

LAND APPLICATION SITE

NORMAN FAMILY TRUST

KQNFT 1-4

KING & QUEEN COUNTY

**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 3-20-2018 between T. Derwood Norman Trustee referred to here as "Landowner", and Recyc Systems, 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 King & Queen Co 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>1624-31R-960A, 962</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

The Norman Family Irrevocable Trust J. Derwood Norman Trustee 13058 Mid Pines Dr.
T. Derwood Norman Trustee J. Derwood Norman Trustee Ashland, Va. 23005
 Landowner - Printed Name, Title Signature Mailing Address & Phone Number

Permittee:

Recyc Systems, 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)

[Signature]
 Permittee - Authorized Representative
 Printed Name

[Signature]
 Signature

PO Box 562 Remington, Virginia 22734
 Mailing Address

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

Permittee: Recyc Systems, Inc County or City: King & Queen Co.
Landowner: T. Derwood Norman Trustee

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).

T. Derwood Norman, Trustee
Landowner's Signature

3-20-2018
Date

TS Norman
Farm Operator Signature

697 Newington Lane
King & Queen Courthouse, Va.
Mailing Address & Phone Number 23085

T. Derwood Norman Trustee

Title of Landowner

Power, Capacity and Authority. Such Party has the right, power, legal capacity, and authority to execute and enter into this Agreement and to execute all other documents and perform all other acts as may be necessary in connection with the performance of this Agreement.

J. Derwood Norman

Signature

T. Derwood Norman

Printed Name of Signer

3-20-2018

Date

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

Permittee: Recyc Systems, Inc County or City: King & Queen Co.
Landowner: Elton Franklin Norman Trustee

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).

Elton Franklin Norman Trustee
Landowner's Signature

3-21-2018
Date

[Signature]
Farm Operator Signature

Mailing Address & Phone Number

Elton Franklin Norman Trustee

Title of Landowner

Power, Capacity and Authority. Such Party has the right, power, legal capacity, and authority to execute and enter into this Agreement and to execute all other documents and perform all other acts as may be necessary in connection with the performance of this Agreement.

Elton Franklin Norman

Signature

Elton Franklin Norman

Printed Name of Signer

3-21-2018

Date

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

Permittee: Recyc Systems, Inc County or City: King & Queen Co.
Landowner: Barbara Norman Bareford Trustee

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).

Barbara Norman Bareford, Trustee
Landowner's Signature

3-22-18
Date

[Signature]
Farm Operator Signature

Mailing Address & Phone Number

Barbara Norman Bareford Trustee

Title of Landowner

Power, Capacity and Authority. Such Party has the right, power, legal capacity, and authority to execute and enter into this Agreement and to execute all other documents and perform all other acts as may be necessary in connection with the performance of this Agreement.

Barbara Norman Bareford

Signature

Barbara Norman Bareford

Printed Name of Signer

3-22-18

Date

**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 3-28-18 between Melvin Arnold Norman Trustee referred to here as "Landowner", and Recyc Systems, 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 King & Queen Co 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>11624-31R-960A, 962</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

The Norman Family Irrevocable Trust
Melvin Arnold Norman Trustee Melvin Arnold Norman Trustee 29742 The Trails
 Landowner - Printed Name, Title Signature Mailing Address & Phone Number

804-832-7253

Permittee:

Recyc Systems, 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)

[Signature] [Signature] PO Box 562 Remington, Virginia 22734
 Permittee - Authorized Representative Signature Mailing Address
 Printed Name

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

Permittee: Recyc Systems, Inc County or City: King & Queen Co.
Landowner: Melvin Arnold Norman Trustee

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.

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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).

Melvin Arnold Norman Trustee 3-28-18
Landowner's Signature Date

MS Norman 804-815-2300
Farm Operator Signature Mailing Address & Phone Number

Melvin Arnold Norman Trustee
Title of Landowner

Power, Capacity and Authority. Such Party has the right, power, legal capacity, and authority to execute and enter into this Agreement and to execute all other documents and perform all other acts as may be necessary in connection with the performance of this Agreement.

Melvin Arnold Norman
Signature

Melvin Arnold Norman
Printed Name of Signer

3-28-18
Date

FARM DATA SHEET

SITE NAME:	Norman Family Trust	COUNTY:	King & Queen
OWNER:	The Norman Family Irrevocable Trust	OPERATOR:	Kevin Norman
OWNER'S ADDRESS:	See List Below	OPERATOR'S ADDRESS:	697 Newington Lane King & Queen Courthouse, VA 23085
OWNER'S TELEPHONE:	See List Below	OPERATOR'S TELEPHONE:	-
GENERAL FARM TYPE:	Row Crops	CELL PHONE:	804-815-2300
# CATTLE:	None	EMAIL:	-
LAGOON or SLURRY:	None	LATITUDE:	37.642
TOPO QUAD:	Truhart	LONGITUDE:	-76.826
COMMENTS:	T. Derwood Norman 13058 Mid Pines Drive Ashland, VA 23005 804-798-1615	Elton Franklin Norman 396 Tastine Road Mattaponi, VA 23110 804-514-4531	Barbara Norman Bareford P.O. Box 432 Saluda, VA 23149 804-758-4611
Melvin Arnold Norman 29742 The Trail Mattaponi, VA 23110 804-832-7253			

