

From: [Jean Mendoza](#)
To: [Caudill, Anya \(ECY\)](#)
Subject: YRCAA SIP Attachments
Date: Friday, August 06, 2021 1:44:45 PM

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Attachments available until September 5, 2021.

Hello Anya,

I was not able to include attachments to the FOTC comments, so I am sending them to you. I know this is a lot of material, but we are so used to having our statements questioned by the YRCAA that we go to great lengths to provide supporting information.

Thanks

Jean Mendoza

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August, 2021

To Whom it May Concern:

Here is information from the Friends of Toppenish Creek regarding the air situation in Yakima County. Although more research is always helpful, and FOTC will continue to do the research, the evidence is clear. The Yakima Regional Clean Air Agency ignores the research and ignores citizen input. For this reason, FOTC and our friends in the community respectfully ask for a closer look at air quality in Yakima County.

- Incidence rates and deaths from COVID 19 are worse in Yakima County compared to the rest of Washington State¹. Ecological research from Harvard finds increased morbidity and mortality from COVID 19 in counties with higher levels of fine particulate matter².
- Incidence rates for cardiovascular disease are elevated in Yakima County³. The EPA has confirmed a direct connection between heart disease and PM 2.5 air pollution⁴.
- Yakima County has the worst levels of PM 2.5 in Washington State and levels in the lower county are worse than levels in the upper county^{5,6,7}.
- Air quality in Yakima County is worsening and borders on non-compliance^{5,6,7}.
- Data from Airpact V shows high levels of nitrogen deposition in the Lower Yakima Valley, compared to the rest of the state, with the worst numbers during the month of August^{8,9}.
- Data from the National Atmospheric Deposition Program shows increasing ammonia deposition at sites around Yakima County¹⁰.

-
1. Attachment 1: COVID 19 Demographics for Yakima County
 2. Attachment 2: Abstract - Wu, X., Nethery, R. C., Sabath, B. M., Braun, D., & Dominici, F. (2020). Exposure to air pollution and COVID-19 mortality in the United States. *MedRxiv*. <https://www.medrxiv.org/content/medrxiv/early/2020/04/27/2020.04.05.20054502.full.pdf>
 3. Attachment 3 MI Data Washington Health Tracking Network. Available at <https://fortress.wa.gov/doh/wtn/WTNPortal/>
 4. Attachment 4: Excerpt from EPA's Integrated Science Assessment for Particulate Matter. Available at <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=347534>
 5. Attachment 5: FRM & FEM Monitor Reports for Yakima County
 6. Attachment 6: Design Values for Yakima County
 7. Attachment 7: Tile Plot Data for Yakima County
 8. Attachment 8: Airpact V Maps for August 2016 to 2020

- The Yakima Air Winter Nitrate Study found that over 30% of fine particulate matter in Yakima County is due to ammonium nitrate and a smaller but significant portion is due to ammonium sulfate. Yakima County has elevated PM 2.5 during the winter months^{11,12}.
- A study by the Agency for Toxic Substances and Disease Registry in the small reservation town Harrah, where two heifer feeding operations lie to the north and west of the town, found hydrogen sulfide levels above the odor threshold; found PM 2.5 levels midway between levels in the City of Yakima (lower) and levels in the City of Toppenish (higher)¹³.
- A study by John Hopkins University found elevated levels of bovine allergens, associated with airborne particulate matter at distances up to three miles from dairy operations¹⁴.
- A study by the University of Washington found increased ammonia levels in the LYV with higher levels near CAFO dairies. The study found decreased pulmonary function in asthmatic children during periods with elevated ammonia levels¹⁵.
- A study of emissions from two LYV dairy barns estimated emissions of particulate matter, ammonia, hydrogen sulfide, and volatile organic compounds¹⁶. The results suggest that these dairy emissions should be regulated in Yakima County. They are not.
- Data from the Washington Health Tracking Network describes levels of fine particulate matter above EPA cutoffs for compliance. YRCAA dismisses this data because it comes from multiple sources¹⁷.
- The WA State Dept. of Agriculture estimates that 35% of all nitrogenous by-products produced by dairy cows volatilize and end up in the ambient air¹⁸.

