# LAND APPLICATION OF BIOSOLIDS
# RALPH BRICKEY

LO172 (FIELDS 1 – 11)
LOUISA COUNTY, VIRGINIA
APRIL 2014

SYNAGRO

April 24, 2014

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 Ralph Brickey (designated as LO172, fields 1 - 11), 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,

Steve McMahon
Technical Services Director

KML/cmw

*Synagro Central, LLC.*
10647 Tidewater Trail, Champlain, VA 22438 * Ph: (804) 443-2170 * Fax (804) 443-2214

SYNAGRO

# FIELD SUMMARY SHEET

**Ralph Brickey** **LO172**

| SYNAGRO FIELD # | GROSS ACRES | NET ACRES | FSA TRACT # | FSA FIELD # | TOPO QUAD | OWNER |
|---|---|---|---|---|---|---|
| 172-01 | 18.5 | 16.8 | | | Zion Crossroads | Brickey, Ralph A & Vivian C |
| 172-02 | 7.1 | 6.1 | | | Zion Crossroads | Brickey, Ralph A & Vivian C |
| 172-03 | 8.2 | 8.2 | | | Zion Crossroads | Brickey, Ralph A & Vivian C |
| 172-04 | 43.9 | 43.6 | | | Ferncliff<br>Zion Crossroads | Brickey, Ralph A & Vivian C |
| 172-05 | 11.6 | 11.2 | | | Ferncliff<br>Zion Crossroads | Brickey, Ralph A & Vivian C |
| 172-06 | 8.0 | 7.9 | | | Ferncliff<br>Zion Crossroads | Brickey, Ralph A & Vivian C |
| 172-07 | 10.2 | 9.3 | | | Zion Crossroads | Brickey, Ralph A & Vivian C |
| 172-08 | 9.6 | 9.6 | | | Ferncliff<br>Zion Crossroads | Brickey, Ralph A & Vivian C |
| 172-09 | 21.9 | 21.8 | | | Ferncliff<br>Zion Crossroads | Brickey, Ralph A & Vivian C |
| 172-10 | 14.0 | 14.0 | | | Ferncliff | Brickey, Ralph A & Vivian C |
| 172-11 | 2.8 | 2.4 | | | Ferncliff | Brickey, Ralph A & Vivian C |
| **TOTALS:** | 155.8 | 150.9 | | | | |

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 3/26/12 between Brickey 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 LC - 19, 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 |
|---|---|---|---|
| 53-96 | | | |
| | | | |
| | | | |

☐ 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 |

RALPH A. & VIVIAN BRICKEY — Landowner – Printed Name
Ralph A. Brickey / Vivian Brickey — Signature
3130 E. JACK SCHETT A — Mailing Address
LOUISA, VA 23093

**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.

Jeff Douthat — Permittee – Authorized Representative Printed Name
Jeff Douthat — Signature
10647 Tidewater Tr, Champlain VA 22430 — Mailing Address

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

**Landowner:** Brickey ***Farm name or address:*** LO 19

**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).

Vivian Brickey 3/26/12
Landowner's Signature Date

# Tax ID Landowner Identification Sheet

| Landowner | Field # | Tax ID |
|---|---|---|
| BRICKEY, RALPH A & VIVIAN C | 172-01 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-02 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-03 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-04 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-05 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-06 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-07 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-08 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-09 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-10 | 53 - 96 |
| BRICKEY, RALPH A & VIVIAN C | 172-11 | 53 - 96 |

| Field # | Latitude (north) | Longitude (west) |
|---|---|---|
| 172-01 | 37° 59' 24.78" | 78° 08' 00.71" |
| 172-02 | 37° 59' 27.00" | 78° 07' 51.89" |
| 172-03 | 37° 59' 18.35" | 78° 07' 58.84" |
| 172-04 | 37° 59' 26.10" | 78° 07' 28.59" |
| 172-05 | 37° 59' 30.64" | 78° 07' 28.62" |
| 172-06 | 37° 59' 11.26" | 78° 07' 35.07" |
| 172-07 | 37° 59' 02.54" | 78° 07' 38.83" |
| 172-08 | 37° 59' 04.97" | 78° 07' 25.18" |
| 172-09 | 37° 58' 58.23" | 78° 07' 33.49" |
| 172-10 | 37° 58' 59.51" | 78° 07' 20.58" |
| 172-11 | 37° 58' 55.20" | 78° 07' 27.06" |

Tax Map ID 53-96

| Scale: 1:18055.954822 | Date: 05/04/2012 | Printed By: |
|---|---|---|

[redacted]sa 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.

