Ohio Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

September 9, 2016

Re: Ringler Energy, LLC
Class B Biosolids Site Transfer
NPDES
Morrow County
4IN00204*AD

Mr. Alex Ringler
Ringler Energy, LLC
2279 County Road 156
Cardington, OH 43315

Dear Mr. Ringler:

Ohio EPA received a request on September 7, 2016, from Otte AG, LLC on behalf of Ringler Energy, LLC to transfer the following biosolids beneficial use sites from the Upper Olentangy Reclamation Center biosolids management program to the Ringler Energy biosolids management program:

Field ID	Previous Field ID	Ohio EPA Site #	County	Township
DEO-02-07	DDWT-02	21-00030	Delaware	Oxford
DEO-02-08	DDWT-01	21-00029	Delaware	Oxford

These sites, owned and operated by Shady Haven Farms, LLC, are located northwest of the intersection of Steamtown Road and US 42.

A review of these sites was conducted by Ohio EPA. Consideration was given to soil and landscape characteristics, isolation distances from residences, geology and ground water conditions, and the proximity to waterways and wells.

The review indicated that these sites contain hydrologic group D soils. Please refer to the precipitation prohibitions and restrictions for group D soils found in Ohio Administrative Code (OAC) 3745-40-08(B)(2).

The soil analytical results for Ohio EPA Site 21-00029 indicate a soil pH of 5.4 S.U. OAC 3745-40-08(D)(5) requires that the pH of this site be raised to a minimum of 5.5 S.U. through the addition of a liming material before or at the time of beneficial use of biosolids.

These sites are authorized to be included as part of the Ringler Energy, LLC biosolids program. This authorization is subject to conditions contained in both the NPDES permit and OAC 3745-40. Conditions contained in the NPDES permit and OAC 3745-40 may differ. In such cases, the more restrictive conditions from either the NPDES permit or OAC 3745-40 shall govern.

Highlights of these conditions are as follows:

1. Biosolids shall not be applied in buffer zones.
2. In accordance with federal/state rules, biosolids may not be applied within 33 feet of surface waters of the state.

Class B Biosolids
Beneficial Use Site Transfer

Ringler Energy, LLC

Ohio EPA Site	Field ID
21-00029	DEO-02-08
21-00030	DEO-02-07

Ohio Environmental Protection Agency
Division of Surface Water
50 W Town Street, Suite 700
Columbus, OH 43216
(614) 644-2150

ED_014244_00000156-00002

Ohio Environmental Protection Agency

John R. Kasich, Governor
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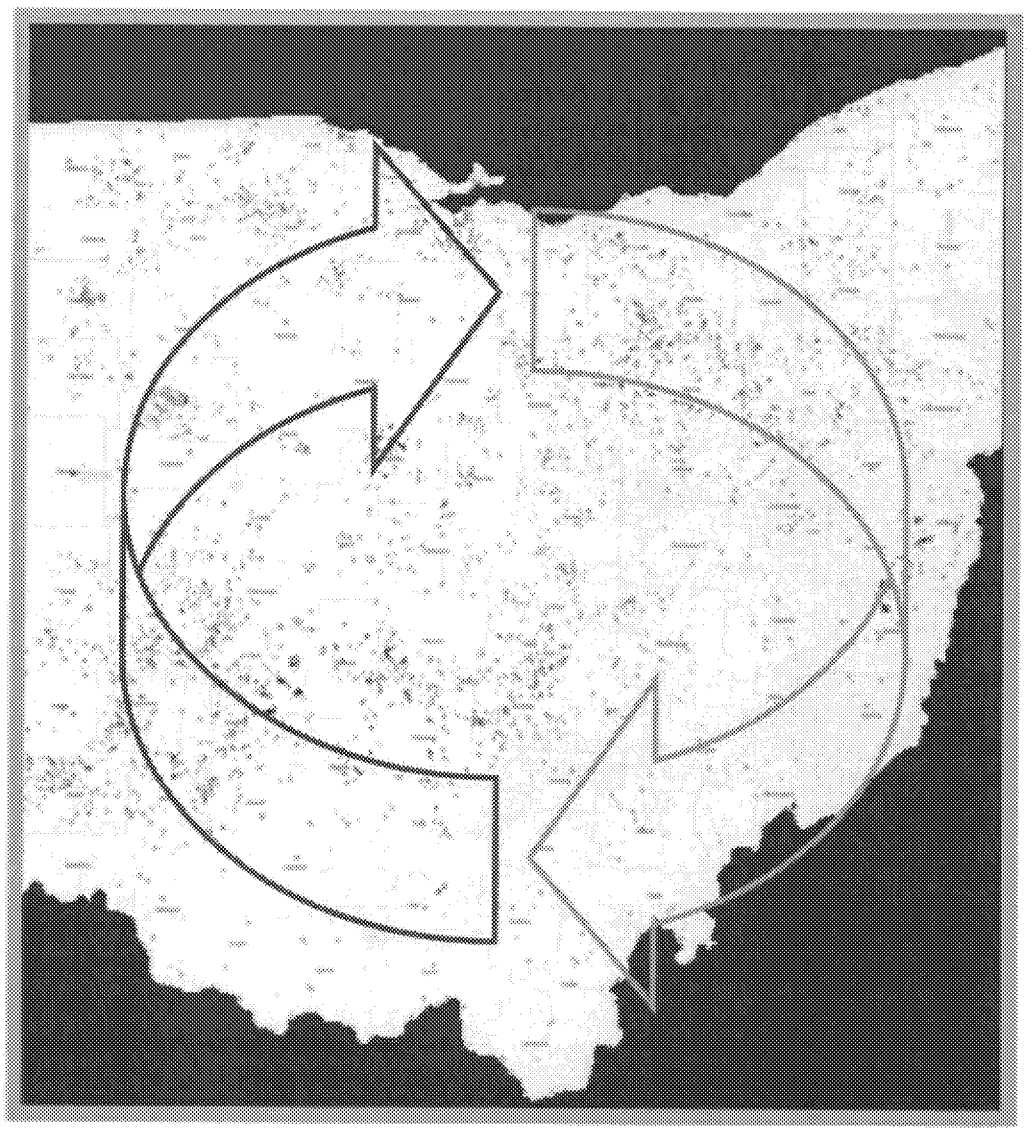
Craig W. Butler, Director