9. Attachment 9: Airpact V Maps for 2020

10. Attachment 10: Ammonia Deposition for South & Central WA

11. Attachment 11: Excerpts from Yakima Air Winter Nitrate Study. Available at <https://ecology.wa.gov/DOE/files/a6/a67789dd-aed4-461e-b138-e77537dd1952.pdf>

12. Attachment 12: Ammonia Production due to Animal Confinement

13. Attachment 13: Excerpts from ATSDR Health Evaluation in Harrah, WA. Available at https://www.atsdr.cdc.gov/HAC/pha/YakamaReservation/Yakama_Reservation_HC-508.pdf

14. Attachment 14: Abstract from John Hopkins Study of Bovine Allergens in Yakima. Available at <https://ehjournal.biomedcentral.com/articles/10.1186/1476-069X-10-72>

15. Attachment 15: U of W Studies of Asthmatic Children in the LYV. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4425279/>
https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/26152/Loftus_washington_0250E_13499.pdf?sequence=1

16. Attachment 16: Emissions from LYV Dairy Barns WSU. Study available at [ASAE Journal | US EPA ARCHIVE DOCUMENT](#)

17. Attachment 17: Emails re Yakima County Compliance and PM 2.5 Levels

18. Attachment 18: WSDA Quote from the LYV Groundwater Management Area Program, Volume I, page 25. Available at <https://www.yakimacounty.us/DocumentCenter/View/22177/GWMA-VolumeI-July2019>

- An FOTC study in the LYV found ammonia levels 63 times higher than levels in a control setting in the UYV¹⁹.
- A study by the Latino Community Fund listed air quality among the highest priorities for families that live in the LYV²⁰.
- FOTC has asked Yakima County to dissolve the Yakima Regional Clean Air Agency and allow the WA State Dept. of Ecology to regulate Yakima County air^{21,22,23}, because:
 - Yakima County has public health problems that the YRCAA refuses to address²¹.
 - Yakima County air emissions contribute to climate change and the YRCAA refuses to address climate change²¹.
 - The YRCAA does not comply with Washington laws regarding air quality regulation²⁴.
 - The YRCAA supports dairy interests and ignores citizen concerns²¹.
 - Air quality in the LYV is bad and getting worse.

It is difficult to summarize these issues for people who spend your professional lives in climate controlled offices. If your home smelled like a sewer, if you had spent the past year burying friends who died during the pandemic, we are sure you would feel the urgency of the situation. The research has been done. What else can we do to convince agencies such as the EPA and Ecology to enforce the laws of the land and protect air quality in Yakima County?

Sincerely,

The Friends of Toppenish Creek

19. Attachment 19: Ammonia Emissions in the LYV. FOTC study.
 20. Attachment 20: LCF Survey of LYV Priorities.
 21. Attachment 21: FOTC Arguments for Dissolving the YRCAA
 22. Attachment 22: FOTC PP Presentation to Yakima County re YRCAA
 23. Attachment 23: Citizen Testimony before YRCAA Board Meetings
 24. Attachment 24: Rules & Regulations with which YRCAA does not comply

Citations:

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7. Attachment 7: Tile Plot Data for Yakima County
8. Attachment 8: Airport V Maps for August 2016 to 2020
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24. Attachment 24: Rules & Regulations with which YRCAA does not comply.

Descriptive Analysis of YRCAA Complaint Reports for Odor and Dust

January 2017 to August 2019

Introduction:

YRCAA states: Our mission is to protect the people and the environment of Yakima County from the effects of air pollution. The Yakima Regional Clean Air Agency is committed to achieving and maintaining healthful air quality throughout our jurisdiction. This is accomplished through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. See <https://www.yakimacleanair.org/about/>

YRCAA fails to do this for the people of the Lower Yakima Valley when it fails to enforce air quality standards for dairy operations. There are no dust control policies for dairies in Yakima County. YRCAA claims a blanket exemption for dairies regarding dust and odor, even when there is clear evidence that dairy emissions impact the health and well-being of neighbors.

