

	Field	Acres	Buffer	Net Ac.	Latitude	Long.	FSN#	Tract	Field	Tax ID #	RPC#
William "Bill" Creasey	RO75-1	7.9	2.7	5.2	37.220	-79.491	1987	1928	1	200 A 4	20001003
	RO75-2	32.4	3.1	29.3	37.217	-79.493	1987	1928	2	200 A 4	20001003
	RO75-3	46.2	22.7	23.5	37.214	-79.214	1987	1928	3-6	200 A 4	20001003
	RO75-4	5.9	1.7	4.2	37.199	-79.449	2078	2009	2	215 A 20	21502100
	RO75-5	19.4	3.9	15.5	37.198	-79.445	2078	2009	4-5	215 A 20	21502100
	RO75-6	7.5	2.2	5.3	37.200	-79.442	2078	2009	13	215 A 20	21502100
	RO75-7	36.1	10.0	26.1	37.250	-79.482	5082	7809	5	183 A 14	18301900
	RO75-8	14.1	3.0	11.1	37.249	-79.481	5082	7809	5	183 A 14	18301900
	RO75-9	14.8	5.4	9.4	37.248	-79.478	5082	7809	12	183 A 14	18301900
	RO75-10	7.1	4.1	3.0	37.246	-79.482	5082	7809	17	183 A 14	18301900
TOTALS		191.4		132.6							

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 8/5/2015 between William Creasey referred to here as "Landowner", and Bio-Nomic Svc, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Bedford City, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
<u>200 A 4</u>	<u>20001003</u>		

Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one: The Landowner is the sole owner of the properties identified herein.
 The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

Class B biosolids Water treatment residuals Food processing waste Other industrial sludges
 Yes No Yes No Yes No Yes No

WILLIAM CREASEY William Creasey 2189 Henderson Building Rd
 Landowner - Printed Name, Title Signature Mailing Address
Bedford, VA 24523

Permittee:
Bio-Nomic Svc, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Vaughn Buck Stevenson Vaughn "Buck" Stevenson 516 Rountree Rd
 Permittee - Authorized Representative Signature Mailing Address
 Printed Name Charlotte, NC 28217

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Bio-Nomic Services

County or City: Bedford County

Landowner: William Creasey

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

William Creasey
Landowner's Signature

9-5-15
Date

Printer-Friendly

[View In Map](#)

Tax Map #

Link

Parcel Number(RPC).

Address

200 A 4

200 A 4

20001003

4913 SHINGLE BLOCK ROAD

[Link to Real Estate Lookup/Sketch](#)

Parcel Information

Valuation

Improvements

Ownership History

General Information

Owner:

CREASEY WILLIAM H

Legal Acreage:

104.3500

Additional Owner:

PCDesc:

6 Agricultural/Undevl(100+ac)

Owner Address:

2119 HEADENS BRIDGE RD
BEDFORD , VA 24523

Legal Description:

SHINGLE BLK RD

Document Number:

990016262

Land Use

Tax Year: 1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

R075-1

R075-2

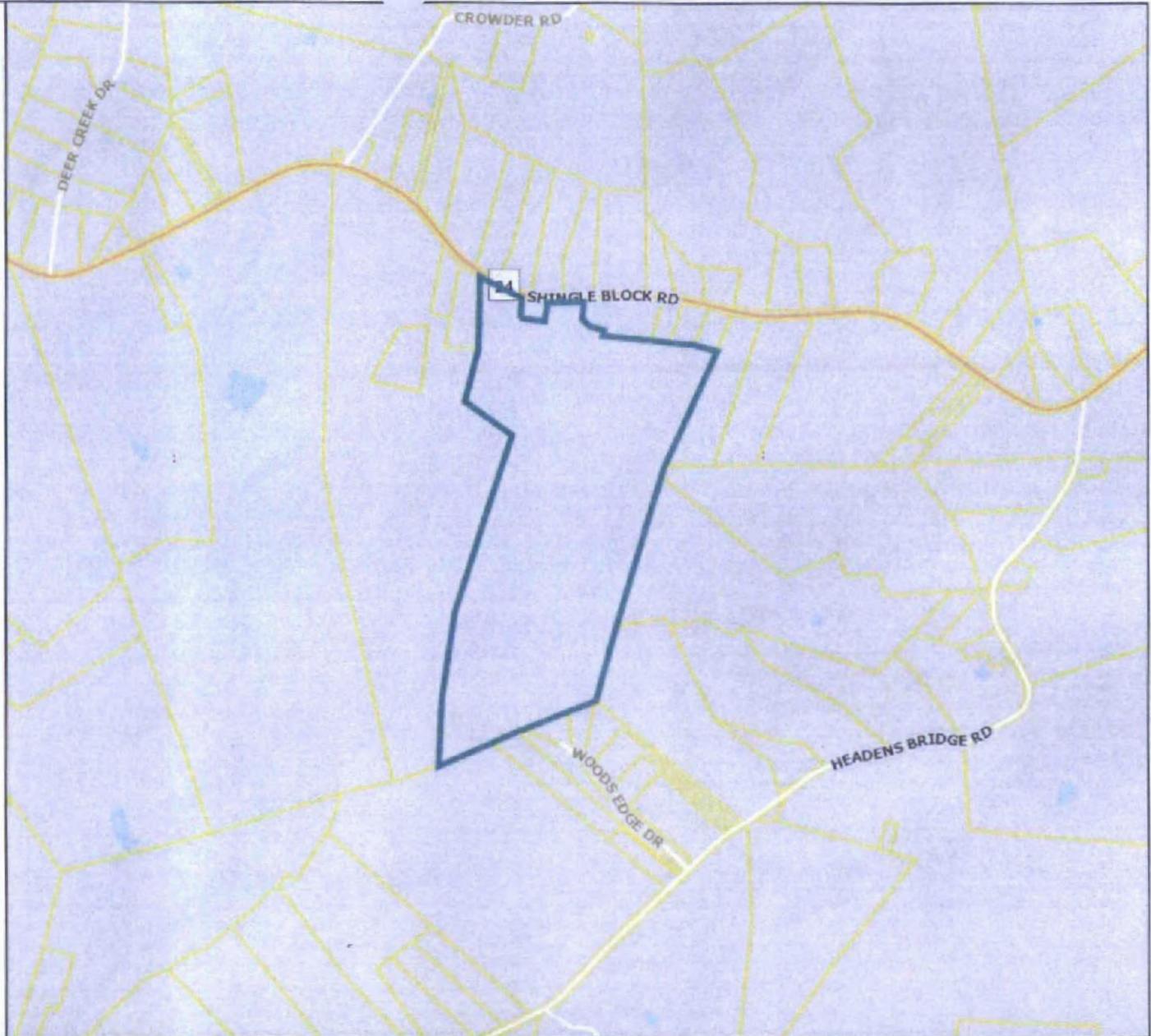
R075-3

Bedford, VA

Legend

- Highway
- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Parcels - County
- Parcels - Town

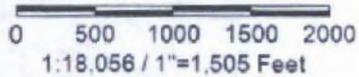
R075-1
R075-2
R075-3



Title: Creasy William H 200 A 4 20001003

Date: 3/17/2016

Feet



DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Bedford County is not responsible for its accuracy or how current it may be.

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 8/31/2015 between Sharon A. Crouch referred to here as "Landowner", and Bio-Nomic, Inc., referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Bedford City, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
<u>215 A 20</u>	<u>21502100</u>		

Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one: The Landowner is the sole owner of the properties identified herein.
 The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

Class B biosolids Water treatment residuals Food processing waste Other industrial sludges
 Yes No Yes No Yes No Yes No

SHARON A CROUCH Sharon A. Crouch 2000 Mentow DR.
 Landowner - Printed Name, Title Signature Mailing Address
Huddeston, Va. 24104

Permittee:
Bio-Nomic, Inc., the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Vaughn "Buck" Stevenson Vaughn "Buck" St 516 Rowntree Rd
 Permittee - Authorized Representative Signature Mailing Address
Charlotte, NC 28217

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Bio-Nomic Services Inc County or City: Red Ford County
Landowner: Sharon A. Crouch

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Sharon A. Crouch

Landowner's Signature

8/31/2015
Date

Printer-Friendly

[View In Map](#)

Tax Map #	Link	Parcel Number(RPC)	Address
215 A 20	215 A 20	21502100	2030 MENTOW DRIVE

[Link to Real Estate Lookup/Sketch](#)

Parcel Information Valuation Improvements Ownership History

General Information

Owner:	CROUCH HAYWOOD LEWIS	Legal Acreage:	86.3400
Additional Owner:		PCDesc:	5 Agricultural/Undevl(20-99ac)
Owner Address:	2030 MENTOW DR HUDDLESTON , VA 241043879	Legal Description:	CRAB ORCH
		Document Number:	

Land Use

- Tax Year:
- 1997
 - 1998
 - 1999
 - 2000
 - 2001
 - 2002
 - 2003
 - 2004
 - 2005
 - 2006
 - 2007
 - 2008
 - 2009
 - 2010
 - 2011
 - 2012
 - 2013
 - 2014
 - 2015
 - 2016