Division of Surface Water

Application for Transfer
Class B Biosolids Beneficial Use Sites



Division of Surface Water
Beneficial Use Site Transfer Request
Class B Beneficial Use Sites

Biosolids Treatment Works Information

Treatment works name: Ringler Energy		
Ohio NPDES permit #: 4IN00204*AD		County: Morrow
Mailing address: 2279 Co Rd 158		
City: Cardington	State: OH	Zip: 43315
Operator of record: Alex Ringler		
Telephone number: 419.253.5300		
Email address: alex@rnenergy.com		

Certification Statement

1. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

2. I have read and understand Chapter 3745-40 of the Ohio Administrative Code (OAC) and I agree to beneficially use biosolids in accordance with all applicable beneficial use requirements and restrictions established.

3. I agree to only beneficially use biosolids that have satisfied a pathogen reduction alternative and a vector attraction reduction option and have metals concentration below the pollutant ceiling concentrations as established in Chapter 3745-40 of the Ohio Administrative Code.

4. I agree to maintain all applicable records established in Chapter 3745-40 of the Ohio Administrative Code.

Signature _____ Date 6 / 29 / 16

This form shall be signed by the operator of record for the treatment works, be an original signature, not a copy, and must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

ED_014244_00000156-00004

Previous Biosolids Treatment Works Information

Treatment works name: Upper Olentangy Water Reclamation Center		
Ohio NPDES permit #: 4PD00004	County: Delaware	
Mailing address: 225 Cherry Street		
City: Delaware	State: Ohio	Zip: 43015
Operator of record: Brad Stanton		
Telephone number: 740-203-1903		
Email address: bstanton@delawareohio.net		

Notification Statement

1. I certify that I have been informed of the potential transfer of the biosolids beneficial use sites detailed within the application for transfer.
2. I agree to maintain all applicable records established in Chapter 3745-40 of the Ohio Administrative Code.

Brad Stanton
Signature[1]

8 / 12 / 16
Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

[1] This form shall be signed by the operator of record for the previous treatment works.

Division of Surface Water
Beneficial Use Site Transfer Request
Class B Beneficial Use Sites

Owner Consent for Beneficial Use

Beneficial use site owner[1]: **Shady Haven Farms, LLC**		
Mailing address: **6331 McCurdy Road**		
City: **Delaware**	State: **OH**	Zip: **43015**
Telephone number: **740.524.2337**		
Email address:		

Certification Statement

1. I agree to allow biosolids generated by the treatment plant identified on Form AFT-1 to be beneficially used on my property at agronomic rates.

2. I understand that the treatment plant that was previously authorized to beneficially use Class B biosolids on the site(s) identified in this application will no longer be authorized to beneficially use Class B biosolids on the site(s) identified in this application.

3. I agree to allow federal, state and local regulatory staff access to the beneficial use site for the purposes of inspecting and authorizing the beneficial use site, beneficially using biosolids, collecting and analyzing samples from the beneficial use site. I reserve the right to ask the above parties for proper identification at any time.

4. I certify that I am holder of legal title to the property described on application form AFT-4 or am authorized by the holder to give consent for the land application of biosolids and that there are no restrictions to the granting of consent under this form.

