Division of Surface Water
Annual Sewage Sludge Report

Facility Information		
Reporting Year: 2021		
Facility Name: Sidney WWTP		
Ohio NPDES Permit Number: 1PD00009*RD		
County: Shelby		
Mailing address: 201 West Poplar Street		
City: Sidney	**State:** OH	**Zip Code:** 45365
Facility telephone number: (937) 498-8720		
Facility email address: mcoy@sidneyoh.com		
Operator of Record Name: Mike Coy		
Operator of Record telehone Number: (937) 498-8720		
Operator of Record email address: bzerkle@sidneyoh.com		
Has sewage sludge been removed from the facility for the reporting year? Y		
Average daily discharge (from DMR report) 4.4508	**Units** Millions of Gallons per Day	
Would you like to provide a corrected value for Average Daily Discharge? N		
Does your facility beneficially use Class B biosolids? Y		
Does your facility have land applied or distributed exceptional quality sewage sludge? N		
Does your facility incinerate, landfill, transfer to PPG Lime Lakes, or transfer to another NPDES permitee? N		

Certification Statement

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 assure 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 for knowing violations.

Electronic Signature:
Mike Coy (User ID: MikeCoy)

Submission Date:
02/16/2022

Printed Name:
Mike Coy

Title:
Operator

Station 581 - Beneficial Use of Class B Biosolids

Facility Name: Sidney WWTP	**Ohio NPDES Permit No:** 1PD00009*RD

Table 1 - Class B Biosolids Verification Matrix

	Vector Attraction Reduction(VAR) Options											
Pathogen Reduction(PR) Alternative	38% Volatile Solids reduction (VAR -1)	Anaerobic Bench Scale Analysis (VAR-2)	Aerobic Bench Scale Analysis (VAR-3)	Specific Oxygen Uptake Rate (VAR-4)	Aerobic Time and Temperature (VAR-5)	Alkali Addition (VAR-6)	>75% Solids without Unstabilized Solids (VAR-7)	>90% Solids with Unstabilized Solids (VAR-8)	Injection (VAR-9)	Immediate Incorporation (VAR-10)	Sewage Sludge Weight(dry tons) DMR Reporting Code 70316	Sewage Sludge Fee Weight(dry tons) DMR Reporting Code 51129
Geometric Mean of Seven Fecal Coliform Samples (P-1)												
Aerobic Digestion (P-2)												
Air Drying (P-3)												
Anaerobic Digestion (P-4)	X										546	546
Composting (P-5)												
Lime Treatment (P-6)												
Equivalent Process (P-7) (USEPA PEC Reccommendation)												

City of Sidney WWTP

Biosolids Land Application Summary

Start Date of Stockpile 10.18.2020 End Date of Stockpile 4.5.2021

FECAL COLIFORM CFU/DRY GRAM ANALYSIS

Sample Date	Result	Sample Date	Result	Sample Date	Result
12/10/2020	2766				
12/10/2020	3576				
12/10/2020	394				
12/10/2020	1563				
12/10/2020	2161				
12/10/2020	2892				
12/10/2020	1448				
3/16/2021	1083				
3/16/2021	1282				
3/16/2021	2552				
3/16/2021	638				
3/16/2021	2233				
3/16/2021	1914				
3/16/2021	1246				

GEOMETRIC MEAN OF SEVEN REQUIRED FECAL COLIFORM RESULTS 1773

GEOMETRIC MEAN OF ALL FECAL COLIFORM RESULTS 1591

VECTOR ATTRACTION

Average Volatile Solids of Primary Sludge during stockpile	83.75
Volatile Solids of Digested Sludge	66.55
Volatile Solids Reduction	61.4%

# of Samples Collected for Land Applied Biosolids Composite

Comments:	Primary %VS Oct. 17 - 31, 2020 = 80.4 %,Nov. 2020= 83.6%,
Dec.2020= 84.5%, Jan. 2021= 84.9%, Feb. 2021= 85.7%, March 2021 = 83.4%, Average= 83.75%.	
Digested: Oct. 17 - 31 = No Sample, Nov. 2020= 66.56%, Dec. 2020= 63.0%, January 2021= 66.74%,	
Feb. 2021 = 67.55%, March 2021 = 68.88%, Average =66.55%	

City of Sidney WWTP

Biosolids Land Application Summary

Start Date of Stockpile 4.15.21 End Date of Stockpile 10.5.21

FECAL COLIFORM CFU/DRY GRAM ANALYSIS

Sample Date	Result	Sample Date	Result	Sample Date	Result
6/3/2021	971				
6/3/2021	1314				
6/3/2021	650				
6/3/2021	1282				
6/3/2021	647				
6/3/2021	966				
6/3/2021	971				
9/1/2021	292				
9/1/2021	1190				
9/1/2021	1190				
9/1/2021	1185				
9/1/2021	298				
9/1/2021	577				
9/1/2021	<294				

GEOMETRIC MEAN OF SEVEN REQUIRED FECAL COLIFORM RESULTS 939

GEOMETRIC MEAN OF ALL FECAL COLIFORM RESULTS 799

VECTOR ATTRACTION

Average Volatile Solids of Primary Sludge during stockpile	84.4
Volatile Solids of Digested Sludge	68.37
Volatile Solids Reduction	60.0%

# of Samples Collected for Land Applied Biosolids Composite

Comments:	Primary %VS Apr 15-30, 2021 = 85.7 %,May 2021= 84.5%,
June 2021= 84.4%, July 2021= 84.4%, Aug 2021= 84.0%	
Sept 2021 = 84.0%, Oct 1-5, 2021= 85.7% Average= 84.4%.	
Digested: Apr 15-30, 2021 = 68.93 %,May 2021= 68.41%,	
June 2021= 69.89%, July 2021= 68.71%, Aug 2021= 67.77%	
Sept 2021 = 67.28%, Oct 1-5, 2021= 67.48% Average= 68.37%.	

Sewage Sludge Monitoring

Facility Name: Sidney WWTP	**Ohio NPDES Permit No:** 1PD00009*RD

Table 5 - Metal Pollutant Analysis

Reporting Month		01003 As (mg/kg)	01028 Cd (mg/kg)	01043 Cu (mg/kg)	01052 Pb (mg/kg)	01068 Ni (mg/kg)	01093 Zn (mg/kg)	01148 Se (mg/kg)	71921 Hg (mg/kg)	78465 Mo (mg/kg)
January	Max									
	Avg									
February	Max									
	Avg									
March	Max	4.26	0	299	18.7	31.5	824	4.85	0	23.6
	Avg	4.26	0	299	18.7	31.5	824	4.85	0	23.6
April	Max									
	Avg									
May	Max									
	Avg									
June	Max	3.82	0	273	16.8	32.4	688	4.66	0	24.6
	Avg	3.82	0	273	16.8	32.4	688	4.66	0	24.6
July	Max									
	Avg									
August	Max									
	Avg									
September	Max	3.62	0	307	16.2	32.2	680	4.9	0	19.9
	Avg	3.62	0	307	16.2	32.2	680	4.9	0	19.9
October	Max									
	Avg									
November	Max									
	Avg									
December	Max	4.52	0	308	16.6	31.3	860	6.28	0	29.4
	Avg	4.52	0	308	16.6	31.3	860	6.28	0	29.4
Highest Reported Maximum Value for Year	Max	4.52	0	308	18.7	32.4	860	6.28	0	29.4
Highest Reported Monthly Average for Year	Avg	4.52	0	308	18.7	32.4	860	6.28	0	29.4