## Environmentally Sensitive Areas

| Field | Reason for Sensitive Area |
|---|---|
| 172-01 | High Water Table (Map Unit IrB – 8%) |
| 172-02 | High Water Table (Map Unit IrB – 32%) |
| 172-03 | High Water Table (Map Unit IrB – 14%) |
| 172-04 | Leaching Potential (Map Unit SeC – 22%) |
| 172-05 | None |
| 172-06 | None |
| 172-07 | None |
| 172-08 | None |
| 172-09 | None |
| 172-10 | None |
| 172-11 | None |

## Louisa County Soils that are Environmentally Sensitive

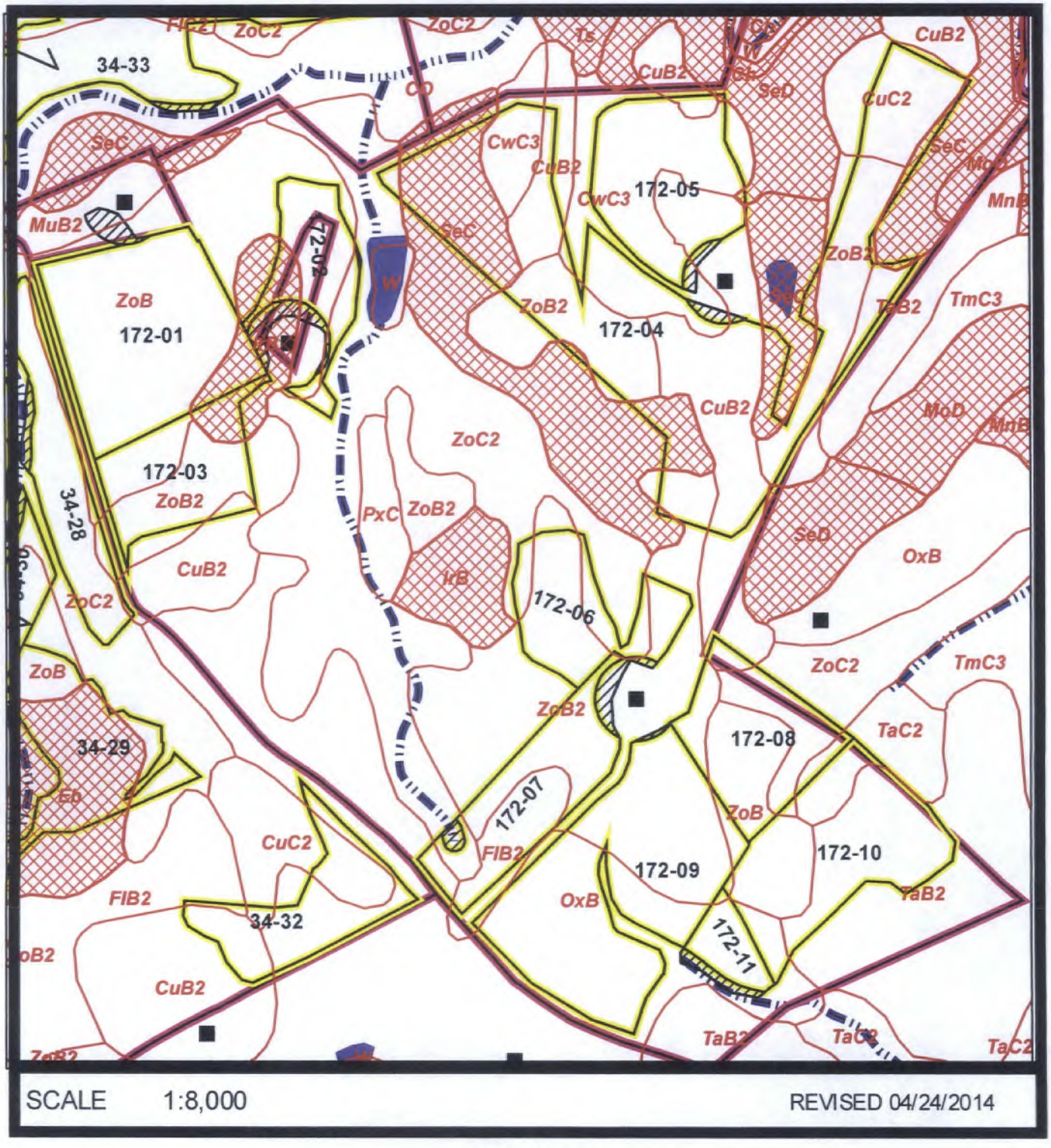
| Soil Map Unit | Series Name | Time of year | | Environmental |
|---|---|---|---|---|
| | | High Water | Flooded | |
| AsB, AsC, AsD | Ashlar | | | Leaching |
| AsC3, AsD3 | Ashlar | | | Leaching |
| AV | Ashlar | | | Leaching |
| Ch | Chewacla | Nov – April | Nov – April | |
| ClB | Colfax | Nov – 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 | | |

