LAND APPLICATION OF BIOSOLIDS
GREEN SPRINGS CATTLE AND GRAIN

LO18 (FIELDS 01 – 17)
LOUISA COUNTY, VIRGINIA
JULY 2011

VA DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN
MAY 15 2014
REGIONAL OFFICE
WOODBRIDGE, VA

SYNAGRO

June 4, 2012

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 Green Springs Cattle and Grain (designated as LO 18, fields 1-17), located in Louisa 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,

Kelly M. Love
Technical Services Director

KML/cmw

10647 Tidewater Trail, Champlain, VA 22438 • Phone (804) 443-2170 • Fax: (804) 223-2214

SYNAGRO

FIELD SUMMARY SHEET

Green Springs Cattle and Grain LO18

SYNAGRO FIELD #	GROSS ACRES	NET ACRES	FSA TRACT #	FSA FIELD #	TOPO QUAD	OWNER
18-1	18.6	18.5				Boswells Tavern Oleary, David C Trustee
18-2	43.0	43.0				Boswells Tavern Oleary, David C Trustee
18-3	30.4	29.9				Boswells Tavern Oleary, David C Trustee
18-4	57.5	55.0				Boswells Tavern Oleary, David C Trustee
18-5	80.9	77.2				Boswells Tavern Oleary, David C Trustee
18-6	82.6	76.7				Boswells Tavern Oleary, David C Trustee
18-7	33.2	31.9				Boswells Tavern Oleary, David C Trustee
18-8	26.7	25.9				Boswells Tavern Oleary, David C Trustee
18-9	17.3	17.3				Boswells Tavern Oleary, David C Trustee
18-10	35.2	32.7				Boswells Tavern Oleary, David C Trustee
18-11	23.3	19.7				Boswells Tavern Oleary, David C Trustee
18-12	38.6	31.9				Boswells Tavern Oleary, David C Trustee
18-13	29.0	29.0				Boswells Tavern Oleary, David C Trustee
18-14	18.2	18.2				Boswells Tavern Oleary, David C Trustee
18-15	13.4	12.5				Boswells Tavern Oleary, David C Trustee
18-16	64.6	58.0				Boswells Tavern Oleary, David C Trustee
18-17	74.9	71.0				Boswells Tavern Oleary, David C Trustee
TOTALS:	687.4	648.4				

Appendix I

VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

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

A. This biosolids/industrial residuals land application agreement is made on 2/7/12 between David C. Oleary 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 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:
I am the registered owner of real property known as LO - 18, located in Louisa, Virginia, which includes the agricultural 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
36-23			
See Tax ID	sheet in site	Book	

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

Check one: ☑ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I 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.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

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

David C. O'Leary — Landowner – Printed Name
David C O'Leary — Signature
1815 E. Green Springs Rd, Louisa, VA 23093 — 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. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

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

Lee C Rosson — Permittee – Authorized Representative Printed Name
Signature
10647 Tidewater Trail, Champlain, VA 22438 — Mailing Address

VIRGINIA POLLUTION ABATEMENT APPLICATION
PART D-VI LAND APPLICATION AGREEMENT

Permittee: Synagro **Permit # or County:** Louisa

Landowner: David C. O'Leary ***Farm name or address:*** Green Springs Cattle and Grain

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, at least 30 days after land application at that site was 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 the permitting authority
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).
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 landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

David C O'Leary 2/7/12

Landowner's Signature Date

Tax ID Landowner Identification Sheet

Landowner	Field #	Tax ID
OLEARY, DAVID C TRUSTEE	18-01	36 - 23
OLEARY, DAVID C TRUSTEE	18-02	36 - 23
OLEARY, DAVID C TRUSTEE	18-03	36 - 23
OLEARY, DAVID C TRUSTEE	18-04	36 - 23
OLEARY, DAVID C TRUSTEE	18-05	36 - 23
OLEARY, DAVID C TRUSTEE	18-06	36 - 23
OLEARY, DAVID C TRUSTEE	18-07	36 - 23
OLEARY, DAVID C TRUSTEE	18-08	36 - 23
OLEARY, DAVID C TRUSTEE	18-09	36 - 23
OLEARY, DAVID C TRUSTEE	18-10	36 - 23
OLEARY, DAVID C TRUSTEE	18-11	36 - 23
OLEARY, DAVID C TRUSTEE	18-12	36 - 23
OLEARY, DAVID C TRUSTEE	18-13	36 - 23
OLEARY, DAVID C TRUSTEE	18-14	36 - 23
OLEARY, DAVID C TRUSTEE	18-15	36 - 23
OLEARY, DAVID C TRUSTEE	18-16	36 - 23
OLEARY, DAVID C TRUSTEE	18-17	36 - 23