SD

RECYC SYSTEMS, INC

FIELD DATA SHEET

Field Identification	DEQ Control ID	Gross Acres	Environmentally Sensitive Soils				Hydro Map	Tax Map #	FSA Tract #
			Water Table	Bed Rock/ Shallow	Surf/ Leach	Freq Flood			
KQNFT 1	51097-00008-0000	18.9	5D Nov.-Apr.	-	-	-	YO 60	1624-31R-962	T 490 F 1, 2
KQNFT 2	51097-00009-0000	13.1	15B Nov.-Apr.	-	-	-	YO 60	1624-31R-962	T 490 F 3, 5, 7
KQNFT 3	51097-00010-0000	13.5	5D Nov.-Apr.	-	-	-	YO 60	1624-31R-962	T 490 F 6
KQNFT 4	51097-00011-0000	9.8	5D Nov.-Apr.	-	-	-	YO 60	1624-31R-960A 1624-31R-962	T 490 F 4
TOTAL ACRES IN SITE		55.3							

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

Landowner Coordination Form

This form is used by the Permittee to identify properties (tax parcels) that are authorized to receive biosolids and/or industrial residuals, and each of the legal landowners of those tax parcels. A Land Application Agreement-Biosolids and Industrial Residuals from original signature must be attached for each legal landowner identified below prior to land application at the identified parcels.

Permittee: Recyc Systems, Inc

Site Name: Norman Family Trust

County or City: King & Queen Co.

Please Print

Signature not required on this page

<u>Tax Parcel ID(s)</u>	<u>Landowners (s)</u>
1624-31R-960A	The Norman Family Irrevocable Trust T. Derwood Norman Trustee/ Owner Elton Franklin Norman Trustee/Owner Barbara Norman Bareford Trustee/Owner Melvin Arnold Norman Trustee/Owner.
1624-31R-962	The Norman Family Irrevocable Trust T. Derwood Norman Trustee/ Owner Elton Franklin Norman Trustee/Owner Barbara Norman Bareford Trustee/Owner Melvin Arnold Norman Trustee/Owner.

Report Number: 16-321-0645

Account Number: 70594



7621 Whitepine Road, Richmond, VA 23237

Main 804-743-9401 ° Fax 804-271-6446

www.waypointanalytical.com

Send To: Recyc Systems Inc
Susan Trumbo
8455 Whiteshop Road
Culpepper VA 22701

"Every acre...Every year."™

Grower: Norman Family Trust
King & Queen Co

Submitted By: SD

SOIL ANALYSIS REPORT

Analytical Method(s): SMP Buffer pH Mehlich 3 Loss On Ignition Water pH

Date Received: 11/16/2016

Date Of Analysis: 11/17/2016

Date Of Report: 11/17/2016

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
1 KQNFT	18390	1.6 L		77	71 H		66 M	48 M	570 H		6.7		0.2	3.6	
2 KQNFT	18391	1.6 L		77	84 H		61 L	39 L	555 H		6.4	6.90	0.3	3.6	
3 KQNFT	18392	1.7 L		80	72 H		59 L	51 H	356 M		6.0	6.89	0.4	2.8	
4 KQNFT	18393	2.3 L		88	106 VH		78 L	93 M	768 H		6.4	6.88	0.5	5.3	

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts
	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
1 KQNFT	4.7	11.1	79.2		5.6			2.7 M	24 H				
2 KQNFT	4.3	9.0	77.1		8.3			2.8 M	17 M				
3 KQNFT	5.4	15.2	63.6		14.3			2.8 M	27 H				
4 KQNFT	3.8	14.6	72.5		9.4			4.4 H	17 M				

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

Report Number: 16-321-0645

Account Number: 70594



7621 Whitepine Road, Richmond, VA 23237

Main 804-743-9401 ° Fax 804-271-6446

www.waypointanalytical.com

Send To: Recyc Systems Inc
Susan Trumbo
8455 Whiteshop Road
Culpeper VA 22701

"Every acre...Every year."™

Grower: Norman Family Trust
King & Queen Co

Submitted By: SD

Date Received: 11/16/2016

Date Of Report: 11/17/2016

SOIL FERTILITY RECOMMENDATIONS

Sample ID Field ID	Intended Crop	Yield Goal	Lime Tons/A	Nitrogen N lb/A	Phosphate P ₂ O ₅ lb/A	Potash K ₂ O lb/A	Magnesium Mg lb/A	Sulfur S lb/A	Zinc Zn lb/A	Manganese Mn lb/A	Iron Fe lb/A	Copper Cu lb/A	Boron B lb/A
1 KQNFT	Adjust pH to 6.5	0	0.0				32			0			
2 KQNFT	Adjust pH to 6.5	0	0.8				41			2			
3 KQNFT	Adjust pH to 6.5	0	1.0				29			0			
4 KQNFT	Adjust pH to 6.5	0	0.8				0			2			

Comments:

Sample(s) : 2,3 Crop: Adjust pH to 6.5

If dolomitic lime is not used, apply required magnesium with magnesium oxide. Epsom Salts, K-Mag or Sul-PO-Mag.

Sample(s) : 2,4 Crop: Adjust pH to 6.5

Apply dolomitic lime to raise pH and improve the magnesium level.

"The recommendations are based on research data and experience, but NO GUARANTEE or WARRANTY expressed or implied, concerning crop performance is made."