L0172

| Field | Map Unit | Acres | Percentage | Soil Series | High Water | Flood |
|---|---|---|---|---|---|---|
| 172-01 | ZoB | 15.5 | 92 | | | |
| | IrB | 1.3 | 8 | Iredell | Dec - April | |
| 172-02 | ZoB | 6.8 | 58 | | | |
| | IrB | 3.8 | 32 | Iredell | Dec - April | |
| | ZoC2 | 1.3 | 10 | | | |
| 172-03 | ZoB2 | 4.4 | 56 | | | |
| | ZoB | 2.3 | 30 | | | |
| | IrB | 1.1 | 14 | Iredell | Dec - April | |
| 172-04 | ZoB2 | 13.1 | 31 | | | |
| | CuB2 | 10.0 | 24 | | | |
| | SeC | 9.5 | 22 | Sekil | | |
| | CwC3 | 5.9 | 14 | | | |
| | CuC2 | 4.0 | 9 | | | |
| 172-05 | CwC3 | 10.0 | 68 | | | |
| | CuB2 | 4.8 | 32 | | | |
| 172-06 | ZoB2 | 5.7 | 72 | | | |
| | ZoC2 | 2.2 | 28 | | | |
| 172-07 | ZoB2 | 4.5 | 48 | | | |
| | FlB2 | 3.6 | 38 | | | |
| | ZoC2 | 0.7 | 8 | | | |
| | OxB | 0.5 | 6 | | | |
| 172-08 | ZoB | 4.2 | 44 | | | |
| | ZoC2 | 3.2 | 33 | | | |
| | ZoB2 | 1.3 | 13 | | | |
| | CuB2 | 0.5 | 5 | | | |
| | TaC2 | 0.5 | 5 | | | |
| 172-09 | OxB | 12.5 | 59 | | | |
| | ZoB2 | 8.7 | 41 | | | |
| 172-10 | TaB2 | 7.5 | 55 | | | |
| | ZoB | 3.5 | 25 | | | |
| | TaC2 | 1.7 | 12 | | | |
| | OxB | 1.1 | 8 | | | |
| 172-11 | OxB | 2.3 | 100 | | | |