Field #	Latitude (north)	Longitude (west)
18-1	38° 01' 21.38"	78° 11' 22.05"
18-2	38° 01' 22.04"	78° 11' 11.39"
18-3	38° 01' 22.57"	78° 10' 59.11"
18-4	38° 01' 22.50"	78° 10' 46.51"
18-5	38° 01' 24.04"	78° 10' 27.92"
18-6	38° 01' 07.72"	78° 10' 20.94"
18-7	38° 01' 07.76"	78° 10' 08.33"
18-08	38° 01' 10.16"	78° 10' 01.51"
18-09	38° 01' 16.63"	78° 09' 49.06"
18-10	38° 01' 06.37"	78° 09' 44.25"
18-11	38° 01' 09.58"	78° 10' 39.39"
18-12	38° 00' 59.04"	78° 10' 45.50"
18-13	38° 01' 02.84"	78° 11' 20.25"
18-14	38° 01' 03.57"	78° 11' 09.65"
18-15	38° 01' 05.19"	78° 11' 01.57"
18-16	38° 00' 52.67"	78° 11' 10.51"
18-17	38° 00' 42.36"	78° 10' 24.43"

Haul Route:

The location maps in conjunction with the above latitude and longitude coordinates are a route planning tool meant to be a guide to indicate suggested haul routes for various preferences; to include but not limited to all federal, state, and local granted STAA access routes.

Tax Map ID 36-5, 23

N

Scale: 1:36111.909643	Date: 05/04/2012	Printed By:

Louisa County assumes no liability for any errors, omissions, or inaccuracies in the information provided regardless of the cause of such or for any decision made, action taken, or action not taken by the user in reliance upon any maps or data provided herein. Please consult official County plats and records for official information.

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
AbB	Abell fine sandy loam, 2 to 7 percent slopes	0.7	2.9%
IrA	Iredell loam, 0 to 2 percent slopes	3.2	14.4%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	2.3	10.2%
PxC	Poindexter loam, 7 to 15 percent slopes	1.2	5.5%
ZoB	Zion loam, 2 to 7 percent slopes	5.2	23.2%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	9.9	43.8%
Totals for Area of Interest		**22.5**	**100.0%**

ZoB2	44%
ZoB	23%
IrA	14%
MuB2	10%
PxC	6%
AbB	3%

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
AbB	Abell fine sandy loam, 2 to 7 percent slopes	0.5	1.2%
IrA	Iredell loam, 0 to 2 percent slopes	14.3	35.0%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	0.9	2.2%
PxC	Poindexter loam, 7 to 15 percent slopes	10.7	26.2%
PxD	Poindexter loam, 15 to 25 percent slopes	0.8	2.0%
ZoB	Zion loam, 2 to 7 percent slopes	4.0	9.8%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	9.7	23.7%
Totals for Area of Interest		**40.9**	**100.0%**

IrA 35%
PxC 26%
ZoB2 24%
ZoB 10%
MuB2 2%
PxD 2%
AbB 1%

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CO	Congaree-Chewacla complex	1.5	4.7%
IrA	Iredell loam, 0 to 2 percent slopes	11.4	34.6%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	0.7	2.2%
PxC	Poindexter loam, 7 to 15 percent slopes	6.0	18.2%
PxD	Poindexter loam, 15 to 25 percent slopes	1.2	3.6%
ZoB	Zion loam, 2 to 7 percent slopes	4.3	13.2%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	7.7	23.5%
Totals for Area of Interest		**32.8**	**100.0%**

IrA 36%
ZoB2 23%
PxC 18%
ZoB 13%
CO 5%
PxD 4%
MuB2 2%

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CO	Congaree-Chewacla complex	0.7	1.1%
Eb	Elbert silt loam	12.7	19.3%
IrA	Iredell loam, 0 to 2 percent slopes	17.3	26.2%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	2.3	3.5%
MuC2	Mecklenburg-Enon loams, 7 to 15 percent slopes, eroded	4.5	6.8%
PxC	Poindexter loam, 7 to 15 percent slopes	9.3	14.1%
ZoB	Zion loam, 2 to 7 percent slopes	9.0	13.6%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	10.3	15.5%
Totals for Area of Interest		**66.1**	**100.0%**

IrA 26%
Eb 19%
ZoB2 15%
PxC 14%
ZoB 14%
MuC2 7%
MuB2 4%
CO 1%

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Eb	Elbert silt loam	9.1	11.1%
IrA	Iredell loam, 0 to 2 percent slopes	19.0	23.3%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	11.3	13.8%
MuC2	Mecklenburg-Enon loams, 7 to 15 percent slopes, eroded	0.2	0.3%
ZoB	Zion loam, 2 to 7 percent slopes	1.5	1.8%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	39.2	48.0%
ZoC2	Zion loam, 7 to 15 percent slopes, eroded	1.4	1.7%
Totals for Area of Interest		**81.7**	**100.0%**