WAC 70.94.640 states:

(1) Odors or fugitive dust caused by agricultural activity consistent with good agricultural practices on agricultural land are exempt from the requirements of this chapter unless they have a substantial adverse effect on public health. In determining whether agricultural activity is consistent with good agricultural practices, the department of ecology or board of any authority shall consult with a recognized third-party expert in the activity prior to issuing any notice of violation.

YRCAA never evaluates health impacts, but simply cites the agricultural exemption and ignores health complaints regarding dairy operations. YRCAA incorrectly denies a link between odor, presence of hazardous pollutants and human health.

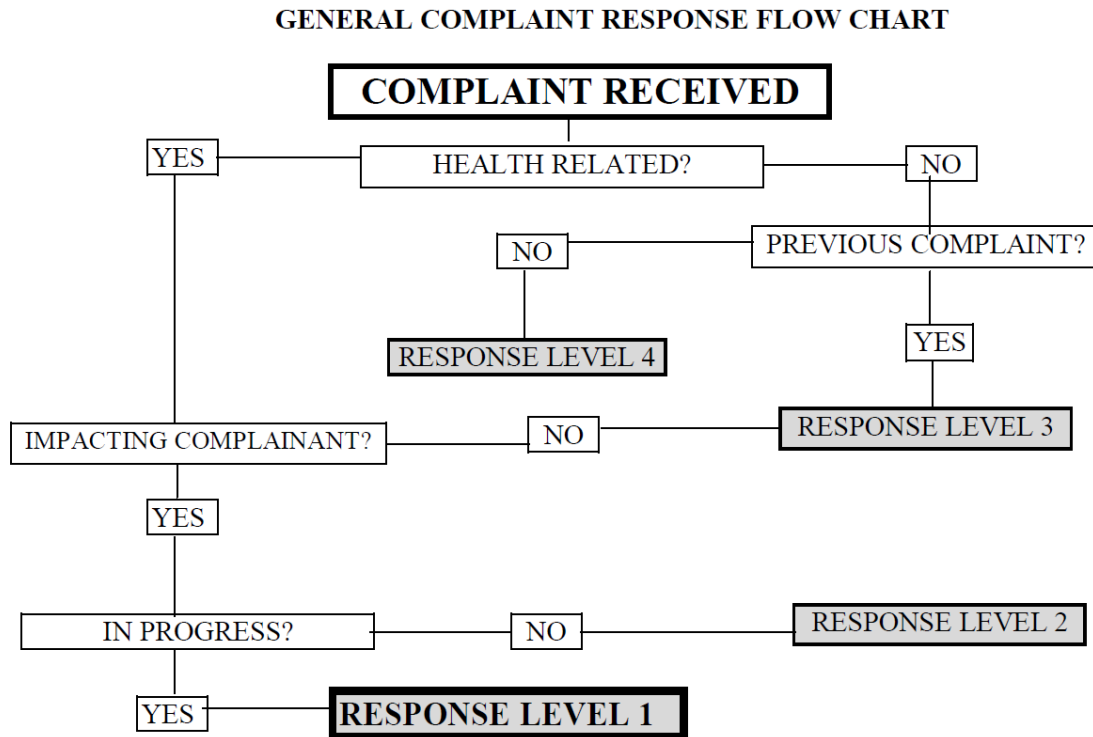
When people in the Upper Valley complain about dust obscuring the roads the YRCAA acts. When people in the Lower Valley complain about dust from dairies obscuring the roads the YRCAA tells them to call the police department. See Complaint #3842

Characterization of Data from YRCAA Complaint Reports re Dust and Odor:

FOTC received 138 Complaint Reports from YRCAA in response to a 2019 Public Records Request. That data is included here in Attachments 4, 5 & 6. Two of the reports had incomplete data. Consequently, FOTC has analyzed 136 reports. Our Excel spreadsheet is Attachment 7.