SYNAGRO

Ralph Brickey
LO172
Fields 1 – 11



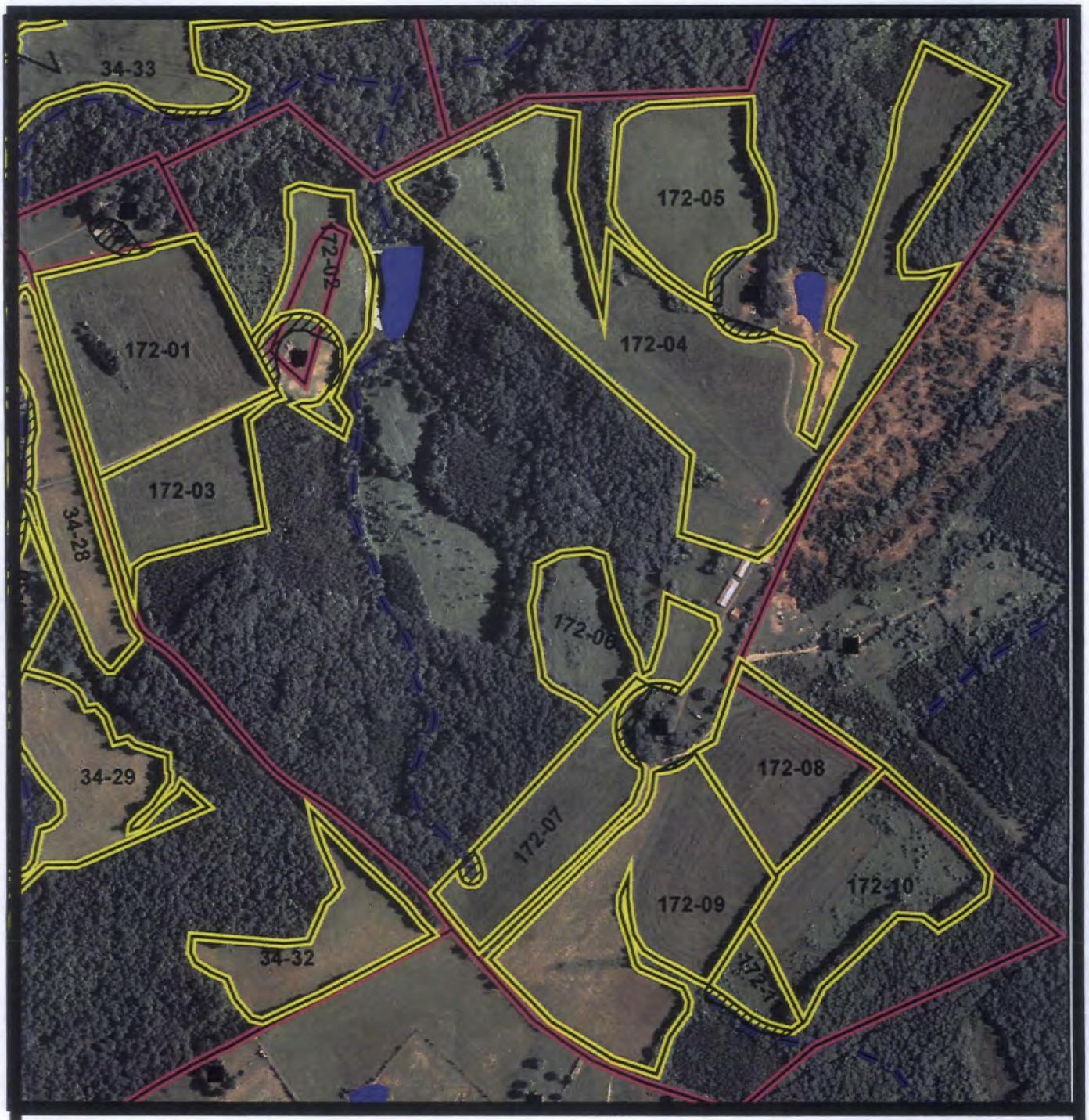

## SOIL MAP

Environmentally Sensitive Soil

N

SYNAGRO

Ralph Brickey
LO172