ZoB2 48%
IrA 23%
MuB2 14%
Eb 11%
ZoB 2%
ZoC2 2%

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
AbB	Abell fine sandy loam, 2 to 7 percent slopes	0.6	0.8%
CuB2	Cullen loam, 2 to 7 percent slopes, eroded	1.1	1.4%
CuC2	Cullen loam, 7 to 15 percent slopes, eroded	5.3	7.0%
CwC3	Cullen clay loam, 7 to 15 percent slopes, severely eroded	6.6	8.7%
Eb	Elbert silt loam	4.2	5.6%
IrB	Iredell loam, 2 to 7 percent slopes	9.6	12.6%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	10.2	13.4%
MuC2	Mecklenburg-Enon loams, 7 to 15 percent slopes, eroded	10.5	13.9%
MvC3	Mecklenburg-Enon clay loams, 7 to 15 percent slopes, severely eroded	0.7	0.9%
PxC	Poindexter loam, 7 to 15 percent slopes	8.6	11.3%
WH	Wehadkee-Chewacla complex	0.5	0.6%
ZoB	Zion loam, 2 to 7 percent slopes	6.5	8.6%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	10.7	14.1%
ZoC2	Zion loam, 7 to 15 percent slopes, eroded	0.8	1.0%
Totals for Area of Interest		**76.0**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
AbB	Abell fine sandy loam, 2 to 7 percent slopes	0.0	0.1%
AcB	Abell silt loam, 2 to 7 percent slopes	2.6	7.9%
CuB2	Cullen loam, 2 to 7 percent slopes, eroded	5.2	15.7%
CuC2	Cullen loam, 7 to 15 percent slopes, eroded	0.2	0.5%
IrB	Iredell loam, 2 to 7 percent slopes	0.5	1.5%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	17.5	52.8%
MuC2	Mecklenburg-Enon loams, 7 to 15 percent slopes, eroded	2.0	6.1%
ZoB	Zion loam, 2 to 7 percent slopes	1.8	5.6%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	3.2	9.7%
Totals for Area of Interest		**33.2**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
AcB	Abell silt loam, 2 to 7 percent slopes	2.2	7.9%
CuB2	Cullen loam, 2 to 7 percent slopes, eroded	6.8	23.8%
Iv	Iredell silt loam, silty subsoil variant	2.6	9.0%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	11.5	40.2%
MuC2	Mecklenburg-Enon loams, 7 to 15 percent slopes, eroded	5.4	18.8%
PxC	Poindexter loam, 7 to 15 percent slopes	0.1	0.3%
Totals for Area of Interest		**28.5**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
AeB	Abell loam, dark surface variant, 2 to 7 percent slopes	0.0	0.1%
CuB2	Cullen loam, 2 to 7 percent slopes, eroded	7.7	42.7%
CwC3	Cullen clay loam, 7 to 15 percent slopes, severely eroded	3.5	19.4%
Iv	Iredell silt loam, silty subsoil variant	0.9	4.8%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	3.6	20.2%
MuC2	Mecklenburg-Enon loams, 7 to 15 percent slopes, eroded	2.3	12.8%
Totals for Area of Interest		**17.9**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CO	Congaree-Chewacla complex	0.4	1.1%
CuB2	Cullen loam, 2 to 7 percent slopes, eroded	2.6	7.4%
CuC2	Cullen loam, 7 to 15 percent slopes, eroded	6.4	18.7%
CwC3	Cullen clay loam, 7 to 15 percent slopes, severely eroded	9.4	27.4%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	4.0	11.6%
MuC2	Mecklenburg-Enon loams, 7 to 15 percent slopes, eroded	2.9	8.3%
PxC	Poindexter loam, 7 to 15 percent slopes	7.6	22.2%
PxD	Poindexter loam, 15 to 25 percent slopes	1.1	3.1%
WH	Wehadkee-Chewacla complex	0.1	0.2%
Totals for Area of Interest		**34.3**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CO	Congaree-Chewacla complex	5.8	13.3%
Eb	Elbert silt loam	0.6	1.5%
IrB	Iredell loam, 2 to 7 percent slopes	3.5	8.1%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	2.8	6.5%
MuC2	Mecklenburg-Enon loams, 7 to 15 percent slopes, eroded	7.3	16.7%
MvC3	Mecklenburg-Enon clay loams, 7 to 15 percent slopes, severely eroded	0.0	0.0%
PxC	Poindexter loam, 7 to 15 percent slopes	11.6	26.6%
ZoB	Zion loam, 2 to 7 percent slopes	4.9	11.2%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	7.0	16.1%
Totals for Area of Interest		**43.6**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CO	Congaree-Chewacla complex	2.5	8.4%
CwB3	Cullen clay loam, 2 to 7 percent slopes, severely eroded	2.2	7.3%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	2.9	9.6%
MvC3	Mecklenburg-Enon clay loams, 7 to 15 percent slopes, severely eroded	12.7	41.8%
PxB	Poindexter loam, 2 to 7 percent slopes	1.9	6.4%
PxC	Poindexter loam, 7 to 15 percent slopes	3.1	10.1%
PxD	Poindexter loam, 15 to 25 percent slopes	3.9	12.8%
W	Water	0.1	0.3%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	1.0	3.3%
Totals for Area of Interest		**30.5**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CO	Congaree-Chewacla complex	0.3	1.1%
IrA	Iredell loam, 0 to 2 percent slopes	6.0	20.6%
IrB	Iredell loam, 2 to 7 percent slopes	4.8	16.5%
PxB	Poindexter loam, 2 to 7 percent slopes	0.0	0.0%
PxC	Poindexter loam, 7 to 15 percent slopes	10.5	35.9%
PxC3	Poindexter loam, 7 to 15 percent slopes, severely eroded	1.0	3.3%
PxD	Poindexter loam, 15 to 25 percent slopes	2.8	9.4%
ZeB2	Zion loam, 2 to 7 percent slopes, eroded	3.8	13.0%
Totals for Area of Interest		**29.3**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CO	Congaree-Chewacla complex	0.9	4.7%
IrA	Iredell loam, 0 to 2 percent slopes	3.6	18.4%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	1.1	5.6%
MvC3	Mecklenburg-Enon clay loams, 7 to 15 percent slopes, severely eroded	0.3	1.4%
PxB	Poindexter loam, 2 to 7 percent slopes	6.8	35.2%
PxC	Poindexter loam, 7 to 15 percent slopes	5.2	26.9%
PxD	Poindexter loam, 15 to 25 percent slopes	1.5	7.9%
Totals for Area of Interest		**19.3**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CO	Congaree-Chewacla complex	0.4	3.6%
IrA	Iredell loam, 0 to 2 percent slopes	0.5	4.2%
MuB2	Mecklenburg-Enon loams, 2 to 7 percent slopes, eroded	2.5	21.4%
MvC3	Mecklenburg-Enon clay loams, 7 to 15 percent slopes, severely eroded	3.6	30.3%
PxB	Poindexter loam, 2 to 7 percent slopes	0.7	6.1%
PxC	Poindexter loam, 7 to 15 percent slopes	2.3	19.4%
PxD	Poindexter loam, 15 to 25 percent slopes	1.8	14.9%
Totals for Area of Interest		**11.8**	**100.0%**

