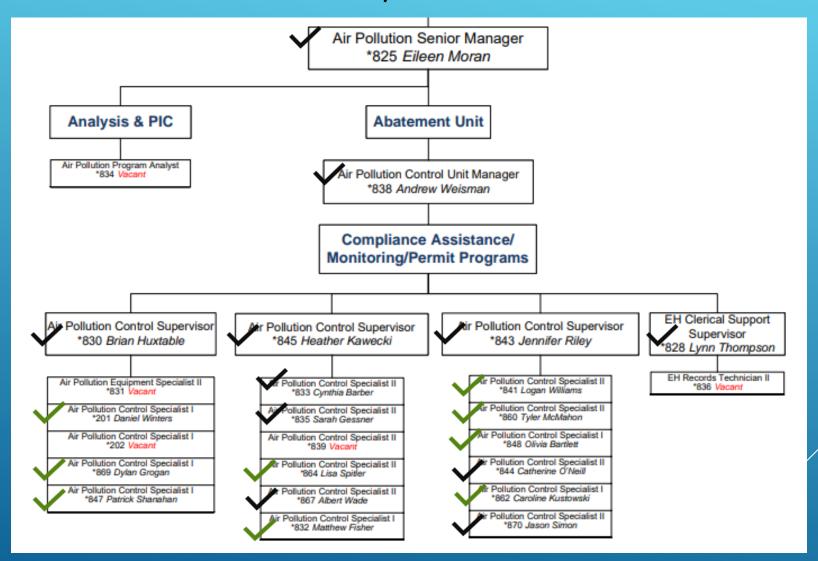


Air & Waste Management Association March 14, 2025 Eileen Moran, Senior Manager Andy Weisman, Unit Manager



# RAPCA ORG CHART/EXPERIENCE 11 PEOPLE OVER 20 YEARS, 9 PEOPLE LESS THAN 6 YEARS





#### **AGENDA**

- PM<sub>2.5</sub> and Ozone NAAQS
- Ohio EPA Budget Annual Fees and Permit Fees
- Ohio rules Startup, Shutdown & Malfunction, NOx RACT
- Current topics Data Centers and Anaerobic Digesters
- New U.S.EPA Administration



#### **OZONE BACKGROUND**

 Ozone is formed from "precursor" emissions of nitrogen oxides (NOx) and volatile organic compounds (VOCs) in the presence of sunlight



- The ozone standard changes over time
  - Since 1997 it has been based on a 3-year average of annual 4<sup>th</sup> highest daily maximum 8-hour concentration (called "design value")
  - 1997 80 ppb
  - 2008 75 ppb
  - 2015 70 ppb ←current standard
- Ozone monitoring season is March 1 to October 31

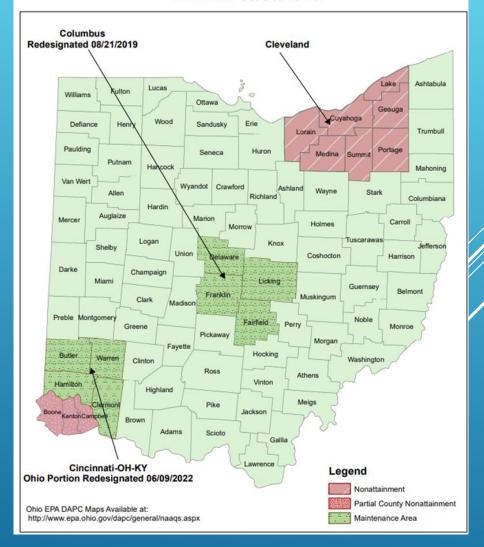


# 2015 OZONE DESIGNATION TIMELINE

- August 3, 2018: U.S. EPA finalized nonattainment areas
  - Columbus, Cincinnati, and Cleveland areas designated marginal nonattainment
  - Marginal attainment date set for August 3, 2021 (2018-2020 design values)
- August 2019 Columbus redesignated to attainment
- June 2022 Cincinnati redesignated to attainment
- November 2022 Cleveland "bumped up" to moderate nonattainment
  - Moderate attainment date set for August 3, 2024 (2021-2023 design values)



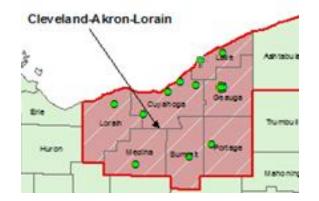
## Ohio 2015 Eight-Hour Ozone (0.070 ppm) Nonattainment Areas Effective 08/03/2018



### 2024 OHIO OZONE LEVELS

			2024 4th High Needed					2022-2024
Metro Area	County	Monitoring Site	to Violate 2015	1st High (ppb)	2nd High (ppb)	3rd High (ppb)	4th High (ppb)	DV To Date
			Standard (ppb)					(ppb)
Akron	Portage	Lake Rockwell	72	73 (6/21)	72 (5/24)	68 (5/19)	67 (4/16)	69
AKIOII	Summit	North HS	73	72 (6/21)	70 (5/19)	69 (8/24)	69 (9/11)	69
	Butler	Middletown Airport	75 (71 contingency)	77 (6/13)	74 (6/12)	70 (6/16)	67 (6/21)	68
	butter	Crawford Woods	75 (74 contingency)	73 (6/13)	71 (6/12)	68 (8/23)	68 (8/26)	68
	Clermont	Batavia	82 (74 contingency)	76 (6/21)	75 (6/14)	71 (8/6)	68 (8/5)	66
Cincinnati		Sycamore	71 (69 contingency)	82 (8/27)	79 (8/26)	73 (6/12)	73 (6/16)	71
	Hamilton	Colerain	72 (69 contingency)	72 (6/13)	71 (6/16)	71 (8/26)	70 (6/12)	70
		Taft NCore PAMS	71 (67 contingency)	82 (8/27)	79 (6/20)	73 (6/21)	73 (7/27)	71
	Warren	Lebanon	70 (68 contingency)	84 (8/27)	78 (8/26)	73 (6/13)	73 (6/16)	72
	Ashtabula	Conneaut	71	73 (6/22)	72 (5/21)	68 (6/13)	67 (8/24)	69
	Cuyahoga	District 6	69	75 (5/20)	74 (6/20)	72 (6/22)	72 (8/24)	72
Cleveland		Berea BOE	73	69 (5/24)	68 (6/13)	67 (8/24)	65 (5/20)	68
Cievelanu		Mayfield	75	77 (8/24)	71 (7/31)	70 (6/13)	70 (6/22)	69
	Lake	Eastlake	65	81 (5/20)	73 (5/21)	73 (6/20)	71 (6/19)	73
	Medina	Chippewa	74	70 (6/13)	68 (5/24)	67 (8/27)	65 (6/12)	68
Columbus	Franklin	New Albany	75 (73 contingency)	72 (8/27)	71 (6/13)	70 (6/21)	69 (6/22)	69
Dayton	Greene	Xenia	75	76 (8/27)	68 (6/13)	67 (6/21)	67 (9/20)	68
Dayton	Montgomery	Eastwood	76	84 (6/13)	79 (6/12)	73 (6/16)	72 (8/27)	69
Lima	Allen	Lima	74	69 (6/13)	66 (6/16)	66 (6/21)	65 (6/20)	68
Springfield	Clark	Springfield Well Fd	76	80 (6/13)	74 (8/27)	71 (6/12)	68 (9/20)	68
Toledo	Lucas	Erie	72	67 (6/21)	65 (6/20)	64 (6/13)	63 (6/19)	68
		Waterville	74	72 (6/21)	70 (9/12)	65 (6/13)	63 (5/24)	67
		Cooley	70	76 (6/21)	75 (7/28)	73 (6/20)	71 (8/24)	71
N/A	Clinton	Wilmington	75	74 (6/21)	74 (6/22)	73 (9/20)	71 (8/6)	69





#### Cleveland Ozone Outlook (\*as of 11/1/24)

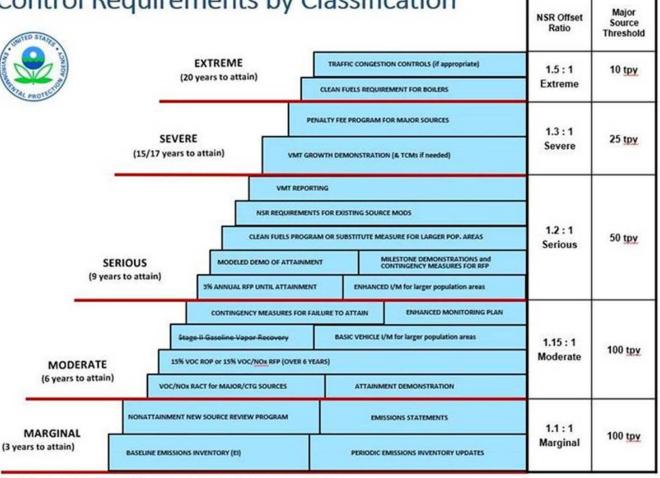
District 6 has had 4 of 4 days over (72, 72, 74, 75) Eastlake has had 4 of 4 days over (71, 73, 73, 81) Lake Rockwell has had 2 of 4 days over (72, 73) Mayfield has had 1 of 4 days over (77)

Site Name	Site ID	County	2021 4 <sup>th</sup> High	2022 4 <sup>th</sup> High	2023 4 <sup>th</sup> High	2024 4 <sup>th</sup> high needed to violate 2015 standard	2024 4 <sup>th</sup> High*	2021- 2023 DV	2022- 2024 DV*
District 6	39-035-0034	Cuyahoga	70	73	71	<mark>69</mark>	72	71	72
GT Craig NCore PAMS	39-035-0060	Cuyahoga	59	61	65	87	65	61	63
Berea BOE	39-035-0064	Cuyahoga	69	65	75	73	65	69	68
Mayfield	39-035-5002	Cuyahoga	68	65	73	75	70	68	69
Notre Dame	39-055-0004	Geauga	67	64	66	83	66	65	65
Eastlake	39-085-0003	Lake	72	76	72	<mark>65</mark>	<b>71</b>	<b>73</b>	<b>73</b>
Painesville	39-085-0007	Lake	63	62	73	78	69	66	68
Sheffield	39-093-0018	Lorain	59	63	64	86	61	62	62
Chippewa	39-103-0004	Medina	65	67	72	74	65	68	68
Lake Rockwell	39-133-1001	Portage	67	71	70	72	67	69	69
North HS	39-153-0026	Summit	66	69	71	73	69	68	69





Overview of CAA Ozone Nonattainment Area Planning & Control Requirements by Classification



NOTE: Transportation and General Conformity apply in all ozone nonattainment areas.

NSR offset ratio 1.2:1

Baseline year reset

Major source permitting threshold lowered from 100 TPY to 50 TPY

- More Title V and synthetic minor sources
- Application timing to avoid Title V

Major modification significance levels decrease from 40 TPY to 25 TPY thresholds will be lowered

 More changes at existing facilities will trigger major new source review

Attainment Date - Aug 3, 2027



#### **CURRENT STATUS - CLEVELAND**

- Serious non-attainment
- RACT
  - Draft January 2025
  - Effective April 1, 2025
- Rule making for Title V
- Facility specific NOx and VOC RACT
  - Evaluated and updated
- Voluntary measures:
  - Idling
  - Lawn/garden rebates
  - Consumer products rule



March 13, 2025

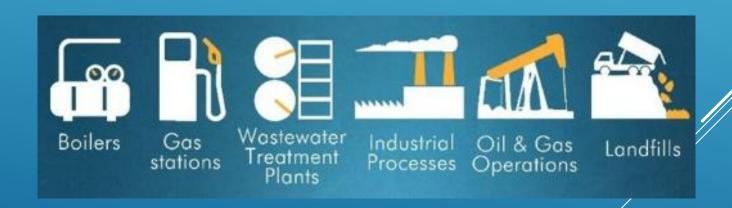
**Ohio EPA Division of Air Pollution Control -**

Adoption of the Rules Related to Cleveland Nonattainment Area Reclassification to Serious Ozone Nonattainment, OAC Chapters 3745-21, 3745-31 and 3745-110



## Permitting - CLEVELAND

- Title V applications due ~ first week of 2026
- Synthetic minor facilities would need to submit a Title V application to gain a permit shield
  - Or have a permit in place by the deadline





#### **CURRENT STATUS - CINCINNATI**

- Redesignated as attainment prior to Aug 3, 2024
- No rule RACT required
- Instead, Ohio chose to incorporate VOC RACT to assist with maintaining standard
  - GE Evendale (VOC)
  - Formica (VOC)



Reasonably Available Control Technology (RACT)
State Implementation Plan for the 2015 Ozone
National Ambient Air Quality Standards for the
Serious Classification

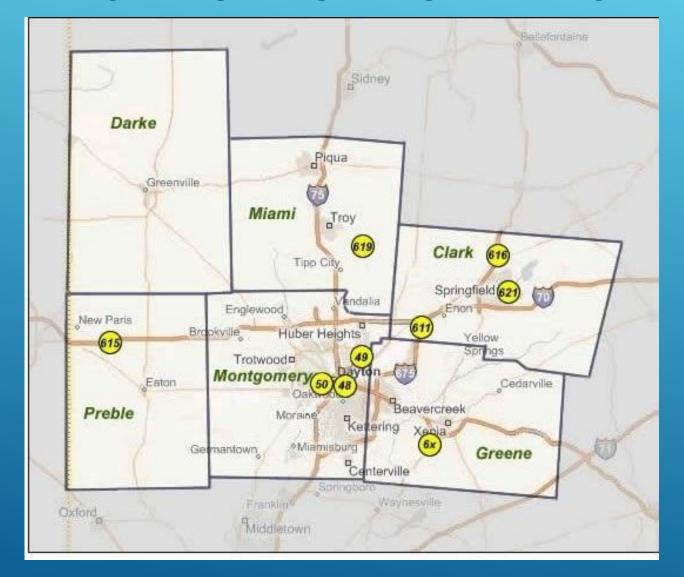
Prepared by:

The Ohio Environmental Protection Agency
Division of Air Pollution Control

November 2024



#### RAPCA MONITORING NETWORK





## MUD RUN – OZONE SITE





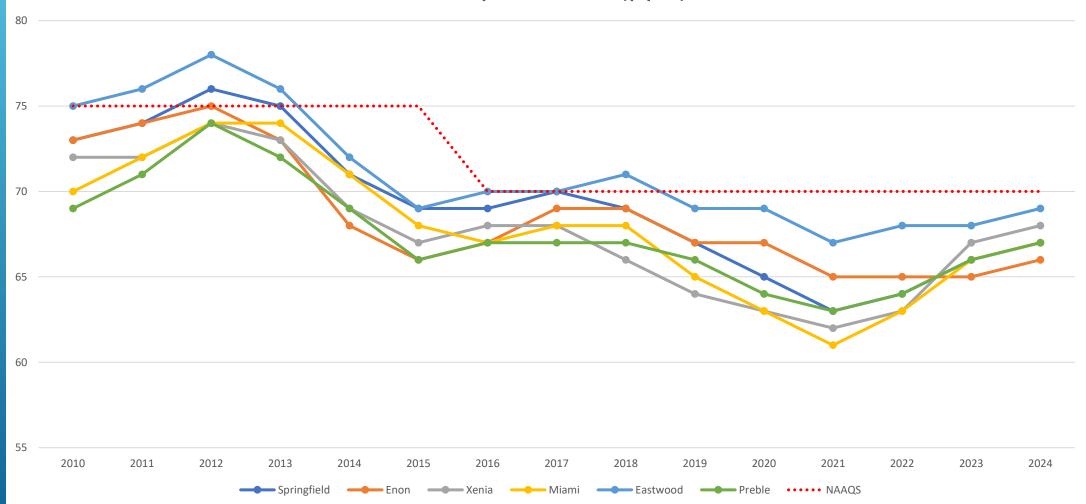


## RAPCA OZONE OUTLOOK

		2024		
	4th High 8	3-hour ozo		
Ozone Monitor	2022	2023	2024	3-yr Design Value
Springfield	68	69	66	67
Enon	64	68	67	66
Xenia	65	73	66	68
Miami	66	69	68	67
Eastwood	66	71	72	69
Preble	69	68	64	67



# RAPCA 8hr Ozone Design Values Parts per billion (ppb)







### RAPCA OZONE EXCEEDENCES 2020-2024

		Easty	wood	Mia	ami	Pre	eble	Xe	nia	_	gfield 1)	Mud R	un (03)	Monitor
	Date	ppb	AQI	ppb	AQI	ppb	AQI	ppb	AQI	ppb	AQI	ppb	AQI	Exceedances
	6/20/2020	71	101	66	87	71	101	68	93	66	87	73	108	3
2020	7/6/2020	71	101	61	71	52	48	60	67	57	58	66	87	1
2020	7/15/2020	71	101	68	93	54	50	54	50	55	51	59	64	1
	7/17/2020	74	112	62	74	56	54	61	71	62	74	66	87	1
2021	7/27/2021	71	101	62	74	62	74	62	74	55	51	61	71	1
	6/21/2022	78	126	77	122	81	136	76	119	79	129	75	115	6
2022	6/22/2022	61	71	75	115	73	108	69	97	70	100	63	77	2
	6/30/2022	73	108	70	100	62	74	61	71	68	93	66	87	1
	6/1/2023	72	105	66	87	67	90	73	108	68	93	69	97	2
	6/2/2023	77	122	74	112	76	119	77	122	74	112	74	112	6
2023	6/3/2023	71	101	69	97	68	93	64	80	69	97	68	93	1
2023	6/10/2023	67	100	72	105	68	93	68	93	70	100	67	90	1
	6/28/2023	78	126	71	101	72	105	73	108	69	97	75	115	5
	8/4/2023	71	100	63	77	65	84	78	126	55	51	61	71	2
	6/12/2024	79	129	68	93	62	74	60	67	71	101	70	100	2
2024	6/13/2024	84	147	71	101	64	80	68	93	80	133	78	126	4
2024	6/16/2024	73	108	69	97	66	87	64	80	66	87	66	87	1
	8/27/2024	72	105	60	67	53	49	76	119	74	112	69	97	3
	Monitor Exceedances							43						





**Exceedances Days** 

## PM<sub>2.5</sub> DATA - STATEWIDE

PM2.5 Annual Design Value (μg/m³)							
Site ID of Highest-Reading Monitor	County	2021-2023 DV Unadjusted	2021-2023 DV Adjusted				
39-003-0009	Allen	7.5	7.5				
39-009-0003	Athens	6.1	6.1				
39-013-0006	Belmont	7.8	7.8				
39-017-0022	Butler	11.0	10.9				
39-023-0005	Clark	9.4	8.8				
39-035-0065	Cuyahoga	12.2	12.2				
39-049-0038	Franklin	9.9	9.3*				
39-061-0014	Hamilton	10.7	9.9				
39-061-0048	Паннион	10.1	10.1				
39-081-0017	Jefferson	10.6	10.0				
39-085-0007	Lake	7.2	7.2				
39-087-0012	Lawrence	8.5	7.9				
39-093-3002	Lorain	7.6 (Invalid)	7.6 (Invalid)				
39-095-1003	Lucas	9.4	9.4*				
39-099-0015	Mahoning	9.0 (Invalid)	8.5 (Invalid)				
39-103-0004	Medina	7.5	7.4				
39-113-0038	Montgomery	9.6	9.0				
39-133-0002	Portage	6.9 (Invalid)	6.9 (Invalid)				
39-135-1001	Preble	8.7	8.0				
39-145-0015	Scioto	7.8	7.7				
39-151-0017	Stark	9.5	9.5*				
39-151-0020		9.9	9.2*				
39-153-0017	Summit	8.7	8.6				
39-155-0014	Trumbull	8.7	8.6				

May-August 2024: U.S. EPA makes "adjustments" to data for certain high reading continuous instruments

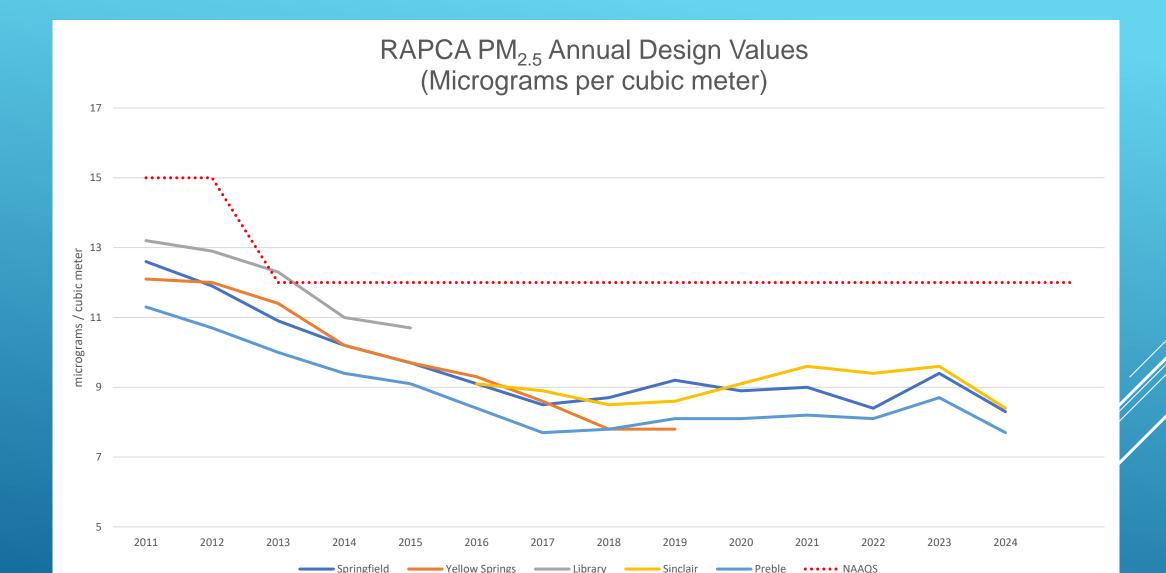
- $\frac{9}{7}$  counties and  $\frac{8}{6}$  areas (MSAs) with monitors > 9.0  $\mu$ g/m<sup>3</sup>
  - Canton area: Stark County
  - Cincinnati area: Butler County, Hamilton County
  - Cleveland area: Cuyahoga County
  - Columbus area: Franklin County
  - Dayton area: Montgomery County
  - Springfield area: Clark County
  - Steubenville area: Jefferson County
  - Toledo area: Lucas County
- \*Ohio will submit exceptional events demonstrations to U.S. EPA requesting that certain data at these monitors affected by Canadian wildfire smoke in the summer of 2023 be excluded from DV calculations. If approved, these monitors will have DVs at or below  $9.0~\mu g/m^3$



# RAPCA PM<sub>2.5</sub> OUTLOOK

	_	<b>2024</b> ed Mean A rams/cubid			
Site ID	Location	2022	2023	2024	3-yr Design Value
39-023-0005	Springfield	7.5	9.8	7.5	8.3
39-113-0038	Sinclair	7.9	9.8	7.5	8.4
39-135-1001	Preble	7.1	9.0	6.9	7.7











### TITLE V FISCAL CHALLENGES

- Largest sources of revenue power plants
- Title V emission reductions equates to significant decreases in Title V revenue
- U.S. EPA has identified Ohio EPA fee program as "Unsustainable"

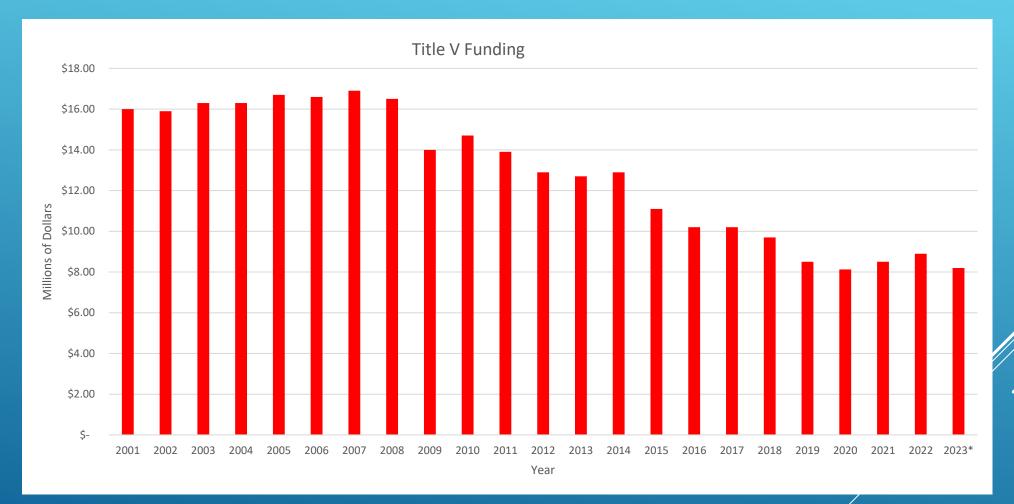


#### TITLE V FISCAL CHALLENGES

- Ohio adopted the presumptive minimum for Title V sources in 1993
- Maintained that level of fees for 30 years
- The various emission reduction programs under the Clean Air Act has resulted in substantially less emissions
- Along with improving air quality, the result has been less revenue to the air program including the local air agencies



## TITLE V REVENUE





# When would the fees be effective? As part of the SFY 26-27 Biennium Budget

Fee	Proposed Increase	Effective Date	Date of Fee Increase/Billing Date
Title V Fee	Base Fee (\$5000)	Oct. 1, 2025	First Billing: October 2025 Second Billing: ~July 1, 2026
PTI Fee	50% Increase	Oct. 1, 2025	Applied to any permits issued after Oct. 1, 2025
Synthetic Minor	Base Fee (\$5000)	Oct. 1, 2025	First Billing: ~Oct. 1, 2025
Synthetic Minor	50% Increase	Jan. 1, 2026	First Billing: ~July 1, 2027



#### TITLE V FEES IN OTHER STATES

- Michigan: Facility Charge + emission fee
  - \$5,250 to \$45,000
- Indiana: Base fee (\$6,100) + emission fee + activity-specific fees
  - e.g., modeling, stack tests, etc.
- Pennsylvania: Annual operating permit maintenance fee (\$8,000/ year) + emission fee
- Tennessee: The higher of \$4,000 base fee + \$/ton emission fee compared or \$10,000 minimum fee (2023)



- U. S. EPA settled a lawsuit with the Sierra Club that addresses rules associated with startup, shutdown and malfunctions in 36 states
- U.S. EPA proposed a "SIP Call" in 36 states (including Ohio) that require that states modify their rules because these rules contain language "inconsistent with the Clean Air Act"
- These states rules were previously approved by U.S. EPA but are now objectionable
- State rule allow "Director's discretion"
- U.S. EPA claims citizens suits are prevented



# Objectionable Rule 1

OAC 3745-15-06(C) – Malfunction of equipment

# Objectionable Rule 2

OAC rules 3745-17-07(A)(3)(c) and 3745-17-07(B)(11)(f) – Visible Emission Rules

# Objectionable Rule 3

OAC 3745-15-06(A)(3) – Scheduled maintenance

#### Objectionable Rule 4

OAC 3745-14-11(D) – NOx from Cement Plants



- Ohio EPA provided detailed response to U.S. EPA on the proposal
- Requested that the Ohio Attorney General appeal SIP Call
- Appeal went to U.S. D.C. Court of Appeals





- Decided March 2024 We won!
- However, we were already well underway to address these SIP Issues
- However, we already changed our rules here are the changes
- Ohio EPA made rule changes to address the federal SIP Call and "modernize" some requirements in the rules.



# STARTUP SHUTDOWN MALFUNCTION SIP CALL RULE REVISION #1

Added To OAC 3745-15-01:

(P) "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, electronic software or hardware, or a process to operate in manner representative of normal source operation which is likely to cause, or has likely caused, emissions reasonably estimated to be in excess of the amount allowed by an applicable emissions limitation, standard, or permit term in the absence of a malfunction. Malfunctions include, but are not limited to, failures caused by power outages, sabotage, or acts of God. Failures that are attributable to poor maintenance or careless operation are not malfunctions. In accordance with paragraph (A)(1) of rule 3745-15-06 of the Administrative Code, maintenance of air pollution control equipment which is scheduled to prevent a malfunction which would occur within two weeks if the maintenance were not performed is considered to be a malfunction.



# STARTUP SHUTDOWN MALFUNCTION SIP CALL STATE RULE REVISION PROCESS

- OAC 3745-15-06
- Immediate notifications, phone call or email to DO/LAA
- After-hours notification is now to be made to the Ohio EPA Emergency Response Spill Hotline
- Written notification will now be required if a malfunction event lasts longer than twenty-four hours, as opposed to the previous requirement of seventy-two hours.
- More detailed information in the notification itself which is to be submitted within one week of the event rather than two.



# STARTUP SHUTDOWN MALFUNCTION SIP CALL STATE RULE REVISION PROCESS

- OAC 3745-14-11- NOx limitations for Portland Cement Plants
- Ohio EPA has removed paragraph (D) which exempted entities from requirements with the rule during maintenance and startup/shutdown

This is because the two plants in the state will now fall under the regular provisions.



# STARTUP SHUTDOWN MALFUNCTION SIP CALL STATE RULE REVISION PROCESS

- Title V rules July 21, 2023, EPA final rule removing "emergency" affirmative defense provisions removing affirmative defense provisions from 40 CFR 70.6(G)
- OAC rule 3745-77-07(G) to be rescinded, Proposed rule out for comment until April 11, 2025



# ANAEROBIC DIGESTERS





# DIGESTER ISSUES



- Non-agricultural feed wastes food wastes, biosolids
- Methane gas created was used to fuel on-site equipment or flared
- Waste stock may not be suitable for digesters, reducing gas creation and contributing to odors
- Lots of odor issues at many sites around the state (feedstock receiving areas and lagoons)

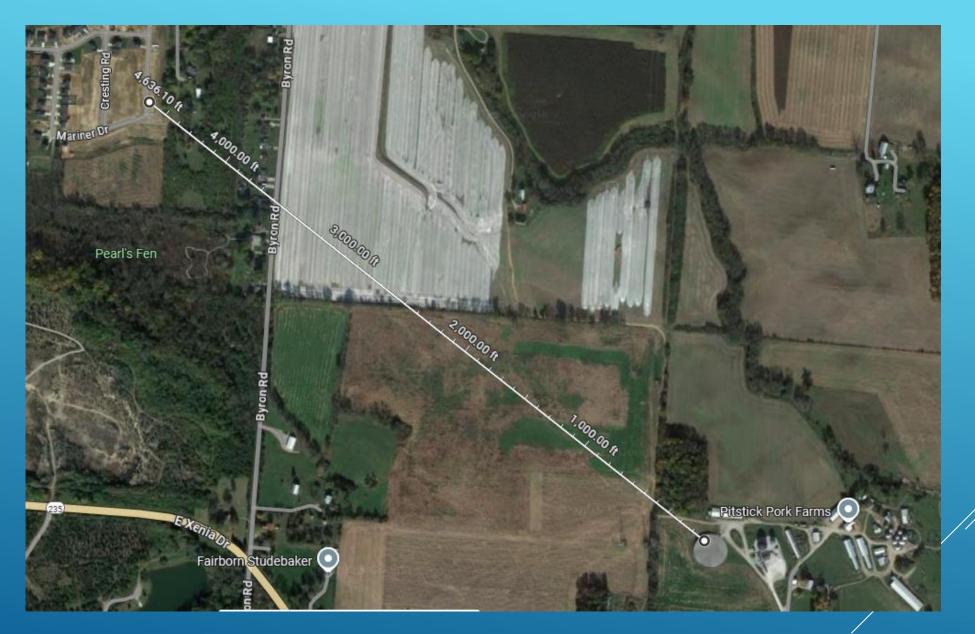


## **DOVETAIL ENERGY**

















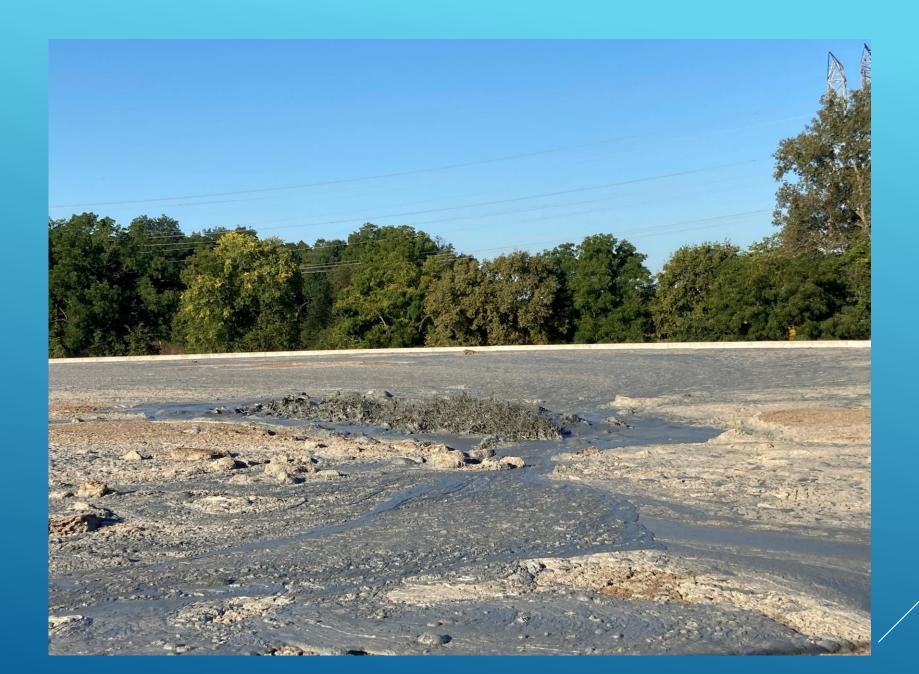




# **Dovetail Energy**

- Hog manure and non-agricultural feed wastes food wastes, biosolids
- Methane gas created was used to fuel on-site electric generator that sold power or flared
- Open surface digestate storage lagoon, 220 feet diameter, 20 feet deep, over 5,000,000 gallons
- Does the digestate lagoon need an air pollution permit? According to testing OC emissions could be around 50 tons/year
- Over 1,000 complaints from 2021-2023, Ohio EPA declared a nuisance and Ohio AG consent decree – permanent shutdown 2024

















## PATH FORWARD

- More stringent DAPC requirements
- Not de minimis sources, even though calculations are challenging
- Entire process needed to be examined for sources of odors, not just the digester
  - All material handling and storage
- May need backup equipment to minimize odors
- State of the art facility Synthica in St Bernard



### DATA CENTERS, HERE COMES A!!

- Fast growing industry sector
- Lots of power needed, some with on-site turbines, numerous emergency generators
- Dispersion modelling challenges
- 5C Data Center proposed in Springfield
  - 48 generators, synthetic minor Title V permit



#### **NEW U.S. EPA ADMINISTRATION**

#### March 12, 2025

"Today is the greatest day of deregulation our nation has ever seen."

Lee Zeldin, Administrator, U.S. EPA

17 news releases regarding air pollution regulations



#### **NEW U.S. EPA ADMINISTRATION**

- Some Air rules for reconsideration:
  - Power Plant rules, NSPS and MACT
  - PM 2.5 NAAQS
  - NOx good neighbor rules and more
- 2009 CO<sub>2</sub> endangerment finding
- Uncertainty for federal funding and staffing



### **QUESTIONS**

EILEEN MORAN - EMORAN@RAPCA.ORG

ANDY WEISMAN - AWEISMAN@RAPCA.ORG