Shady Haven LLC
Dillon Thurston member 5/30/15
Signature[2] Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

[1] For purposes of this form, "beneficial use site owner" means the person who owns the legal rights to the proposed beneficial use site.

[2] In the event the owner of the beneficial use site changes, Form AFT-3 must be revised and resubmitted to Ohio EPA.

ED_014244_00000156-00006

Beneficial Use Site Operator Consent for Beneficial Use

Beneficial use site operator[1]: **Shady Haven Farms, LLC**		
Mailing address: **6331 McCurdy Road**		
City: **Delaware**	State: **OH**	Zip: **43015**
Telephone number: **740.524.2337**		
Email address:		

Certification Statement

I agree to be responsible for complying with all applicable beneficial use requirements established in Chapter 3745-40 of the Ohio Administrative Code.

Shady Haven LLC
[illegible]
Signature[2]

6 / 30 / 16
Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

[1] For purposes of this form, "beneficial use site operator" means the person who plants, grows, harvests or otherwise manages feed crops, fiber crops, food crops or pasture land on the proposed beneficial use site.

[2] In the event the operator of the beneficial use site changes, Form AFT-4 must be revised and resubmitted to Ohio EPA.

ED_014244_00000156-00007

Beneficial User Information

Beneficial user[1]: Ringler Energy, LLC		
Contact person: Alex Ringler		
Mailing address: 461 St. Rt. 61		
City: Marengo	State: OH	Zip: 43334
Telephone number: 419.253.5330		
Email address: alex@reenergy.com		

Certification Statement

I agree to be responsible for complying with all applicable beneficial use requirements established in Chapter 3745-40 of the Ohio Administrative Code.

Signature

6/29/16
Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

[1] For purposes of this form, the beneficial user means the person who sprays or spreads Class B biosolids onto the surface of the beneficial use site, injects below the surface of the beneficial use site, or incorporates into the soil of the beneficial use site, for the purpose of providing an agronomic benefit.

[2] In the event the beneficial user of the beneficial use site changes, Form AFT-5 must be revised and resubmitted to Ohio EPA.

ED_014244_00000156-00008

Current Beneficial Use Site Information

Ohio EPA site I.D.: **21-000030**	
Field site I.D.: **DDWT-02**	
County: **Delaware**	Township: **Oxford**
Treatment works name: **Upper Olentangy Water Reclamation Center**	
Ohio NPDES permit #: **4 PD00004**	

Date of Last Beneficial Use	Agronomic Rate (dry tons/acre)	Soil Phosphorus			Agronomic Rate Utilized (Check Only One)	
		Date of Soil Analysis	Result (PPM)	Analysis Method (Check Only One)		
1999	Unknown	8/10/2016	14	☐ Bray-Kurtz P1 ☐ Mehlich 3	☐ Nitrogen ☐ <250 lb/acre P_2O_5 ☐ 256 - 500 lb/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ P-Index

A copy of the agronomic rate calculation performed for the most recent beneficial use event must be included.

Is this beneficial use site subject to cumulative loading rates (CPLR)?	Pollutant	CPLR to date (lb/acre)
■ No ☐ Yes If "Yes", the table must be completed.	Arsenic	
	Cadmium	
	Copper	
	Lead	
	Mercury	
	Molybdenum	
	Nickel	
	Selenium	
	Zinc	

Form AFT-6

New Beneficial Use Site Information

Field site I.D.: **DEO-02-07**	
Latitude: **40° 24' 2.84" N**	Longitude: **82° 57' 48.79" W**

Type of crops to be grown:

Crop Type	Expected Yield
Corn	**185**
Soybeans	**50**
Wheat	**90**
Pasture	
Hay	
Other:	

The application must also include all of the following:

- An aerial map of the beneficial use site that clearly identifies the entrance of the beneficial use site from the nearest road and all applicable isolation distances as established in Chapter 3745-40 of the Ohio Administrative Code;
- A vicinity road map at or near the township level that clearly identifies the beneficial use site with all roads labeled;
- A copy of the agronomic rate calculation performed for the most recent beneficial use event on the beneficial use site; and

  The following is correpsondance from Lew Wood, Ringler Energy, regarding the ARC:

  I (Lew Wood) met with Brad Stanton, Public Utilities Director City of Delaware this afternoon and learned that the last application the City was involved in with was roughly 15 years ago. Actual land application data was not available.
- A copy of the most recent soil test results identified in this form.