Table 6 -Sewage Sludge Characteristics

Reporting Month		00627 TKN (mg/kg)	00611 NH3-N (mg/kg)	00633 NO2NO3-N (mg/kg)	00668 P (mg/kg)	00938 K (mg/kg)	00400 pH (S.U.)	70318 TS (%)	70322 VS (%)
January	Max								
	Avg								
	Min								
February	Max								
	Avg								
	Min								
March	Max	43600	5250		28200	1340			
	Avg	43600	5250		28200	1340			
	Min	43600	5250		28200	1340			
April	Max								
	Avg								
	Min								
May	Max								
	Avg								
	Min								
June	Max	55700	13000		24900	1580			
	Avg	55700	13000		24900	1580			
	Min	55700	13000		24900	1580			
July	Max								
	Avg								
	Min								
August	Max								
	Avg								
	Min								
September	Max	47500	2690		29300				
	Avg	47500	2690		29300				
	Min	47500	2690		29300				
October	Max								
	Avg								
	Min								
November	Max								
	Avg								
	Min								
December	Max	40800	6570		27500	1440			
	Avg	40800	6570		27500	1440			
	Min	40800	6570		27500	1440			

Class B Agronomic Rates

Facility Name: Sidney WWTP	Ohio NPDES Permit No: 1PD00009*RD

Table 8 -Agronomic Rate Summary

Ohio EPA Site # (or Address)	Date of Beneficial Use	Dry Tons Used	Acres Used	Calculated Agronomic Rate (Dry Tons/acre)	Actual Agronomic Rate (Dry Tons/acre)	Agronomic Rate Utilized	If Multi-year P2O5 Rate Utilized, Enter term of restriction in years	Soil Phosphorus		
								Date of Soil Analysis	Result (PPM)	Analysis Method
75-00025	04/08/2021	32	19	2.3	1.7	Phosphorus Index		05/06/2020	35	Mehlich 3
75-00041	04/19/2021	52	28.15	1.9	1.85	Phosphorus Index		08/06/2019	64	Mehlich 3
75-00003	04/19/2021	12.8	7.58	1.9	1.7	Phosphorus Index		05/06/2020	57	Mehlich 3
75-00102	10/07/2021	48.64	35.2	2.1	1.4	Phosphorus Index		04/29/2020	38	Mehlich 3
75-00103	10/07/2021	95.27	42	2.2	2.29	Phosphorus Index		04/29/2020	31	Mehlich 3
75-00075	11/09/2021	63.75	33.37	2.1	1.91	Phosphorus Index		05/01/2018	43	Mehlich 3
75-00076	11/09/2021	78.13	37.6	2.1	2.08	Phosphorus Index		05/01/2018	43	Mehlich 3
75-00101	04/07/2021	76	28.75	2.25	2.64	Phosphorus Index		06/12/2019	40	Mehlich 3
75-00070	04/19/2021	87	42.81	2.15	2.03	Phosphorus Index		05/06/2020	49	Mehlich 3

Station 581 - Certification Statements(Appendix A)

Facility Name: Sidney WWTP	Ohio NPDES Permit No: 1PD00009*RD

Certification Statements

I certify, under penalty of law, that the information that was used to determine compliance with the pathogen reduction alternative(s) identified in Table 1 of this annual report was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Electronic Signature:
Mike Coy (User ID: MikeCoy)

Submission Date:
02/16/2022

Printed Name:
Mike Coy

Title:
Operator

I certify, under penalty of law, that the information that was used to determine compliance with the vector attraction reduction alternative(s) identified in Table 1 of this annual report was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Electronic Signature:
Mike Coy (User ID: MikeCoy)

Submission Date:
02/16/2022

Printed Name:
Mike Coy

Title:
Operator

(A representative of the treatment works shall sign this form in accordance with the instructions for this annual report)

Please upload Beneficial User - Certification Statement (Appendix C) signed by authorized representative of the beneficial user: Beneficial Use-Hauler form_2021.pdf

Attachments

Were there any complaints during the reporting period? N

Please attach the agronomic rate calculations for each Ohio EPA Site listed in Table 8 - Agronomic Rate Summary Agronomic Loading Rates_2021.pdf **Please attach the site certification required by OAC 3745-40-06(F) for each beneficial use site listed in Table 8 - Agronomic Rate Summary. An example site certification form can be found at https://epa.ohio.gov/dsw/sludge/biosolid.**

Fees

Total Class B Biosolids Sewage Sludge Fee: $1435.43

Total Sewage Sludge Fee: $1435.43

ADDITIONAL INFORMATION
Please add any additional comments or attachments below.
Additional Information attachment(s): Land Application Packet_Fall 2021.pdf, Land Application Packet_Spring 2021.pdf

Ohio Environmental Protection Agency

Division of Surface Water
Annual Sewage Sludge Report

Beneficial User - Certification Statement

Facility name: City of Sidney	Ohio NPDES permit #: 1PD00009*RD

Beneficial User: Right on Excavation		
Contact: Shane Roe		
Mailing address: 8066 Patterson Halpin Rd.		
City: Sidney	State: OH	Zip: 45365
Beneficial user telephone number: 937- 493-0756		
Beneficial user email address: shane@rightonexcavation.com		

Certification Statement

"I certify, under penalty of law, that the information that was used to determine compliance with the land application agronomic management requirements of rule 3745-40-08 of the Administrative Code was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment;" and

"I certify, under penalty of law, that the information that was used to determine compliance with the site restrictions in rule 3745-40-08 of the Administrative Code was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Shane Roe
Signature

4 / 5 / 2021
Date

Shane Roe
Printed Name

President
Title

(A representative of the person who beneficially used the biosolids shall sign this form in accordance with the instructions for this annual report.)

Ohio Environmental Protection Agency

Division of Surface Water
Annual Sewage Sludge Report

Beneficial User - Certification Statement

Facility name: City of Sidney	Ohio NPDES permit #: 1PD00009*RD

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"I certify, under penalty of law, that the information that was used to determine compliance with the site restrictions in rule 3745-40-08 of the Administrative Code was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Signature

10-14-2021
Date

Shane Roe
Printed Name

President
Title

(A representative of the person who beneficially used the biosolids shall sign this form in accordance with the instructions for this annual report.)

Ohio EPA
Annual Sewage Sludge Fee Invoice
Division of Surface Water

Ohio Environmental Protection Agency

Billed to:
Mike Coy
201 West Poplar Street
Sidney, OH 45365

Facility:
City of Sidney WWTP
1091 Childrens Home Road
Sidney, OH 45365

Transaction ID: 1734340
DATE: 02/15/2022
Payment Due: 07/01/2022
Revenue ID: 1475664

ANNUAL SEWAGE SLUDGE FEE INVOICE

[FOR SEWAGE SLUDGE, CALENDAR YEAR 2021; PURSUANT TO ORC 3745-11(Y)]

DESCRIPTION	AMOUNT
Class B Biosolids Sewage Sludge Fee:	$1,435.43

Balance Due **$1,435.43**

PAYMENT OPTIONS - Payment options for this invoice include the following:

Electronic Payment through Ohio EPA's eBusiness Center: To pay this invoice online, visit http://ebiz.epa.ohio.gov
Payment by Check: If paying by check, please send your check with the remittance advice outlined below.

You must write the Revenue ID (if shown below) on your check to ensure proper credit.

CUT OFF THIS STUB AND MAIL IT WITH YOUR CHECK. DO NOT MAIL TOP PORTION.

Pay to: **Treasurer, State of Ohio**. Please write the **Revenue ID** on your check. Please **send this stub** with your check. **DO NOT SEND LETTERS OR OTHER FORMS.**

Ohio EPA
PO Box 77005
Cleveland, OH 44194-7005

Due Date:	07/01/2022
Revenue ID:	1475664
Amount Due:	$1,435.43
Type Code:	ANNSF
Transaction ID:	

1475664 0000143543 ANNSF 000000000 7

Ohio EPA
Ohio Environmental Protection Agency
Division of Surface Water

Biosolids Agronomic Rate Calculation Worksheet

SSW-1 & SSW-2

General Information

Ohio EPA #	SSW-1	
Field ID #	SSW-1	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	2690.00	mg/kg
Total Kjeldahl Nitrogen	47500.00	mg/kg
Total Phosphorus	29300.00	mg/kg
Organic Nitrogen	89.62	lbs/ton
Available Nitrogen	32.27	lbs/ton
Phosphate (P_2O_5)	134.19	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	43.00	ppm	Mehlich 3			
	37.84	ppm				
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The nitrogen agronomic rate, a phosphate beneficial use rate of <250 lbs/acre, a phosphate beneficial use rate of 250-500 lbs/acre if injected/incorporated within 24 hours of beneficial use or if there is >50% ground cover, or the Phosphorus Index.					
County	Shelby					
Soil Type	Crosby silt loam, 2 to 6 percent slopes					
Hydrologic Soil Group	C					
Year 1	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 2	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 3	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 4	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 5	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)						
Expected Crop Yield(s)(bu/acre or tons/acre)						
Crop Nitrogen Requirements (Year 1)	210	lbs/acre				
Existing Available Nitrogen	30	lbs/acre				
Non-Biosolids Nitrogen Application	45	lbs/acre				
Phosphate (P_2O_5) Fertilizer Application	0	lbs/acre				
Non-Biosolids Organic Phosphate (P_2O_5) Application	0	lbs/acre				
Biosolids Phosphate (P_2O_5) Beneficial Use	281.81	lbs/acre				
Total Organic Phosphate (P_2O_5) Fertilizer Application	281.81	lbs/acre				

Phosphorus Index

		Subvalue
Soil Loss	5 tons/acre/year	5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is not adjacent to an intermittent or perenial stream.	0
Runoff Class - Slope Range	1-3%	4
Soil Phosphorus		2.65
Application - Phosphate (P_2O_5) Fertilizer		0
Method - Phosphate (P_2O_5) Fertilizer	None applied.	0
Application - Organic Phosphate (P_2O_5) Fertilizer		16.91
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in ≤ one week or applied on 50% to 80% cover.	1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No	0
Total Phosphorus Index		29.56

Calculated Agronomic Rates

Nitrogen Agronomic Rate	2.10	dry tons/acre
1. Calculated Agronomic Rate	4.18	dry tons/acre
Single Year Phosphate Agronomic Rate	0.57	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.85	dry tons/acre
Phosphorus Index	Medium potential for phosphorus runoff. Use the Nitrogen Agronomic Rate.	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	165.48	dry tons		
Phosphate (P_2O_5) Beneficially Used Per Acre	281.81	lbs/acre		
Acreage	78.8			
Date Biosolids Delivered to Beneficial Use Site				
Dates of Beneficial Use		to		
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days		
Date Signage Posted at Beneficial Use Site	9/1/2021	☐ Yes	☑ No	Is a permanent sign posted at the beneficial use site?
Date Signage Removed from Beneficial Use Site				

OhioEPA
Ohio Environmental Protection Agency
Division of Surface Water

Biosolids Agronomic Rate Calculation Worksheet

General Information

Ohio EPA #	WE-2	
Field ID #	WE-2	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	2690.00	mg/kg
Total Kjeldahl Nitrogen	47500.00	mg/kg
Total Phosphorus	29300.00	mg/kg
Organic Nitrogen	89.62	lbs/ton
Available Nitrogen	32.27	lbs/ton
Phosphate (P_2O_5)	134.19	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	31.00	ppm	Mehlich 3		
	27.28	ppm			
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The nitrogen agronomic rate, a phosphate beneficial use rate of <250 lbs/acre, a phosphate beneficial use rate of 250-500 lbs/acre if injected/incorporated within 24 hours of beneficial use or if there is >50% ground cover, or the Phosphorus Index.				
County	Shelby				
Soil Type	Crosby silt loam, 2 to 6 percent slopes				
Hydrologic Soil Group	C				

	Year 1	Year 2	Year 3	Year 4	Year 5
Crop 1	Corn (Grain)	Soybean	Corn (Grain)	Soybean	
Crop 2					
Crop 3					
Crop 4					
Crop 5					
Crop Type(s)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190	60	190	60	

Crop Nitrogen Requirements (Year 1)	200	lbs/acre		
Existing Available Nitrogen	30	lbs/acre		
Non-Biosolids Nitrogen Application	45	lbs/acre		
Phosphate (P_2O_5) Fertilizer Application	0	lbs/acre		
Non-Biosolids Organic Phosphate (P_2O_5) Application	0	lbs/acre		
Biosolids Phosphate (P_2O_5) Beneficial Use	295.23	lbs/acre		
Total Organic Phosphate (P_2O_5) Fertilizer Application	295.23	lbs/acre		

Phosphorus Index

			Subvalue
Soil Loss	5	tons/acre/year	5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is not adjacent to an intermittent or perenial stream.		0
Runoff Class - Slope Range	1-3%		4
Soil Phosphorus			1.91
Application - Phosphate (P_2O_5) Fertilizer			0
Method - Phosphate (P_2O_5) Fertilizer	None applied.		0
Application - Organic Phosphate (P_2O_5) Fertilizer			17.71
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in ≤ one week or applied on 50% to 80% cover.		1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No		0
Total Phosphorus Index			29.62

Calculated Agronomic Rates

Nitrogen Agronomic Rate	2.20	dry tons/acre
I. Calculated Agronomic Rate	3.87	dry tons/acre
Single Year Phosphate Agronomic Rate	0.57	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.85	dry tons/acre
Phosphorus Index	Medium potential for phosphorus runoff. Use the Nitrogen Agronomic Rate.	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	92.09	dry tons		
Phosphate (P_2O_5) Beneficially Used Per Acre	295.22	lbs/acre		
Acreage	41.86			
Date Biosolids Delivered to Beneficial Use Site				
Dates of Beneficial Use		to		
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days		
Date Signage Posted at Beneficial Use Site	9/1/2021	☐ Yes	☑ No	Is a permanent sign posted at the beneficial use site?
Date Signage Removed from Beneficial Use Site				

OhioEPA
Ohio Environmental Protection Agency
Division of Surface Water

Biosolids Agronomic Rate Calculation Worksheet

General Information

Ohio EPA #	WE-1	
Field ID #	WE-1	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	2690.00	mg/kg
Total Kjeldahl Nitrogen	47500.00	mg/kg
Total Phosphorus	29300.00	mg/kg
Organic Nitrogen	89.62	lbs/ton
Available Nitrogen	32.27	lbs/ton
Phosphate (P_2O_5)	134.19	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	38.00	ppm	Mehlich 3			
	33.44	ppm				
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The nitrogen agronomic rate, a phosphate beneficial use rate of <250 lbs/acre, a phosphate beneficial use rate of 250-500 lbs/acre if injected/incorporated within 24 hours of beneficial use or if there is >50% ground cover, or the Phosphorus Index.					
County	Shelby					
Soil Type	Crosby silt loam, 2 to 6 percent slopes					
Hydrologic Soil Group	C					
Year 1	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 2	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 3	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 4	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 5	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)						
Expected Crop Yield(s)(bu/acre or tons/acre)						
Crop Nitrogen Requirements (Year 1)	210	lbs/acre				
Existing Available Nitrogen	30	lbs/acre				
Non-Biosolids Nitrogen Application	45	lbs/acre				
Phosphate (P_2O_5) Fertilizer Application	0	lbs/acre				
Non-Biosolids Organic Phosphate (P_2O_5) Application	0	lbs/acre				
Biosolids Phosphate (P_2O_5) Beneficial Use	281.81	lbs/acre				
Total Organic Phosphate (P_2O_5) Fertilizer Application	281.81	lbs/acre				

Phosphorus Index

		Subvalue
Soil Loss	5 tons/acre/year	5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is not adjacent to an intermittent or perenial stream.	0
Runoff Class - Slope Range	1-3%	4
Soil Phosphorus		2.34
Application - Phosphate (P_2O_5) Fertilizer		0
Method - Phosphate (P_2O_5) Fertilizer	None applied.	0
Application - Organic Phosphate (P_2O_5) Fertilizer		16.91
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in ≤ one week or applied on 50% to 80% cover.	1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No	0
Total Phosphorus Index		29.25

Calculated Agronomic Rates

Nitrogen Agronomic Rate	2.10	dry tons/acre
I. Calculated Agronomic Rate	4.18	dry tons/acre
Single Year Phosphate Agronomic Rate	0.57	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.85	dry tons/acre
Phosphorus Index	Medium potential for phosphorus runoff. Use the Nitrogen Agronomic Rate.	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	79.7	dry tons		
Phosphate (P_2O_5) Beneficially Used Per Acre	281.83	lbs/acre		
Acreage	37.95			
Date Biosolids Delivered to Beneficial Use Site				
Dates of Beneficial Use		to		
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days		
Date Signage Posted at Beneficial Use Site	9/1/2021		☐ Yes	Is a permanent sign posted at the beneficial use site?
Date Signage Removed from Beneficial Use Site			☑ No	

Ohio EPA
Ohio Environmental Protection Agency
Division of Surface Water

Biosolids Agronomic Rate Calculation Worksheet

General Information

Ohio EPA #	2	
Field ID #	2	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	5250.00	mg/kg
Total Kjeldahl Nitrogen	43600.00	mg/kg
Total Phosphorus	28200.00	mg/kg
Organic Nitrogen	76.70	lbs/ton
Available Nitrogen	33.51	lbs/ton
Phosphate (P_2O_5)	129.16	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	31.00	ppm	Mehlich 3			
	27.28	ppm				
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The nitrogen agronomic rate, a phosphate beneficial use rate of <250 lbs/acre, a phosphate beneficial use rate of 256-500 lbs/acre if injected/incorporated within 24 hours of beneficial use or if there is >50% ground cover, or the Phosphorus Index.					
County	Shelby					
Soil Type	Eldean loam, 0 to 2 percent slopes					
Hydrologic Soil Group	C					
Year 1	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 2	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 3	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 4	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 5	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)						
Expected Crop Yield(s)(bu/acre or tons/acre)						
Crop Nitrogen Requirements (Year 1)	200	lbs/acre				
Existing Available Nitrogen	30	lbs/acre				
Non-Biosolids Nitrogen Application	45	lbs/acre				
Phosphate (P_2O_5) Fertilizer Application	0	lbs/acre				
Non-Biosolids Organic Phosphate (P_2O_5) Application	0	lbs/acre				
Biosolids Phosphate (P_2O_5) Beneficial Use	245.40	lbs/acre				
Total Organic Phosphate (P_2O_5) Fertilizer Application	245.40	lbs/acre				

Phosphorus Index

		Subvalue
Soil Loss	5 tons/acre/year	5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is adjacent to an intermittent or perenial stream.	4
Runoff Class - Slope Range	1-3%	4
Soil Phosphorus		1.91
Application - Phosphate (P_2O_5) Fertilizer		0
Method - Phosphate (P_2O_5) Fertilizer	None applied.	0
Application - Organic Phosphate (P_2O_5) Fertilizer		14.72
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in 5 one week or applied on 50% to 80% cover.	1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No	0
Total Phosphorus Index		30.63

Calculated Agronomic Rates

Nitrogen Agronomic Rate	1.90	dry tons/acre
i. Calculated Agronomic Rate	3.73	dry tons/acre
Single Year Phosphate Agronomic Rate	0.59	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.92	dry tons/acre
Phosphorus Index	High potential for phosphorus runoff. Use the Phosphate Agronomic Rate (single or multi year).	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	24.7	dry tons		
Phosphate (P_2O_5) Beneficially Used Per Acre	245.40	lbs/acre		
Acreage	13			
Date Biosolids Delivered to Beneficial Use Site				
Dates of Beneficial Use		to		
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days		
Date Signage Posted at Beneficial Use Site			☐ Yes	Is a permanent sign posted at the beneficial use site?
Date Signage Removed from Beneficial Use Site			☑ No	

OhioEPA
Ohio Environmental Protection Agency
Division of Surface Water

Biosolids Agronomic Rate Calculation Worksheet

General Information

Ohio EPA #	1	
Field ID #	1	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	5250.00	mg/kg
Total Kjeldahl Nitrogen	43600.00	mg/kg
Total Phosphorus	28200.00	mg/kg
Organic Nitrogen	76.70	lbs/ton
Available Nitrogen	33.51	lbs/ton
Phosphate (P_2O_5)	129.16	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	47.00	ppm	Mehlich 3			
	41.36	ppm				
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The Nitrogen Agronomic Rate, the Multi-Year Phosphate Agronomic Rate, or the Phosphorus Index.					
County	Shelby					
Soil Type	Glynwood silt loam, 2 to 6 percent slopes					
Hydrologic Soil Group	C					
Year 1	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 2	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 3	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 4	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 5	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5	
Crop Type(s)						
Expected Crop Yield(s)(bu/acre or tons/acre)						
Crop Nitrogen Requirements (Year 1)	200	lbs/acre				
Existing Available Nitrogen	30	lbs/acre				
Non-Biosolids Nitrogen Application	45	lbs/acre				
Phosphate (P_2O_5) Fertilizer Application	0	lbs/acre				
Non-Biosolids Organic Phosphate (P_2O_5) Application	0	lbs/acre				
Biosolids Phosphate (P_2O_5) Beneficial Use	245.40	lbs/acre				
Total Organic Phosphate (P_2O_5) Fertilizer Application	245.40	lbs/acre				

Phosphorus Index

			Subvalue
Soil Loss	5	tons/acre/year	5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is adjacent to an intermittent or perenial stream.		4
Runoff Class - Slope Range	2-3%		4
Soil Phosphorus			2.90
Application - Phosphate (P_2O_5) Fertilizer			0
Method - Phosphate (P_2O_5) Fertilizer	None applied.		0
Application - Organic Phosphate (P_2O_5) Fertilizer			14.72
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in ≤ one week or applied on 50% to 80% cover.		1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No		0
Total Phosphorus Index			31.62

Calculated Agronomic Rates

Nitrogen Agronomic Rate	1.90	dry tons/acre
L Calculated Agronomic Rate	3.73	dry tons/acre
Single-Year Phosphate Agronomic Rate	0.59	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.92	dry tons/acre
Phosphorus Index	High potential for phosphorus runoff. Use the Phosphate Agronomic Rate (single or multi year).	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	35.91	dry tons		
Phosphate (P_2O_5) Beneficially Used Per Acre	245.40	lbs/acre		
Acreage	18.9			
Date Biosolids Delivered to Beneficial Use Site				
Dates of Beneficial Use		to		
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days		
Date Signage Posted at Beneficial Use Site			☐ Yes	Is a permanent sign posted at the beneficial use site?
Date Signage Removed from Beneficial Use Site			☑ No	

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Biosolids Agronomic Rate Calculation Worksheet

General Information

Ohio EPA #	ARHome-4	
Field ID #	ARHome-4 (west)	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	5250.00	mg/kg
Total Kjeldahl Nitrogen	43600.00	mg/kg
Total Phosphorus	28200.00	mg/kg
Organic Nitrogen	76.70	lbs/ton
Available Nitrogen	33.51	lbs/ton
Phosphate (P_2O_5)	129.16	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	64.00 ppm	Mehlich 3			
	58.32 ppm				
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The Nitrogen Agronomic Rate, the Multi-Year Phosphate Agronomic Rate, or the Phosphorus Index.				
County	Shelby				
Soil Type	Blount silt loam, 2 to 6 percent slopes				
Hydrologic Soil Group	C				
Year 1	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)				
Expected Crop Yield(s)(bu/acre or tons/acre)	190				
Year 2	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean				
Expected Crop Yield(s)(bu/acre or tons/acre)	60				
Year 3	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)				
Expected Crop Yield(s)(bu/acre or tons/acre)	190				
Year 4	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean				
Expected Crop Yield(s)(bu/acre or tons/acre)	60				
Year 5	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)					
Expected Crop Yield(s)(bu/acre or tons/acre)					
Crop Nitrogen Requirements (Year 1)	200	lbs/acre			
Existing Available Nitrogen	30	lbs/acre			
Non-Biosolids Nitrogen Application	45	lbs/acre			
Phosphate (P_2O_5) Fertilizer Application	0	lbs/acre			
Non-Biosolids Organic Phosphate (P_2O_5) Application	0	lbs/acre			
Biosolids Phosphate (P_2O_5) Beneficial Use	258.31	lbs/acre			
Total Organic Phosphate (P_2O_5) Fertilizer Application	258.31	lbs/acre			

Phosphorus Index

			Subvalue
Soil Loss	5	tons/acre/year	5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is not adjacent to an intermittent or perenial stream.		0
Runoff Class - Slope Range	1-3%		4
Soil Phosphorus			3.94
Application - Phosphate (P_2O_5) Fertilizer			0
Method - Phosphate (P_2O_5) Fertilizer	None applied.		0
Application - Organic Phosphate (P_2O_5) Fertilizer			15.50
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in 5 one week or applied on 50% to 80% cover.		1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No		0
Total Phosphorus Index			29.44

Calculated Agronomic Rates

Nitrogen Agronomic Rate	2.00	dry tons/acre
I. Calculated Agronomic Rate	3.73	dry tons/acre
Single Year Phosphate Agronomic Rate	0.59	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.92	dry tons/acre
Phosphorus Index	Medium potential for phosphorus runoff. Use the Nitrogen Agronomic Rate.	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	59	dry tons		
Phosphate (P_2O_5) Beneficially Used Per Acre	258.31	lbs/acre		
Acreage	29.5			
Date Biosolids Delivered to Beneficial Use Site				
Dates of Beneficial Use		to		
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days		
Date Signage Posted at Beneficial Use Site			☐ Yes	Is a permanent sign posted at the beneficial use site?
Date Signage Removed from Beneficial Use Site			☑ No	

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Biosolids Agronomic Rate Calculation Worksheet

General Information

Ohio EPA #	WEST-2	
Field ID #	WEST-2	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	5250.00	mg/kg
Total Kjeldahl Nitrogen	43600.00	mg/kg
Total Phosphorus	28200.00	mg/kg
Organic Nitrogen	76.70	lbs/ton
Available Nitrogen	33.51	lbs/ton
Phosphate (P_2O_5)	129.16	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	57.00	ppm	Mehlich 3		
	50.15	ppm			
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The Nitrogen Agronomic Rate, the Multi-Year Phosphate Agronomic Rate, or the Phosphorus Index.				
County	Shelby				
Soil Type	Blount silt loam, 2 to 6 percent slopes				
Hydrologic Soil Group	C				
Year 1	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)				
Expected Crop Yield(s)(bu/acre or tons/acre)	190				
Year 2	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean				
Expected Crop Yield(s)(bu/acre or tons/acre)	60				
Year 3	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)				
Expected Crop Yield(s)(bu/acre or tons/acre)	190				
Year 4	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean				
Expected Crop Yield(s)(bu/acre or tons/acre)	60				
Year 5	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)					
Expected Crop Yield(s)(bu/acre or tons/acre)					
Crop Nitrogen Requirements (Year 1)	200	lbs/acre			
Existing Available Nitrogen	30	lbs/acre			
Non-Biosolids Nitrogen Application	45	lbs/acre			
Phosphate (P_2O_5) Fertilizer Application	0	lbs/acre			
Non-Biosolids Organic Phosphate (P_2O_5) Application	0	lbs/acre			
Biosolids Phosphate (P_2O_5) Beneficial Use	245.40	lbs/acre			
Total Organic Phosphate (P_2O_5) Fertilizer Application	245.40	lbs/acre			

Phosphorus Index

			Subvalue
Soil Loss	5	tons/acre/year	5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is adjacent to an intermittent or perenial stream.		4
Runoff Class - Slope Range	1-3%		4
Soil Phosphorus			3.51
Application - Phosphate (P_2O_5) Fertilizer			0
Method - Phosphate (P_2O_5) Fertilizer	None applied.		0
Application - Organic Phosphate (P_2O_5) Fertilizer			14.72
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in 5 one week or applied on 50% to 80% cover.		1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No		0
Total Phosphorus Index			32.23

Calculated Agronomic Rates

Nitrogen Agronomic Rate	1.90	dry tons/acre
I. Calculated Agronomic Rate	3.73	dry tons/acre
Single Year Phosphate Agronomic Rate	0.59	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.92	dry tons/acre
Phosphorus Index	High potential for phosphorus runoff. Use the Phosphate Agronomic Rate (single or multi year).	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	15.2	dry tons		
Phosphate (P_2O_5) Beneficially Used Per Acre	245.40	lbs/acre		
Acreage	8			
Date Biosolids Delivered to Beneficial Use Site				
Dates of Beneficial Use		to		
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days		
Date Signage Posted at Beneficial Use Site			☐ Yes	Is a permanent sign posted at the beneficial use site?
Date Signage Removed from Beneficial Use Site			☑ No	

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Biosolids Agronomic Rate Calculation Worksheet

General Information

Ohio EPA #	NB-1	
Field ID #	NB-1	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	5250.00	mg/kg
Total Kjeldahl Nitrogen	43600.00	mg/kg
Total Phosphorus	28200.00	mg/kg
Organic Nitrogen	76.70	lbs/ton
Available Nitrogen	33.51	lbs/ton
Phosphate (P_2O_5)	129.16	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	49.00 ppm	Mehlich 3			
	43.12 ppm				
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The Nitrogen Agronomic Rate, the Multi-Year Phosphate Agronomic Rate, or the Phosphorus Index.				
County	Shelby				
Soil Type	Blount silt loam, 2 to 6 percent slopes				
Hydrologic Soil Group	C				
Year 1	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)				
Expected Crop Yield(s)(bu/acre or tons/acre)	190				
Year 2	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean				
Expected Crop Yield(s)(bu/acre or tons/acre)	60				
Year 3	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)				
Expected Crop Yield(s)(bu/acre or tons/acre)	190				
Year 4	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean				
Expected Crop Yield(s)(bu/acre or tons/acre)	60				
Year 5	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)					
Expected Crop Yield(s)(bu/acre or tons/acre)					
Crop Nitrogen Requirements (Year 1)	200	lbs/acre			
Existing Available Nitrogen	30	lbs/acre			
Non-Biosolids Nitrogen Application	45	lbs/acre			
Phosphate (P_2O_5) Fertilizer Application	0	lbs/acre			
Non-Biosolids Organic Phosphate (P_2O_5) Application	0	lbs/acre			
Biosolids Phosphate (P_2O_5) Beneficial Use	277.69	lbs/acre			
Total Organic Phosphate (P_2O_5) Fertilizer Application	277.69	lbs/acre			

Phosphorus Index

			Subvalue
Soil Loss	5 tons/acre/year		5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is not adjacent to an intermittent or perenial stream.		0
Runoff Class - Slope Range	1-3%		4
Soil Phosphorus			3.02
Application - Phosphate (P_2O_5) Fertilizer			0
Method - Phosphate (P_2O_5) Fertilizer	None applied.		0
Application - Organic Phosphate (P_2O_5) Fertilizer			16.66
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in ≤ one week or applied on 50% to 80% cover.		1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No		0
Total Phosphorus Index			29.68

Calculated Agronomic Rates

Nitrogen Agronomic Rate	2.15	dry tons/acre
i. Calculated Agronomic Rate	3.73	dry tons/acre
Single Year Phosphate Agronomic Rate	0.59	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.92	dry tons/acre
Phosphorus Index	Medium potential for phosphorus runoff. Use the Nitrogen Agronomic Rate.	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	94.6	dry tons			
Phosphate (P_2O_5) Beneficially Used Per Acre	277.69	lbs/acre			
Acreage	44				
Date Biosolids Delivered to Beneficial Use Site					
Dates of Beneficial Use		to			
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days			
Date Signage Posted at Beneficial Use Site			☐ Yes	Is a permanent sign posted at the beneficial use site?	
Date Signage Removed from Beneficial Use Site			☑ No		

92 D.T.
42.81 Acres

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Biosolids Agronomic Rate Calculation Worksheet

General Information

Ohio EPA #	DEERPEN-1	
Field ID #	DEERPEN-1	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	5250.00	mg/kg
Total Kjeldahl Nitrogen	43600.00	mg/kg
Total Phosphorus	28200.00	mg/kg
Organic Nitrogen	76.70	lbs/ton
Available Nitrogen	33.51	lbs/ton
Phosphate (P_2O_5)	129.16	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	35.00 ppm	Mehlich 3			
	30.80 ppm				
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The nitrogen agronomic rate, a phosphate beneficial use rate of <250 lbs/acre, a phosphate beneficial use rate of 256-500 lbs/acre if injected/incorporated within 24 hours of beneficial use or if there is >50% ground cover, or the Phosphorus Index.				
County	Shelby				
Soil Type	Celina silt loam, 0 to 2 percent slopes				
Hydrologic Soil Group	C				
Year 1	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)				
Expected Crop Yield(s)(bu/acre or tons/acre)	190				
Year 2	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean				
Expected Crop Yield(s)(bu/acre or tons/acre)	60				
Year 3	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)				
Expected Crop Yield(s)(bu/acre or tons/acre)	190				
Year 4	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean				
Expected Crop Yield(s)(bu/acre or tons/acre)	60				
Year 5	Crop 1	Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)					
Expected Crop Yield(s)(bu/acre or tons/acre)					
Crop Nitrogen Requirements (Year 1)	200 lbs/acre				
Existing Available Nitrogen	30 lbs/acre				
Non-Biosolids Nitrogen Application	45 lbs/acre				
Phosphate (P_2O_5) Fertilizer Application	0 lbs/acre				
Non-Biosolids Organic Phosphate (P_2O_5) Application	0 lbs/acre				
Biosolids Phosphate (P_2O_5) Beneficial Use	297.06 lbs/acre				
Total Organic Phosphate (P_2O_5) Fertilizer Application	297.06 lbs/acre				

Phosphorus Index

		Subvalue
Soil Loss	5 tons/acre/year	5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is not adjacent to an intermittent or perenial stream.	0
Runoff Class - Slope Range	1-3%	4
Soil Phosphorus		2.16
Application - Phosphate (P_2O_5) Fertilizer		0
Method - Phosphate (P_2O_5) Fertilizer	None applied.	0
Application - Organic Phosphate (P_2O_5) Fertilizer		17.82
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in ≤ one week or applied on 50% to 80% cover.	1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No	0
Total Phosphorus Index		29.98

Calculated Agronomic Rates

Nitrogen Agronomic Rate	2.30	dry tons/acre
i. Calculated Agronomic Rate	3.73	dry tons/acre
Single Year Phosphate Agronomic Rate	0.59	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.92	dry tons/acre
Phosphorus Index	Medium potential for phosphorus runoff. Use the Nitrogen Agronomic Rate.	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	42.78	dry tons		
Phosphate (P_2O_5) Beneficially Used Per Acre	297.06	lbs/acre		
Acreage	18.6			
Date Biosolids Delivered to Beneficial Use Site				
Dates of Beneficial Use		to		
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days		
Date Signage Posted at Beneficial Use Site			☐ Yes	Is a permanent sign posted at the beneficial use site?
Date Signage Removed from Beneficial Use Site			☑ No	

OhioEPA
Ohio Environmental Protection Agency
Division of Surface Water

Biosolids Agronomic Rate Calculation Worksheet

General Information

Ohio EPA #	BS-1	
Field ID #	BS-1	
Generator Name	City of Sidney WWTP	

Biosolids Data and Beneficial Use Methods

Ammonia Nitrogen	5250.00	mg/kg
Total Kjeldahl Nitrogen	43600.00	mg/kg
Total Phosphorus	28200.00	mg/kg
Organic Nitrogen	76.70	lbs/ton
Available Nitrogen	33.51	lbs/ton
Phosphate (P_2O_5)	129.16	lbs/ton
Will immediate incorporation / injection be performed?	No	

Beneficial Use Site Information

Soil Phosphorus	40.00	ppm	Mehlich 3			
	35.20	ppm				
Please note that the agronomic rates and phosphorus index have been calculated within the *Calculated Agronomic Rates* section; however, based upon the above provided *Soil Phosphorus* result, you must utilize the most limiting factor or the *Phosphorus Index*:	The nitrogen agronomic rate, a phosphate beneficial use rate of <250 lbs/acre, a phosphate beneficial use rate of 250-500 lbs/acre if injected/incorporated within 24 hours of beneficial use or if there is >50% ground cover, or the Phosphorus Index.					
County	Shelby					
Soil Type	Crosby silt loam, 2 to 6 percent slopes					
Hydrologic Soil Group	C					
Year 1	Crop 1		Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 2	Crop 1		Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 3	Crop 1		Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Corn (Grain)					
Expected Crop Yield(s)(bu/acre or tons/acre)	190					
Year 4	Crop 1		Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)	Soybean					
Expected Crop Yield(s)(bu/acre or tons/acre)	60					
Year 5	Crop 1		Crop 2	Crop 3	Crop 4	Crop 5
Crop Type(s)						
Expected Crop Yield(s)(bu/acre or tons/acre)						
Crop Nitrogen Requirements (Year 1)	200	lbs/acre				
Existing Available Nitrogen	30	lbs/acre				
Non-Biosolids Nitrogen Application	45	lbs/acre				
Phosphate (P_2O_5) Fertilizer Application	0	lbs/acre				
Non-Biosolids Organic Phosphate (P_2O_5) Application	0	lbs/acre				
Biosolids Phosphate (P_2O_5) Beneficial Use	290.60	lbs/acre				
Total Organic Phosphate (P_2O_5) Fertilizer Application	290.60	lbs/acre				

Phosphorus Index

		Subvalue
Soil Loss	5 tons/acre/year	5
Connectivity to "waters of the State"	Concentrated flow does not leave the beneficial use site and is not adjacent to an intermittent or perenial stream.	0
Runoff Class - Slope Range	1-3%	4
Soil Phosphorus		2.46
Application - Phosphate (P_2O_5) Fertilizer		0
Method - Phosphate (P_2O_5) Fertilizer	None applied.	0
Application - Organic Phosphate (P_2O_5) Fertilizer		17.44
Method - Organic Phosphate (P_2O_5) Fertilizer	Incorporation in 5 one week or applied on 50% to 80% cover.	1
Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393?	No	0
Total Phosphorus Index		29.90

Calculated Agronomic Rates

Nitrogen Agronomic Rate	2.25	dry tons/acre
1. Calculated Agronomic Rate	3.73	dry tons/acre
Single Year Phosphate Agronomic Rate	0.59	dry tons/acre
Multi-Year Phosphate Agronomic Rate	1.92	dry tons/acre
Phosphorus Index	Medium potential for phosphorus runoff. Use the Nitrogen Agronomic Rate.	

Beneficial Use Site Records

Quantity of Biosolids Beneficially Used	56.25	dry tons		
Phosphate (P_2O_5) Beneficially Used Per Acre	290.60	lbs/acre		
Acreage	25			
Date Biosolids Delivered to Beneficial Use Site				
Dates of Beneficial Use		to		
Total Days Biosolids Stored at Beneficial Use Site	0.00	Days		
Date Signage Posted at Beneficial Use Site			☐ Yes	Is a permanent sign posted at the beneficial use site?
Date Signage Removed from Beneficial Use Site			☑ No	

Ohio EPA - Division of Surface Water
Class B Beneficial Use Site Re-Certification

Ohio Administrative Code (OAC) 3745-40-06(F) requires the permittee to certify that prior to beneficial use, each authorized beneficial use site was evaluated for changes at or near the beneficial use site that may affect site restrictions.

If changes have occurred at or near the beneficial use site, the permittee shall comply with all applicable site restrictions in OAC 3745-40.

Treatment Works: City of Sidney WWTP	**NPDES Permit #: 1PD00009*RD**
Ohio EPA Site I.D.: 75-00102	**Field Site I.D.:** WE-1
Date site authorized: March 3, 2015	
Date site evaluated for changes: Oct 4, 2021	
Date(s) of beneficial use: 10-7-2021	

Were changes found at the site since original approval for the beneficial use of biosolids?

No ☒ If no changes, sign Certification Statement on Form BUR-2.

Yes ☐ If changes, complete section below and sign Certification Statement on Form BUR-2.

Changes found at site since original approval (check all that apply; provide description and attach maps as needed):

		Description (ex: new home with well on east side of site)
New occupied structure or school within 300 feet of site	☐	
New private potable water source within 300 feet of site	☐	
New medical care facility within 1,000 feet of site	☐	
Change in sanitary isolation distance of public water system	☐	
Addition of, or change in, subsurface tile drainage	☐	
Changes in crops to be grown	☐	
New site owner, site operator, or beneficial user (If Yes, submit updated applicable BUA Form.)	☐	
Other:	☐	
Other:	☐	

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 in OAC 3745-40.

3. Any changes that were found at the site require the need to adhere to additional site restrictions, but do not affect the site's overall suitability for the beneficial use of biosolids.

4. I agree to maintain all applicable records required by OAC 3745-40.

Signature

10 / 4 / 2021
Date

WWTP Operator
Title

Ohio EPA - Division of Surface Water
Class B Beneficial Use Site Re-Certification

Ohio Administrative Code (OAC) 3745-40-06(F) requires the permittee to certify that prior to beneficial use, each authorized beneficial use site was evaluated for changes at or near the beneficial use site that may affect site restrictions.

If changes have occurred at or near the beneficial use site, the permittee shall comply with all applicable site restrictions in OAC 3745-40.

Treatment Works: City of Sidney WWTP	**NPDES Permit #: 1PD00009*RD**
Ohio EPA Site I.D.: 75-00103	**Field Site I.D.:** WE-2
Date site authorized: March 3, 2015	
Date site evaluated for changes: ~~Oct 20~~ mc OCT 4, 2021	
Date(s) of beneficial use: 10-7-21	

Were changes found at the site since original approval for the beneficial use of biosolids?

No ☒ If no changes, sign Certification Statement on Form BUR-2.

Yes ☐ If changes, complete section below and sign Certification Statement on Form BUR-2.

Changes found at site since original approval (check all that apply; provide description and attach maps as needed):

		Description (ex: new home with well on east side of site)
New occupied structure or school within 300 feet of site	☐	
New private potable water source within 300 feet of site	☐	
New medical care facility within 1,000 feet of site	☐	
Change in sanitary isolation distance of public water system	☐	
Addition of, or change in, subsurface tile drainage	☐	
Changes in crops to be grown	☐	
New site owner, site operator, or beneficial user (If Yes, submit updated applicable BUA Form.)	☐	
Other:	☐	
Other:	☐	

Certification Statement

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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 in OAC 3745-40.

3. Any changes that were found at the site require the need to adhere to additional site restrictions, but do not affect the site's overall suitability for the beneficial use of biosolids.

4. I agree to maintain all applicable records required by OAC 3745-40.

Signature

10 / 4 / 2021
Date

WWTP Operator
Title

Ohio EPA - Division of Surface Water
Class B Beneficial Use Site Re-Certification

Ohio Administrative Code (OAC) 3745-40-06(F) requires the permittee to certify that prior to beneficial use, each authorized beneficial use site was evaluated for changes at or near the beneficial use site that may affect site restrictions.

If changes have occurred at or near the beneficial use site, the permittee shall comply with all applicable site restrictions in OAC 3745-40.

Treatment Works: City of Sidney WWTP	**NPDES Permit #: 1PD00009*RD**
Ohio EPA Site I.D.: 75-00075	**Field Site I.D.:** SSW-1
Date site authorized: Jan 20, 2009	
Date site evaluated for changes: 11-3-2021	
Date(s) of beneficial use: ~~10-7~~ mc 11-9-21	

Were changes found at the site since original approval for the beneficial use of biosolids?

No ☒ If no changes, sign Certification Statement on Form BUR-2.

Yes ☐ If changes, complete section below and sign Certification Statement on Form BUR-2.

Changes found at site since original approval (check all that apply; provide description and attach maps as needed):

		Description (ex: new home with well on east side of site)
New occupied structure or school within 300 feet of site	☐	
New private potable water source within 300 feet of site	☐	
New medical care facility within 1,000 feet of site	☐	
Change in sanitary isolation distance of public water system	☐	
Addition of, or change in, subsurface tile drainage	☐	
Changes in crops to be grown	☐	
New site owner, site operator, or beneficial user (If Yes, submit updated applicable BUA Form.)	☐	
Other:	☐	
Other:	☐	

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 in OAC 3745-40.

3. Any changes that were found at the site require the need to adhere to additional site restrictions, but do not affect the site's overall suitability for the beneficial use of biosolids.

4. I agree to maintain all applicable records required by OAC 3745-40.

Mike G
Signature

11 / 3 / 2021
Date

WWTP Operator
Title

Ohio EPA - Division of Surface Water
Class B Beneficial Use Site Re-Certification

Ohio Administrative Code (OAC) 3745-40-06(F) requires the permittee to certify that prior to beneficial use, each authorized beneficial use site was evaluated for changes at or near the beneficial use site that may affect site restrictions.

If changes have occurred at or near the beneficial use site, the permittee shall comply with all applicable site restrictions in OAC 3745-40.

Treatment Works: City of Sidney WWTP	**NPDES Permit #: 1PD00009*RD**
Ohio EPA Site I.D.: 75-00076	**Field Site I.D.:SSW-2**
Date site authorized: Jan 21, 2009	
Date site evaluated for changes: November 10, 2021	
Date(s) of beneficial use: 11-9-21	

Were changes found at the site since original approval for the beneficial use of biosolids?

No ☐ If no changes, sign Certification Statement on Form BUR-2.

Yes ☒ If changes, complete section below and sign Certification Statement on Form BUR-2.

Changes found at site since original approval (check all that apply; provide description and attach maps as needed):

		Description (ex: new home with well on east side of site)
New occupied structure or school within 300 feet of site	☐	
New private potable water source within 300 feet of site	☐	
New medical care facility within 1,000 feet of site	☐	
Change in sanitary isolation distance of public water system	☐	
Addition of, or change in, subsurface tile drainage	☐	
Changes in crops to be grown	☐	
New site owner, site operator, or beneficial user (If Yes, submit updated applicable BUA Form.)	☐	
Other:	☒	Grass drainage marked as setback.
Other:	☐	

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.

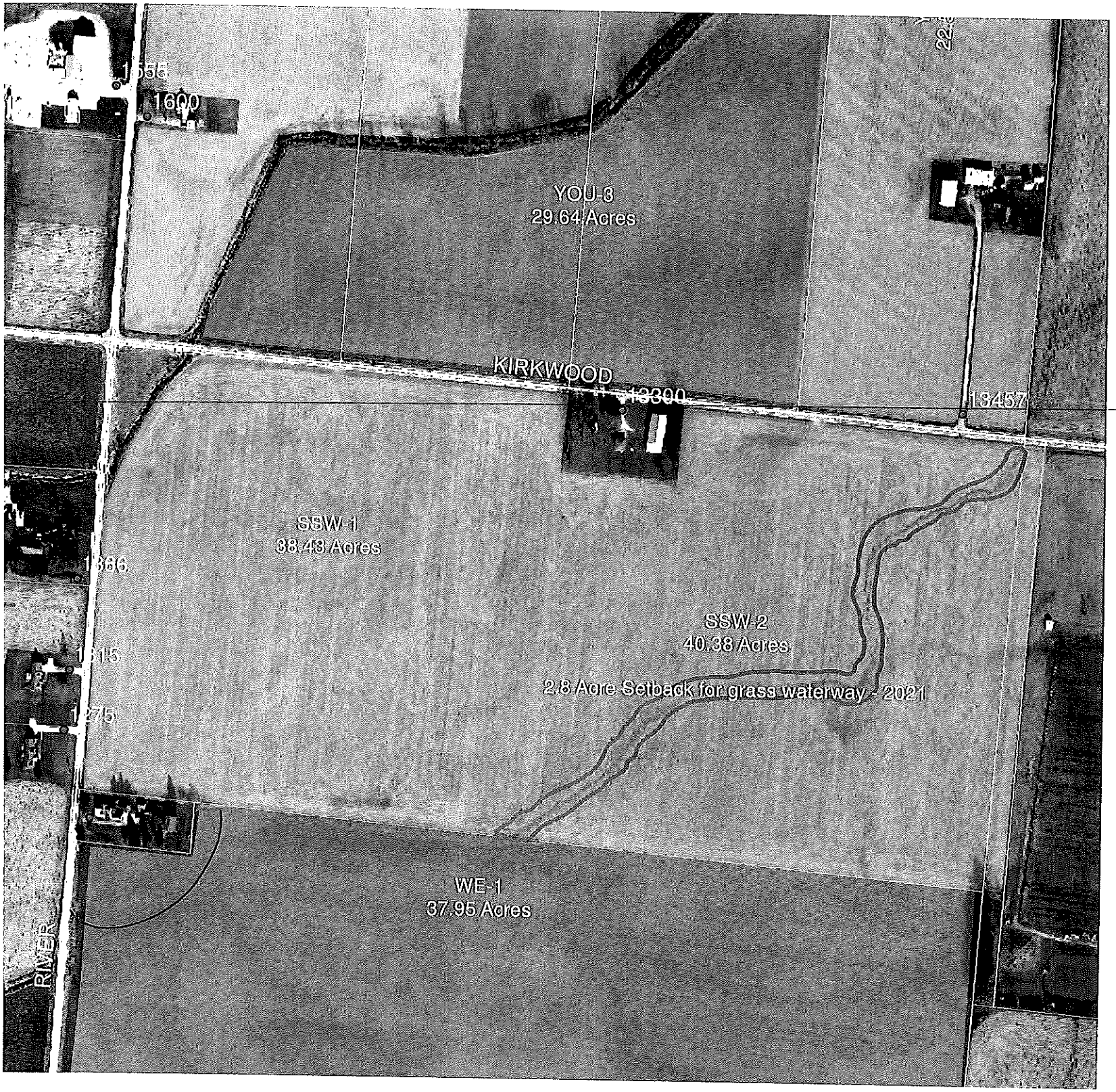
2. I have read and understand Chapter 3745-40 of the Ohio Administrative Code (OAC) and I agree to beneficially use biosolids in accordance with all applicable beneficial use requirements and restrictions established in OAC 3745-40.

3. Any changes that were found at the site require the need to adhere to additional site restrictions, but do not affect the site's overall suitability for the beneficial use of biosolids.

4. I agree to maintain all applicable records required by OAC 3745-40.

[signature] 11 / 10 / 2021
Signature Date

WWTP Operator
Title


1600
YOU-3
29.64 Acres
KIRKWOOD
13300
13457
SSW-1
38.43 Acres
SSW-2
40.38 Acres
2.8 Acre Setback for grass waterway - 2021
WE-1
87.95 Acres
RIVER