Thirteen (13) or 9% of the reports had questionable dates and times. The times of incidence occurrence supposedly happened after reports were made, or investigations supposedly took place before the incidents were reported. These are clerical errors, but they confound the data analysis.

The YRCAA Administrative Code Part B provides a flowsheet to guide agency response to complaints on page 5-7. It is copied here:



The following response levels will be used in conjunction with the complaint response flow chart.

a. Level 1

Attempt same day site inspection. Request backup if not available for same day response.

b. Level 2

Attempt inspection within 48 hours. Request backup if not available for 48 hour response.

c. Level 3

Attempt site inspection within 7 days. Request backup if not available for 7 day response.

d. Level 4

Site inspection not required. Correspond with the source to advise of the complaint, to inform of the applicable rules and to discuss the potential for enforcement action.

A phone call or a fax may be helpful but, it should be followed up in writing.

To be very clear, the only path to a Level 4 Response happens when the complaint is not health related and there has been no previous complaint. According to FOTC analysis 85

out of 136 or 63% of complaints were assigned Response Level 4. We believe that at least 29 of those assignments were incorrectly done. See yellow highlighting in our spreadsheet. However, in reality, YRCAA made onsite investigations of many complaints that were assigned Level 4 Responses.

There were 89 complaints from the Upper Valley or about 65% of the total which correlates very well with the percentage of people who live there. For the Upper Valley 87% of the complaints concerned dust, 11% concerned odor and 1% concerned “other”. For the Lower Valley there were 47 complaints or 35% of the total. For the Lower Valley 62% of the complaints concerned dust and 28% concerned odor.

For the Upper Valley the average lag time between when an incident allegedly occurred and when the complaint was received (recorded) was 18.18 hours with a median of 4. Half of the complaints were received (recorded) within 4 hours of the time they were sent. For the Lower Valley the average lag time between when an incident allegedly occurred and when the complaint was received (recorded) was 37.92 hours with a median of 17 hours.

For the Upper Valley the average time between when an incident was reported (recorded) and when an investigation was initiated was 26.58 hours with a median of 3.5 hours. For the Lower Valley the average time between when an incident was reported and when an investigation was initiated was 60.25 hours with a median of 24.75 hours.

Lag Times between Occurrence, Report & Investigation

					Upper Valley	Lower Valley
Average Time Between Occurrence and Report					18.18 hrs.	37.92 hrs.
Median Time Between Occurrence and Report					4 hrs.	17 hrs.
Time Between Report and Investigation					26.58 hrs.	60.25 hrs.
Median Time Between Report and Investigation					3.5 hrs.	24.75 hrs.

Compare Upper Valley and Lower Valley Response Levels

	Upper		Lower		
RL-1	7	8%	5	11%	Attempt same day site inspection. Request backup if not available for same day response
RL-2	10	11%	0	0%	Attempt inspection within 48 hours. Request backup if not available for 48 hour response
RL-3	5	6%	7	15%	Attempt site inspection within 7 days. Request backup if not available for 7 day response
RL-4	51	57%	30	64%	Site inspection not required. Correspond with the source to advise of the complaint, to inform of the applicable rules and to discuss the potential for enforcement action.
No Rating	16	18%	5	11%	
Warning Letter	6	7%	2	4%	
NOV	7	8%	3	6%	

Percentage wise slightly more Lower Valley complaints were assigned a Level 1, 3 or 4 Response. Upper Valley complaints were more likely to receive a Level 2 Response or no rating. Upper Valley complaints were more likely to end in a warning letter or a Notice of Violation (NOV).

Comparison of Prolonged Odor Episodes in the Upper Valley and the Lower Valley

Two prolonged episodes of foul odor were documented in the complaints. One occurred in Selah and was related to the Tree Top Apple Processing Plant. The other occurred in the Lower Valley between Sunnyside and Grandview and was related to a cluster of dairies in that area. The ways that YRCAA responded are informative.

Selah:

May 31, 2017 at 3 PM a resident called and YRCAA took the call immediately. According to the record:

CP says that there has been a terrible odor (sewage-like) emanating from Tree Top's wastewater pond. He says it has been particularly bad for the last couple of weeks.

YRCAA began an investigation 23 hours later on 6/1/2019, assigning Response Level 2 which means that there was a health risk that was impacting the complainant, but the problem was not in progress:

Did not smell anything until I parked right across from 1500 Harrison Road, which is the Treetop Treatment facility's address. The odor was at a 2. I noticed they were utilizing sprinklers, which may be making the odor more airborne, as we have had complaints with Treetop in the past regarding the same issue. I am going to go out in the morning, as most of the people calling in are saying it's worst in the morning.

June 1, 2017 at 9:04 AM another resident called and YRCAA recorded the call three hours later at 1200 noon. An investigation began two hours later.

CP says that there has been a horrible "sewage-like" smell in the East Selah area for the last two weeks. She said it was extremely bad this morning.

YRCAA found:

Investigated this issue along with other complaints that were place recently. Odor was not detectable until I was across from 1500 Harrison Rd. At that point, the odor level was a 2.

June 1, 2019 at 9:41 a third resident called and the YRCAA recorded the call at 12:00 noon. The same investigation began two hours later at Response Level 2:

CP says that there has been a terrible smell in East Selah lately. She said she checked with Selah Public Works, to see if their waste treatment plant could have been the cause of the smell, but they said everything is fine.

YRCAA found:

Drove past the Selah waste treatment plant, but did not smell anything bad, I continued to drive on Harrison Road by Tree Top and when I hit 1500 Harrison Road, I could detect an odor that was sewage-like. The odor level was a 2. Treetop had their sprinklers going, so I'm assuming the water is coming from the wastewater ponds, and that is the cause of the smell.

June 5, 2019 at 10:30 AM a fourth resident called and the YRCAA recorded the call 3 ½ hours later at 2:00 PM. The investigation began one half hour later with a Response Level 4.

CP says that there has been a bad odor emanating from Tree Top's wastewater ponds

YRCAA called Tree Top and issued a verbal warning.

Sunnyside/Grandview

July 19, 2019 (Friday) at 7:35 PM a resident left a voice mail message with YRCAA that was picked up on Monday, July 22, 2019 at 3:00 PM.

CP says there's "Ambient cow pen dirt from Hornby west to Waneta and further. Particle dirt filling the air around us can be seen on video with lights. It smells like urine but you don't care about that."

According to the report the complaint received a Response Level 3 and an investigation was not begun until eleven days later on July 30, 2019 at 3:00 PM.

July 21, 2019 (Sunday) at 11:30 PM the same resident left a message that was picked up on Monday, July 22, 2019 at 3:00 PM.

CP says that "Foul cloud of ambient open pen dirt and lagoon storage. Strong smell of ammonia/urine permeating our property and home. Gagging, sinus headache and inability to breathe even with high power filtering system."

Although the resident clearly states health complaints that are impacting her, the complaint is assigned a Response Level 3 that implies no health risks. An investigation was begun eleven days later, on July 30, 2019 at 3:00 PM.

July 22, 2019 at 11:15 PM the complainant left another message:

CP says that "The ambient pen dirt air was sucked into her home and her sons through open windows around 11:00 PM when she was cooling her house down with the evening air. Horrible dirty feeling ambient pen dirt willed with horrid ammonia and manure AND

The YRCAA recorded the message the next morning but took no action. Initially the assignment was Response Level 3.

July 24, 2019 at 9:35 AM the complainant called again, this time in the morning, but the message was not picked up until 22.5 hours later.

After wonderful rain and thunder showers last night no smells! Wonderful sweet clean air! But tonight, Wednesday, 7/24/2019 9:25, windows open screen doors letting in fresh air until this very moment! Boom ! Ambient pen ammonia stench coming in.

YRCAA assigned a Response Level 4 that signifies no previous complaints. There was no investigation.

July 25, 2019 at 8:00 AM the complainant called and YRCAA documented the call 45 minutes later.

"Awoke to horrid smell of dead cow composting. Velduis Klompe CAFOs is composting turning dead cow compost and it's gross. The ambient air is bringing this cloud of stench to my property this morning! Go to sleep with smells of urine wake up to manure

The YRCAA did not investigate and made a Response Level 3 assignment to the complaint.

July 25, 2019 at 8:27 AM the complainant called again and the YRCAA recorded the call one hour later.

"Kelsey this has to stop! More and more ambient air full of CAFOs stench. I've written several complaints and no response from yrcaa! Come on you guys! Do your job. Kathy Rogers"

The YRCAA did not investigate and made a Response Level 4 assignment to the complaint.

July 25, 2019 at 11:15 PM the complainant called and left a message that was picked up the next morning at 9:00 AM.

CP says "Cool nights are once more and very appreciated. However, opening our windows and screened doors is a negative. The ambient pen dirt full of odor from the cafo open pens surrounding our home and the neighbors is restricting the enjoyment of fresh

The YRCAA did not investigate and made a Response Level 3 assignment to the complaint.

July 26, 2019 (Friday) at 1:20 AM the complainant left an email message. YRCAA had all day Friday to pick up but they did not record the message until Monday morning on July 29, 2019. Not being able to sleep due to odor qualifies as a health concern but YRCAA made a Response Level 3 assignment and did not investigate.

CP says "Awakened by stench form ambient open pen dirt infiltrating our home! Cool night, windows open, sleeping well, then BOOM, I can't sleep because I'm breathing in this heavy dirt, band like dust in my house. Our large Austin Air filters is always

July 29, 2019 with no time recorded the complainant left an email message that was picked up the next day at 9:55 AM.

CP says "Kelsey, once more Klompe CAFO is composting and the ambient dirt from that is just nasty at my home. The wind was blowing from the east as well. I believe they've been told not to compost in the wind. Kelsey I have photos! This needs to be handled

The YRCAA initiated an "investigation" on July 30, 2019 at 1 PM. This was their investigation:

Dairies and CAFOs in the vicinity of Hornby, Stove, Braden and Tear Roads were contacted and made aware of the complaints

This was the final response for all of the above odor complaints during this episode of foul air. YRCAA is well aware that FOTC research in this area found average ammonia levels that exceed the Minimum Risk Level (MRL) for chronic ammonia exposure. The YRCAA cannot state that composting dead cows next to family homes is an acceptable agricultural practice. YRCAA performed no onsite investigations and took no odor measurements. Based on the evidence no one can state how high the odor or ammonia levels were during this week or what the risks were to complainant health.

Does the YRCAA Agree or Disagree with People Who Complain about Dust & Odor?

Overall, the YRCAA investigations agreed with complainants perceptions 22% of the time, disagreed 39% of the time and took a position in the middle 18% of the time. There was no investigation for 18% of complaints.

The numbers look different when the Upper and Lower Valleys are compared. In the Lower Valley the YRCAA disagreed with the complainants 49% of the time and supported the complaints only 4% of the time. The YRCAA did not investigate 32% of the complaints from the Lower Valley.

YRCAA Support for Upper Valley and Lower Valley Residents

		Upper Valley		Lower Valley		Yakima County	
		# Complaints	%	# Complaints	%	# Complaints	%
No Support		30	34%	23	49%	53	39%
Yes Support		27	30%	2	4%	30	22%
Maybe		18	20%	7	15%	25	18%
No Investigation		10	11%	15	32%	25	18%
NA		4	4%	0	0%	4	3%

When dust and odor complaints are compared there is another large disparity. The YRCAA disagreed with 17% of those who complained about odor and disagreed with 37% of those who complained about dust. The YRCAA agreed with 25% of those who complained about dust and agreed with 17% of those who complained about odor. The shocking finding is that the YRCAA failed to investigate 67% of odor complaints. Given the significant lag time for investigation, especially with respect to odor, this is disturbing.

YRCAA Support for Dust Complaints versus Odor Complaints

	Dust # Complaints	Dust %	Odor # Complaints	Odor %
No Support	40	37%	3	17%
Yes Support	27	25%	3	17%
Maybe	25	23%	0	0%
No Investigation	13	12%	12	67%
NA	4	4%	0	0%

Please see the Attachment 8 Spreadsheet for work documentation.



Complaint Form

[Find or Edit a Complaint](#)[Add a New Complaint](#)

complaint_number	3532	Help: find #	DAN	AP65-01-02 Rev.	
Date received	5/31/2017	Time	3:00:00 PM	Date of Destruction	
active	<input type="checkbox"/>				
Date occurred	5/31/2017	Time	3:00:00 PM	Investigator	Kelsey
received via	phone			Investigation Date	6/1/2017
received by	Kelsey			Investigation Time	2:04:00 PM
violation type	OD	Violation Address	1500 Harrison Rd.		
		Zip Code	98942		
Pictures		City	Selah		
AOD?		NOV?	non-disclosure <input type="checkbox"/>		
Responsible Party		Complaint Party			
contact_name	Theresa		First Name	Don	
contact title			Last Name	Davidson	
First Name	Tree top		Address	341 Archie Rd.	
Last Name	Tree Top		Zip Code	98942	
Address	1500 Harrison Rd.		City	Selah	
Zip Code	98942		Home phone #	(509) 930-7565	
City	Selah	State	WA	Cellphone #	
Home phone #	(509) 698-1221		Email		
Cellphone #					
Description alleged violation	CP says that there has been a terrible odor (sewage-like) emanating from Tree Top's wastewater pond. He says it has been particularly bad for the last couple of weeks.				
findings	Did not smell anything until I parked right across from 1500 Harrison Road, which is the Treetop Treatment facility's address. The odor was at a 2. I noticed they were utilizing sprinklers, which may be making the odor more airborne, as we have had complaints with Treetop in the past regarding the same issue. I am going to go out in the morning, as most of the people calling in are saying it's the worst in the morning.				
actions taken	Contacted Treetop preliminarily to make them aware of the complaint. Drove across from wastewater ponds, and did not smell any sewage-like odors there, like I did on 6/2/2017.RL-2				

Complaint Form		Find or Edit a Complaint	Add a New Complaint
complaint_number 3533		DAN AP65-01-02 Rev.	
Date received 6/1/2017 Time 12:00:00 PM		Date of Destruction 	
active <input type="checkbox"/>		Investigator Kelsey	
Date occurred 6/1/2017 Time 9:14:00 AM		Investigation Date 6/1/2017	
received via voice mail		Investigation Time 2:04:00 PM	
received by Kelsey			
violation type OD		Violation Address 1500 Harrison Rd.	
		Zip Code 98942	
Pictures 		City Selah	
AOD? 		NOV? 	
		non-disclosure <input type="checkbox"/>	
Responsible Party		Complaint Party	
contact_name Theresa		First Name Ruth	
contact title 		Last Name Collins	
First Name Treetop		Address 	
Last Name Treetop		Zip Code 98942	
Address 1500 Harrison Rd.		City Selah	
Zip Code 98942		Home phone # (509) 248-4246	
City Selah		Cellphone # 	
State WA		Email 	
Home phone # (509) 698-1221			
Cellphone # 			
description alleged violation	CP says that there has been a horrible "sewage-like" smell in the East Selah area for the last two weeks. She said it was extremely bad this morning.		
findings	Investigated this issue along with other complaints that were placed recently. Odor was not detectable until I was across from 1500 Harrison Rd. At that point, the odor level was a 2.		
actions taken	Going to go out and investigate early in the morning, as most of the CP's have been saying the smell is much worse in the early morning. Tried to call Theresa, with Treetop on 6/2/2017, to let her know that the smell is definitely coming from treetop, however, there was no answer or voicemail to leave a message.		
additional	<div style="border: 1px solid black; height: 20px;"></div>		