Division of Surface Water
Beneficial Use Site Transfer Request
Class B Beneficial Use Sites

Biosolids Treatment Works Information

Treatment works name: Ringler Energy		
Ohio NPDES permit #: 4IN00204*AD		County: Morrow
Mailing address: 2279 Co Rd 158		
City: Cardington	State: OH	Zip: 43315
Operator of record: Alex Ringler		
Telephone number: 419.253.5300		
Email address: alex@rrenergy.com		

Certification Statement

1. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

2. I have read and understand Chapter 3745-40 of the Ohio Administrative Code (OAC) and I agree to beneficially use biosolids in accordance with all applicable beneficial use requirements and restrictions established.

3. I agree to only beneficially use biosolids that have satisfied a pathogen reduction alternative and a vector attraction reduction option and have metals concentration below the pollutant ceiling concentrations as established in Chapter 3745-40 of the Ohio Administrative Code.

4. I agree to maintain all applicable records established in Chapter 3745-40 of the Ohio Administrative Code.

Signature _____ Date 6 / 29 / 16

This form shall be signed by the operator of record for the treatment works, be an original signature, not a copy, and must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

ED_014244_00000156-00011

Division of Surface Water
Beneficial Use Site Transfer Request
Class B Beneficial Use Sites

Previous Biosolids Treatment Works Information

Treatment works name: Upper Olentangy Water Reclamation Center		
Ohio NPDES permit #: 4PD00004	County: Delaware	
Mailing address: 225 Cherry Street		
City: Delaware	State: Ohio	Zip: 43015
Operator of record: Brad Stanton		
Telephone number: 740-203-1903		
Email address: bstanton@delawareohio.net		

Notification Statement

1. I certify that I have been informed of the potential transfer of the biosolids beneficial use sites detailed within the application for transfer.
2. I agree to maintain all applicable records established in Chapter 3745-40 of the Ohio Administrative Code.

Signature[1] _____ Date 8 / 12 / 16

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

[1] This form shall be signed by the operator of record for the previous treatment works.

ED_014244_00000156-00012

Division of Surface Water
Beneficial Use Site Transfer Request
Class B Beneficial Use Sites

Owner Consent for Beneficial Use

Beneficial use site owner[1]: **Shady Haven Farms, LLC**		
Mailing address: **6331 McCurdy Road**		
City: **Delaware**	State: **OH**	Zip: **43015**
Telephone number: **740.524.2337**		
Email address:		

Certification Statement

1. I agree to allow biosolids generated by the treatment plant identified on Form AFT-1 to be beneficially used on my property at agronomic rates.

2. I understand that the treatment plant that was previously authorized to beneficially use Class B biosolids on the site(s) identified in this application will no longer be authorized to beneficially use Class B biosolids on the site(s) identified in this application.

3. I agree to allow federal, state and local regulatory staff access to the beneficial use site for the purposes of inspecting and authorizing the beneficial use site, beneficially using biosolids, collecting and analyzing samples from the beneficial use site. I reserve the right to ask the above parties for proper identification at any time.

4. I certify that I am holder of legal title to the property described on application form AFT-4 or am authorized by the holder to give consent for the land application of biosolids and that there are no restrictions to the granting of consent under this form.

Shady Haven LLC
William Thurston member 5/30/16
Signature[2] Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

[1] For purposes of this form, "beneficial use site owner" means the person who owns the legal rights to the proposed beneficial use site.

[2] In the event the owner of the beneficial use site changes, Form AFT-3 must be revised and resubmitted to Ohio EPA.

ED_014244_00000156-00013

Beneficial Use Site Operator Consent for Beneficial Use

Beneficial use site operator[1]: **Shady Haven Farms, LLC**		
Mailing address: **6331 McCurdy Road**		
City: **Delaware**	State: **OH**	Zip: **43015**
Telephone number: **740.524.2337**		
Email address:		

Certification Statement

I agree to be responsible for complying with all applicable beneficial use requirements established in Chapter 3745-40 of the Ohio Administrative Code.

Shady Haven LLC
Corporate Member

Signature[2]

6 / 30 / 16
Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

[1] For purposes of this form, "beneficial use site operator" means the person who plants, grows, harvests or otherwise manages feed crops, fiber crops, food crops or pasture land on the proposed beneficial use site.

[2] In the event the operator of the beneficial use site changes, Form AFT-4 must be revised and resubmitted to Ohio EPA.

ED_014244_00000156-00014

Beneficial User Information

Beneficial user[1]: Ringler Energy, LLC		
Contact person: Alex Ringler		
Mailing address: 461 St. Rt. 61		
City: Marengo	State: OH	Zip: 43334
Telephone number: 419.253.5330		
Email address: alex@renergy.com		

Certification Statement

I agree to be responsible for complying with all applicable beneficial use requirements established in Chapter 3745-40 of the Ohio Administrative Code.

Signature

6/29/16
Date

Original signatures, not copies, must be less than one year old at the time the application for transfer is submitted to Ohio EPA for review.