Map Unit Legend

Louisa County, Virginia (VA109)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CwB3	Cullen clay loam, 2 to 7 percent slopes, severely eroded	2.6	3.5%
IrA	Iredell loam, 0 to 2 percent slopes	0.0	0.0%
Iv	Iredell silt loam, silty subsoil variant	1.8	2.4%
MuC2	Mecklenburg-Enon loams, 7 to 15 percent slopes, eroded	5.9	7.9%
MvC3	Mecklenburg-Enon clay loams, 7 to 15 percent slopes, severely eroded	2.9	4.0%
PxB	Poindexter loam, 2 to 7 percent slopes	3.2	4.3%
PxC	Poindexter loam, 7 to 15 percent slopes	22.3	30.0%
PxD	Poindexter loam, 15 to 25 percent slopes	4.7	6.4%
ZoB2	Zion loam, 2 to 7 percent slopes, eroded	30.9	41.5%
Totals for Area of Interest		**74.4**	**100.0%**

Environmentally Sensitive Areas

Field	Reason for Sensitive Area
18-01	High Water Table (Map Unit IrA – 17%)
18-02	High Water Table (Map Unit IrA – 33%)
18-03	High Water Table (Map Unit IrA – 39%)
18-04	High Water Table (Map Units Eb, IrA – 49%)
18-05	High Water Table (Map Units Eb, IrA – 34%)
18-06	High Water Table (Map Unit IrB – 14%)
18-07	None
18-08	High Water Table (Map Unit Iv – 7%)
18-09	High Water Table (Map Unit Iv – 6%)
18-10	None
18-11	High Water Table (Map Unit IrB – 18%)
18-12	None
18-13	High Water Table (Map Units IrA, IrB – 39%)
18-14	High Water Table (Map Unit IrA – 20%)
18-15	High Water Table (Map Unit IrA – 5%)
18-16	High Water Table (Map Unit Eb, IrB – 42%)
18-17	None

Louisa County Soils that are Environmentally Sensitive

Soil Map Unit	Series Name	Time of year		Environmental
		High Water	Flooded	
AsB, AsC, AsD	Ashlar			Leaching
AsC3, AsD3	Ashlar			Leaching
AV	Ashlar			Leaching
Ch	Chewacla	Nov – April	Nov – April	
ClB	Colfax	Nov – June		
Eb	Elbert	Nov – May		
FN	Fluvaquents	Nov – April	Nov – April	
Fo	Forestdale	Jan – April	Jan – April	
FrB	Fork	Oct – May	Oct – May	
IdB	Iredell	Dec – April		
IdB2, IdC2	Iredell	Dec – April		
IrA, IrB	Iredell	Dec – April		
Iv	Iredell	Dec – April		
LgB	Lignum	Dec – May		
MnB, MnC, MnD	Madison			Shallow
MoC, MoD	Madison			Shallow
SeB, SeC, SeD	Sekil			Leaching
SeC3	Sekil			Leaching
SP	Sekil			Leaching
To	Tocca		Jan – Dec	
Ts	Tocca		Jan – Dec	
We	Wehadkee	Nov – May	Nov – June	
WH	Wehadkee-Chewacla	Nov – May	Nov – June	
WoB	Worsham	Nov - May		

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

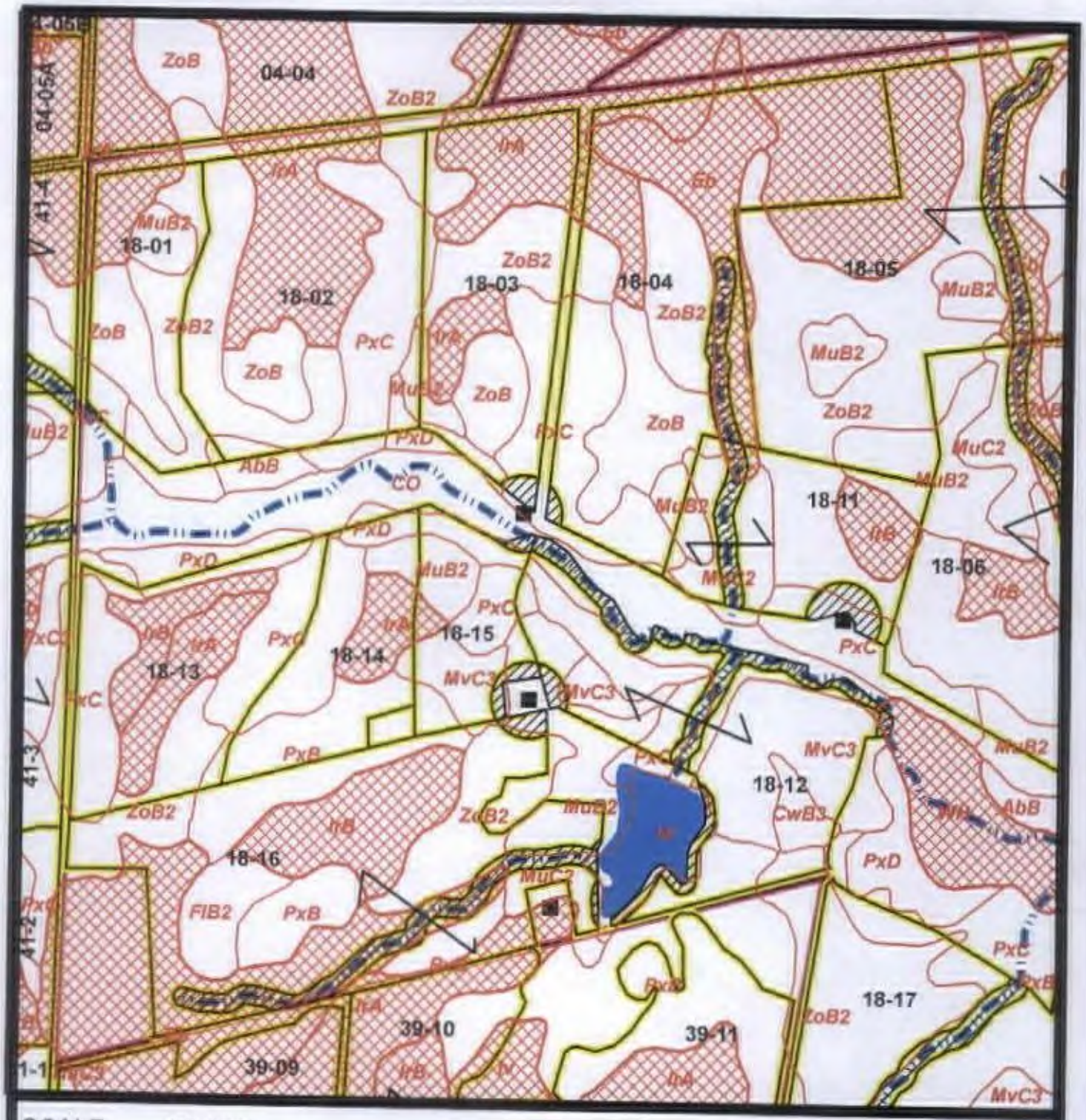
Property Line – (Standard 100' Buffer, unless waiver issued)

Revised: Jan. 13, '14

SYNAGRO

SYNAGRO

Green Springs Cattle & Grain
LO18
Fields 1 – 5, 11 – 16



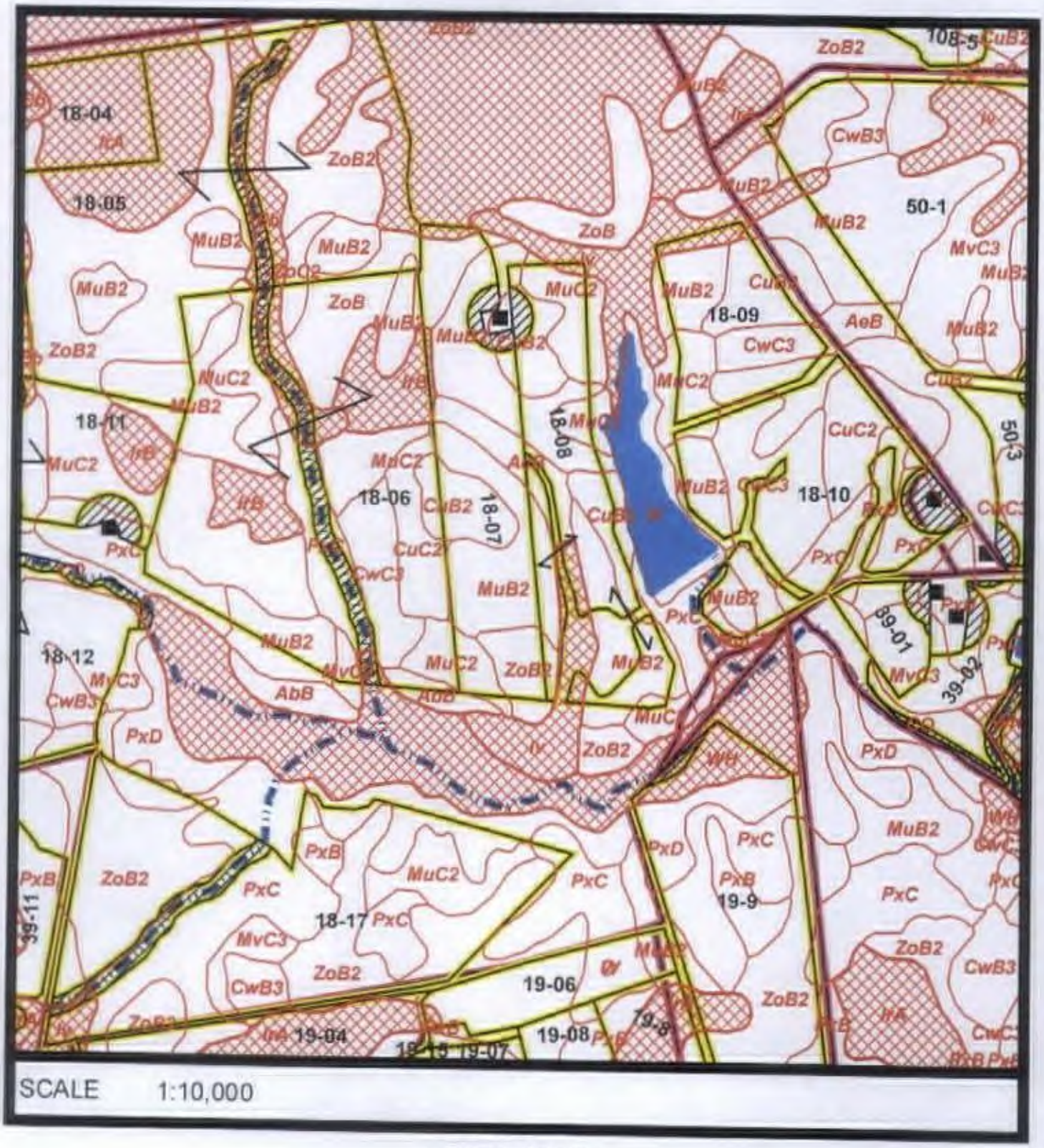
SOIL MAP

Environmentally Sensitive Soil

N

SYNAGRO

Green Springs Cattle & Grain
LO18
Fields 5 - 10, 17



SOIL MAP

Environmentally Sensitive Soil

N

SYNAGRO

Green Springs Cattle and Grain
LO18
Fields 1 – 4, 11 – 16

SCALE 1:9,000

REVISED 05/01/2014

AERIAL MAP

N

SYNAGRO

Green Springs Cattle and Grain
LO18
Fields 5 – 10, 17

SCALE 1:10,000

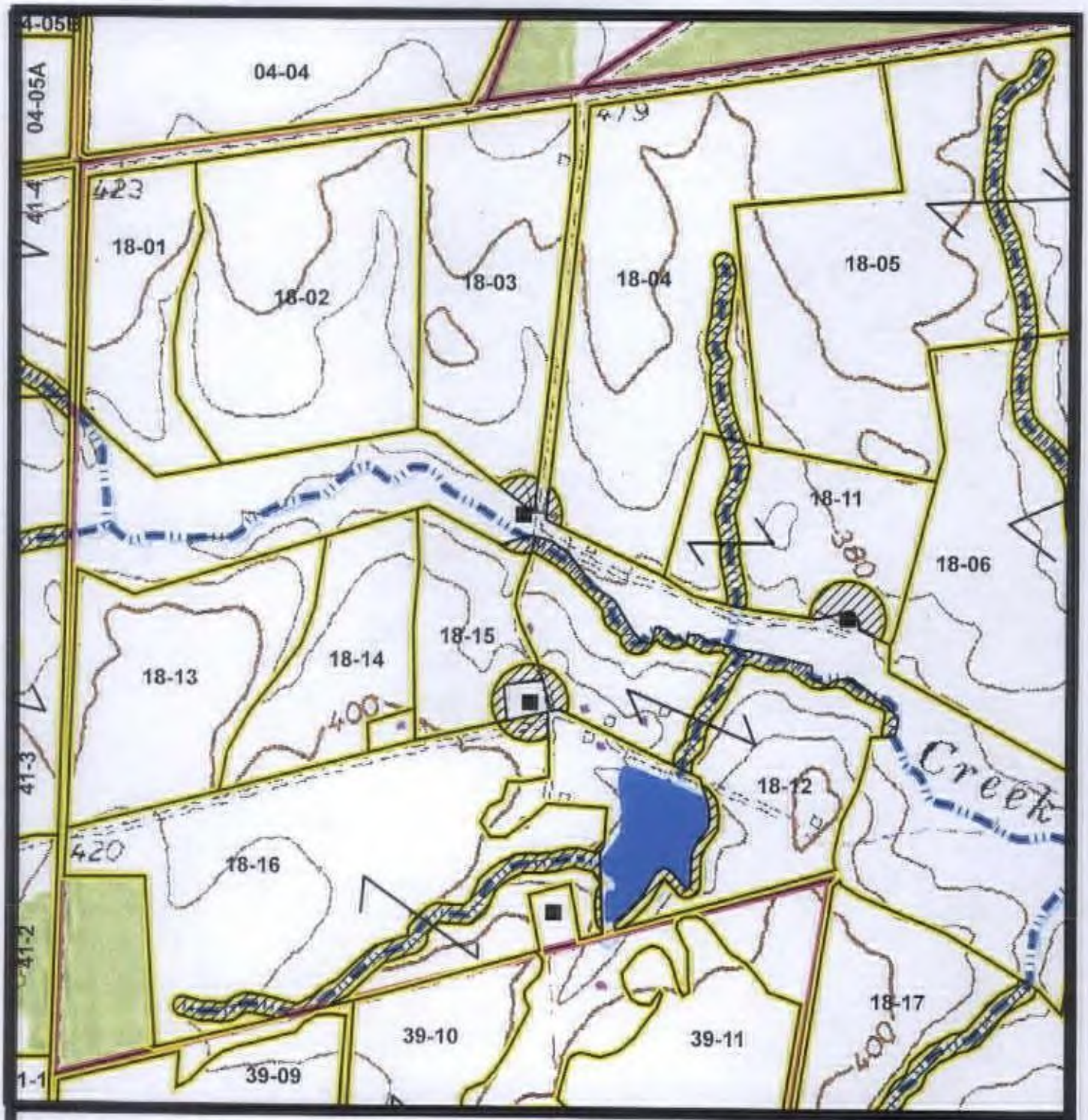
REVISED 05/01/2014

AERIAL MAP

N

SYNAGRO

Green Springs Cattle & Grain
LO18
Fields 1 – 5, 11 – 16



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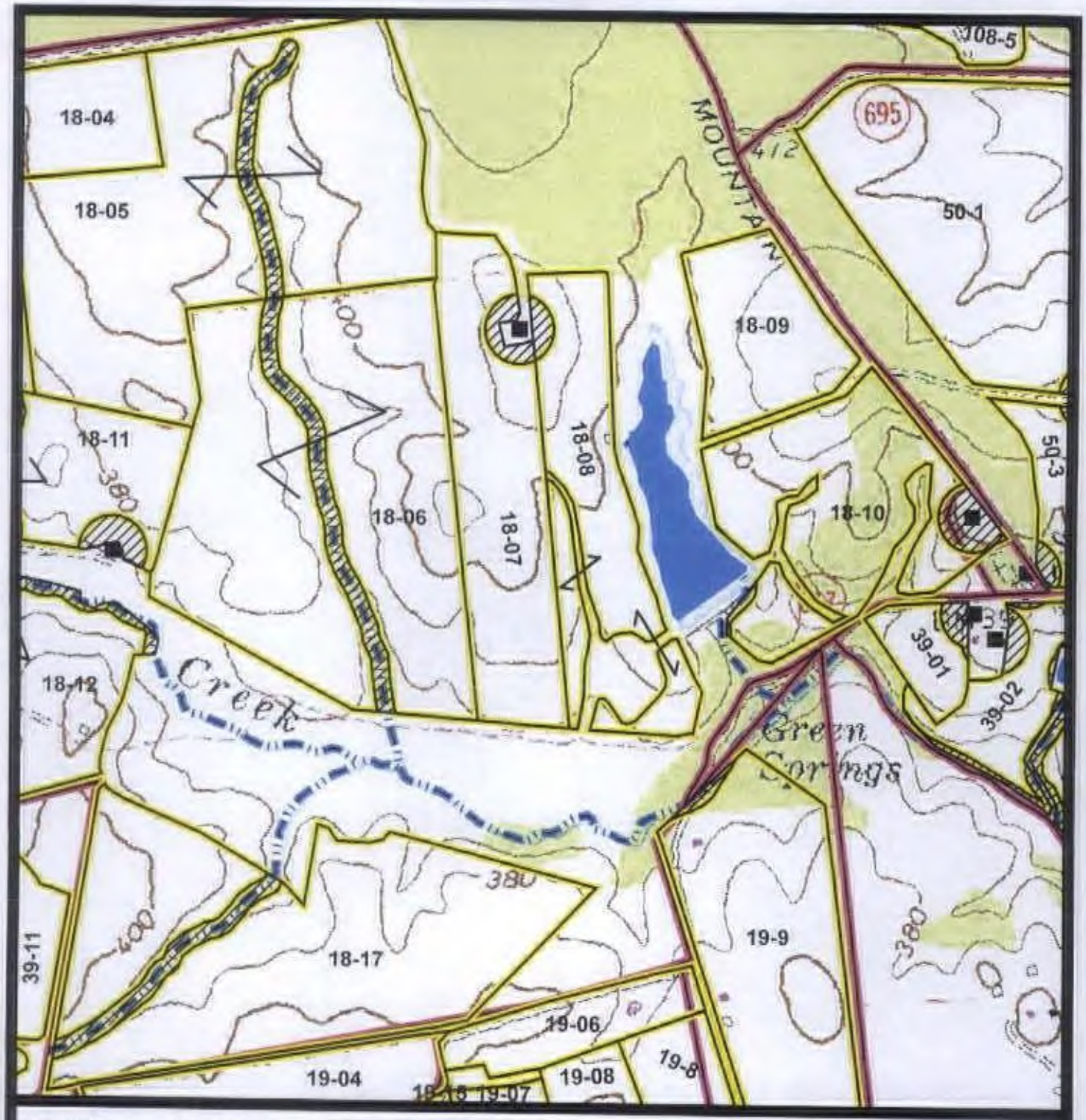
TOPO MAP

N

SYNAGRO

Green Springs Cattle & Grain
LO18
Fields 5 - 10, 17



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TOPO MAP

N

SYNAGRO

Green Springs Cattle & Grain
LO18
Fields 1 – 17

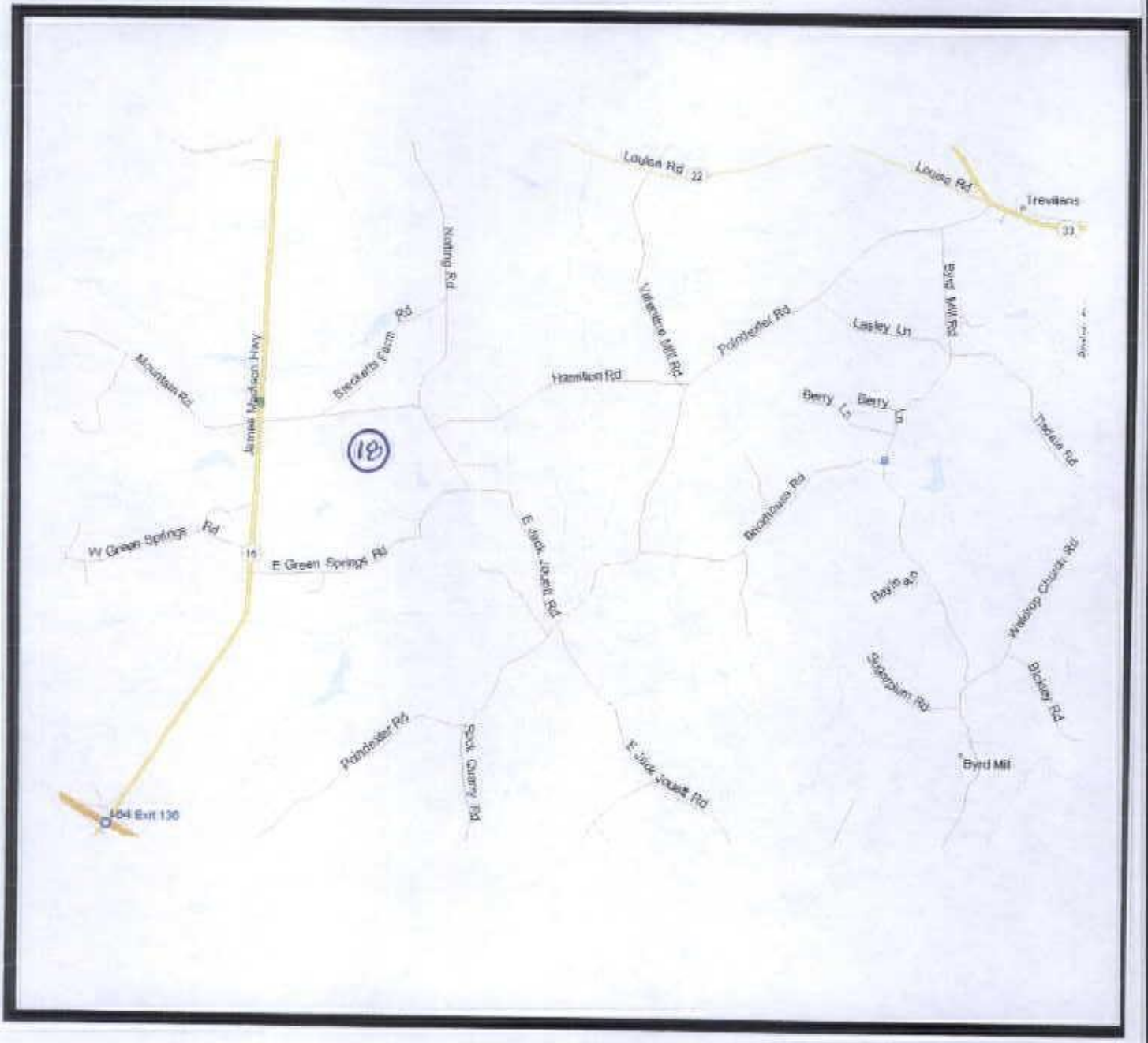
SCALE 1:24,000

TOPO MAP

N

SYNAGRO

Green Springs Cattle & Grain
LO18
Fields 1 – 17



LOCATION MAP

N