Fields 1 – 11




SCALE 1:8,000 REVISED 04/24/2014

**AERIAL MAP**

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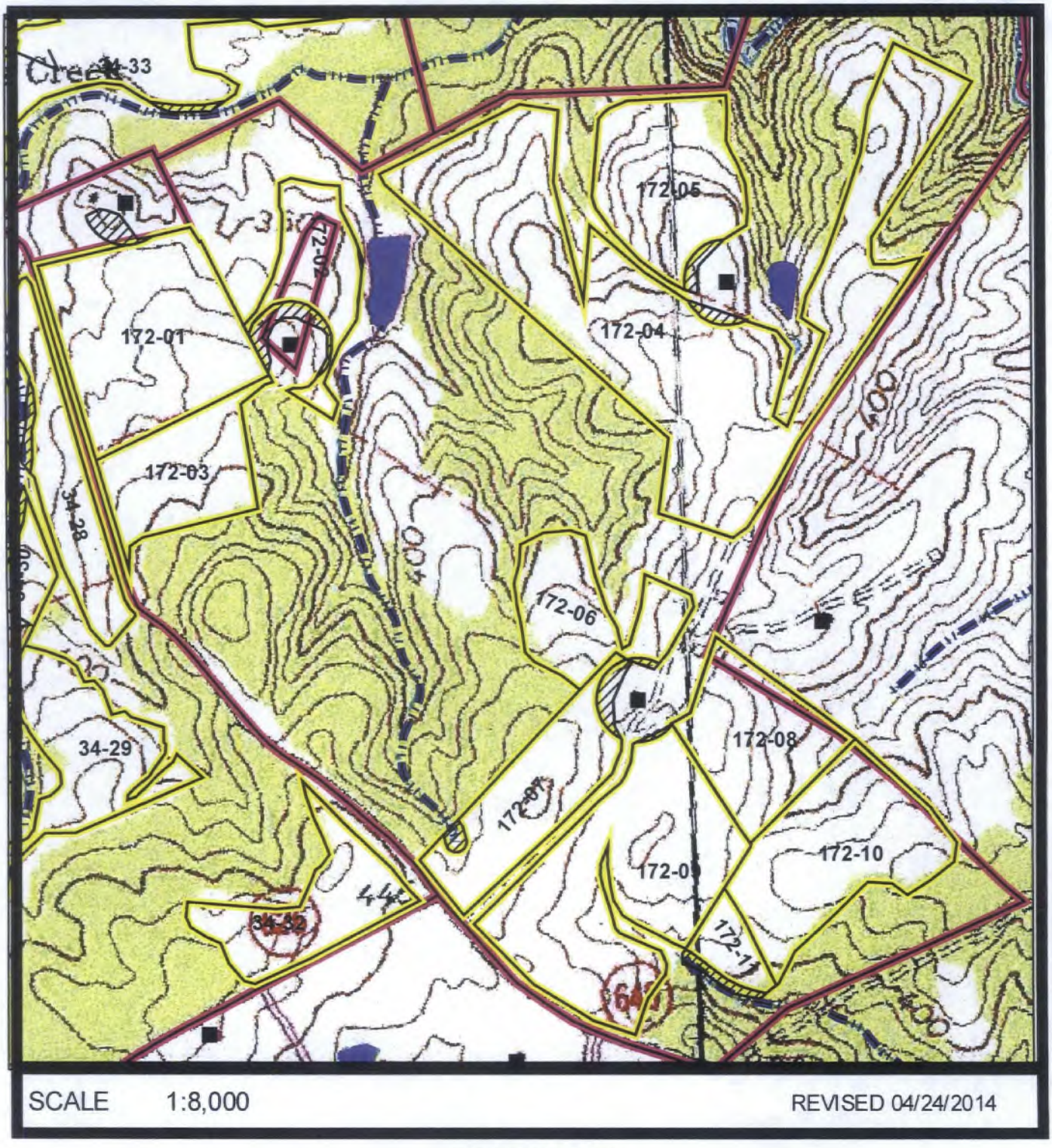
SYNAGRO