[1] For purposes of this form, the beneficial user means the person who sprays or spreads Class B biosolids onto the surface of the beneficial use site, injects below the surface of the beneficial use site, or incorporates into the soil of the beneficial use site, for the purpose of providing an agronomic benefit.

[2] In the event the beneficial user of the beneficial use site changes, Form AFT-5 must be revised and resubmitted to Ohio EPA.

ED_014244_00000156-00015

Division of Surface Water
Beneficial Use Site Transfer Request
Class B Beneficial Use Sites

Current Beneficial Use Site Information

Ohio EPA site I.D.: **21-000029**	
Field site I.D.: **DDWT-01**	
County: **Delaware**	Township: **Oxford**
Treatment works name: **Upper Olentangy Water Reclamation Center**	
Ohio NPDES permit #: **4 PD00004**	

Date of Last Beneficial Use	Agronomic Rate (dry tons/acre)	Soil Phosphorus			Agronomic Rate Utilized (Check Only One)	
		Date of Soil Analysis	Result (PPM)	Analysis Method (Check Only One)		
1999	**Unknown**	**8/10/2016**	**22**	☐ Bray-Kurtz P1 ■ Mehlich 3	☐ Nitrogen ☐ <250 lb/acre P_2O_5 ☐ 256 - 500 lb/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ P-Index
A copy of the agronomic rate calculation performed for the most recent beneficial use event must be included.						

Is this beneficial use site subject to cumulative loading rates (CPLR)?	Pollutant	CPLR to date (lb/acre)
■ No ☐ Yes If "Yes", the table must be completed.	Arsenic	
	Cadmium	
	Copper	
	Lead	
	Mercury	
	Molybdenum	
	Nickel	
	Selenium	
	Zinc	

orm AFT-6

ED_014244_00000156-00016

New Beneficial Use Site Information

Field site I.D.: **DEO-02-08**	
Latitude: **40° 24' 19.15" N**	Longitude: **82° 57' 47.54" W**

Type of crops to be grown:

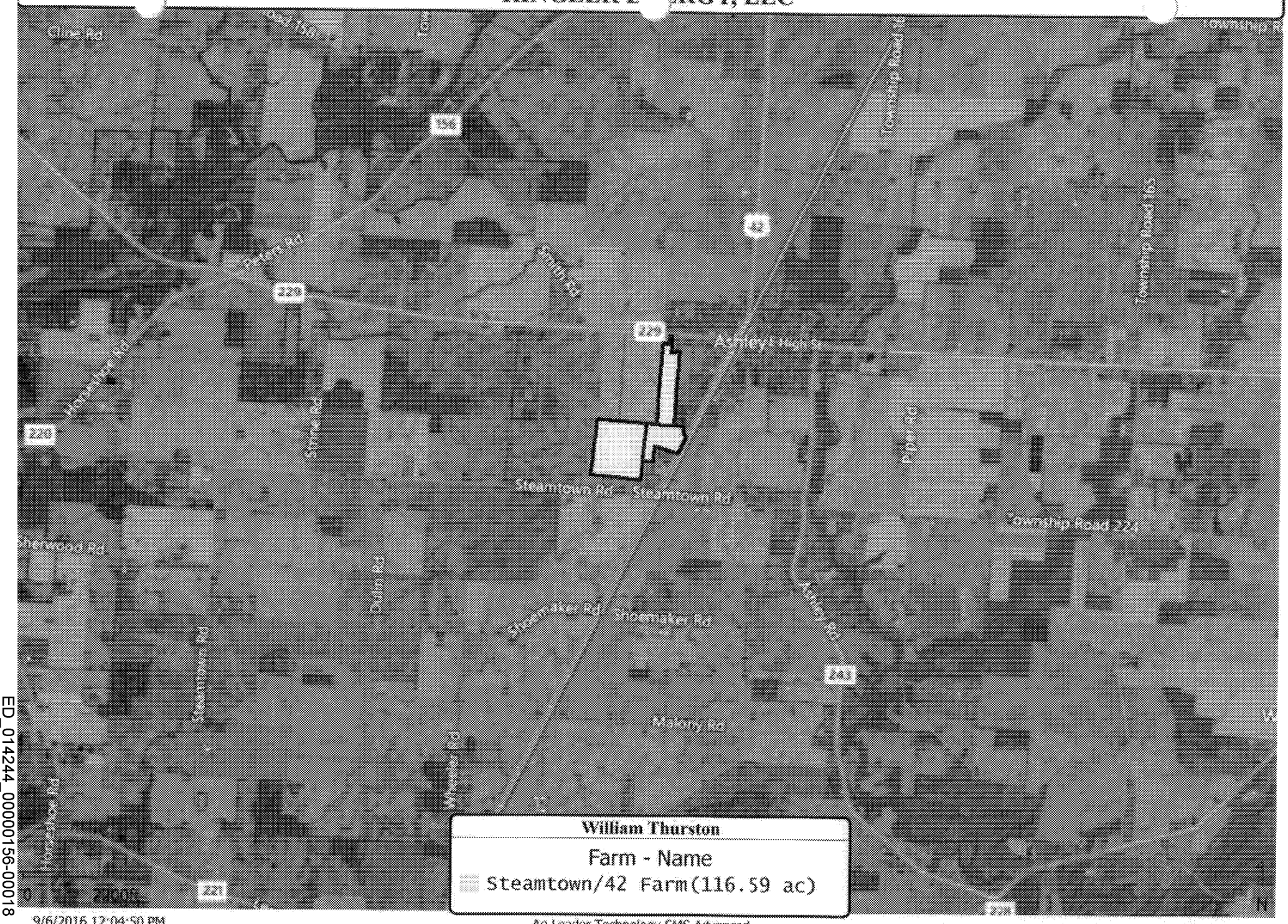
Crop Type	Expected Yield
Corn	**185**
Soybeans	**50**
Wheat	**90**
Pasture	
Hay	
Other:	

