

Title V Air Operation Permits in Yakima County

Friends of Toppenish Creek, April 8, 2025

It is difficult to determine how many Title V sources of air emissions exist in Yakima County because some reports indicate there are two and some three. Historically there have been as many as five.

Below is the data FOTC has reviewed.

1. Washington Reported Major Point Source Emissions (2009 – 2023) available at [Air emissions inventory - Washington State Department of Ecology](#) says that two Yakima sources report emissions.

2023	Spokane Regional Clean Air Agency	Spokane	Waste To Energy
2023	Yakima Regional Clean Air Agency	Yakima	Novolex Shields, LLC
2023	Yakima Regional Clean Air Agency	Yakima	Terrace Heights Landfill
2022	Benton Clean Air Agency	Benton	Nutrien US LLC
2022	Benton Clean Air Agency	Benton	Williams Pipeline
2022	Spokane Regional Clean Air Agency	Spokane	Waste To Energy
2022	Yakima Regional Clean Air Agency	Yakima	Novolex Shields, LLC
2022	Yakima Regional Clean Air Agency	Yakima	Terrace Heights Landfill
2021	Benton Clean Air Agency	Benton	Agrium US Inc
2021	Benton Clean Air Agency	Benton	Williams Pipeline
2021	Spokane Regional Clean Air Agency	Spokane	Waste To Energy
2021	Yakima Regional Clean Air Agency	Yakima	Novolex Shields, LLC
2021	Yakima Regional Clean Air Agency	Yakima	SunSteel, LLC
2021	Yakima Regional Clean Air Agency	Yakima	Terrace Heights Landfill
2020	Benton Clean Air Agency	Benton	Agrium US Inc
2020	Benton Clean Air Agency	Benton	Williams Pipeline
2020	Spokane Regional Clean Air Agency	Spokane	Waste To Energy
2020	Yakima Regional Clean Air Agency	Yakima	Novolex Shields, LLC
2020	Yakima Regional Clean Air Agency	Yakima	SunSteel, LLC
2020	Yakima Regional Clean Air Agency	Yakima	Terrace Heights Landfill
2019	Benton Clean Air Agency	BENTON	Agrium US Inc
2019	Benton Clean Air Agency	BENTON	Williams Pipeline

2. 2024 was the first year in which the U.S. Environmental Protection Agency (EPA) conducted a review of YRCAA Title V permitting.

The EPA report “Yakima Regional Clean Air Agency Title V Program Review (1st Round)” September 27, 2024 available at [yrcaa-2024-round-1-final-report.pdf](#) says there are three sources in Yakima County.

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State and local permitting authorities base their title V operating permits program on the part 70 rule. There are three part 70 sources operating within YRCAA’s jurisdiction, and YRCAA has issued title V permits to all three of them. There is currently one permit writer that is responsible for writing title V permits as well as reviewing emission inventories and other miscellaneous duties. There are other staff that provide management, administrative, enforcement and accounting support to the title V program.

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To prepare for the review, EPA Region 10 sent a November 21, 2023, kickoff letter, requesting specific information from YRCAA (Attachment 1). Region 10 reviewed YRCAA’s emailed responses (Attachment 2) which included a staff list, financial records, and the response to the questionnaire included in the kickoff letter. EPA Region 10 also reviewed the permit issuance data that YRCAA reported semi-annually to the Title V Operating Permits System (Attachment 3). Due to YRCAA only having three permits and one permit writer, all title V permits were reviewed. The three permits reviewed are listed in the table below.

<u>Permit No.</u>	<u>Company Name & Location</u>	<u>Date Issued</u>
y-003-04	Novolex Shields, LLC	02/9/2024
y-004-03	Terrace Heights Landfill	08/10/2022
Y-00063-1	Cheyne Landfill	03/14/2024

3. The WA State Auditor has stated in Audits of the YRCAA Air Operating Permit Program, available at [Audit Reports | Office of the Washington State Auditor](#) , that YRCAA issued four Air Operating Permits (AOPs) until 2023 when the number fell to three.

4. YRCAA Board Minutes for April 2024 at [2024-05-09_Board_Packet.pdf](#) page 6, indicate that the number of permittees decreased recently.

Jones asked about the change in revenue for “Title V” (major) sources. Thornsbery explained one of these sources previously elected to voluntarily limit its operations so as to move from a major source to a synthetic minor source, ultimately reducing the number of major sources by one. Thornsbery stated there had been no other changes.

The data tends to agree with statements from the Auditor's Office and the EPA.

If, for some reason, Cheyne Landfill simply does not report emissions to Ecology, that could explain the discrepancies.

Summary:

2007 - 2023: Four Air Operating Permits (Title V) in Yakima County per the WA State Auditor's Office. The number drops to three in 2023.

2009 – 2010: Five Title V facilities reporting emissions in Yakima County per WA Ecology Major Point Source Emissions Reporting.

2011 – 2021: Three Title V facilities reporting emissions in Yakima County per WA Ecology Major Point Source Emissions Reporting.

2022 to Present: Two Title V facilities reporting emissions in Yakima County per WA Ecology Major Point Source Emissions Reporting.

April 2024: Number of Title V sources reduced by one per YRCAA Executive Director.

September 2024: Three Title V permittees per EPA

Reality Check

There are about 23 Yakima County dairies with more than 2,000 milk cows. According to FOTC calculations a dairy with this many cows meets criteria for a Title V source. If dairies were treated like other sources there would be 25 Title V sources listed for Yakima County.

Attachment 1: Who Has to Obtain a Title V Permit?

Any major source:

- A major source has actual or potential emissions at or above the major source threshold for any “air pollutant.”
- The major source threshold for any air pollutant is 100 tons/year (this is the “default value”).
- Major source thresholds for “hazardous air pollutants” (HAP) are 10 tons/year for a single HAP or 25 tons/year for any combination of HAP.

Source of Information: [Who Has to Obtain a Title V Permit? | US EPA](#)

Attachment 2: Emissions from Yakima County Title V Sources in 2023 as Tons per Year available at [Air emissions inventory - Washington State Department of Ecology](#)

Name	PM10	PM2.5	SO2	NOX	VOC	CO	NH3
Novolex Shields, LLC	0	0	0	1.6	352.8	2.3	0
Terrace Heights LF	24.39769	4.13769	1.48	2.28	19.62	6.8	0

Attachment 3: Estimates of Emissions from Dairy Cows

From Environmental Protection Agency Models for Washington State available at [State Inventory and Projection Tool | US EPA](#)

Methane

Manure Management 43,041,000,000 g/year for 275,000 cows = 428.80 g/day/cow

Enteric Fermentation 150.9 kg/cow per year = 410.96 g/day/cow

Total Methane 839.76 g/cow/day

From *Emissions Data from Two Dairy Freestall Barns in Washington* – National Air Emissions Monitoring Study available at [ASAE_Journal | US EPA ARCHIVE DOCUMENT](#)

Ammonia

Barn 2: 56.5 g/day/cow

Barn 4: 56.5 g/day/cow

56.5 g/day/cow average

Hydrogen Sulfide

Barn 2: 1.08 g/day/cow

Barn 4: 1.15 g/d/cow

1.12 g/day/cow average

Volatile Organic Compounds

Barn 2: 86.67 g/day/cow

Barn 4: 145.71 g/day/cow

116.19 g/day/cow average

PM 2.5

Barn 2: 5.25 g/day/cow

Barn 4: 1.90 g/day/cow

3.58 g/day/cow average

PM 10

Barn 2: 6.94 g/day/cow

Barn 4: 10.0 g/day/cow

8.47 g/day/cow average

Estimated emissions from dairy cows in grams/cow/day and lb./cow/day

Pollutant	Grams/cow/day	Lbs./cow/day
Methane (Manure Mgmt. + Enteric)	839.76	1.849692
Ammonia	56.50	0.124449
Hydrogen Sulfide	1.12	0.002467
VOCs	116.19	0.255925
PM 2.5	3.58	0.007885
PM 10	8.47	0.018656

Estimated Emissions from 100,000 milk cows in Yakima County in Metric Tons and Tons Per Year based on NAEMS data and EPA models.

Pollutants	Metric tons	Tons
Methane	30,651	33,716
Ammonia	2,062	2,270
Hydrogen Sulfide	41	45
VOCs	4,241	4,665
PM 2.5	131	144
PM 10	309	340

Attachment 4: FOTC Estimates of air emissions from large dairies

Pollutant	Lbs./cow/day	Tons/day for a 2,000 head dairy	Tons per year for a 2,000 head dairy
Methane (Manure management plus enteric fermentation)	1.8497	1.8497	675.1405
Ammonia	0.1244	0.1244	45.406
Hydrogen sulfide	0.0025	0.0025	0.9125
VOCs	0.2559	0.2559	93.4035
PM 2.5	0.0079	0.0079	2.8835
PM 10	0.0187	0.0187	6.8255

Pollutant	Lbs./cow/day	Tons/day for a 5,000 head dairy	Tons per year for a 5,000 head dairy
Methane (Manure management plus enteric fermentation)	1.8497	4.62425	1687.851
Ammonia	0.1244	0.311	113.515
Hydrogen sulfide	0.0025	0.00625	2.28125
VOCs	0.63975	0.63975	233.5088
PM 2.5	0.01975	0.01975	7.20875
PM 10	0.0187	0.04675	17.06375
Pollutant	Lbs./cow/day	Tons/day for a 10,000 head dairy	Tons per year for a 10,000 head dairy
Methane (Manure management plus enteric fermentation)	1.8497	9.2485	3375.703
Ammonia	0.1244	0.622	227.03
Hydrogen sulfide	0.0025	0.0125	4.5625
VOCs	1.2795	1.2795	467.0175
PM 2.5	0.2559	0.0395	14.4175
PM 10	0.0187	0.0935	34.1275