RO75-4
RO75-5
RO75-6

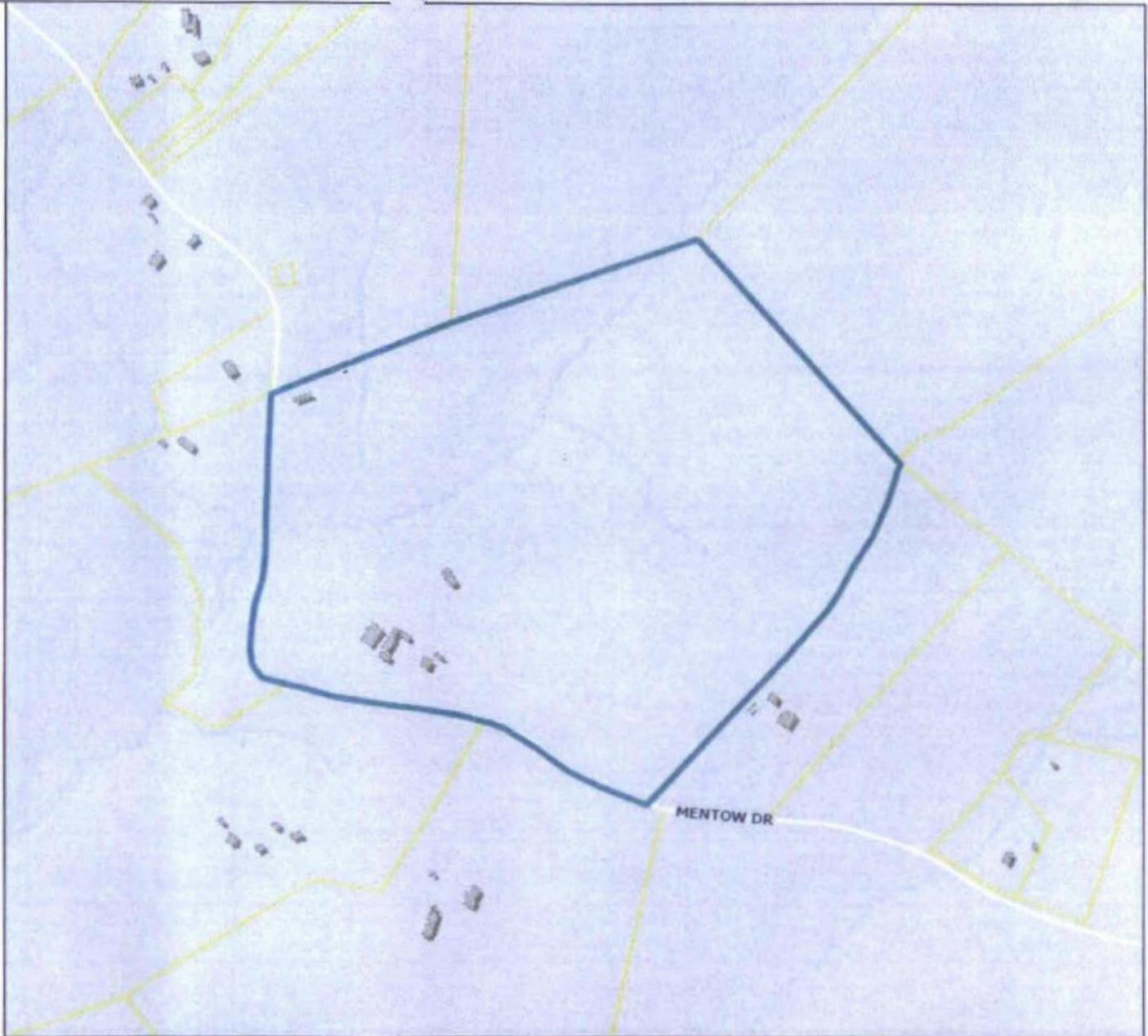
* HAYWOOD CROUCH DECEASED.
LAND DEEDED TO SHARON CROUCH.
GIS NOT UPDATED TO REFLECT CHANGE
IN OWNERSHIP

Bedford, VA

Legend

- Highway
- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Parcels - County
- Parcels - Town
- Public School Boundary

R075-4
R075-5
R075-6



Feet
0 200 400 600 800
1:9,028 / 1"=752 Feet

Title: Crouch Haywood Lewis 215 A 20 21502100

Date: 3/17/2016

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VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Bio-Nomic Services
Landowner: Robert N. Cooper

County or City: Bedford County

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
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 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Robert N. Cooper

Landowner's Signature

9-12-15

Date

Printer-Friendly

[View in Map](#)

Tax Map #	Link	Parcel Number(RPC)	Address
183 A 14	183 A 14	18301900	7063 VIRGINIA BYWAY

[Link to Real Estate Lookup/Sketch](#)

Parcel Information

Valuation

Improvements

Ownership History

General Information

Owner:	COOPER VIRGINIA W & OTHERS	Legal Acreage:	83.3700
Additional Owner:		PCDesc:	5 Agricultural/Undev(20-99ac)
Owner Address:	328 MORNINGSIDE DR ABINGDON , VA 24210	Legal Description:	TRACT 1 PB 51/158
		Document Number:	090006457

Land Use

- Tax Year:
- 1997
 - 1998
 - 1999
 - 2000
 - 2001
 - 2002
 - 2003
 - 2004
 - 2005
 - 2006
 - 2007
 - 2008
 - 2009
 - 2010
 - 2011
 - 2012
 - 2013
 - 2014
 - 2015
 - 2016

R075-7

R075-8

R075-9

R075-10

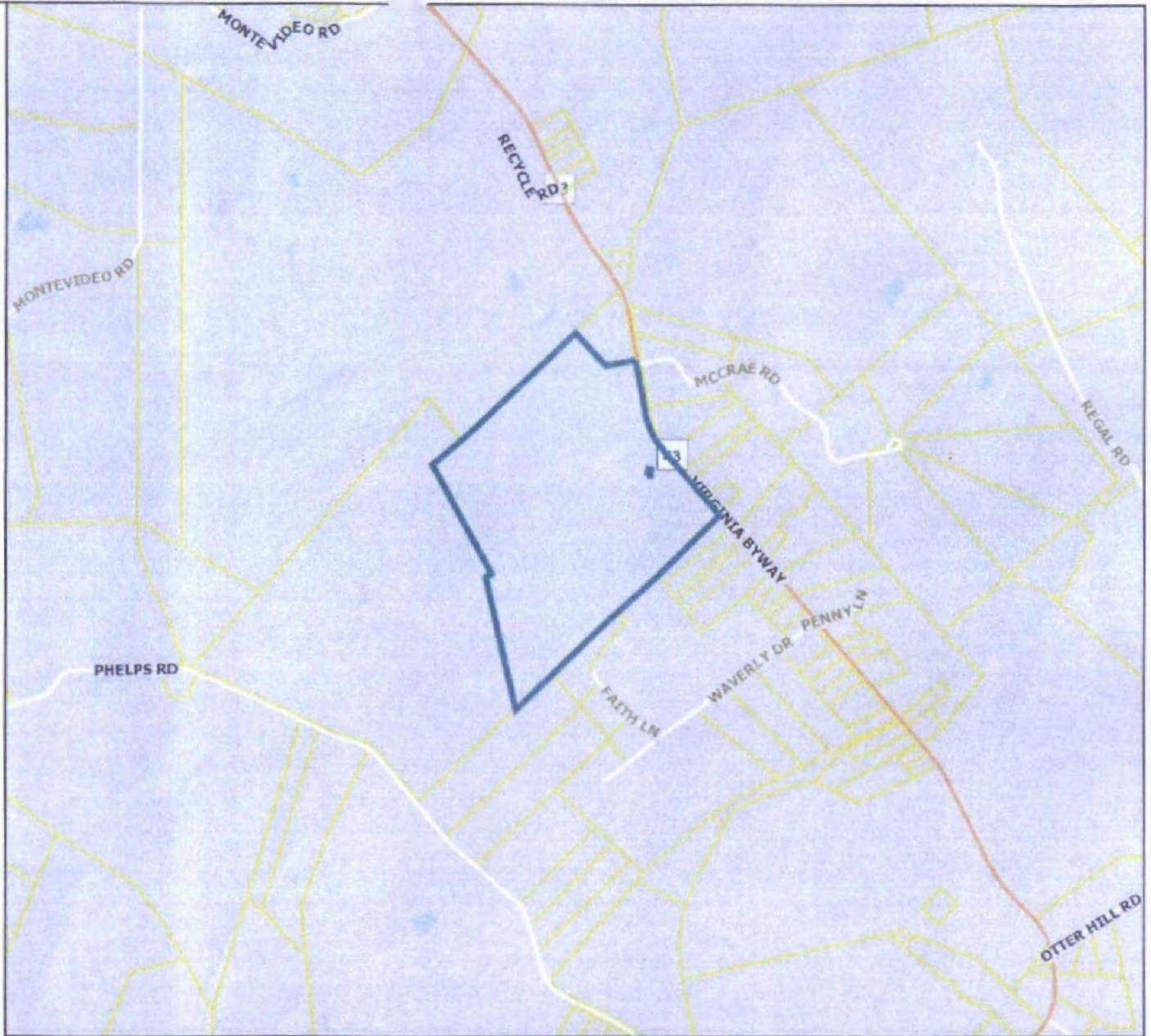
* VIRGINIA COOPER DECEASED.
LAND DEEDED TO ROBERT COOPER.
GIS NOT UPDATED TO REFLECT
CHANGE IN OWNERSHIP

Bedford, VA

Legend

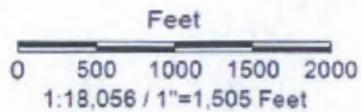
- Highway
- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Parcels - County
- Parcels - Town

P075-7
P075-8
P075-9
P075-10



Title: Cooper Virginia W&Others 183 A 14 18301900

Date: 3/17/2016



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William Creasey Farm

Bio-Nomic Services, Inc. is filing this application to apply approved (VA0025020) Class B biosolids to this designated farm land in Bedford County, Virginia.