The application must also include all of the following:

- An aerial map of the beneficial use site that clearly identifies the entrance of the beneficial use site from the nearest road and all applicable isolation distances as established in Chapter 3745-40 of the Ohio Administrative Code;
- A vicinity road map at or near the township level that clearly identifies the beneficial use site with all roads labeled;
- A copy of the agronomic rate calculation performed for the most recent beneficial use event on the beneficial use site; and

  The following is correpsondance from Lew Wood, Ringler Energy, regarding the ARC:
  I (Lew Wood) met with Brad Stanton, Public Utilities Director City of Delaware this afternoon and learned that the last application the City was involved in with was roughly 15 years ago. Actual land application data was not available.
- A copy of the most recent soil test results identified in this form.

RINGLER ENERGY, LLC



9/6/2016 12:04:50 PM

Ag Leader Technology SMS Advanced

ED_014244_00000156-00018

RINGLER EN[illegible]RGY, LLC

Farm - Name
Steamtown/42 Farm(116.59 ac)

WILLIAM THURSTON
Cty:Delaware, OH Twp:Oxford

ED_014244_00000156-00019

Soil Map—Delaware County, Ohio
(Renergy - Thurston - DEO-02-07)

Map Scale: 1:3,100 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

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

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Map Unit Legend

Delaware County, Ohio (OH041)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	6.8	29.3%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	3.4	14.7%
PwA	Pewamo silty clay loam, 0 to 1 percent slopes	12.9	56.0%
Totals for Area of Interest		**23.0**	**100.0%**

ED_014244_00000156-00021

Map Scale: 1:4,920 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

N

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

Map Unit Legend

Delaware County, Ohio (OH041)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	11.2	36.0%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	2.3	7.4%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	0.4	1.2%
PwA	Pewamo silty clay loam, 0 to 1 percent slopes	17.2	55.4%
Totals for Area of Interest		**31.0**	**100.0%**

ED_014244_00000156-00023

Flooding Frequency Class—Delaware County, Ohio
(Renergy - Thurston - DEO-02-07)

Map Scale: 1:3,100 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

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

ED_014244_00000156-00024

Flooding Frequency Class

Flooding Frequency Class— Summary by Map Unit — Delaware County, Ohio (OH041)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	None	6.8	29.3%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	None	3.4	14.7%
PwA	Pewamo silty clay loam, 0 to 1 percent slopes	None	12.9	56.0%
Totals for Area of Interest			**23.0**	**100.0%**

Description

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent.

"None" means that flooding is not probable. The chance of flooding is nearly 0 percent in any year. Flooding occurs less than once in 500 years.

"Very rare" means that flooding is very unlikely but possible under extremely unusual weather conditions. The chance of flooding is less than 1 percent in any year.

"Rare" means that flooding is unlikely but possible under unusual weather conditions. The chance of flooding is 1 to 5 percent in any year.

"Occasional" means that flooding occurs infrequently under normal weather conditions. The chance of flooding is 5 to 50 percent in any year.

"Frequent" means that flooding is likely to occur often under normal weather conditions. The chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year.

"Very frequent" means that flooding is likely to occur very often under normal weather conditions. The chance of flooding is more than 50 percent in all months of any year.

ED_014244_00000156-00025

Flooding Frequency Class—Delaware County, Ohio
(Renergy Thurston DEO-02-08)

Map Scale: 1:4,920 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

N

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

Flooding Frequency Class

Flooding Frequency Class— Summary by Map Unit — Delaware County, Ohio (OH041)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	None	11.2	36.0%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	None	2.3	7.4%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	None	0.4	1.2%
PwA	Pewamo silty clay loam, 0 to 1 percent slopes	None	17.2	55.4%
Totals for Area of Interest			**31.0**	**100.0%**

Description

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent.

"None" means that flooding is not probable. The chance of flooding is nearly 0 percent in any year. Flooding occurs less than once in 500 years.

"Very rare" means that flooding is very unlikely but possible under extremely unusual weather conditions. The chance of flooding is less than 1 percent in any year.

"Rare" means that flooding is unlikely but possible under unusual weather conditions. The chance of flooding is 1 to 5 percent in any year.

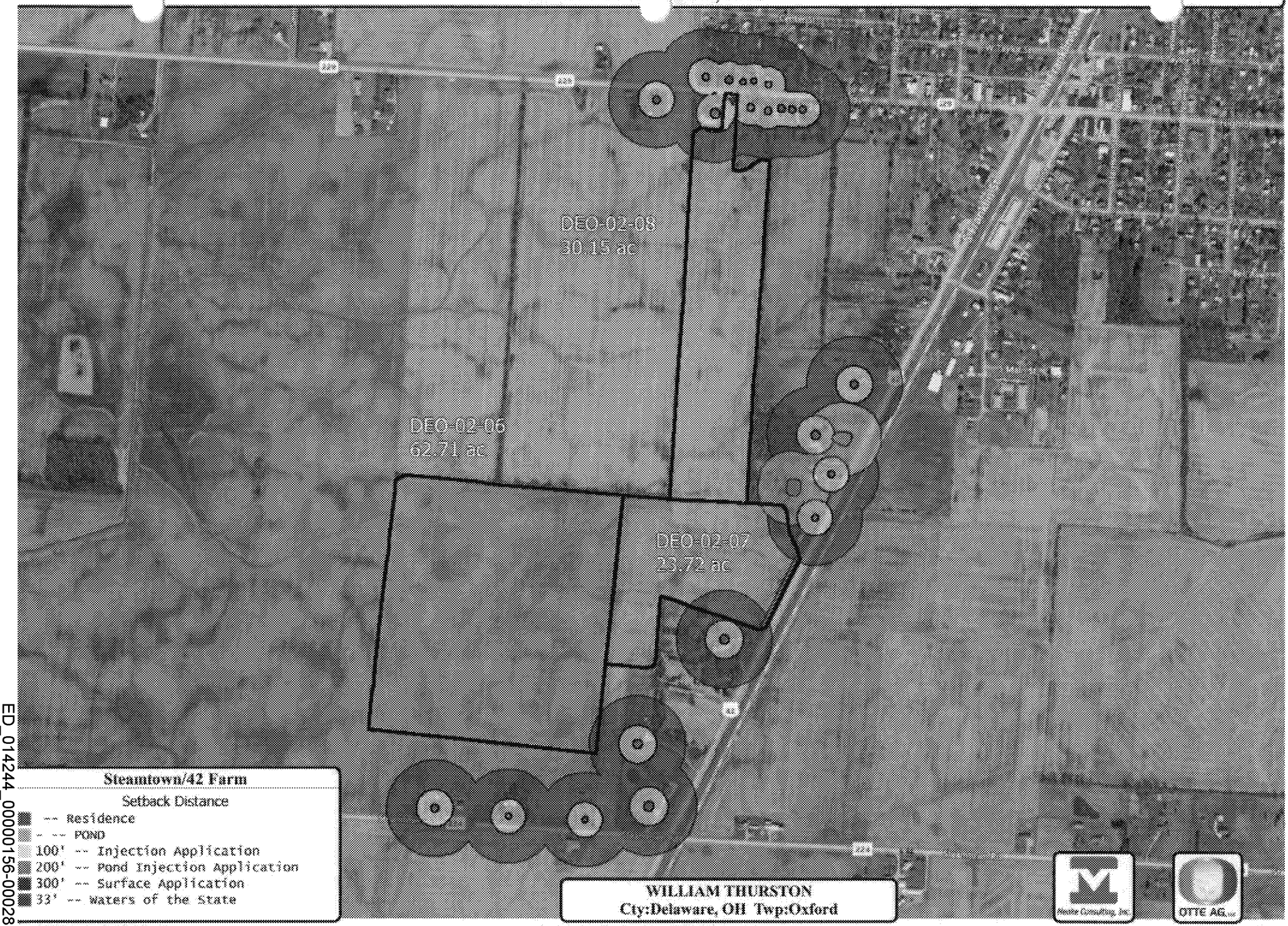
"Occasional" means that flooding occurs infrequently under normal weather conditions. The chance of flooding is 5 to 50 percent in any year.

"Frequent" means that flooding is likely to occur often under normal weather conditions. The chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year.

"Very frequent" means that flooding is likely to occur very often under normal weather conditions. The chance of flooding is more than 50 percent in all months of any year.

ED_014244_00000156-00027

RINGLER ENERGY, LLC



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Ag Leader Technology SMS Advanced

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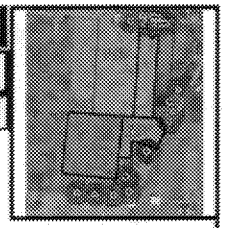
Query 1



Layer 1 - Steamtown/42 Farm | William Thursto

Main Layer

Total area	23.72 ac
Length	4,738.3 ft
Count	1

Description	Value	Area	Length	Count
Farm - Name				
	Steamtown/42 Farm	23.72 ac	4,738.3 ft	1
Field - Name				
	DEO-02-07	23.72 ac	4,738.3 ft	1

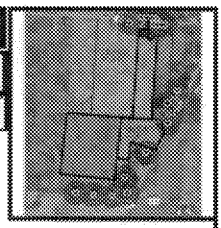
Layer 2 - Setbacks | 2016 |

Main Layer

Total area	3.292 ac
Length	3,787.2 ft
Count	3

Description	Value	Area	Length	Count
Setback Names				
	POND Injection	0.387 ac	555.47 ft	1
	Waters of the State	0.413 ac	1,170.3 ft	1
	Surface	2.492 ac	2,061.4 ft	1
Setback Distance				
	200'	0.387 ac	555.47 ft	1
	33'	0.413 ac	1,170.3 ft	1
	300'	2.492 ac	2,061.4 ft	1

Query 2



Layer 1 - Steamtown/42 Farm | William Thursto

Main Layer

Total area	30.15 ac
Length	6,674.0 ft
Count	1

Description	Value	Area	Length	Count
Farm - Name				
	Steamtown/42 Farm	30.15 ac	6,674.0 ft	1
Field - Name				
	DEO-02-08	30.15 ac	6,674.0 ft	1

Layer 2 - Setbacks | 2016 |

Main Layer

Total area	1.906 ac
Length	2,323.3 ft
Count	2

Description	Value	Area	Length	Count
Setback Names				
	Injection	0.479 ac	1,061.6 ft	1
	Surface	1.426 ac	1,261.8 ft	1
Setback Distance				
	100'	0.479 ac	1,061.6 ft	1
	300'	1.426 ac	1,261.8 ft	1

21-00029 to 30

August 15, 2016

Permitted Beneficial Use Sites

1:18,056

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

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Division of Surface Waters Ohio EPA

County of Delaware, Esri, HERE, DeLorme, INCREMENT P, NGA, USGS | Ohio EPA Division of Surface Water | Esri, HERE |

ED_014244_00000156-00031

lb/A

BROOKSIDE LABORATORIES, INC.

58251-3

SOIL AUDIT AND INVENTORY REPORT

Name Ringler Energy City Cardington State OH

Independent Consultant Brookside Consultants of Ohio, Inc. Date 08/10/2016

Sample Location	THURSTON/STEAM		20-	29-			
Sample Identification			d 18 in 00030	d 18 in 00029			
Lab Number			1150-1	1151-1			
Total Exchange Capacity (ME/100 g)			17.20	21.01			
pH (H_2O 1:1)			5.7	5.4			
Organic Matter (humus) %			3.14	3.35			
Estimated Nitrogen Release		lb/A	243	252			
ANIONS	SOLUBLE SULFUR*	ppm	11	9			
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	192	302			
		ppm of P	14	22			
	BRAY II	lb/A P as P_2O_5	192	302			
		ppm of P	14	22			
	OLSEN	lb/A P as P_2O_5					
		ppm of P					
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	11160	11898			
		ppm	1860	1983			
	MAGNESIUM*	lb/A	1692	1764			
		ppm	282	294			
	POTASSIUM*	lb/A	624	528			
		ppm	104	88			
	SODIUM*	lb/A	174	138			
		ppm	29	23			
BASE SATURATION PERCENT							
	Calcium	%	54.07	47.19			
	Magnesium	%	13.66	11.66			
	Potassium	%	1.55	1.07			
	Sodium	%	0.73	0.48			
	Other Bases	%	6.00	6.60			
	Hydrogen	%	24.00	33.00			
EXTRACTABLE MINORS							
	Boron* (ppm)		0.64	0.80			
	Iron* (ppm)		170	207			
	Manganese* (ppm)		59	20			
	Copper* (ppm)		2.79	2.98			
	Zinc* (ppm)		1.65	1.01			
	Aluminum* (ppm)		861	845			
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						

d - specific depth

* Mehlich III Extractable