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Pauric McGeary

THE PLANNER IS NOT STATE CERTIFIED

Nutrient Management Plan Balance Sheet
(Spring, 2018-Summer, 2020)
Norman Family Trust
Planner: John Doe

Tract: 490

Location: King & Queen

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes
1, 2/KQNFT 1(N)	19/19	2018	Corn (grain)	140-30-80	20/0				120-30-80	N/A		
3, 5, 7/KQNFT 2(N)	13/13	2018	Corn (grain)	140-30-80	20/0				120-30-80	N/A		
6/KQNFT 3(N)	14/14	2018	Corn (grain)	130-30-80	20/0				110-30-80	N/A		
4/KQNFT 4(N)	10/10	2018	Corn (grain)	130-20-60	20/0				110-20-60	N/A		

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Soil Test Summary

Tract	Field	Acre	Date	P2O5	K2O	Lab	Soil pH	Lime Date	rec. lime tons/Ac
490	KQNFT 1	19	2016-Fa	H (71 P ppm)	M- (66 K ppm)	A&L MIII	6.7		
490	KQNFT 2	13	2016-Fa	H (84 P ppm)	M- (61 K ppm)	A&L MIII	6.4		
490	KQNFT 3	14	2016-Fa	H (72 P ppm)	M- (59 K ppm)	A&L MIII	6.		
490	KQNFT 4	10	2016-Fa	H+ (106 P ppm)	M (78 K ppm)	A&L MIII	6.4		

Field Productivities for Major Crops

Tract Name	Tract/ Field	Field Name	Acres	Predominant Soil Series	Corn	Small Grain	Alfalfa	Grass Hay	Environmental Warnings
490	490/1, 2	KQNFT 1	19	Emporia	IIIa	II	III	II	
	490/3, 5, 7	KQNFT 2	13	Emporia	IIIa	II	III	II	
	490/6	KQNFT 3	14	Suffolk	IIIb	II	Not Suited	III	
	490/4	KQNFT 4	10	Emporia	IIIb	III	III	III	

Yield Range

Field Productivity Group	Corn Grain Bu/Acre	Barley/Intensive Wheat Bu/Acre	Std. Wheat Bu/Acre	Alfalfa Tons/Acre	Grass/Hay Tons/Acre
I	>170	>80	>64	>6	>4.0
II	150-170	70-80	56-64	4-6	3.5-4.0
III	130-150	60-70	48-56	<4	3.0-3.5
IV	100-130	50-60	40-48	NA	<3.0
V	<100	<50	<40	NA	NA

Farm Summary Report

Plan: New Plan Spring, 2018 - Summer, 2020

Farm Name: Norman Family Trust

Location: King & Queen

Specialist: John Doe

N-based Acres: 55.3

P-based Acres: 0.0

Tract Name: 490

FSA Number: 490

Location: King & Queen

Field Name: KQNFT 1

Total Acres: 18.90 Usable Acres: 18.90

FSA Number: 1, 2

Tract: 490

Location: King & Queen

Slope Class: B Hydrologic Group: C

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
Fa-2016	6.7	H(71 P ppm)	M-(66 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
92	4B	Emporia
6	5D	Emporia Slagle
1	5E	Emporia Slagle

Field Warnings:

Field Name: KQNFT 2

Total Acres: 13.10 Usable Acres: 13.10

FSA Number: 3, 5, 7

Tract: 490

Location: King & Queen

Slope Class: B Hydrologic Group: C

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
Fa-2016	6.4	H(84 P ppm)	M-(61 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
72	4B	Emporia
9	4C	Emporia
5	5D	Emporia Slagle
13	15B	Slagle

Field Warnings:

Field Name: KQNFT 3

Total Acres: 13.50 Usable Acres: 13.50

FSA Number: 6

Tract: 490

Location: King & Queen

Slope Class: C Hydrologic Group: C

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
Fa-2016	6.0	H(72 P ppm)	M-(59 K ppm)	A&L MIII	

Soils:

PERCENT	SYMBOL	SOIL SERIES
44	17B	Suffolk
25	4C	Emporia
31	5D	Emporia Slagle

Field Warnings:

Field Name: KQNFT 4

Total Acres: 9.80 Usable Acres: 9.80

FSA Number: 4

Tract: 490

Location: King & Queen

Slope Class: C Hydrologic Group: C

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
Fa-2016	6.4	H+(106 P ppm)	M(78 K ppm)	A&L MIII	

Soils:

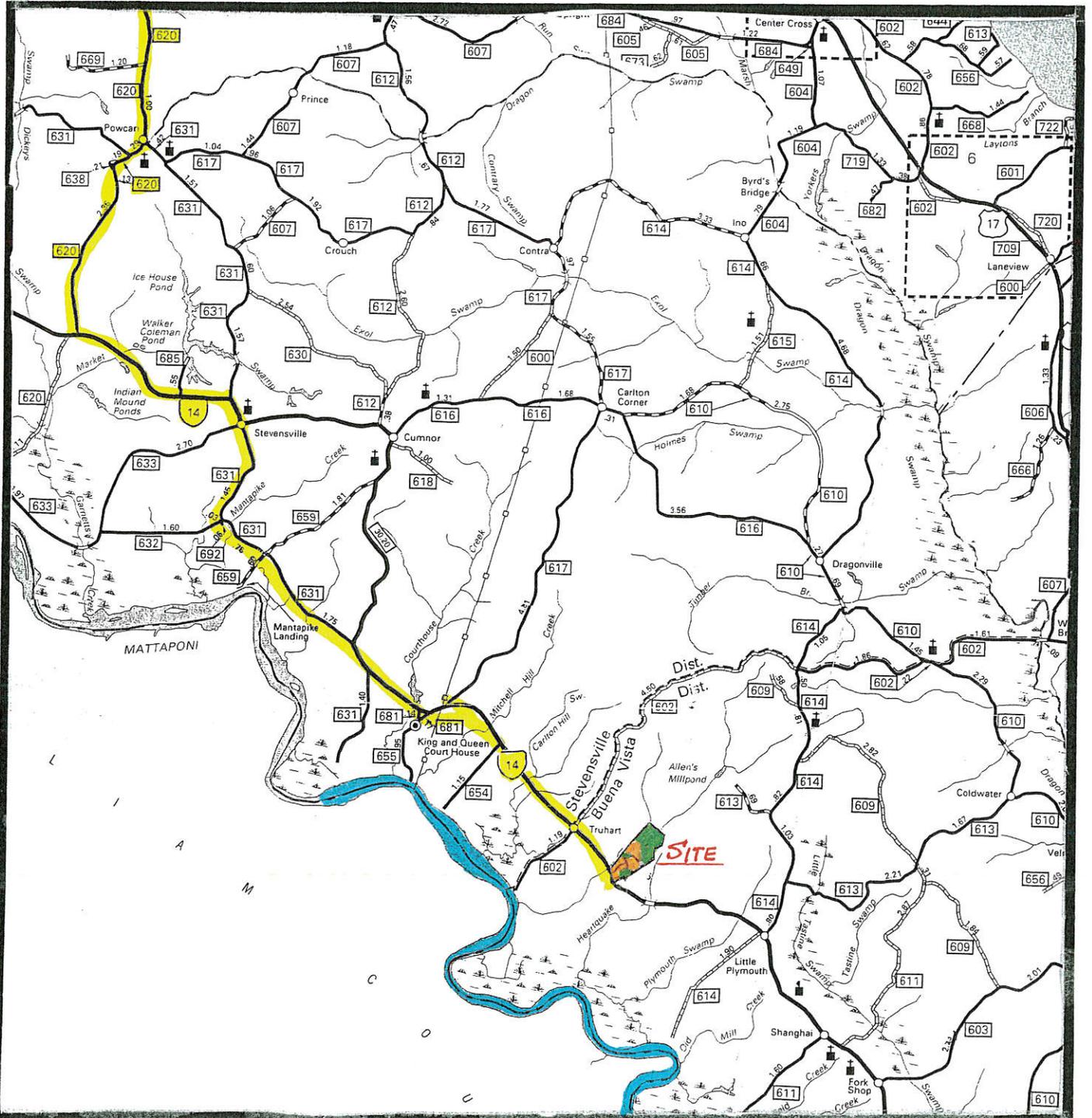
PERCENT	SYMBOL	SOIL SERIES
46	4C	Emporia
32	5D	Emporia Slagle
23	17B	Suffolk

Field Warnings:

MAPS

Recyc Systems™

Inc. (Biosolids Land Application)



