117

Re: Quiet Waters Property
Annapolis Neck Road
Anne Arundel County, Maryland

Subject: Soils Evaluation

Dear Mr. Cann:

An on-site soils investigation has been completed to confirm published Soil Survey maps for the property as it relates to the extent of highly erodible soils and hydric soils. Our findings indicate that Soil Survey maps are reasonably accurate for the site. Highly erodible soils do not exist on the property, and hydric soils do not extend beyond the limit of jurisdictional wetlands that were previously surveyed on the property.

Background

Predominant soil mapping units on the property include the following:

- DnA (Donlonton fine sandy loam, 0-2% slopes)
- AoB (Annapolis loamy sand, 2-5% slopes)
- AuB (Annapolis – Urban Land complex, 2-5% slopes)
- CkA (Colemantown fine sandy loam, 0-2% slopes)

Information provided on the Soil Survey map (Exhibit 1) is intended for the purpose of general land planning. Inclusions of other soil types are often present within individual mapping units due limitations with the scale of mapping. For example, the CkA mapping unit may contain, in addition to Colemantown soils, a minor component of moderately well drained Donlonton soils and poorly drained Shrewsberry soils. The poorly drained Colemantown soils are hydric (Fine, glauconitic, mesic Typic Albaquults), whereas Donlonton soils are not hydric (Fine-loamy, glauconitic, mesic Aquic Hapludults).

In addition, enlarging the soil map to match the scale of the site development plan creates inherent errors that would not be present if the soils were mapped using detailed topography at the same scale as the site plan. Consequently, detailed soil mapping is needed when regulatory approvals or building decisions are affected by Soil Survey information.

Results

Field work was completed on November 28, 2011 in accordance with guidance on hydric soil evaluations prepared by the Natural Resources Conservation Service (NRCS). The assessment included the examination of 6 soil profiles using a tile spade and bucket auger. The approximate location of each boring is shown on the attached map. Soil profiles were typically described to a depth of 24 to 30 inches, and were classified using Soil Taxonomy (see attached soil profile descriptions). Each profile was evaluated for hydric soil indicators in accordance with Field Indicators of Hydric Soils in the United States (Version 7.0).

Based on this investigation, soils within the CkA map unit include Colemantown, Shrewsberry and Donlonton soils, which is consistent with the NRCS map unit description. Soils within the DnB mapping unit were found to include moderately well drained and somewhat poorly drained components of Donlonton soils, which is also consistent with the map unit description. The following table summarizes our findings related to highly erodible soils and hydric soils on the site.

Soil Boring	Soil Survey Mapping Unit	Observed Soil	K factor	Highly Erodible	Hydric
SB1	DnB	Donlonton loamy fine sand	0.32	No	No
SB2	CkA	Donlonton loamy fine sand	0.32	No	No
SB3	CkA	Shrewsberry loamy fine sand	0.28	No	Yes
SB4	CkA	Donlonton loamy fine sand	0.32	No	No
SB5	CkA	Colemantown sandy loam	0.28	No	Yes
SB6	CkA	Donlonton loamy fine sand	0.32	No	No