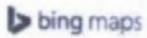
The farms are located in the Bedford community. Fields RO 75-1, 75-2, 75-3 are located off Shingle Block Road just east of Body Camp Elementary School. Fields RO 75-4, 75-5, 75-6 are located off of Mentow Drive. Fields RO 75-7, 75-8, 75-9, 75-10 are located off of Virginia Byway (Highway 43) east of the Bedford County Landfill. All fields are located in a predominately agricultural areas. All streams, drainage features, rock outcrops, structures, dwellings, property lines, roadways and wells are designated and buffered as required. There is one public contact site in the vicinity of RO 75-1 and one public contact site in the vicinity of RO 75-7. See the attached buffer maps for more details. Biosolids are currently being used as crop nutrients on close by farms, and have been used on this farm by another biosolids contractor.

Mr. Creasey operates his acreage for hay production or pasture. The grass cover in the hayfields/ pastures is predominately fescue.

The current fescue hay fields are: RO 75-2, 75-4, 75-5, 75-6, 75-7.

The current fescue pastures are: RO 75-1, 75-3, 75-8, 75-9, 75-10.

Nutrient Management Plans will be written by a certified plan writer to address the application of biosolids to the designated fields that will address the most recent planned use of the fields should any changes occur in agricultural practices.



A Brownlee Ave SE, Roanoke, VA 24014

44 min, 26.6 mi

B 4957 VA-24, Bedford, VA 24523

Light traffic (39 min without traffic)

Via VA-24, VA-24 E

Creasy
RO 75 -1,2,3

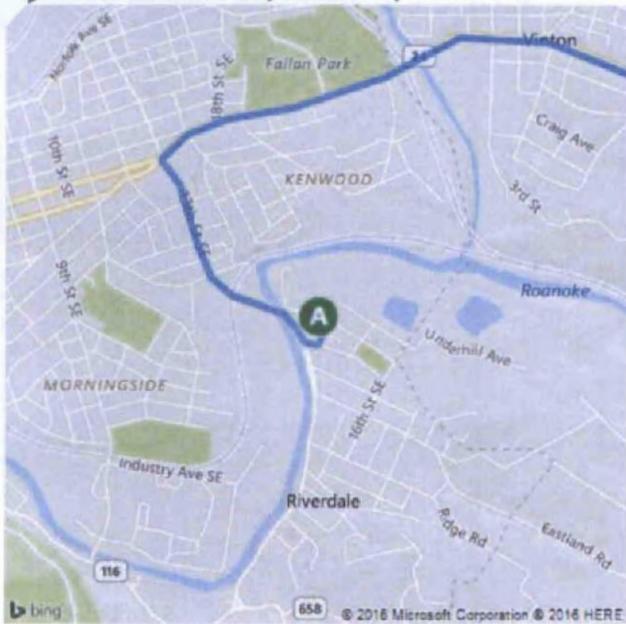
A Brownlee Ave SE, Roanoke, VA 24014

↑	1. Depart Brownlee Ave SE toward Kindred St SE	161 ft
↘	2. Turn right onto Kindred St SE	479 ft
↘	3. Turn right onto Carlisle Ave SE , and then immediately turn right onto Bennington St SE	0.8 mi
↘	4. Turn right onto VA-24 Pass Hess in 1.0 mi	2.2 mi
↑	5. Keep left to stay on VA-24 E / Bypass Rd	0.4 mi
↘	6. Turn right to stay on VA-24 E Pass Exxon in 4.4 mi	23.1 mi, 31 min
	7. Arrive at VA-24 on the right The last intersection is Crowder Rd If you reach Headens Bridge Rd, you've gone too far	

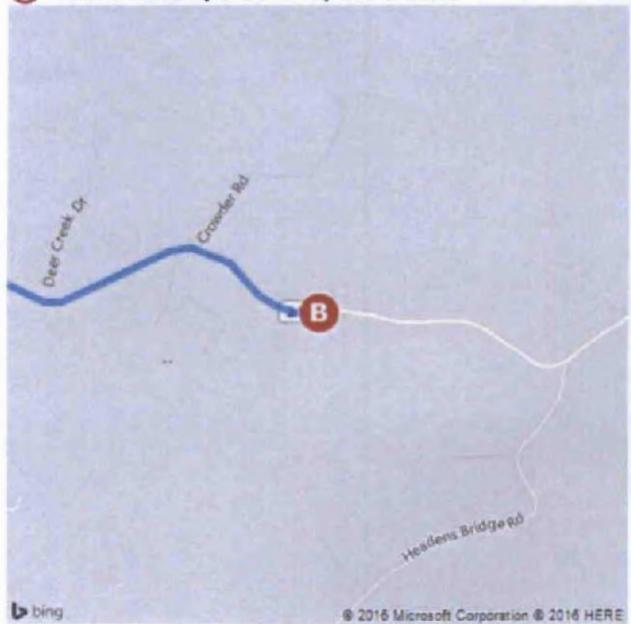
B 4957 VA-24, Bedford, VA 24523



A Brownlee Ave SE, Roanoke, VA 24014



B 4957 VA-24, Bedford, VA 24523



These directions are subject to the Microsoft® Service Agreement and are for informational purposes only. No guarantee is made regarding their completeness or accuracy. Construction projects, traffic, or other events may cause actual conditions to differ from these results. Map and traffic data © 2016 HERE™.



-  **Brownlee Ave SE, Roanoke, VA 24014**
 **2050 Mentow Dr, Huddleston, VA 24104**

52 min, 30.5 mi

Light traffic (47 min without traffic)