Scale: 1" = 2 miles

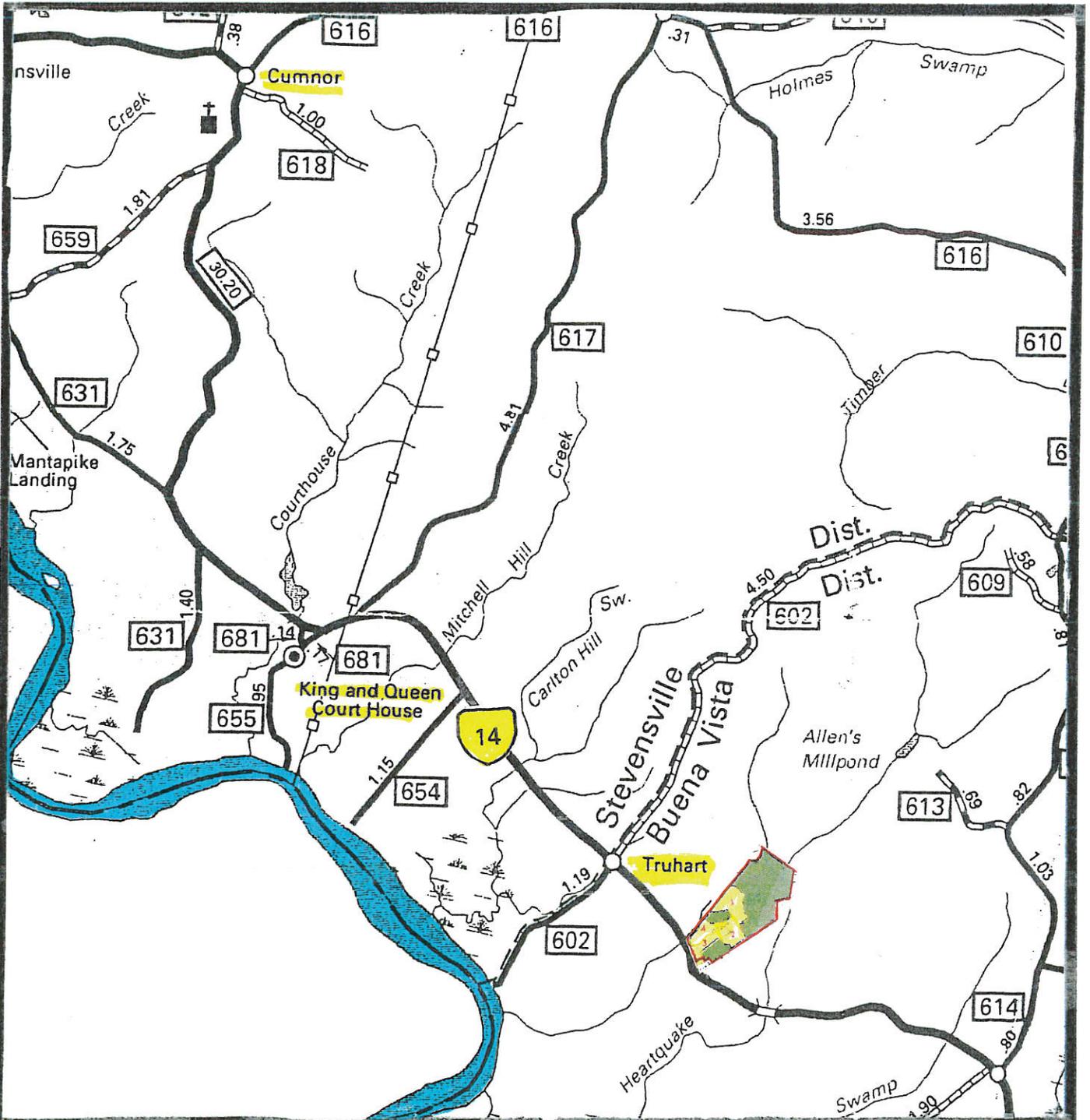
KQNF 1-4

VICINITY MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)