Ralph Brickey
LO172
Fields 1 – 11

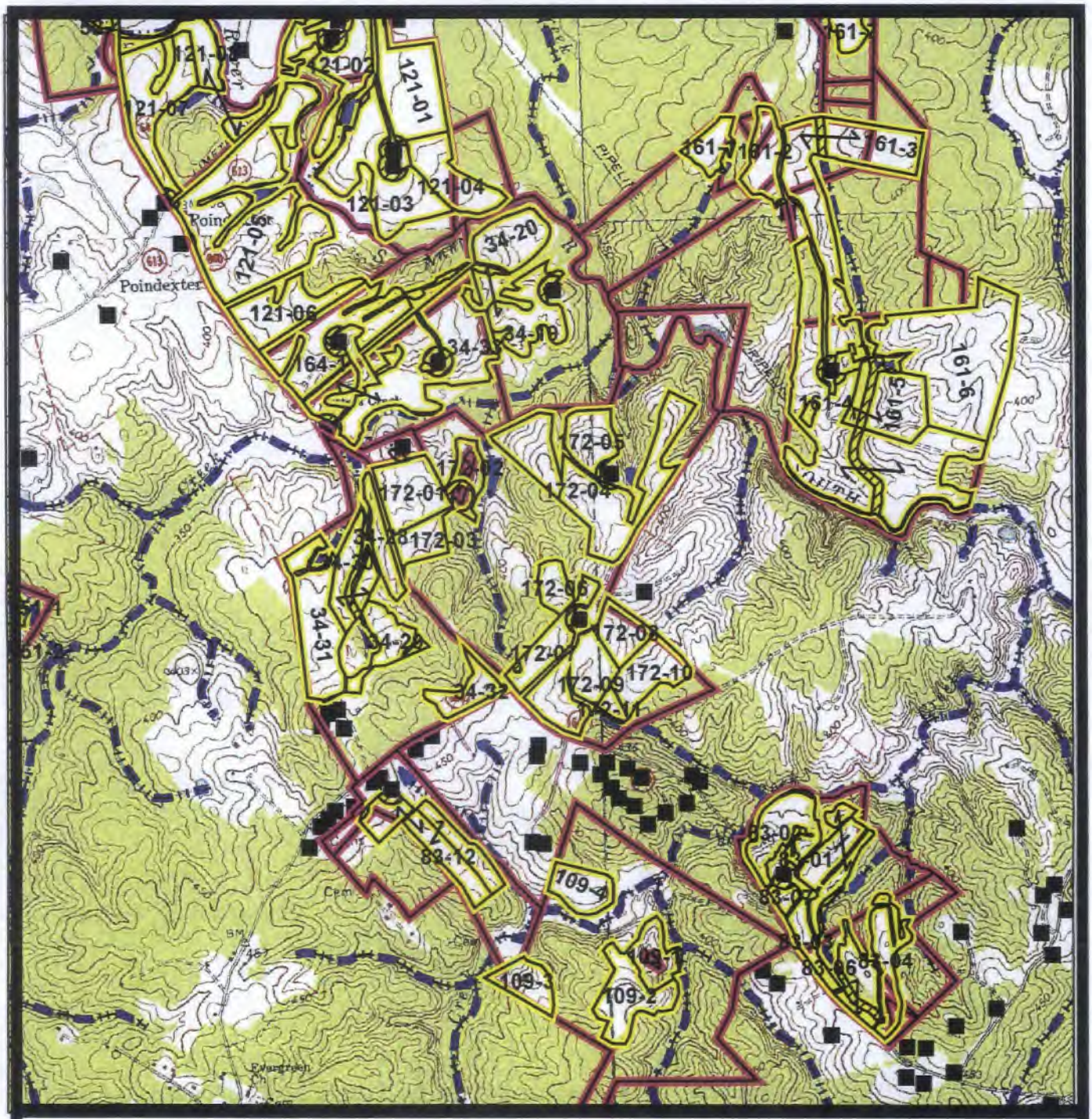



**TOPO MAP**

N

SYNAGRO

Ralph Brickey
LO172
Fields 1 – 11