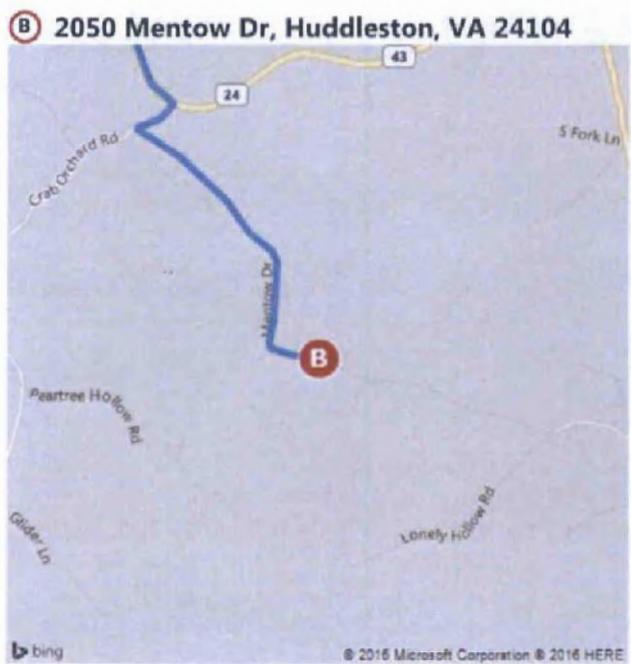
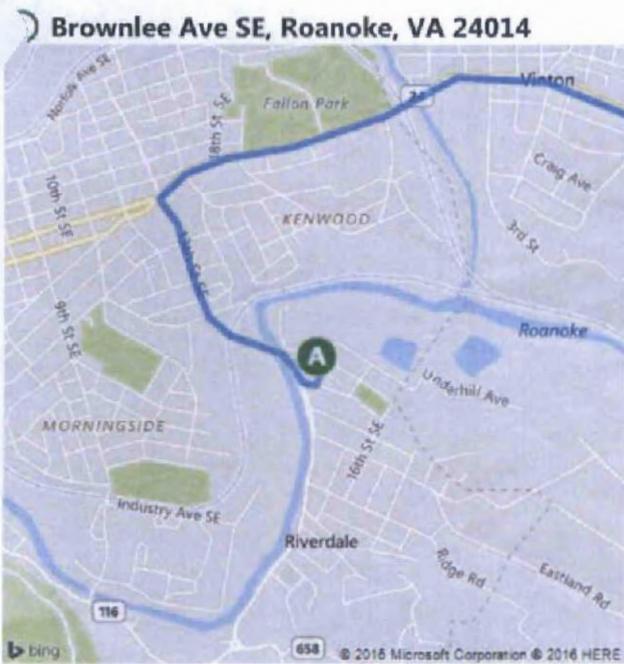
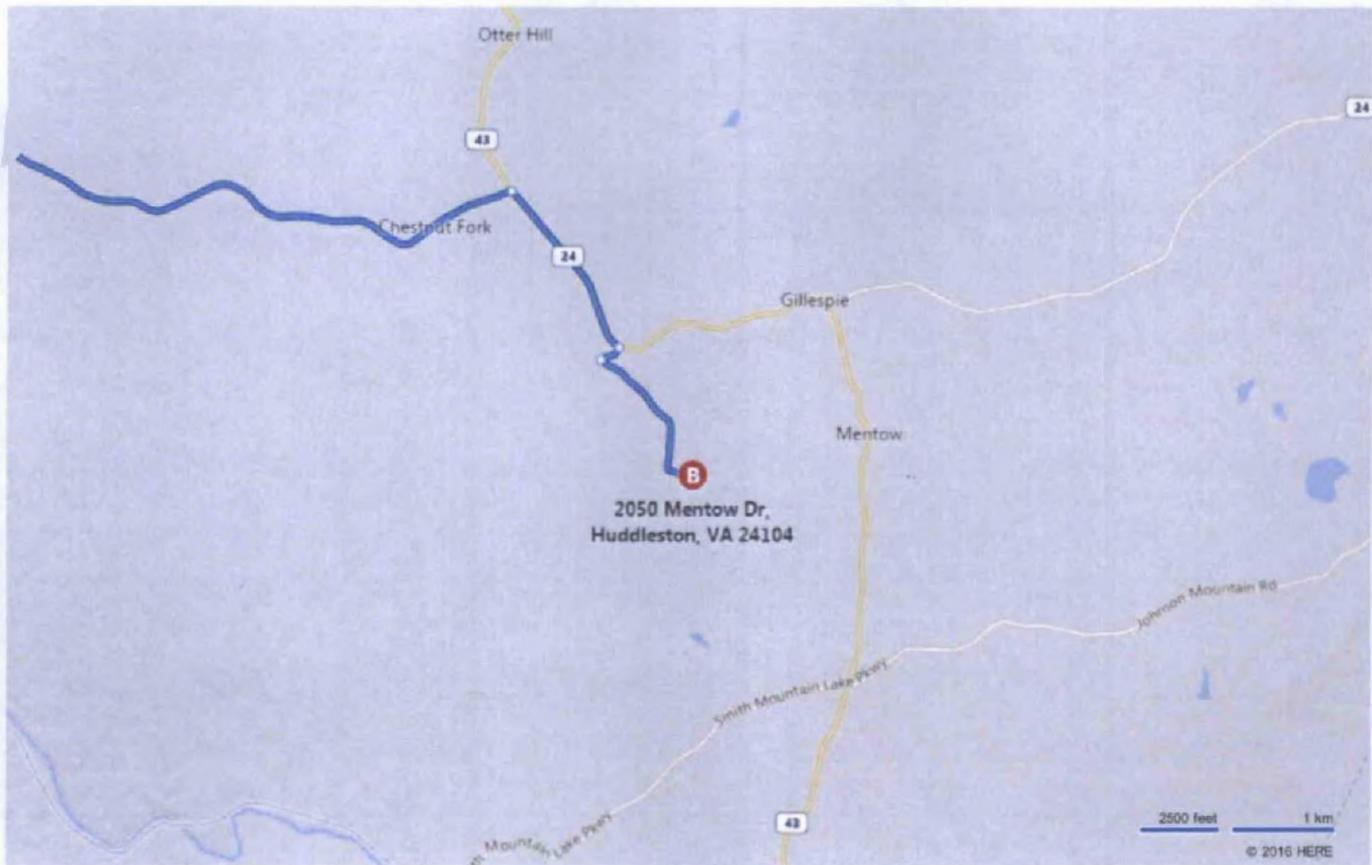
Via VA-24, VA-24 E

Creasy
RO 75-4,5,6

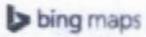
-  **Brownlee Ave SE, Roanoke, VA 24014**

	1. Depart Brownlee Ave SE toward Kindred St SE	161 ft
	2. Turn right onto Kindred St SE	479 ft
	3. Turn right onto Carlisle Ave SE , and then immediately turn right onto Bennington St SE	0.8 mi
	4. Turn right onto VA-24 Pass Hess in 1.0 mi	2.2 mi
	5. Keep left to stay on VA-24 E / Bypass Rd	0.4 mi
	6. Turn right to stay on VA-24 E Pass Exxon in 4.4 mi	24.6 mi, 33 min
	7. Turn right onto VA-24 / VA-43	1.2 mi
	8. Turn right onto Crab Orchard Dr	0.1 mi
	9. Turn left onto Mentow Dr • <i>Unpaved Road</i>	1.0 mi
	10. Arrive at Mentow Dr on the left The last intersection is Crab Orchard Dr If you reach Lonely Hollow Rd, you've gone too far	

-  **2050 Mentow Dr, Huddleston, VA 24104**



These directions are subject to the Microsoft® Service Agreement and are for informational purposes only. No guarantee is made regarding their completeness or accuracy. Construction projects, traffic, or other events may cause actual conditions to differ from these results. Map and traffic data © 2016 HERE™.



- A) Brownlee Ave SE, Roanoke, VA 24014
- B) 7073 Virginia Byway, Bedford, VA 24523

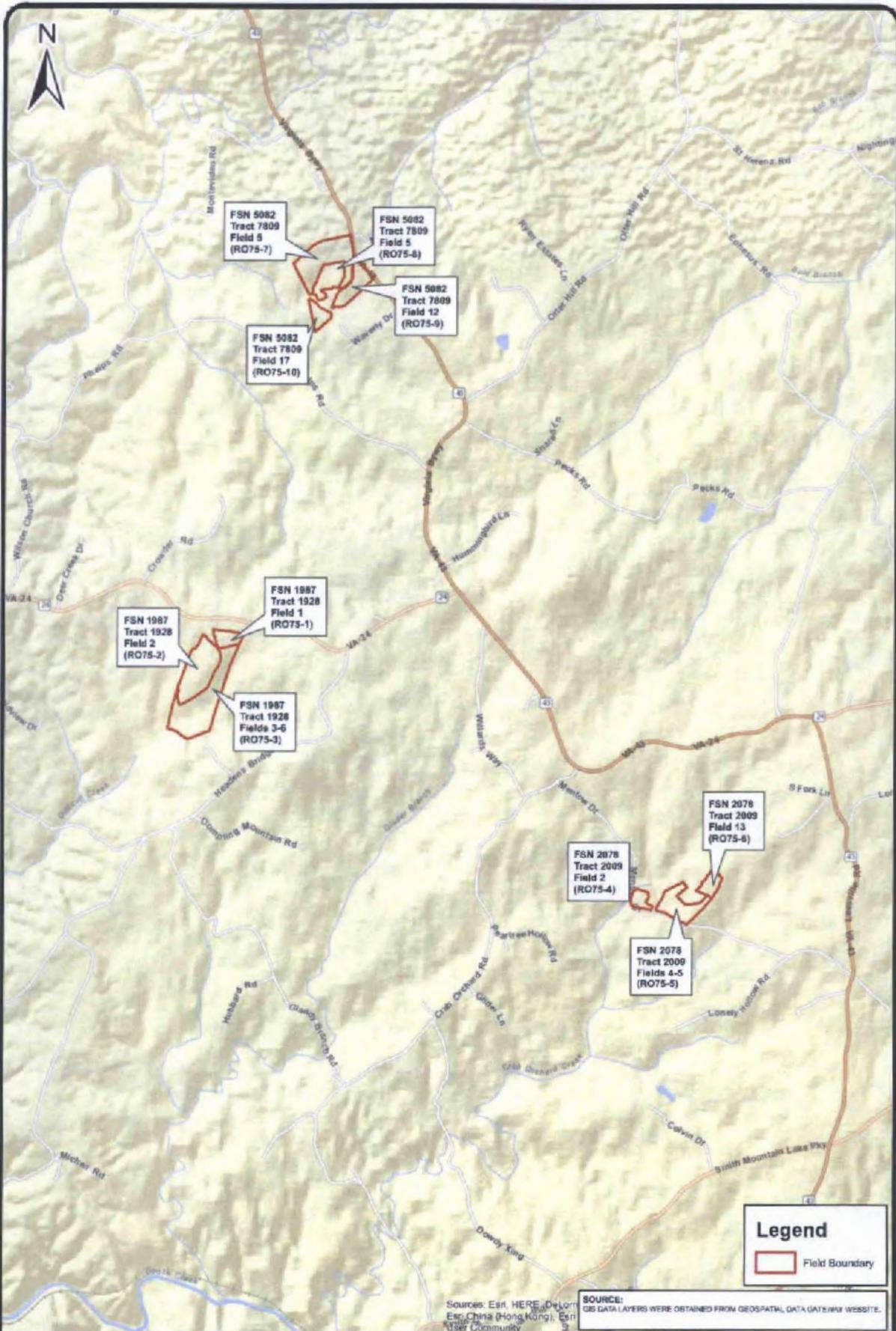
50 min, 30.3 mi
 Light traffic (45 min without traffic)
 Via VA-24, VA-24 E

Creasy Farm
 RO 75-7,8,9,10

A) Brownlee Ave SE, Roanoke, VA 24014

↑	1. Depart Brownlee Ave SE toward Kindred St SE	161 ft
↘	2. Turn right onto Kindred St SE	479 ft
↘	3. Turn right onto Carlisle Ave SE , and then immediately turn right onto Bennington St SE	0.8 mi
↘	4. Turn right onto VA-24 Pass Hess in 1.0 mi	2.2 mi
↑	5. Keep left to stay on VA-24 E / Bypass Rd	0.4 mi
↘	6. Turn right to stay on VA-24 E Pass Exxon in 4.4 mi	24.6 mi, 33 min
↙	7. Turn left onto VA-43 / Virginia Byway	2.2 mi
	8. Arrive at VA-43 / Virginia Byway The last intersection is Waverly Dr If you reach McCrae Rd, you've gone too far	

B) 7073 Virginia Byway, Bedford, VA 24523



SCALE: 1" = 0.5 miles
 DATE: 09-18-15
 DRAWN BY: MEM
 PROJECT NO.: 15-18 Ph: 01



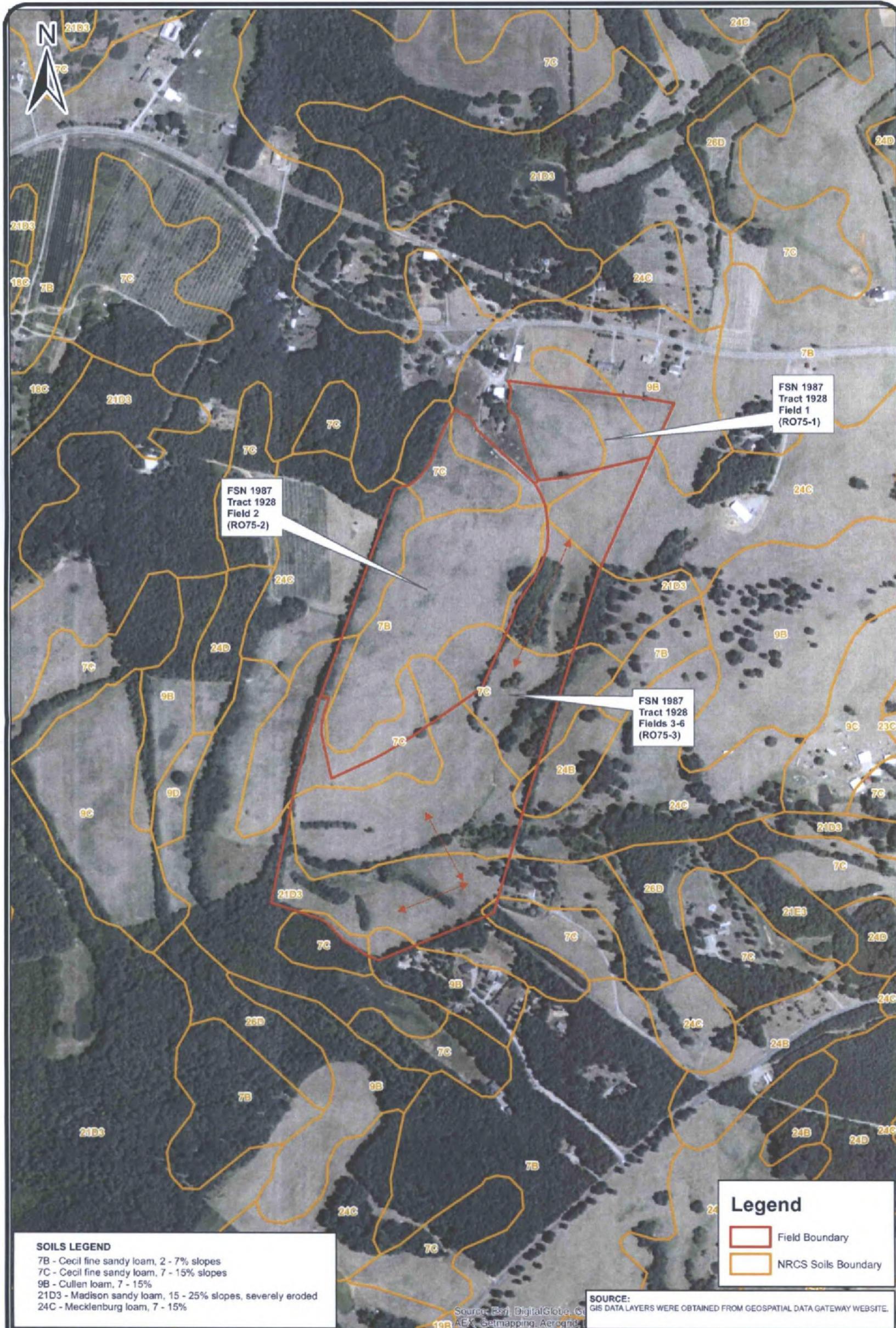
BIO-NOMIC SERVICES, INC.

VICINITY MAP
WILLIAM "BILL" CREASEY
 CITY OF ROANOKE
 LAND APPLICATION PROGRAM
 BEDFORD COUNTY, VIRGINIA

FIGURE NO.

1

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SOILS LEGEND
 7B - Cecil fine sandy loam, 2 - 7% slopes
 7C - Cecil fine sandy loam, 7 - 15% slopes
 9B - Cullen loam, 7 - 15%
 21D3 - Madison sandy loam, 15 - 25% slopes, severely eroded
 24C - Mecklenburg loam, 7 - 15%

Legend
 [Red outline] Field Boundary
 [Yellow outline] NRCS Soils Boundary

SOURCE:
 GIS DATA LAYERS WERE OBTAINED FROM GEOSPATIAL DATA GATEWAY WEBSITE.

SCALE: 1" = 500'
 DATE: 09-18-15
 DRAWN BY: MEM
 PROJECT NO: 15-18 Ph: 01

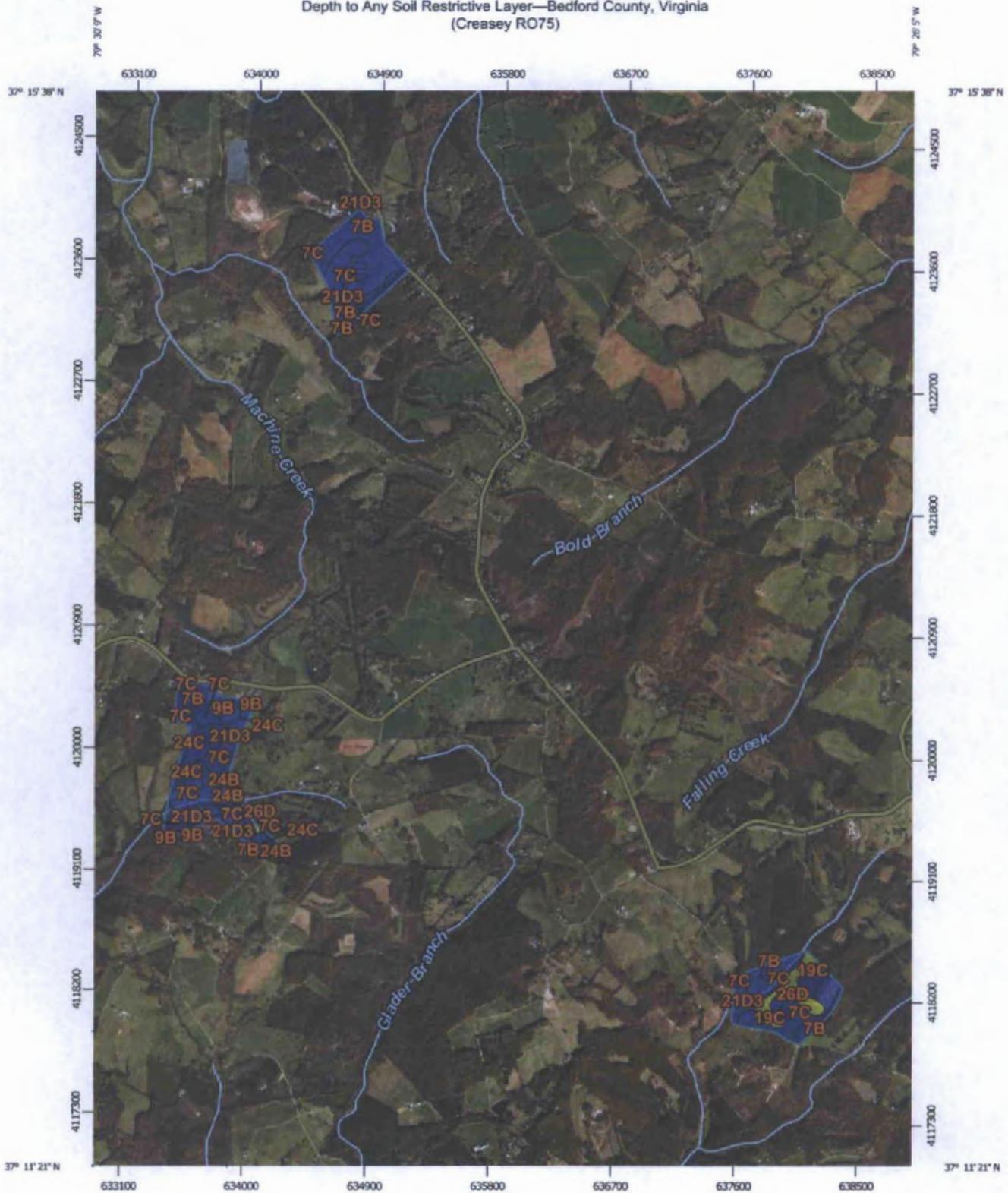


NRCS SOILS MAP - WILLIAM "BILL" CREASEY
FSN 1987 TRACT 1928
 CITY OF ROANOKE
 LAND APPLICATION PROGRAM
 BEDFORD COUNTY, VIRGINIA

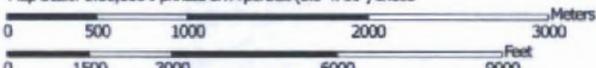
FIGURE NO.
3

C:\argis\2009\1598-09-059 Bio-nomics\William Creasey\Maps\NRCS Fig 3.mxd

Depth to Any Soil Restrictive Layer—Bedford County, Virginia
(Creasey RO75)



Map Scale: 1:38,600 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84



Depth to Any Soil Restrictive Layer—Bedford County, Virginia
(Creasey RO75)

MAP LEGEND

Area of Interest (AOI)	 Area of Interest (AOI)	 Not rated or not available
Soils		Water Features
Soil Rating Polygons		 Streams and Canals
 0 - 25		Transportation
 25 - 50		 Rails
 50 - 100		 Interstate Highways
 100 - 150		 US Routes
 150 - 200		 Major Roads
 > 200		 Local Roads
 Not rated or not available		Background
		 Aerial Photography
Soil Rating Lines		
 0 - 25		
 25 - 50		
 50 - 100		
 100 - 150		
 150 - 200		
 > 200		
 Not rated or not available		
Soil Rating Points		
 0 - 25		
 25 - 50		
 50 - 100		
 100 - 150		
 150 - 200		
 > 200		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bedford County, Virginia
Survey Area Data: Version 11, Dec 11, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 8, 2010—Mar 17, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Any Soil Restrictive Layer

Depth to Any Soil Restrictive Layer— Summary by Map Unit — Bedford County, Virginia (VA019)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
7B	Cecil fine sandy loam, 2 to 7 percent slopes	>200	85.5	27.6%
7C	Cecil fine sandy loam, 7 to 15 percent slopes	>200	102.9	33.2%
9B	Cullen loam, 2 to 7 percent slopes	>200	12.4	4.0%
19C	Iredell fine sandy loam, 7 to 15 percent slopes	>200	14.4	4.7%
21D3	Madison sandy clay loam, 15 to 25 percent slopes, severely eroded	>200	34.8	11.2%
24B	Mecklenburg loam, 2 to 7 percent slopes	>200	1.8	0.6%
24C	Mecklenburg loam, 7 to 15 percent slopes	>200	35.5	11.5%
26D	Poindexter fine sandy loam, 15 to 25 percent slopes	56	22.5	7.3%
Totals for Area of Interest			309.9	100.0%

Description

A "restrictive layer" is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

This theme presents the depth to any type of restrictive layer that is described for each map unit. If more than one type of restrictive layer is described for an individual soil type, the depth to the shallowest one is presented. If no restrictive layer is described in a map unit, it is represented by the "> 200" depth class.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

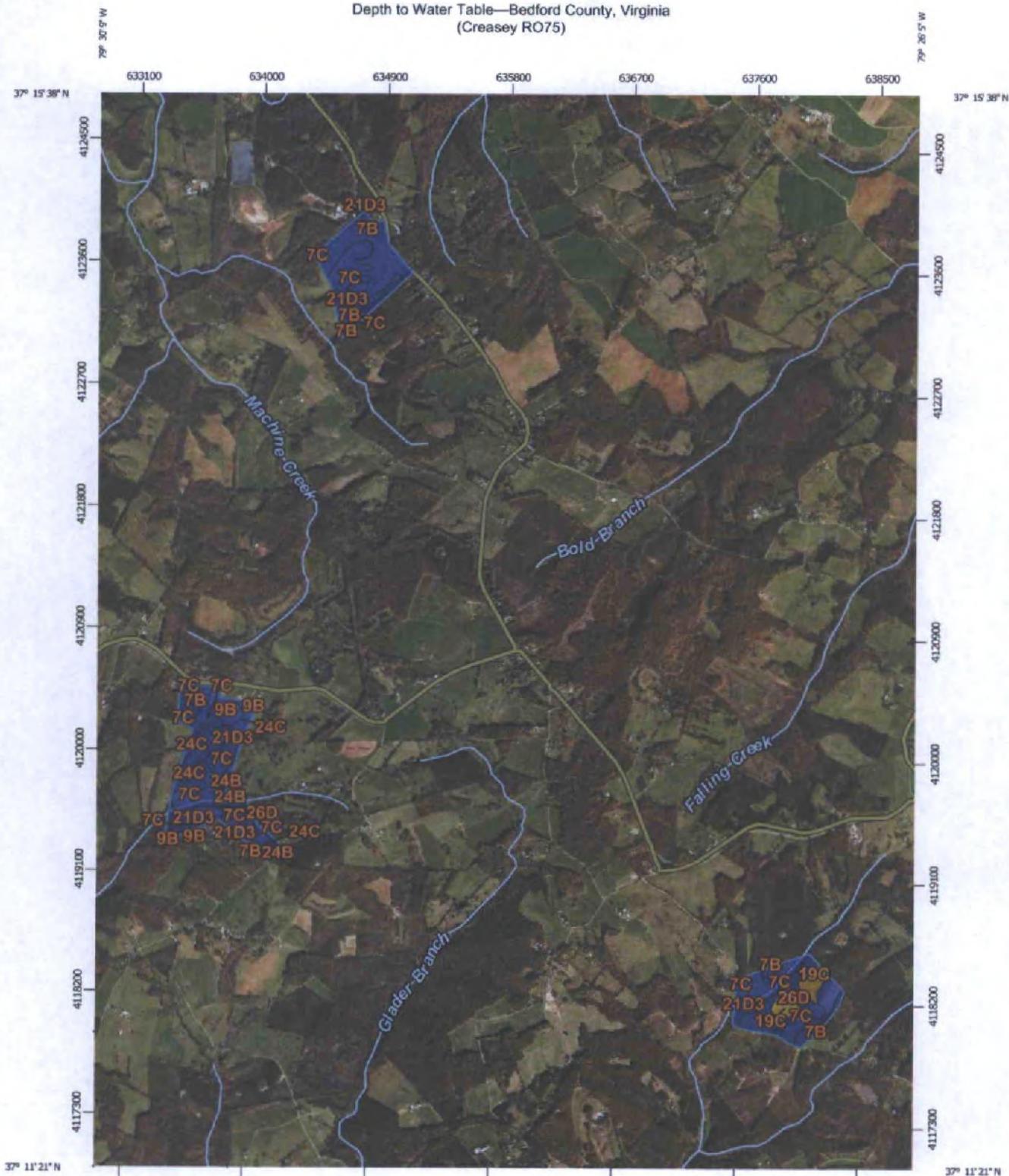
Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Depth to Water Table—Bedford County, Virginia
(Creasey RO75)



Map Scale: 1:38,600 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84



Depth to Water Table—Bedford County, Virginia
(Creasey RO75)

MAP LEGEND

Area of Interest (AOI)	 Area of Interest (AOI)	 Not rated or not available
Soils		Water Features
Soil Rating Polygons		 Streams and Canals
 0 - 25		Transportation
 25 - 50		 Rails
 50 - 100		 Interstate Highways
 100 - 150		 US Routes
 150 - 200		 Major Roads
 > 200		 Local Roads
 Not rated or not available		Background
		 Aerial Photography
Soil Rating Lines		
 0 - 25		
 25 - 50		
 50 - 100		
 100 - 150		
 150 - 200		
 > 200		
 Not rated or not available		
Soil Rating Points		
 0 - 25		
 25 - 50		
 50 - 100		
 100 - 150		
 150 - 200		
 > 200		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bedford County, Virginia
Survey Area Data: Version 11, Dec 11, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 8, 2010—Mar 17, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Water Table

Depth to Water Table— Summary by Map Unit — Bedford County, Virginia (VA019)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
7B	Cecil fine sandy loam, 2 to 7 percent slopes	>200	85.5	27.6%
7C	Cecil fine sandy loam, 7 to 15 percent slopes	>200	102.9	33.2%
9B	Cullen loam, 2 to 7 percent slopes	>200	12.4	4.0%
19C	Iredell fine sandy loam, 7 to 15 percent slopes	30	14.4	4.7%
21D3	Madison sandy clay loam, 15 to 25 percent slopes, severely eroded	>200	34.8	11.2%
24B	Mecklenburg loam, 2 to 7 percent slopes	>200	1.8	0.6%
24C	Mecklenburg loam, 7 to 15 percent slopes	>200	35.5	11.5%
26D	Poindexter fine sandy loam, 15 to 25 percent slopes	>200	22.5	7.3%
Totals for Area of Interest			309.9	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

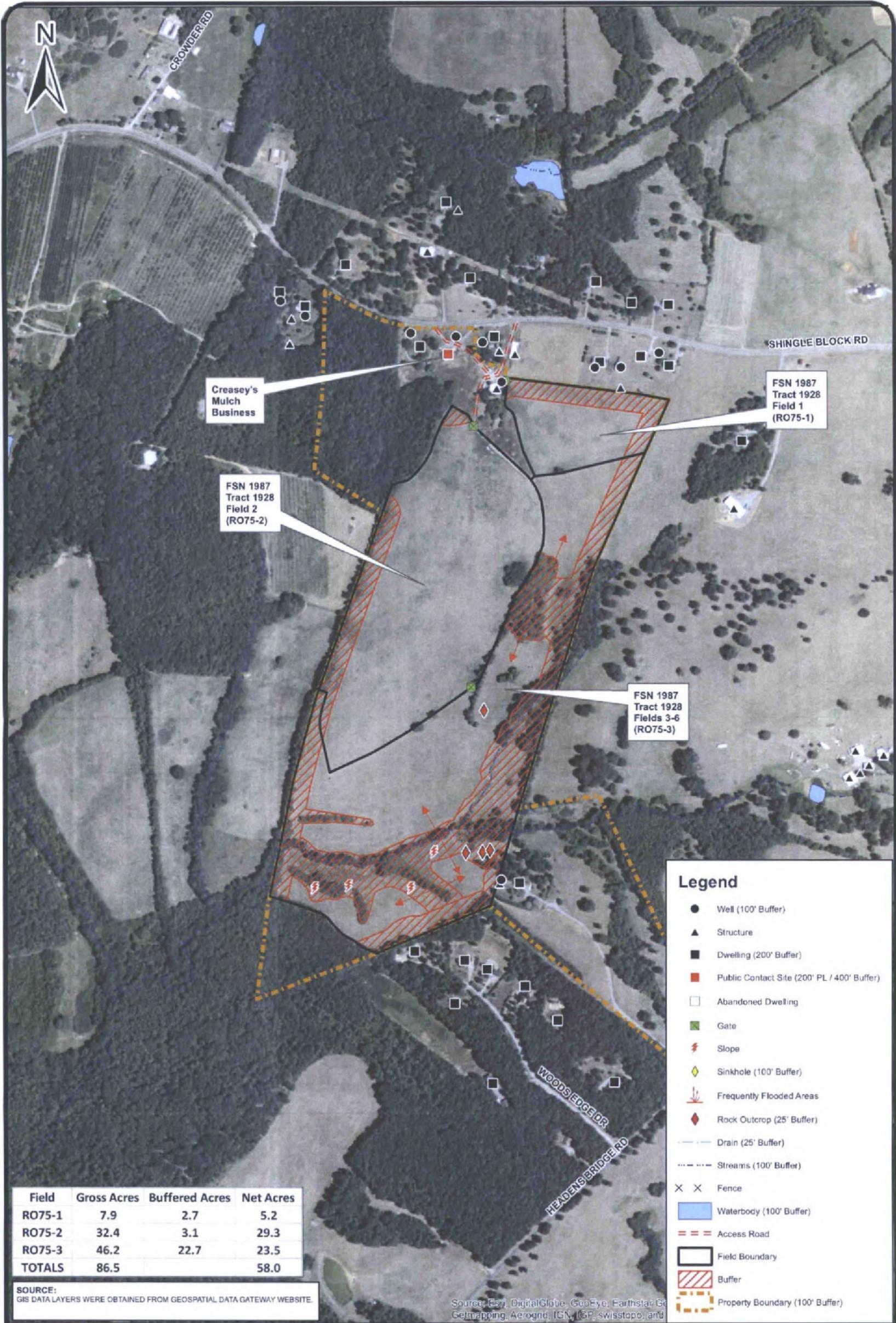
Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December



Creasey's Mulch Business

FSN 1987 Tract 1928 Field 2 (RO75-2)

FSN 1987 Tract 1928 Field 1 (RO75-1)

FSN 1987 Tract 1928 Fields 3-6 (RO75-3)

- Legend**
- Well (100' Buffer)
 - ▲ Structure
 - Dwelling (200' Buffer)
 - Public Contact Site (200' PL / 400' Buffer)
 - Abandoned Dwelling
 - Gate
 - ⚡ Slope
 - ◆ Sinkhole (100' Buffer)
 - ⬇ Frequently Flooded Areas
 - ◆ Rock Outcrop (25' Buffer)
 - Drain (25' Buffer)
 - Streams (100' Buffer)
 - × × Fence
 - Waterbody (100' Buffer)
 - == Access Road
 - ▭ Field Boundary
 - ▨ Buffer
 - Property Boundary (100' Buffer)

Field	Gross Acres	Buffered Acres	Net Acres
RO75-1	7.9	2.7	5.2
RO75-2	32.4	3.1	29.3
RO75-3	46.2	22.7	23.5
TOTALS	86.5		58.0

SOURCE: GIS DATA LAYERS WERE OBTAINED FROM GEOSPATIAL DATA GATEWAY WEBSITE.

Source: Esri, DigitalGlobe, GeoEye, Earthstar, GeoMapping, Aerogrid, IGN, IGP, swisstopo, and

SCALE:	1" = 500'
DATE:	01-29-16
DRAWN BY:	MEM
PROJECT NO:	15-18 Ph: 01



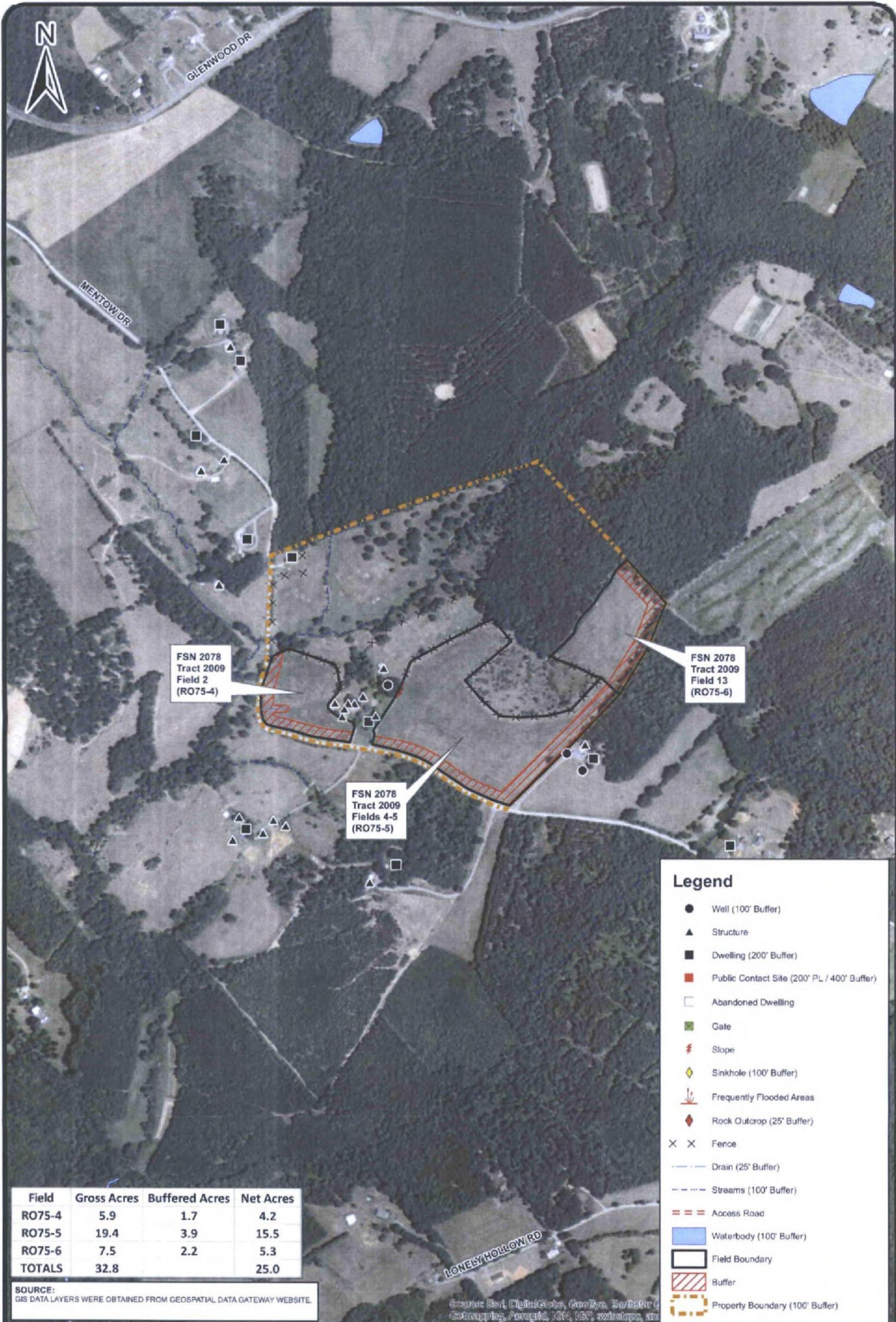
BIO-NOMIC SERVICES, INC.

**BUFFER MAP - WILLIAM "BILL" CREASEY
FSN 1987 TRACT 1928**

CITY OF ROANOKE
LAND APPLICATION PROGRAM
BEDFORD COUNTY, VIRGINIA

FIGURE NO.
6

C:\arcgis\2009\1568-09-059 Bio-nomic\William Creasey\Maps\Buffer Fig 6.mxd



SOURCE:
GIS DATA LAYERS WERE OBTAINED FROM GEOSPATIAL DATA GATEWAY WEBSITE.

Source: Esri, DigitalGlobe, GeoEye, Earthstar (Google Earth), IGN, IGF, swisstopo, and

SCALE: 1" = 590'
DATE: 01-29-16
DRAWN BY: MEM
PROJECT NO: 15-18 Ph: 01



BIO-NOMIC SERVICES, INC.

**BUFFER MAP - WILLIAM "BILL" CREASEY
FSN 2078 TRACT 2009**

CITY OF ROANOKE
LAND APPLICATION PROGRAM
BEDFORD COUNTY, VIRGINIA

FIGURE NO.

7

C:\work\2009\1588-09-055 Bio-nomics\William Creasey\Mapa\Buffer Fig 7.mxd



1 inch = 624 feet

Farm: 1987
Tract: 1928



Bedford County, VA

Wetland Determination Map File #
 Shaded Area
 Wetland Boundary
 Shaded Area
 Wetland Boundary

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.

August 11, 2015



1 inch = 384 feet

Farm: 2078
Tract: 2009

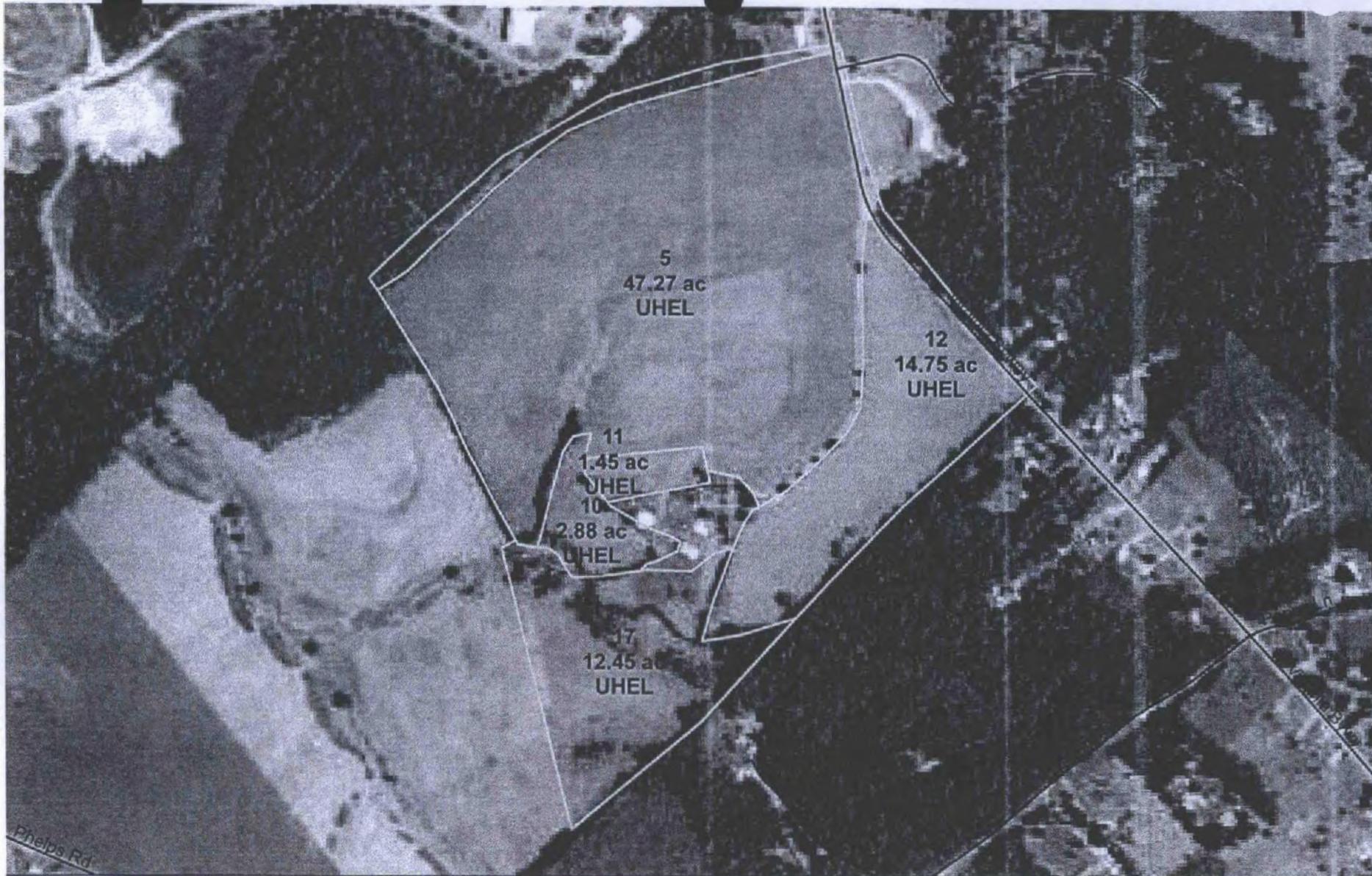


Bedford County, VA

- Wetland
- Wetland
- Wetland

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.

September 02, 2015



Phelps Rd



1 inch = 473 feet

Farm: 5082
Tract: 7809



Bedford County, VA

- Wetland
- Wetland
- Wetland

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.

September 02, 2015

Report Number: 16-098-0533

Account Number: 45671



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Main 804-743-9401 Fax 804-271-6446

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Joel Coert
516 ROUNDTREE RD
CHARLOTTE NC 28217

"Every acre...Every year."™

Grower: CREASEY

Submitted By: DON GREENE
Farm ID: RO 75

SOIL ANALYSIS REPORT

Analytical Method(s): Lime Index Mehlich 3 Loss On Ignition Water pH

Date Received: 04/07/2016

Date Of Analysis: 04/08/2016

Date Of Report: 04/08/2016

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
75-1	06902	4.2 M	MIN	117	173 VH NC = 144			97 L NC = 50	94 L	2190 VH		7.5		0.0	12.0
75-2	06903	3.2 M	MIN	99	62 H NC = 52			29 VL NC = 15	65 VL	1977 VH		7.5		0.0	10.5
75-3	06904	4.0 M	MIN	112	87 H NC = 72			313 VH NC = 160	75 VL	2242 VH		7.4		0.0	12.6
75-4	06905	4.9 M	MIN	127	174 VH NC = 145			31 VL NC = 16	85 VL	2736 VH		7.4		0.0	14.5

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts	Chloride	Aluminum
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate	Cl ppm Rate	Al ppm
75-1	2.1	6.5	91.3		0.0										
75-2	0.7	5.2	94.1		0.0										
75-3	6.4	5.0	89.0		0.0										
75-4	0.5	4.9	94.3		0.0										

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: *Paucic McGeary*

Paucic McGeary

Report Number: 16-098-0541

Account Number: 45671



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516 ROUNDTREE RD
CHARLOTTE NC 28217

"Every acre...Every year."™

Grower: CREASEY

Submitted By: DON GREENE
Farm ID: RO 75

SOIL ANALYSIS REPORT

Analytical Method(s): Lime Index Mehlich 3 Loss On Ignition Water pH

Date Received: 04/07/2016

Date Of Analysis: 04/08/2016

Date Of Report: 04/08/2016

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
75-5	06911	4.0 M	MIN	116	38 M NC = 32			25 VL NC = 13	68 VL	1766 VH		7.3		0.0	9.5
75-6	06912	2.7 M	MIN	96	8 VL NC = 7			89 L NC = 46	237 VH	696 M		7.1		0.0	5.7
75-7	06913	4.1 M	MIN	124	9 VL NC = 7			58 L NC = 30	163 H	488 L		5.4	6.77	1.6	5.5
75-8	06914	2.7 M	MIN	94	7 VL NC = 6			46 VL NC = 24	117 M	797 M		5.5	6.75	1.8	6.9
75-9	06915	2.3 L	MIN	88	9 VL NC = 7			31 VL NC = 16	53 L	600 M		5.2	6.75	1.8	5.3

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts	Chloride	Aluminum
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate	Cl ppm Rate	Al ppm
75-5	0.7	6.0	92.9		0.0										
75-6	4.0	34.6	61.1		0.0										
75-7	2.7	24.7	44.4		29.1										
75-8	1.7	14.1	57.8		26.1										
75-9	1.5	8.3	56.6		34.0										

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: *Paucic McGeary*

Paucic McGeary

Report Number: 16-098-0541

Account Number: 45671



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Grower: CREASEY

Submitted By: DON GREENE
 Farm ID: RO 75

SOIL ANALYSIS REPORT

Analytical Method(s): Lime Index Mehlich 3 Loss On Ignition Water pH

Date Received: 04/07/2016

Date Of Analysis: 04/08/2016

Date Of Report: 04/08/2016

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
75-10	06916	2.6 M		96	6 VL NC = 5			139 VH NC = 71	85 H	316 L		5.2	6.79	1.4	4.0

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts	Chloride	Aluminum
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate	Cl ppm Rate	Al ppm
75-10	8.9	17.7	39.5		35.0										

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: *Paucic McGroary*

Paucic McGroary