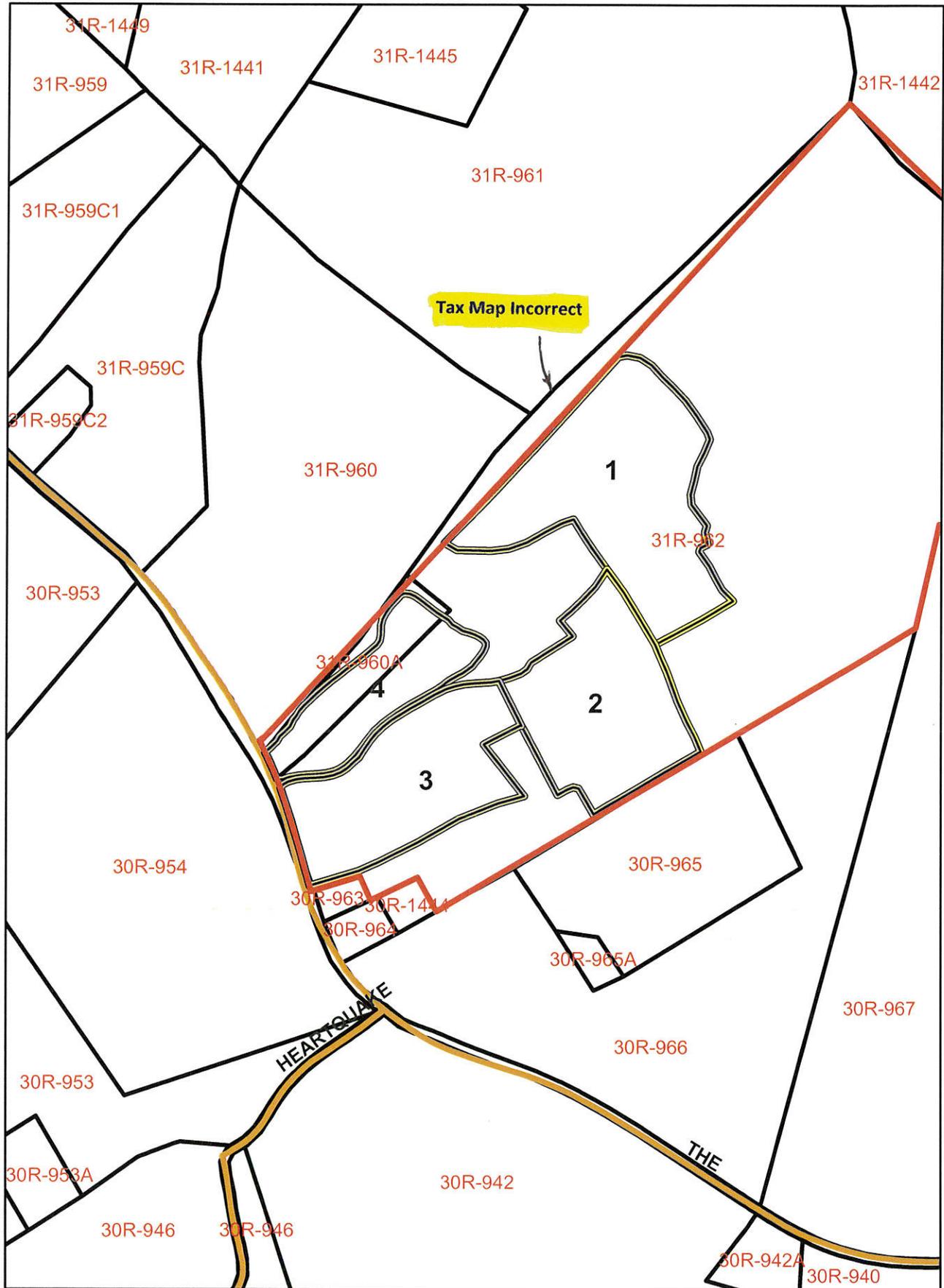


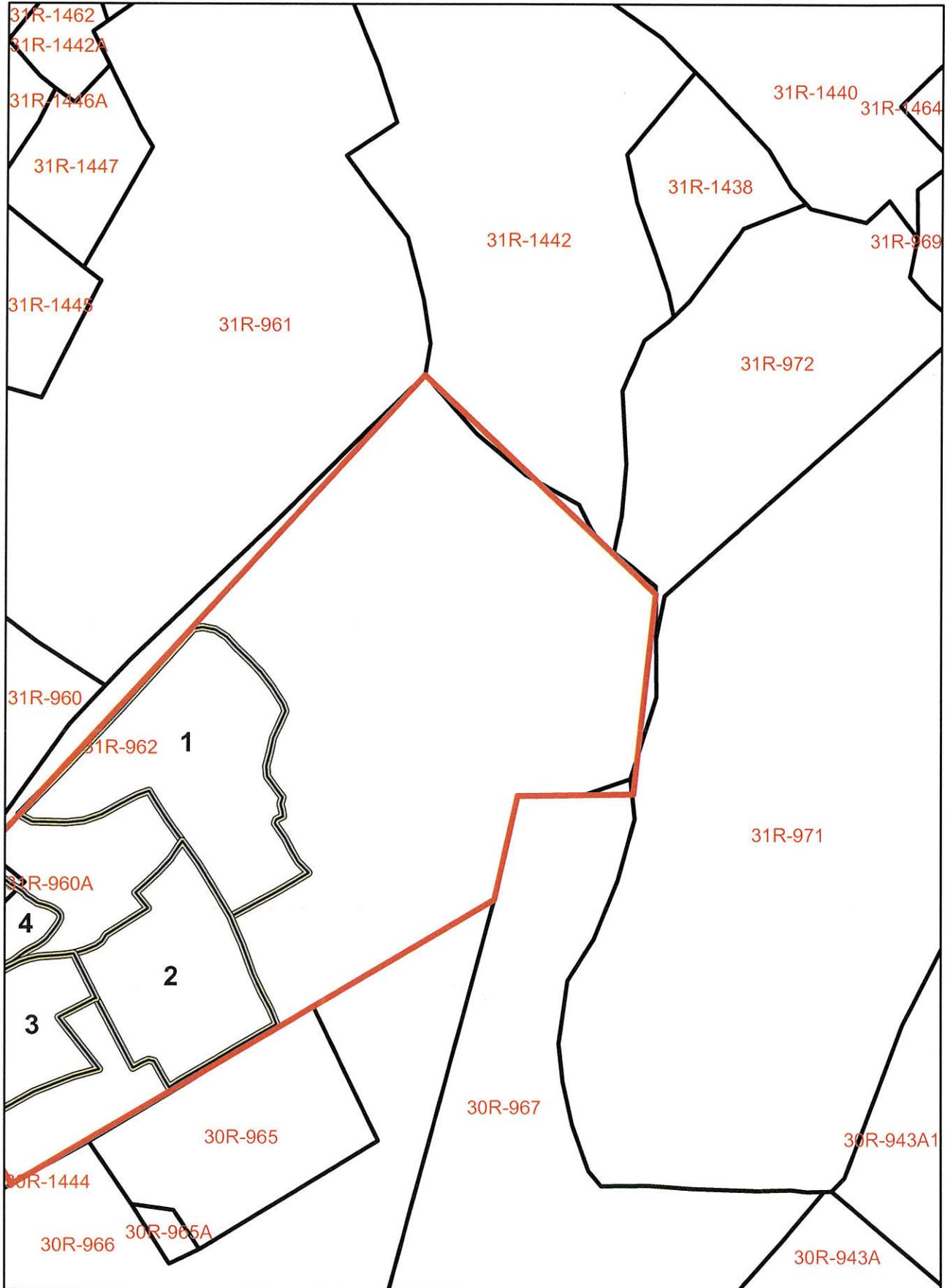
Scale: 1" = 1 mile

KQNFT 1-4

VICINITY MAP





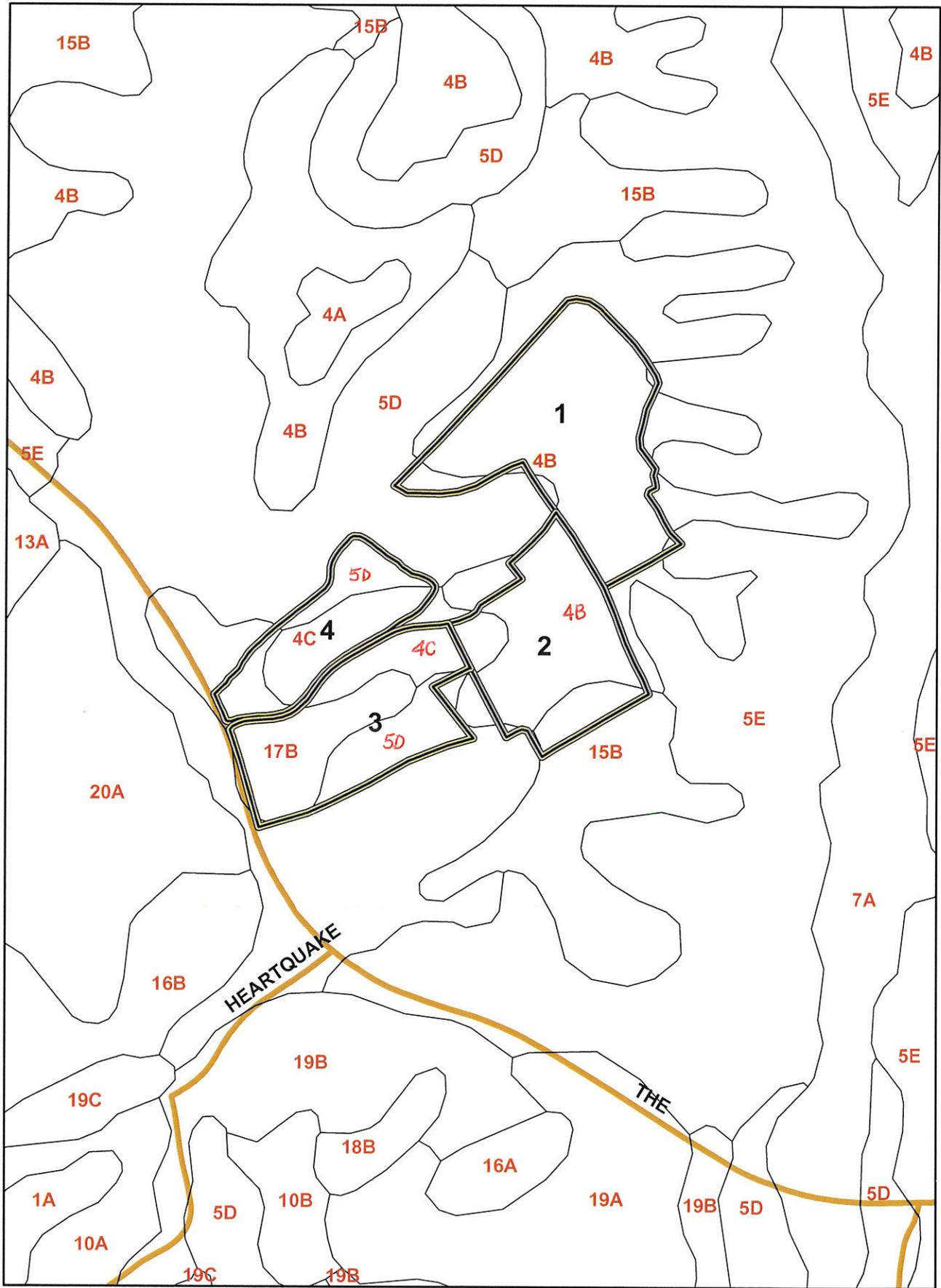


ADJOINING LANDOWNERS

Norman Family Trust

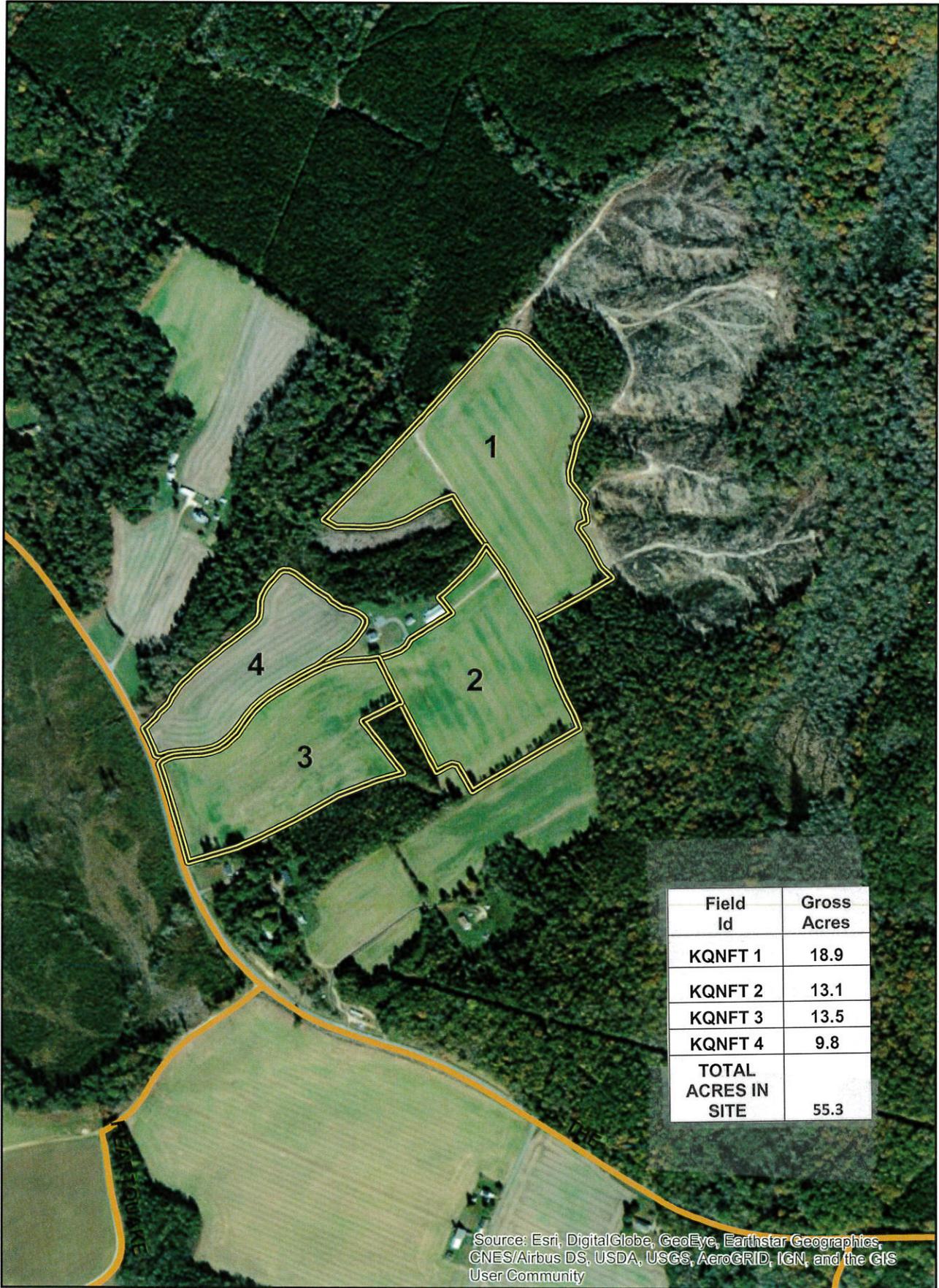
KING AND QUEEN COUNTY

Tax Map	Parcel #	Owner Name(s)
1624-31R	960	The Ashley Trust/ Edward B. and Bertha C. Ashley Trustees
	961	Comm. Of Virginia Department of Forestry