**TOPO MAP**

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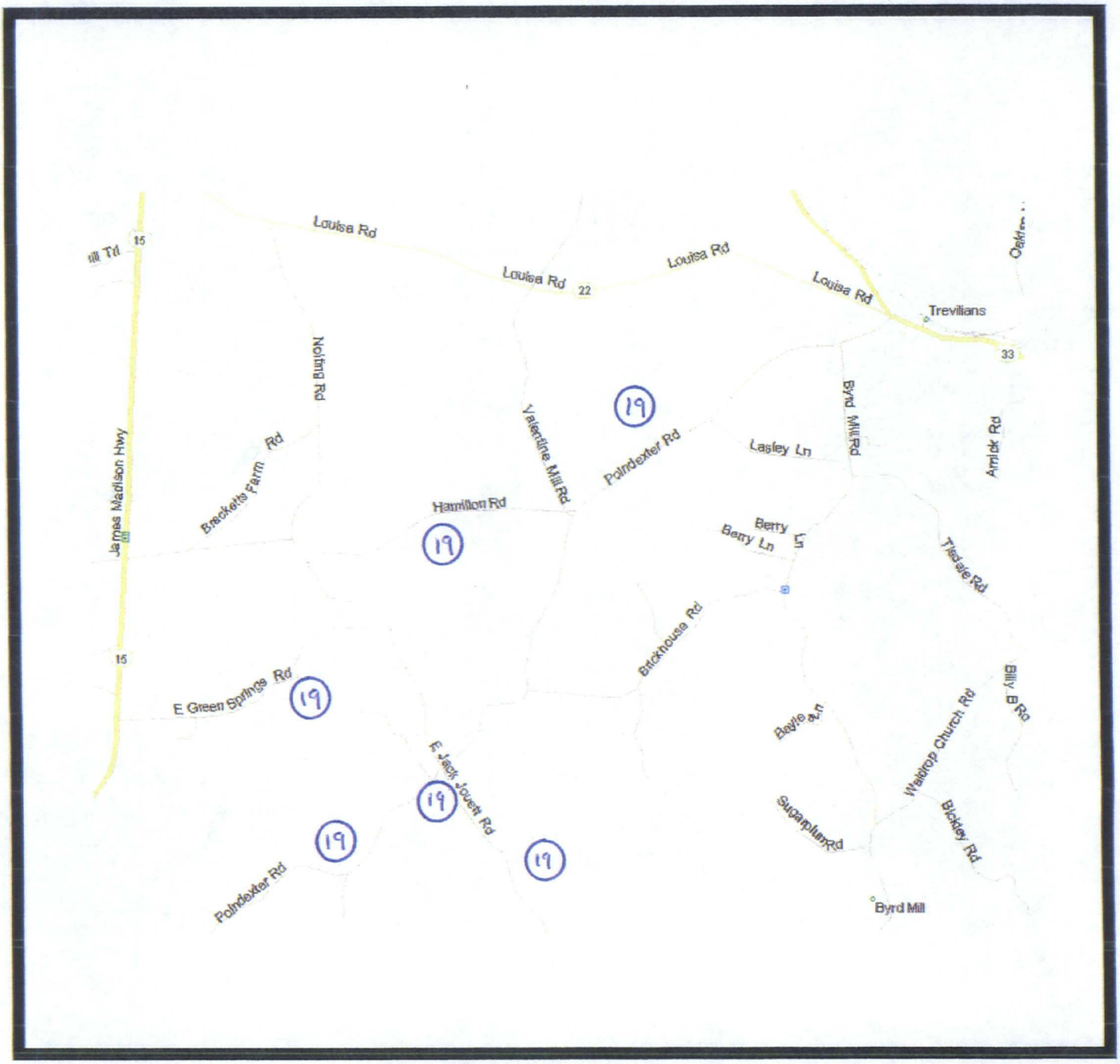
SYNAGRO




**LOCATION MAP**

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