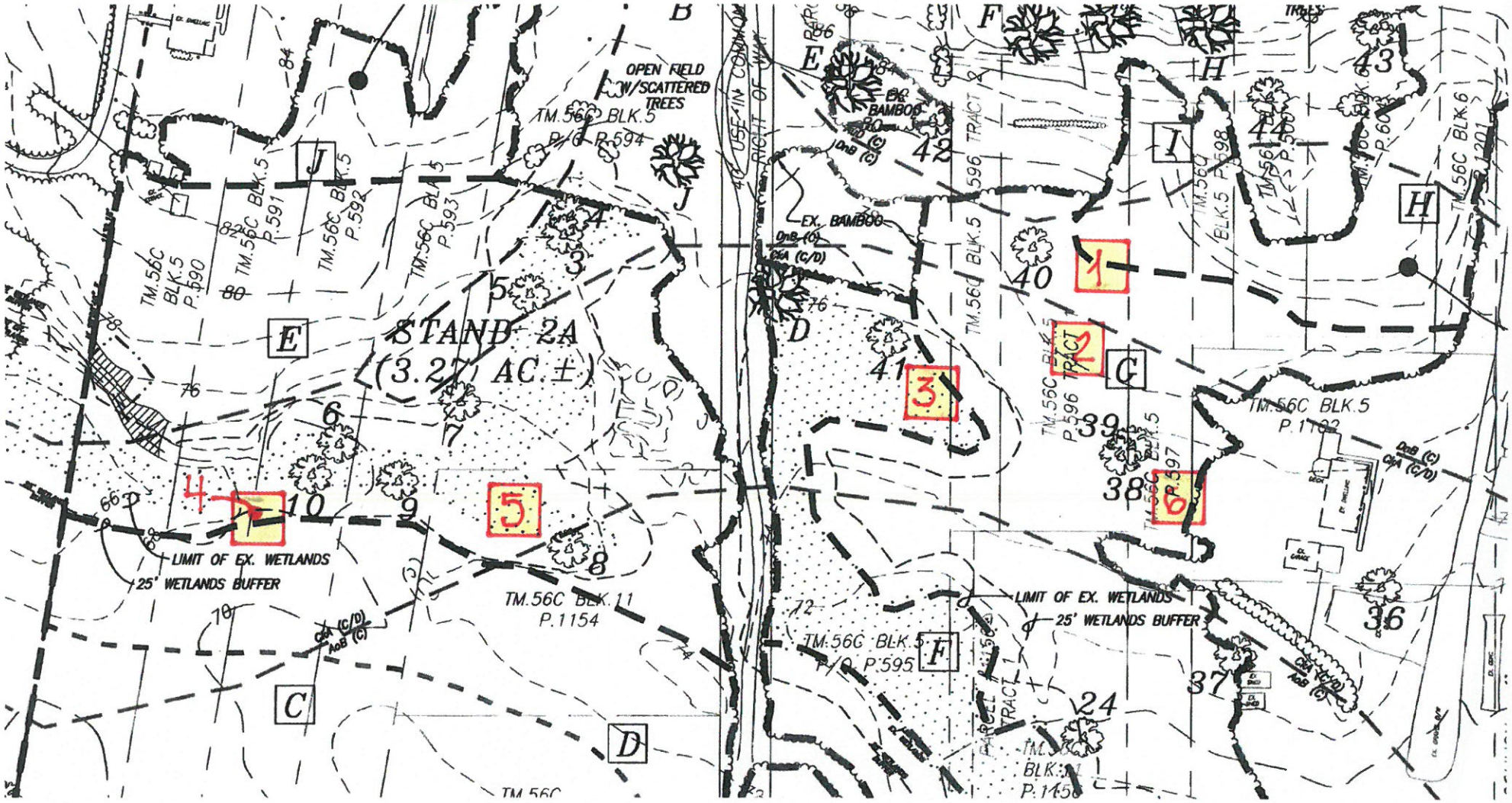
If you have any questions or require additional information concerning soils on the site, please call me at 410-274-0622.

Sincerely,
Acorn Environmental, Inc.

Gary Jellick

Gary J. Jellick, President
Certified Professional Soil Scientist

1 SOIL BORING LOCATIONS



SOIL PROFILE DESCRIPTION

Project: Quiet Waters	County: Anne Arundel	Landscape Position: Footslope	Location: SB1
Date: 28-Nov-11	State: Maryland	Slope: 3%	Classification: Not Hydric
By: G. Jellick		Depth to Water: 16 inches	Series: Donlonton

Hori-zon	Depth (inch)	Texture Rock Mod	Texture Class	Clay %	Matrix Color	Redox Color	Redox %	Structure	Consis-tence	Comments
Ap	0 - 8		lfs		10YR 3/1					40% coated sand grains
E	8 - 11		lfs		10YR 4/4					
BE	11 - 18		ls		10YR 5/6	2.5Y 5/4	30			
Bt	18 - 24		scl		5Y 4/3	7.5YR 5/8	10			
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General Notes:

SOIL PROFILE DESCRIPTION

Project: Quiet Waters	County: Anne Arundel	Landscape Position: Footslope	Location: SB2
Date: 28-Nov-11	State: Maryland	Slope: 3%	Classification: Not Hydric
By: G. Jellick		Depth to Water: 14 inches	Series: Donlonton

Hori-zon	Depth (inch)	Texture Rock Mod	Texture Class	Clay %	Matrix Color	Redox Color	Redox %	Structure	Consis-tence	Comments
Ap	0 - 6		lfs		10YR 3/1					60% uncoated sand grains
E	6 - 10		lfs		10YR 4/4					
BE	10 - 20		ls		10YR 4/3	10YR 5/6	20			
Bt	20 - 36		scl		5Y 4/3	7.5YR 5/8	5			
Btg	36 -		sc		5GY 4/0	7.5YR 5/8	20			
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General Notes:

SOIL PROFILE DESCRIPTION

Project: Quiet Waters	County: Anne Arundel	Landscape Position: Swale	Location: SB3
Date: 28-Nov-11	State: Maryland	Slope: 1%	Classification: Hydric
By: G. Jellick		Depth to Water: 7 inches	Series: Shrewsberry

Hori-zon	Depth (inch)	Texture Rock Mod	Texture Class	Clay %	Matrix Color	Redox Color	Redox %	Structure	Consis-tence	Comments
Ap	0 - 9		lfs		2/5Y 2.5/1					90% coated sand grains
Eg	9 - 14		fs		2.5Y 5/2	10YR 4/6	5			
BE	14 - 24		ls		10YR 5/4	10YR 5/2	20			
Bt	24 -		scl		5Y 4/3	10YR 4/6				
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General Notes:

SOIL PROFILE DESCRIPTION

Project: Quiet Waters	County: Anne Arundel	Landscape Position: Toeslope	Location: SB4
Date: 28-Nov-11	State: Maryland	Slope: 2%	Classification: Not Hydric
By: G. Jellick		Depth to Water: 12 inches	Series: Donlonton *

Hori-zon	Depth (inch)	Texture Rock Mod	Texture Class	Clay %	Matrix Color	Redox Color	Redox %	Structure	Consis-tence	Comments
Ap1	0 - 4		lfs		10YR 3/1					40% coated sand grains
Ap2	4 - 8		lfs		10YR 3/2					
BE	8 - 16		fs		2.5Y 5/3	7.5YR 4/6	30			
Btg1	16 - 30		ls		2.5Y 5/2	7.5YR 5/6	40			
Btg2	30 -		scl		5GY 4/0	7.5YR 4/6	20			
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General Notes: *Drainage class is somewhat poorly drained

SOIL PROFILE DESCRIPTION

Project: Quiet Waters	County: Anne Arundel	Landscape Position: Swale	Location: SB5
Date: 28-Nov-11	State: Maryland	Slope: 1%	Classification: Hydric
By: G. Jellick		Depth to Water: 0 inches	Series: Colemantown

Hori-zon	Depth (inch)	Texture Rock Mod	Texture Class	Clay %	Matrix Color	Redox Color	Redox %	Structure	Consis-tence	Comments
Ap	0 - 4		sl		10YR 2/1					
BE	4 - 12		scl		2.5Y4/2	7.5YR 4/6	20			
Btg1	12 - 20		sc		5GY 4/0	7.5YR 4/6	40			
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General Notes:

SOIL PROFILE DESCRIPTION

Project: Quiet Waters	County: Anne Arundel	Landscape Position: Upland flat	Location: SB6
Date: 28-Nov-11	State: Maryland	Slope: 1%	Classification: Not Hydric
By: G. Jellick		Depth to Water: 16 inches	Series: Donlonton

Hori-zon	Depth (inch)	Texture Rock Mod	Texture Class	Clay %	Matrix Color	Redox Color	Redox %	Structure	Consis-tence	Comments
Ap1	0 - 4		lfs		10YR 2/1					50% coated sand grains
Ap2	4 - 8		lfs		7.5YR 4/6					
BE	8 - 20		fs		2.5Y 5/3	7.5YR 4/6	30			
Btg1	20 - 24		sc		5GY 4/0	7.5YR 5/6	40			
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General Notes: