

LAND APPLICATION OF BIOSOLIDS
SHAWN WOODFOLK

MA10 (FIELDS 1 – 13)
MADISON COUNTY, VIRGINIA
AUGUST 2012



September 11, 2013

Mr. Ed Stuart
Dept of Environmental Quality
Northern Virginia Regional Office
13901 Crown Court
Woodbridge, VA 22193

Dear Mr. Stuart:

Transmitted herein for your consideration is land application site for Shawn Woodfolk (designated as MA10, fields 1 - 13), located in Madison County, Virginia. This submission contains strictly site specific information. Please refer to the operations and maintenance manual submitted under separate cover for all non-site specific information.

Do not hesitate to contact me at (804) 443-2170 should you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink that reads "Kelly M. Love". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Kelly M. Love
Technical Services Director

KML/cmw



FIELD SUMMARY SHEET

Shawn Woodfolk

MA10

SYNAGRO FIELD #	GROSS ACRES	NET ACRES	FSA TRACT #	FSA FIELD #	TOPO QUAD	OWNER
10-01	27.0	23.5	908	1	Rochelle	Edward Berry
10-02	22.7	21.4	908	2	Rochelle	Thomas Henry Berry Et Als
10-03	9.4	9.4	908	3	Rochelle	Thomas Henry Berry Et Als
10-04	8.7	7.6	908	4	Rochelle	Thomas Henry Berry Et Als
10-05	14.2	12.2	908	5	Rochelle	Thomas Henry Berry Et Als
10-06	17.4	16.6	908	6	Rochelle	Thomas Henry Berry Et Als
10-07	27.3	24.0	908	7, 15	Rochelle	Thomas Henry Berry Et Als
10-07a	4.1	2.6	908	7, 15	Rochelle	Thomas Henry Berry Et Als
10-08	6.6	6.6	908	8	Rochelle	Thomas Henry Berry Et Als
10-09	14.3	14.3	908	9	Rochelle	Thomas Henry Berry Et Als
10-10	14.6	11.5	908	10	Rochelle	Thomas Henry Berry Et Als
10-11	9.1	9.1	908	11, 12, 13	Rochelle	Thomas Henry Berry Et Als
10-12	27.3	25.1	908	14	Rochelle	Thomas Henry Berry Et Als
10-13	121.1	93.2	565	1	Madison	Thomas Henry Berry Et Als
TOTALS:	323.8	277.1				

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

MA 10

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

A. This land application agreement is made on 09-11-2013 between Thomas Henry Berry Et Als referred to here as "Landowner", and Synagro, 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 Madison, 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>48-3</u>			
<u>47-6</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.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
X Yes <input type="checkbox"/> No			

PO Box 4

Thomas H Berry
 Landowner – Printed Name, Title


 Signature

Madison, VA 22727
 Mailing Address

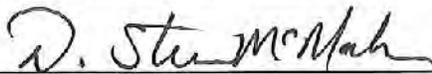
Permittee:

Synagro, 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)

D. Steve McMahon
 Permittee – Authorized Representative
 Printed Name


 Signature

10647 Tidewater Trail
Champlain, VA 22438
 Mailing Address

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

Permittee: Synagro County or City: Madison

Landowner: Thomas Henry Berry Et Als (Thomas H Berry)

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).

9-24-13

Landowner's Signature

Date

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

MA-10

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

A. This land application agreement is made on 09-11-2013 between Thomas Henry Berry Et Als referred to here as "Landowner", and Synagro, 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 Madison, 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>47-3A</u>			
<u>47-3B</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.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
X Yes <input type="checkbox"/> No			

8265 Ruth Road

Edward DeJ Berry
Landowner - Printed Name, Title

Edward DeJ Berry
Signature

Madison, VA 22727
Mailing Address

Permittee:

Synagro, 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)

D. Steve McMahon
Permittee - Authorized Representative
Printed Name

D. Steve McMahon
Signature

10647 Tidewater Trail
Champlain, VA 22438
Mailing Address

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

Permittee: Synagro County or City: Madison

Landowner: Thomas Henry Berry Et Als (Edward DeJ Berry)

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
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 - 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:
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 - c. Other animals shall be restricted from grazing for 30 days;
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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).

Edward DeJ Berry

Landowner's Signature

9/15/2013

Date

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

VA 10

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

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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
48-3			
47-6			

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:

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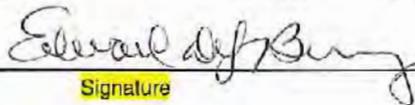
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<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
X Yes <input type="checkbox"/> No			

8265 Ruth Road

Edward DeJ Berry



Madison, VA 22727

Landowner – Printed Name, Title

Signature

Mailing Address

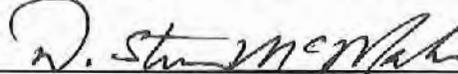
Permittee:

Synagro, 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](#).

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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)

D. Steve McMahon



10647 Tidewater Trail
Champlain, VA 22438

Permittee – Authorized Representative
Printed Name

Signature

Mailing Address

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

Permittee: Synagro County or City: MadisonLandowner: Thomas Henry Berry Et Als (Edward DeJ Berry)**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.

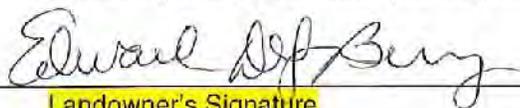
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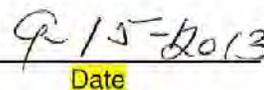
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 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified 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.
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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).



Landowner's Signature



Date

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

VA 4-10

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

A. This land application agreement is made on 09-11-2013 between Thomas Henry Berry Et Als referred to here as "Landowner", and Synagro, 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.

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Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
48-3			
47-6			

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.

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<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
X Yes <input type="checkbox"/> No			

Nancy B Coppedge		PO Box 44
Landowner - Printed Name, Title	Signature	Mailing Address
		Madison, VA 22727

Permittee:

Synagro, 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](#).

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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)

		10647 Tidewater Trail
Permittee - Authorized Representative	Signature	Mailing Address
Printed Name		Champlain, VA 22438

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

Permittee: Synagro County or City: Madison

Landowner: Thomas Henry Berry Et Als (Nancy B Coppedge)

Landowner Site Management Requirements:

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 - 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).