	971	William Davis Carlton and Ruth Morris Carlton
	972	William Davis Carlton and Ruth Morris Carlton
	1442	The Dorothy T. Ashley Trust
1624-30R	954	John Wesley McKinney III
	963	Aaron S. Babcock
	964	Humphrey Scott
	965	Will Holmes
	966	Flora Lee Estate
	967	Edward Holmes
	1444	Deborah E. Scott



SOIL MAP

1 in = 660 feet



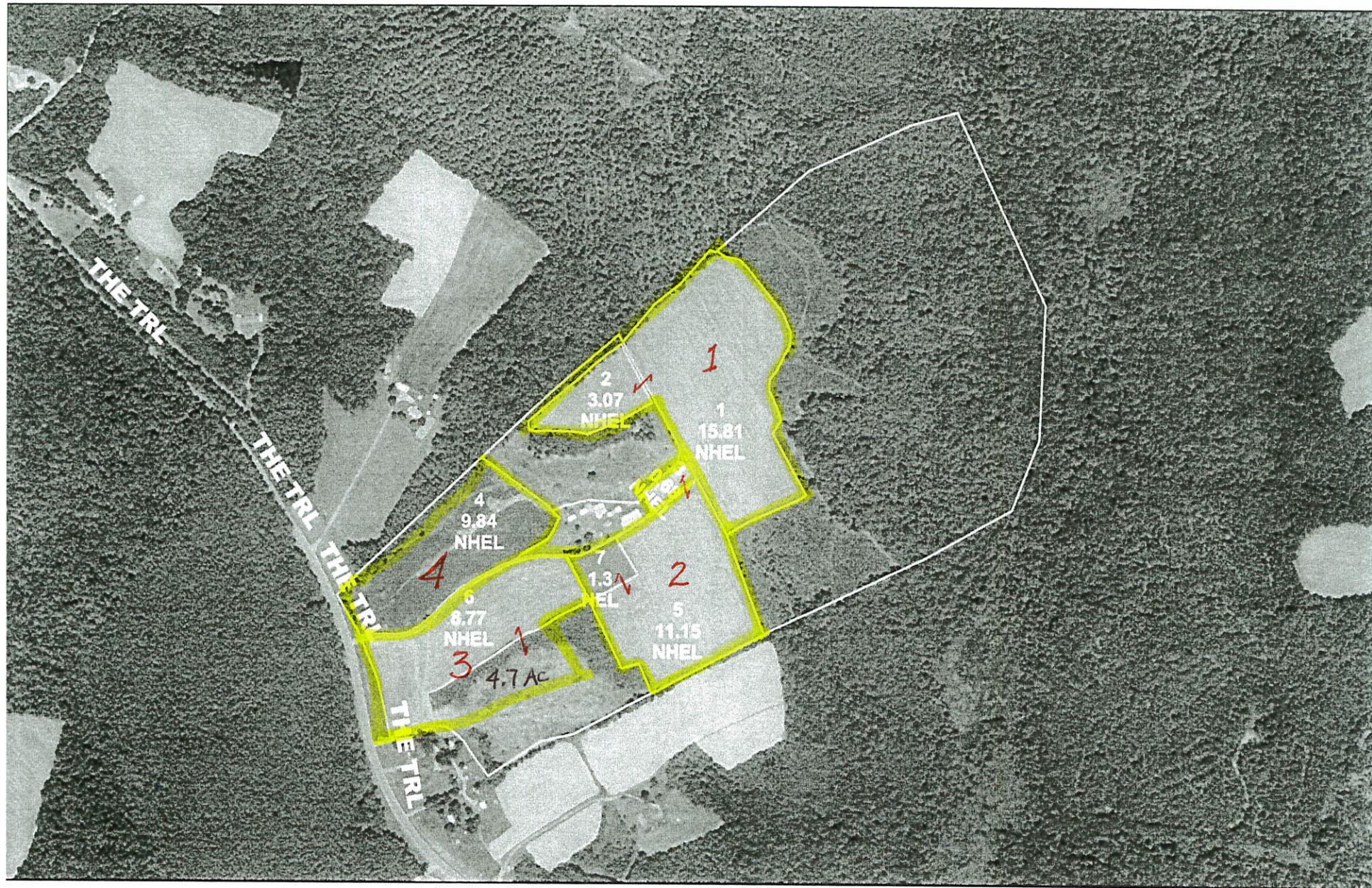
Field Id	Gross Acres
KQNFT 1	18.9
KQNFT 2	13.1
KQNFT 3	13.5
KQNFT 4	9.8
TOTAL ACRES IN SITE	55.3

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



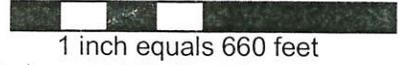
AERIAL MAP

1 inch 660 feet



Farm Number: 2096
 Tract Number: 490

660 330 0 660 Feet



1 inch equals 660 feet

USDA UNITED STATES DEPARTMENT OF AGRICULTURE

Farm Service Agency
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 Tappahannock, VA 22560
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