Nancy Coppedge
Landowner's Signature

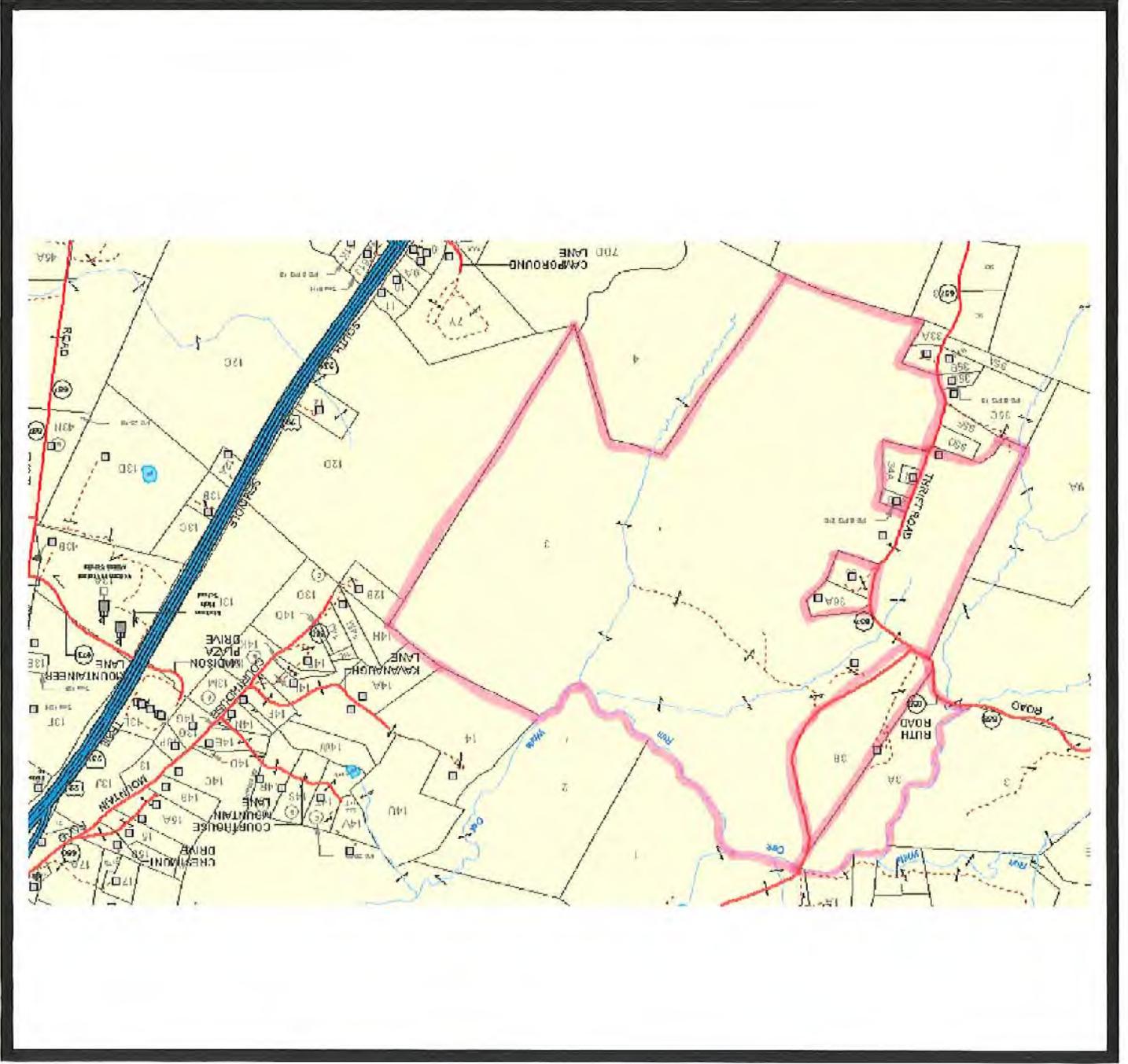
9/19/13
Date

Tax ID Landowner Identification Sheet

Landowner	Field #	Tax ID
Edward Berry	10-01	47 - 3A, 3B
Thomas Henry Berry Et Als	10-02	48 - 3
Thomas Henry Berry Et Als	10-03	48 - 3
Thomas Henry Berry Et Als	10-04	48 - 3
Thomas Henry Berry Et Als	10-05	48 - 3
Thomas Henry Berry Et Als	10-06	48 - 3
Thomas Henry Berry Et Als	10-07	48 - 3
Thomas Henry Berry Et Als	10-07a	48 - 3
Thomas Henry Berry Et Als	10-08	48 - 3
Thomas Henry Berry Et Als	10-09	48 - 3
Thomas Henry Berry Et Als	10-10	48 - 3
Thomas Henry Berry Et Als	10-11	48 - 3
Thomas Henry Berry Et Als	10-12	48 - 3
Thomas Henry Berry Et Als	10-13	47 - 6

Field #	Latitude (north)	Longitude (west)
10-01	38 ⁰ 22' 05.12"	78 ⁰ 17' 48.53"
10-02	38 ⁰ 22' 08.42"	78 ⁰ 17' 29.21"
10-03	38 ⁰ 22' 07.01"	78 ⁰ 17' 37.65"
10-04	38 ⁰ 22' 03.33"	78 ⁰ 17' 31.93"
10-05	38 ⁰ 21' 49.17"	78 ⁰ 17' 57.55"
10-06	38 ⁰ 21' 39.10"	78 ⁰ 18' 02.88"
10-07	38 ⁰ 21' 46.28"	78 ⁰ 17' 29.71"
10-07a	38 ⁰ 21' 43.05"	78 ⁰ 17' 26.41"
10-08	38 ⁰ 21' 33.97"	78 ⁰ 17' 31.23"
10-09	38 ⁰ 21' 21.10"	78 ⁰ 17' 46.43"
10-10	38 ⁰ 21' 46.60"	78 ⁰ 17' 12.55"
10-11	38 ⁰ 21' 53.09"	78 ⁰ 17' 26.68"
10-12	38 ⁰ 21' 56.81"	78 ⁰ 17' 22.36"
10-13	38 ⁰ 22' 18.15"	78 ⁰ 19' 18.47"

TAX MAP



Shawn Woodfolk
MA10
Fields 1 - 12



Farm Summary Report

Plan: New Plan Fall, 2010 - Winter, 2013

Farm Name: MA10
Location: Madison
Specialist: Bill Rogers
N-based Acres: 397.4
P-based Acres: 0.0

Tract Name: MA10
FSA Number: 0
Location: Madison

Field Name: 10-01
Total Acres: 27.00 Usable Acres: 25.30
FSA Number: 908/1
Tract: MA10
Location: Madison
Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Soils:

PERCENT	SYMBOL	SOIL SERIES
25	EuC3	Eubanks Lloyd
22	EyD2	Eubanks Lloyd
19	EyC	Eubanks Lloyd
13	EyB	Eubanks Lloyd
12	EyB2	Eubanks Lloyd
9	MvB	Meadowville

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Field Name: 10-02
Total Acres: 22.70 Usable Acres: 21.40
FSA Number: 908/2
Tract: MA10
Location: Madison
Slope Class: A Hydrologic Group: D

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Field Narrative:

On portions of the field containing Chewacla silt loam (Cm), the seasonal high water table may be within 18 inches of the soil surface during the months of November - April. During this period, soil borings must be conducted in these areas of the field within 7 days prior to biosolids application, during the above stated period.

Chewacla silt loam (Cm) is a soil type identified by USDA as being frequently flooded during the months of November - April. All biosolids applied to portions of the field containing this soil type must be incorporated within 48 hours of application, during the above stated period.

Congaree loam (Cw) is a soil type identified by USDA as being frequently flooded during the months of November - April. All biosolids applied to portions of the field containing this soil type must be incorporated within 48 hours of application, during the above stated period.

Soil Test Results:

DATE	PH	P	K	Lab
	[NO TEST]			

Soils:

PERCENT	SYMBOL	SOIL SERIES
66	Cm	Chewacla
34	Cw	Congaree

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Field Name: 10-03

Total Acres: 9.40 Usable Acres: 9.40

FSA Number: 908/3

Tract: MA10

Location: Madison

Slope Class: B Hydrologic Group: D

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Field Narrative:

On portions of the field containing Chewacla silt loam (Cm), the seasonal high water table may be within 18 inches of the soil surface during the months of November - April. During this period, soil borings must be conducted in these areas of the field within 7 days prior to biosolids application, during the above stated period.

Chewacla silt loam (Cm) is a soil type identified by USDA as being frequently flooded during the months of November - April. All biosolids applied to portions of the field containing this soil type must be incorporated within 48 hours of application, during the above stated period.

Congaree loam (Cw) is a soil type identified by USDA as being frequently flooded during the months of November period.

Soil Test Results:

DATE	PH	P	K	Lab
	[NO TEST]			

Soils:

PERCENT	SYMBOL	SOIL SERIES
35	SrC	Starr
26	Cm	Chewacla
21	MvB	Meadowville
18	Cw	Congaree

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Field Name: 10-04

Total Acres: 8.70 Usable Acres: 7.60

FSA Number: 908/4

Tract: MA10

Location: Madison

Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Field Narrative:

On portions of the field containing Chewacla silt loam (Cm), the seasonal high water table may be within 18 inches of the soil surface during the months of November - April. During this period, soil borings must be conducted in these areas of the field within 7 days prior to biosolids application, during the above stated period.

Chewacla silt loam (Cm) is a soil type identified by USDA as being frequently flooded during the months of November - April. All biosolids applied to portions of the field containing this soil type must be incorporated within 48 hours of application, during the above stated period.

Soils with percent slope in excess of 15%

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Field Name: 10-06

Total Acres: 17.40 Usable Acres: 16.60

FSA Number: 908/6

Tract: MA10

Location: Madison

Slope Class: B Hydrologic Group: D

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
	[NO TEST]			

Soils:

PERCENT	SYMBOL	SOIL SERIES
53	MvB	Meadowville
18	CkC	Brandywine Chester
17	HsB2	Hiwassee
7	BeC	Brandywine
5	CkB	Brandywine Chester

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Field Name: 10-07

Total Acres: 27.30 Usable Acres: 24.50

FSA Number: 908/7,15

Tract: MA10

Location: Madison

Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

Field Name: 10-08
Total Acres: 4.60 Usable Acres: 4.60
FSA Number: 908/8
Tract: MA10
Location: Madison
Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Soils:

PERCENT	SYMBOL	SOIL SERIES
100	LoC	Louisburg

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Field Name: 10-09
Total Acres: 13.70 Usable Acres: 13.60
FSA Number: 908/9
Tract: MA10
Location: Madison
Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Soils:

PERCENT	SYMBOL	SOIL SERIES
---------	--------	-------------

43	CkC	Brandywine Chester
22	LmC2	Lloyd
19	LmB2	Lloyd
8	MvB	Meadowville
8	HsB2	Hiwassee

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Field Name: 10-11

Total Acres: 9.10 Usable Acres: 9.10

FSA Number: 908/11,12,13

Tract: MA10

Location: Madison

Slope Class: B Hydrologic Group: D

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Field Narrative:

Congaree loam (Cw) is a soil type identified by USDA as being frequently flooded during the months of November - April. All biosolids applied to portions of the field containing this soil type must be incorporated within 48 hours of application, during the above stated period.

Soil Test Results:

DATE	PH	P	K	Lab
	[NO TEST]			

Soils:

PERCENT	SYMBOL	SOIL SERIES
53	CkB	Brandywine Chester
19	Cw	Congaree
15	AIB	Altavista
13	MvB	Meadowville

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Field Name: 10-12

Total Acres: 27.30 Usable Acres: 25.10

FSA Number: 908/14

Tract: MA10

Location: Madison

Slope Class: A Hydrologic Group: D

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Field Narrative:

On portions of the field containing Chewacla silt loam (Cm), the seasonal high water table may be within 18 inches of the soil surface during the months of November - April. During this period, soil borings must be conducted in these areas of the field within 7 days prior to biosolids application, during the above stated period.

Chewacla silt loam (Cm) is a soil type identified by USDA as being frequently flooded during the months of November - April. All biosolids applied to portions of the field containing this soil type must be incorporated within 48 hours of application, during the above stated period.

Congaree loam (Cw) is a soil type identified by USDA as being frequently flooded during the months of November - April. All biosolids applied to portions of the field containing this soil type must be incorporated within 48 hours of application, during the above stated period.

Soil Test Results:

DATE	PH	P	K	Lab
	[NO TEST]			

Soils:

PERCENT	SYMBOL	SOIL SERIES
56	Cm	Chewacla
21	MvB	Meadowville
16	Cw	Congaree
7	CkB	Brandywine Chester

Field Warnings:

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Field Name: 10-13

Total Acres: 121.10 Usable Acres: 108.10

FSA Number: 565/1

Tract: MA10

Location: Madison

Slope Class: C Hydrologic Group: D

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE	PH	P	K	Lab
[NO TEST]				

Soils:

PERCENT	SYMBOL	SOIL SERIES
39	EyC2	Eubanks Lloyd
29	MvB	Meadowville
14	EuC3	Eubanks Lloyd
12	BnD	Brandywine
6	BeF	Brandywine

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with percent slope in excess of 15%

Crop Rotation:

PLANTED	YIELD	CROP NAME
---------	-------	-----------

Environmentally Sensitive Areas

Field	Reason for Sensitive Area
10-01	None
10-02	High Water Table (Map Unit Cm – 66%) Flooded Soils (Map Units Cm, Cw – 100%)
10-03	High Water Table (Map Unit Cm – 26%) Flooded Soils (Map Units Cm, Cw – 44%)
10-04	High Water Table (Map Unit Cm – 26%) Flooded Soils (Map Unit Cm – 26%) High Leaching Potential (Map Unit BeD – 30%)
10-05	High Leaching Potential (Map Unit BeC – 14%)
10-06	High Leaching Potential (Map Unit BeC – 7%)
10-07	High Leaching Potential (Map Unit BeC – 22%)
10-07a	High Leaching Potential (Map Units BeD, LoF – 90%)
10-08	High Leaching Potential (Map Unit LoC – 100%)
10-09	None
10-10	Flooded Soils (Map Unit Cw – 5%) High Leaching Potential (Map Unit LoD – 39%)
10-11	Flooded Soils (Map Unit Cw – 19%)
10-12	High Water Table (Map Unit Cm – 56%) Flooded Soils (Map Units Cm, Cw – 72%)
10-13	High Leaching Potential (Map Units BeF, BnD – 18%)

Madison County Soils that are Environmentally Sensitive

Soil Map Unit	Series Name	Time of year		Environmental
		High Water	Flooded	
Ab	Albano	Nov – May		
Ac, Ad	Alluvial	Nov – May	Nov – May	
Au	Augusta	Dec – May		
BaB	Baile	Nov – April		
BdC, BdD	Brandywine			Leaching
BeC, BeD, BeF	Brandywine			Leaching
BnD, BnF	Brandywine			Leaching
BrC, BrE	Bremo			Leaching
Bu	Buncombe		Feb – June	Leaching
CbB	Calverton	Dec – May		
CcC, CcE	Catoctin			Shallow
Cm	Chewacla	Nov – April	Nov – April	
Cn	Codorus	Nov – April	Nov – April	
CoC	Colfax	Nov – June		
Cv, Cw	Congaree		Nov – April	
Eb	Elbert	Nov – May		
HaC, HaD, HaF	Hazel			Shallow
IrB	Iredell	Dec – April		
LeD	Lewisberry			Leaching
LoC, LoD, LoF	Louisburg			Leaching
MoC	Manor			Leaching
Rh	Riverwash	Jan – Dec	Oct – July	
Rk	Roanoke	Nov – May		
TuB, TuC, TuD, TuE	Tusquitee			Leaching
WaC, WaE	Watt			Shallow
We	Wehadkee	Nov – May	Nov – May	
WmB	Worsham	Nov – April		

MAP LEGEND

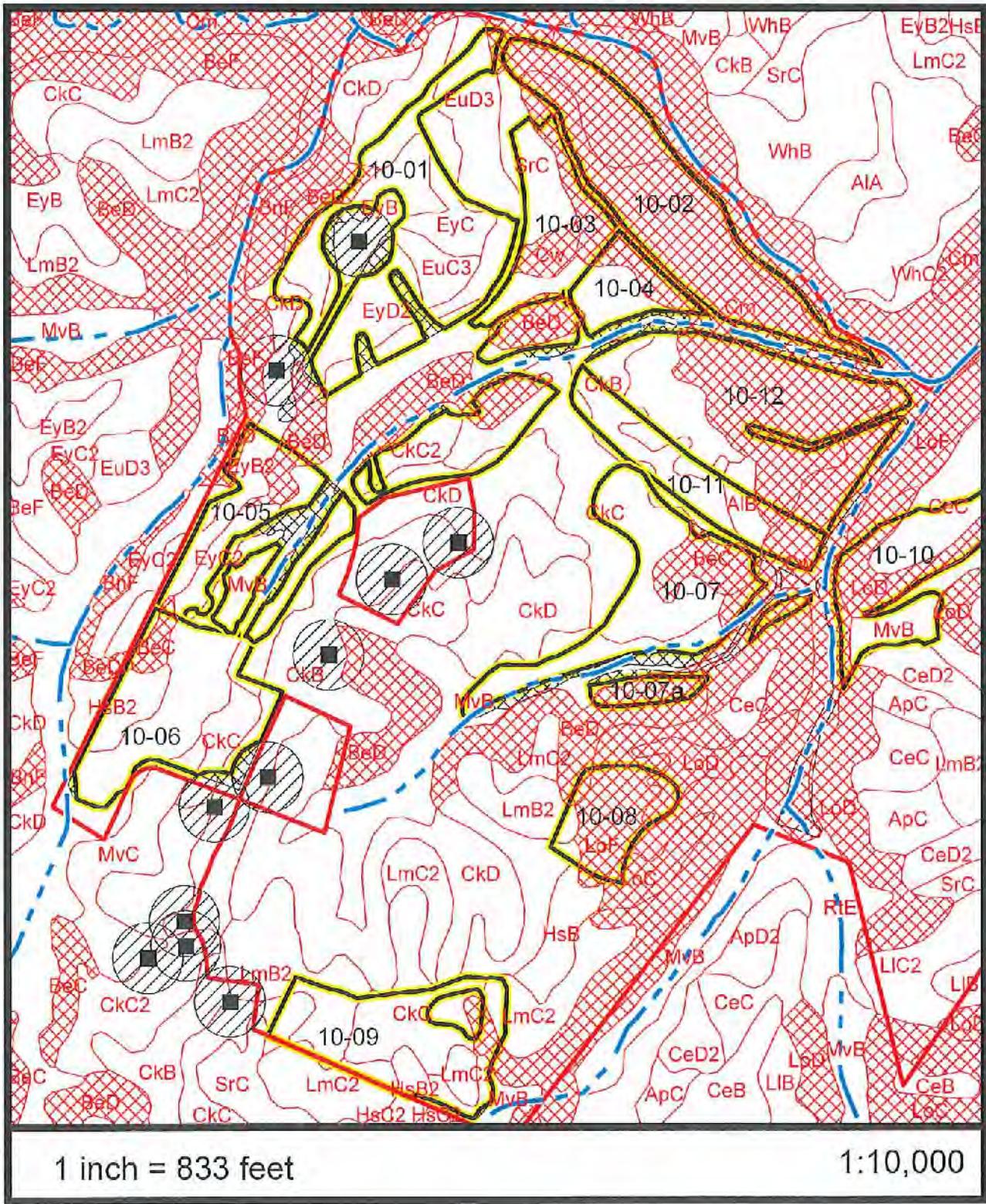
-  House/Dwelling with a well
-  Rock Outcrop
-  Well
-  Lake/Pond
-  Slope which exceeds 15%
-  Intermittent Stream
-  Stream/River
-  Agricultural/Drainage Ditch
-  Field boundary
-  Property Line – (Standard 100' Buffer, unless waiver issued)

Revised: Jan. 13, '14



SYNAGRO

Shawn Woolfolk
MA 10
Fields 1-12



SOIL MAP

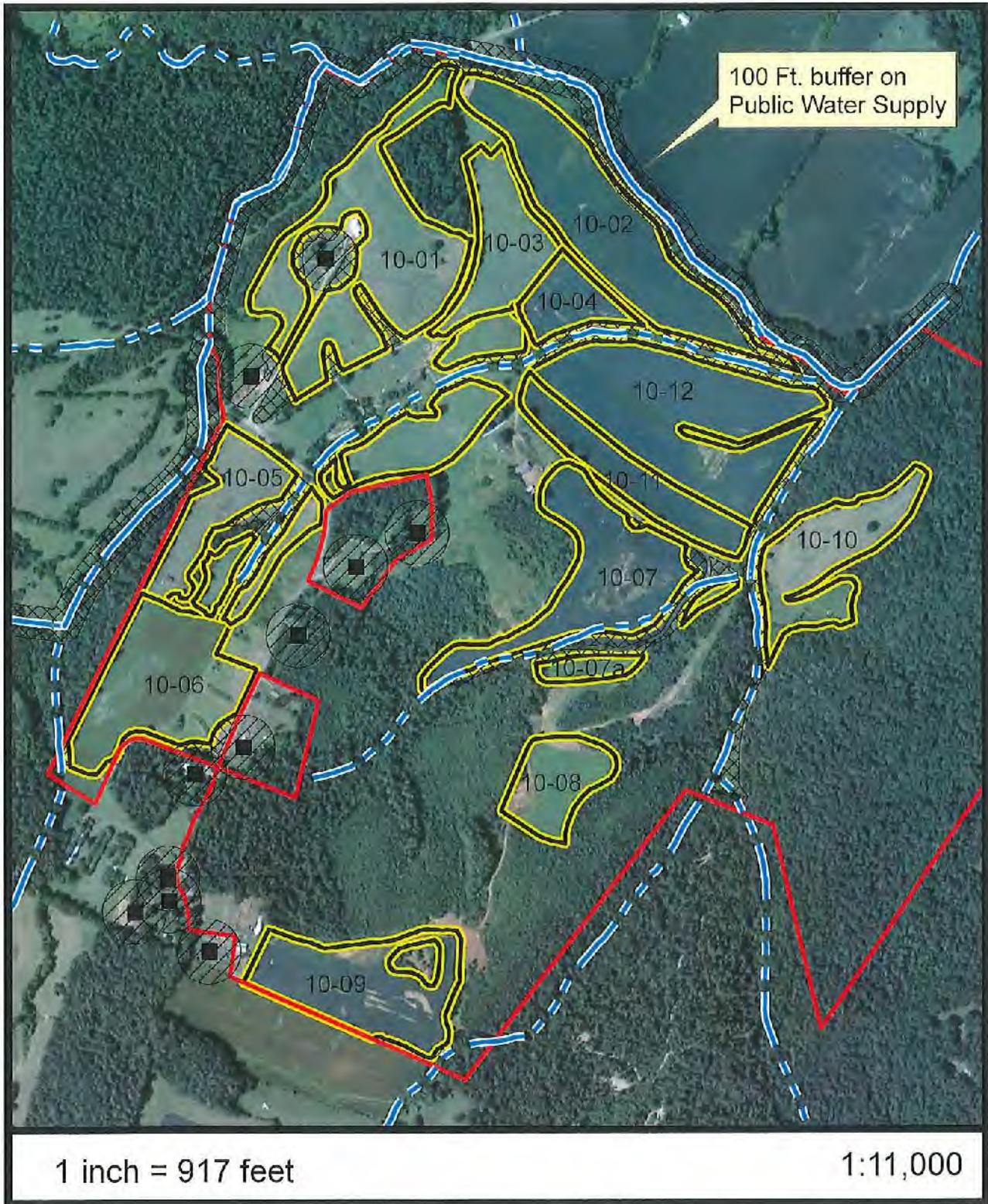
REVISED 3-5-2014

 Environmentally Sensitive Areas



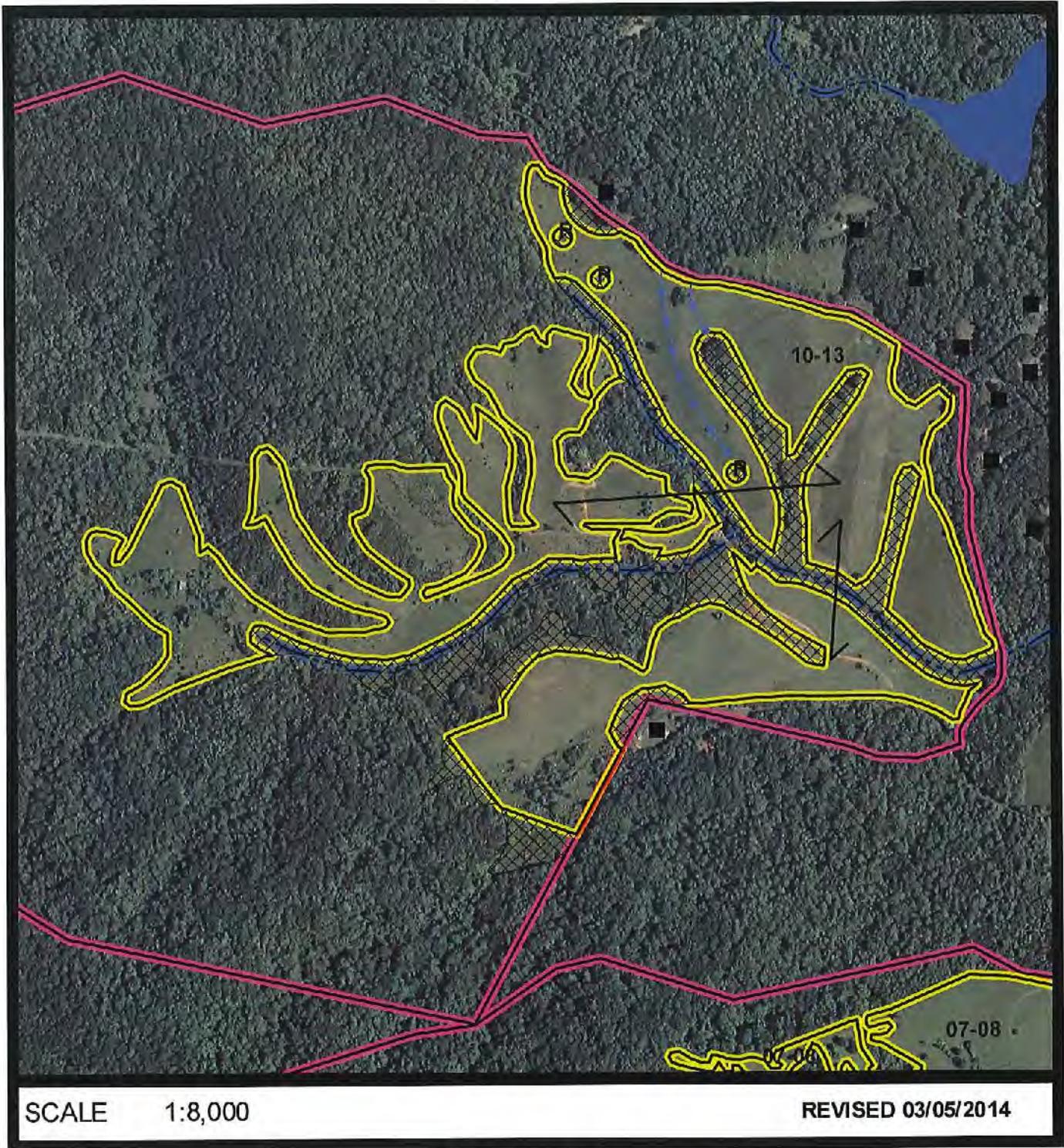
SYNAGRO

Shawn Woolfolk
MA 10
Fields 1 - 12



AERIAL MAP

REVISED 6-6-2016



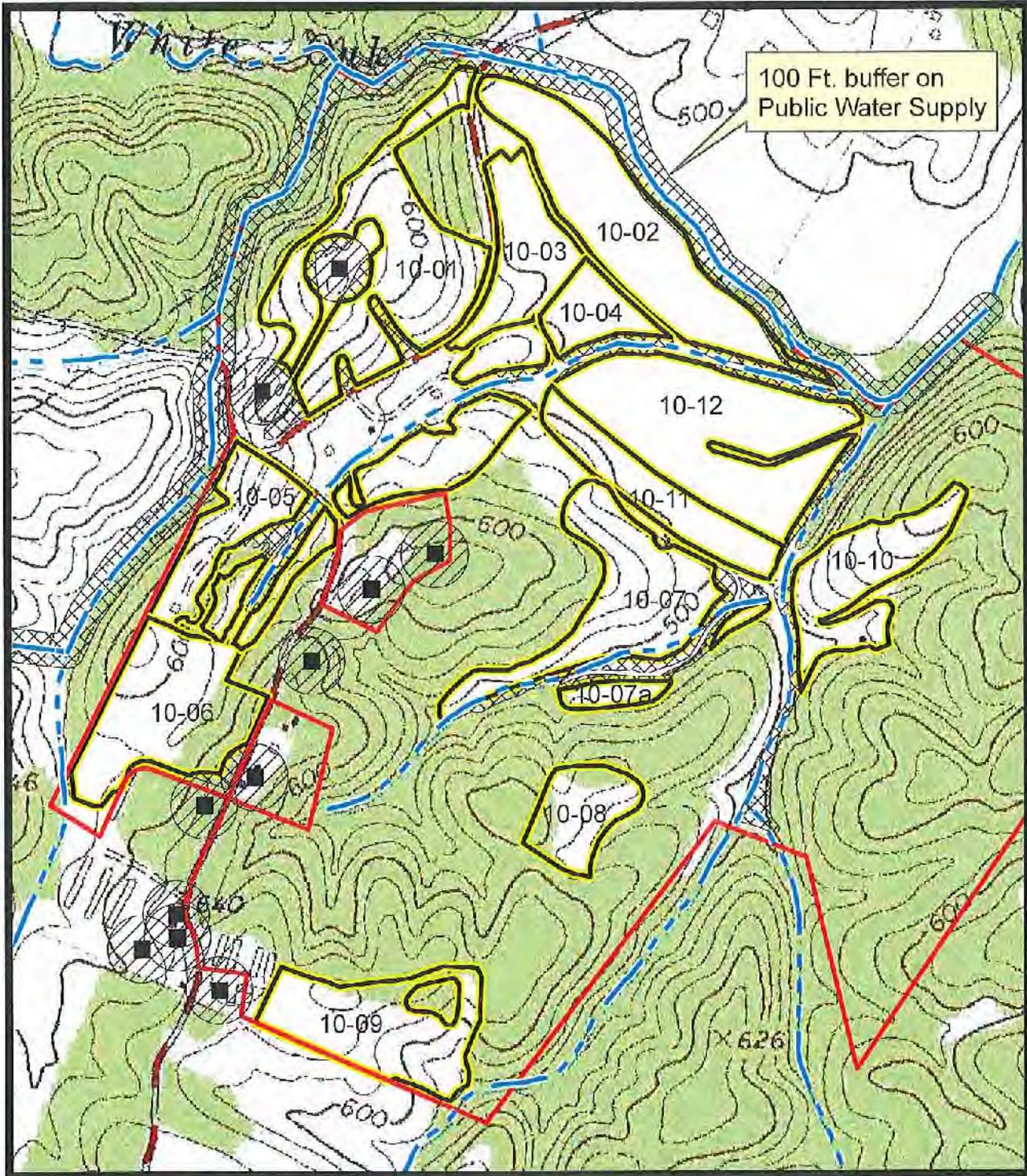
AERIAL MAP





SYNAGRO

Shawn Woolfolk
MA 10
Fields 1 - 12



1 inch = 917 feet

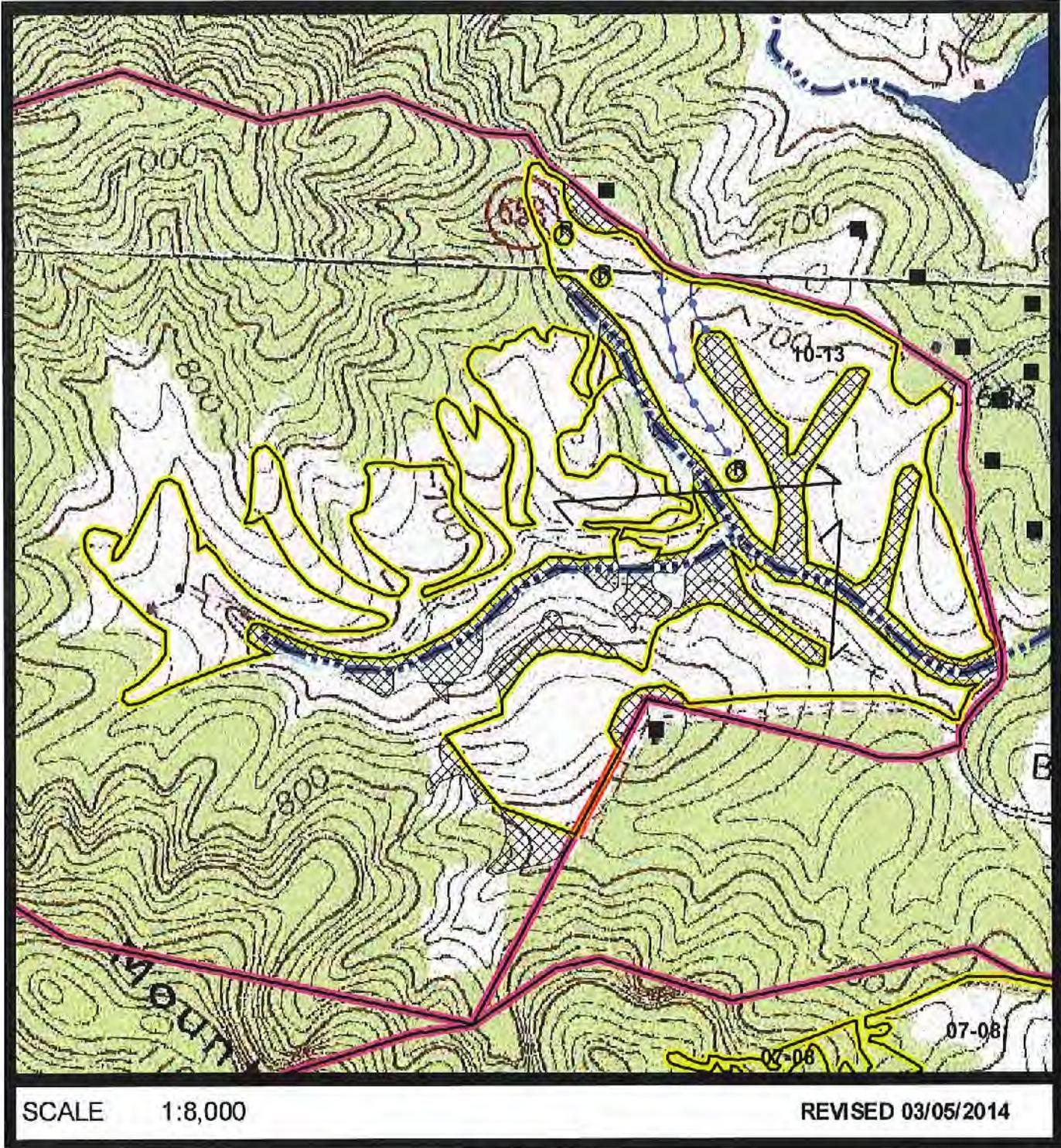
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FIELD	ACRES	FIELD	ACRES
10-01	27	10-06	17.4
10-02	22.7	10-07	27.3
10-03	9.4	10-07A	4.1
10-04	8.7	10-08	6.6

TOPO MAP

REVISED 6-6-2016

FIELD	ACRES
10-10	14.6
10-11	9.1
10-12	27.3



TOPO MAP

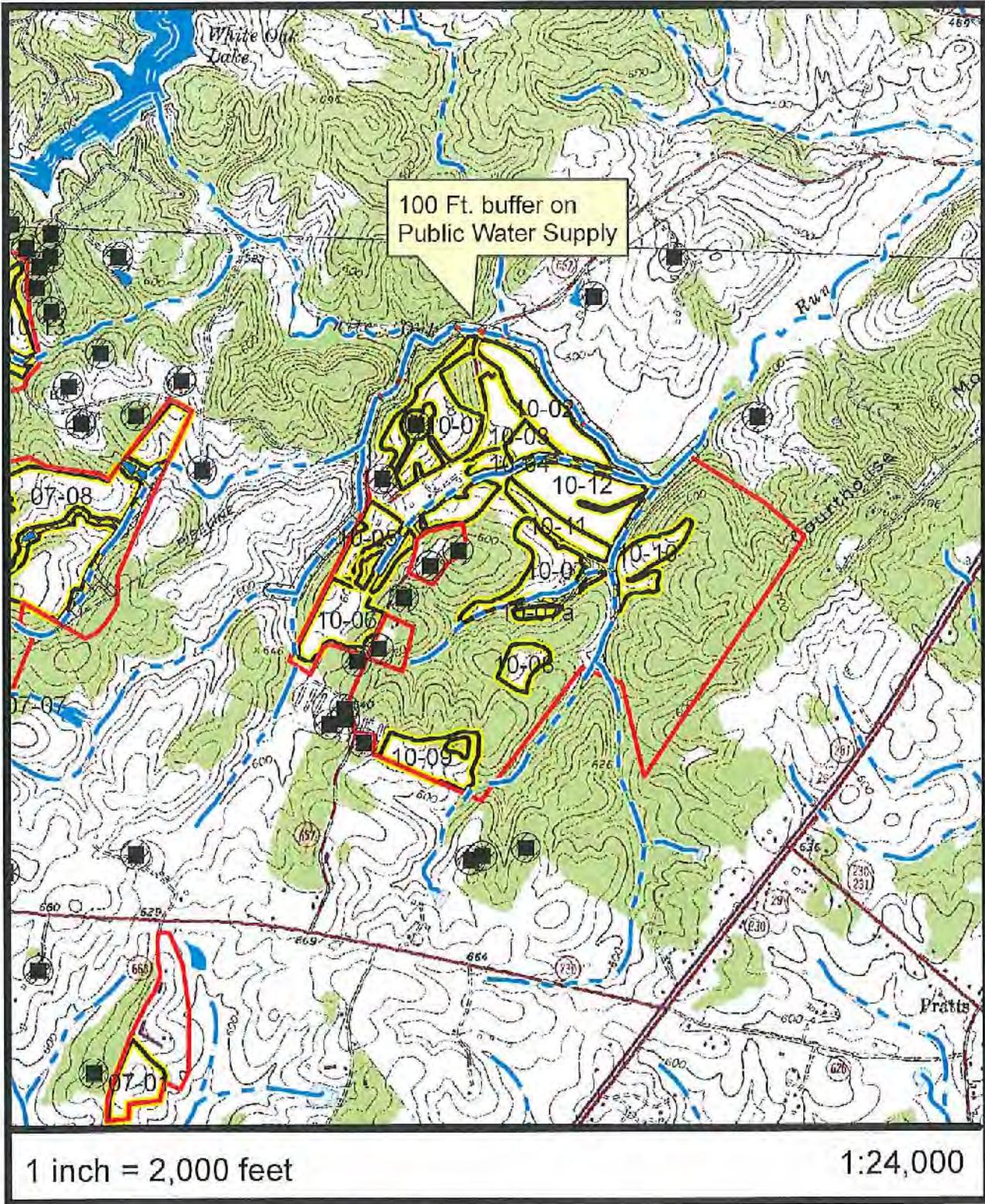
FIELD	ACRES
10-13	121.1





SYNAGRO

Shawn Woolfolk
MA 10
Fields 1 - 12



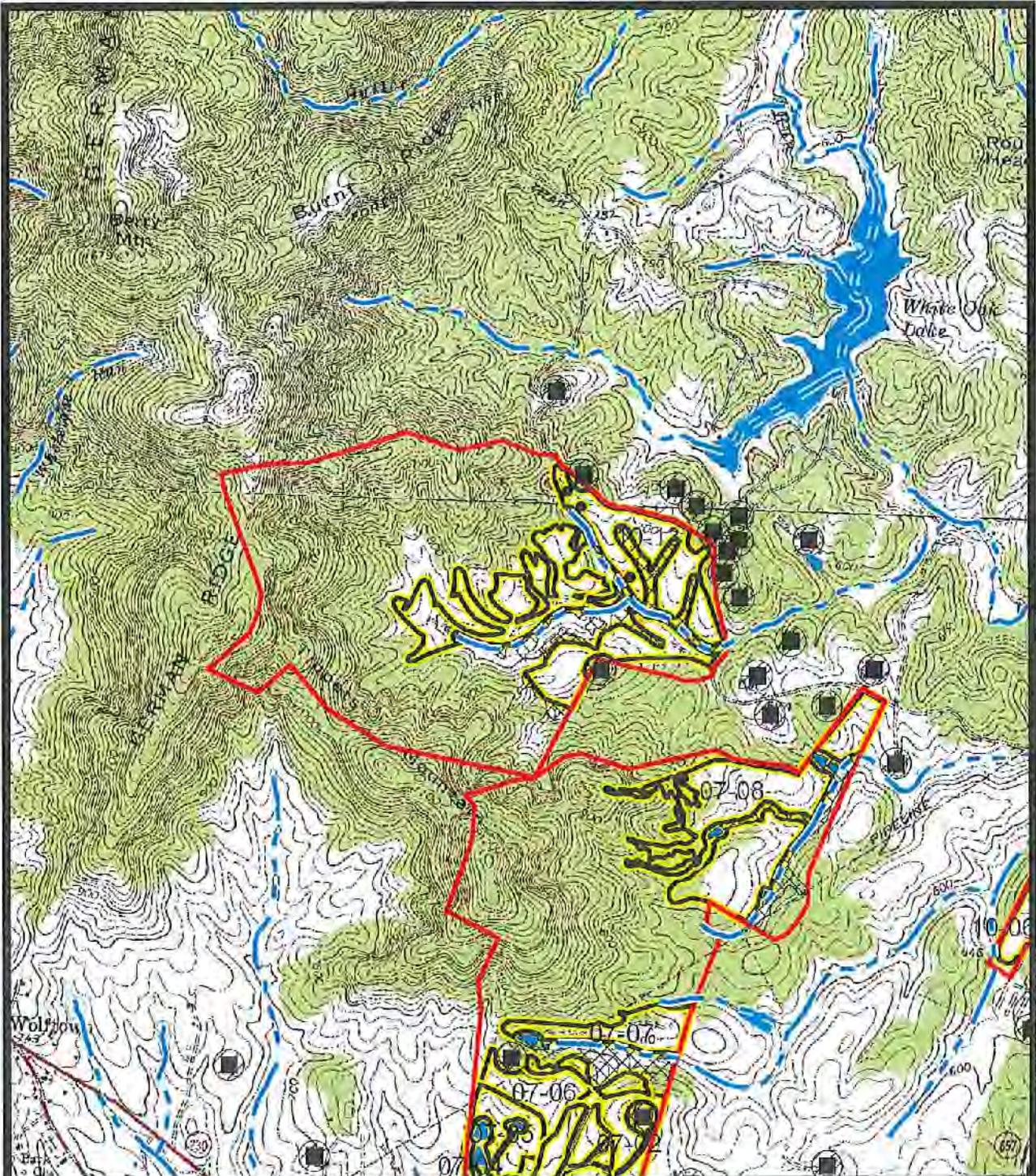
AERIAL MAP

REVISED 6-6-2016



SYNAGRO

Shawn Woolfolk
MA 10
Field 13

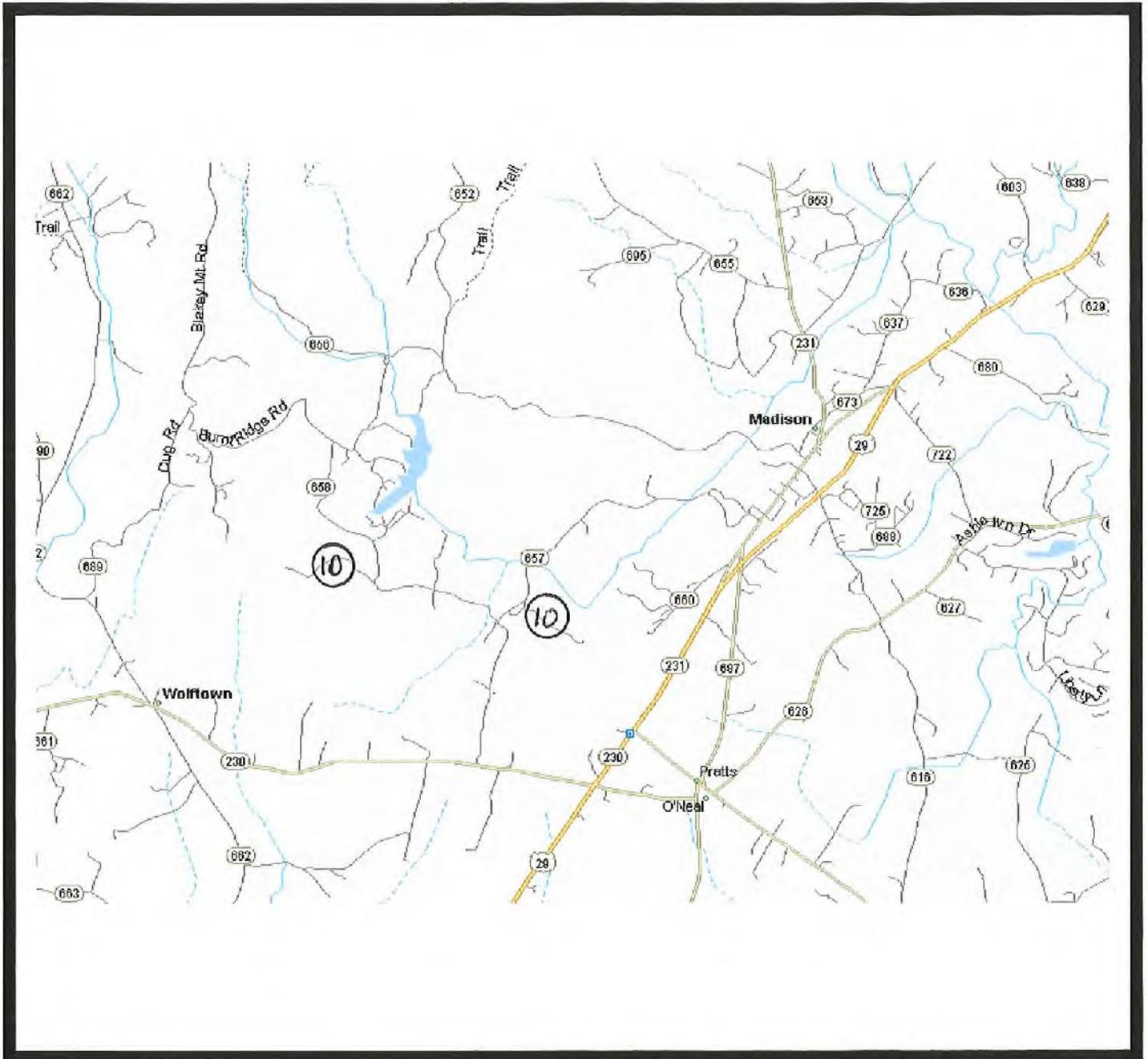


1 inch = 2,000 feet

1:24,000

TOPO MAP

REVISED 3-5-2014



LOCATION MAP