Complaint Form		Find or Edit a Complaint	Add a New Complaint
complaint_number 3534		DAN AP65-01-02 Rev.	
Date received 6/1/2017 Time 12:00:00 PM		Date of Destruction 	
active <input type="checkbox"/>		Investigator Kelsey	
Date occurred 6/1/2017 Time 9:41:00 AM		Investigation Date 6/1/2017	
received via voice mail		Investigation Time 2:04:00 PM	
received by Kelsey			
violation type OD		Violation Address 1500 Harrison Rd.	
Zip Code 98942		City Selah	
Pictures 		NOV? 	
AOD? 		non-disclosure <input type="checkbox"/>	
Responsible Party		Complaint Party	
contact_name Theresa		First Name Veronica	
contact title 		Last Name Santangelo	
First Name TreeTop		Address 603 Jamie Drive	
Last Name TreeTop		Zip Code 98942	
Address 1500 Harrison Rd.		City Selah	
Zip Code 98942		Home phone # (509) 697-6672	
City Selah State WA		Cellphone # 	
Home phone # 		Email 	
Cellphone # 			
description alleged violation	CP says that there has been a terrible smell in East Selah lately. She said she checked with Selah Public Works, to see if their waste treatment plant could have been the cause of the smell, but they said that everything is fine.		
findings	Drove past the Selah waste treatment plant, but I did not smell anything bad. I continued to drive on Harrison Road by TreeTop, and when I hit 1500 Harrison Road, I could detect an odor that was sewage-like. The odor level was a 2. TreeTop had their sprinklers going, so I'm assuming the water is coming from the wastewater ponds, and that is the cause of the smell.		
actions taken	Parked in front of CP's house on 6/5/17 at 10:45am, and did not smell any sewage like smells in the area. Drove across from wastewater ponds, and did not smell any sewage like odors there, like I did on 6/2/2017. RL-2.		

Complaint Form		Find or Edit a Complaint	Add a New Complaint
Complaint Number: 3537		DAN: AP65-01-02 Rev.	
Date received: <input type="text" value="6/5/2017"/> Time: <input type="text" value="2:00:00 PM"/>		Date of Destruction: <input type="text"/>	
active: <input type="checkbox"/>		Investigator: <input type="text" value="Kelsey"/>	
Date occurred: <input type="text" value="6/5/2017"/> Time: <input type="text" value="10:30:00 AM"/>		Investigation Date: <input type="text" value="6/5/2017"/>	
received via: <input type="text" value="email"/>		Investigation Time: <input type="text" value="2:30:00 PM"/>	
received by: <input type="text" value="Kelsey"/>			
violation type: <input type="text" value="OD"/>		Violation Address: <input type="text" value="1500 Harrison Rd."/>	
Zip Code: <input type="text" value="98942"/>			
Pictures: <input type="text"/>		City: <input type="text" value="Selah"/>	
AOD?: <input type="text"/>		NOV?: <input type="text"/> non-disclosure <input type="checkbox"/>	
Responsible Party		Complaint Party	
contact_name: <input type="text" value="Theresa"/>		First Name: <input type="text" value="James"/>	
contact title: <input type="text"/>		Last Name: <input type="text" value="Ingberg"/>	
First Name: <input type="text" value="TreeTop"/>		Address: <input type="text" value="265 Johnson Rd."/>	
Last Name: <input type="text" value="TreeTop"/>		Zip Code: <input type="text" value="98942"/>	
Address: <input type="text" value="1500 Harrison Rd."/>		City: <input type="text" value="Selah"/>	
Zip Code: <input type="text" value="98942"/>		Home phone #: <input type="text"/>	
City: <input type="text" value="Selah"/> State: <input type="text" value="WA"/>		Cellphone #: <input type="text"/>	
Home phone #: <input type="text" value="(509) 698-1221"/>		Email: <input type="text"/>	
Cellphone #: <input type="text"/>			
description alleged violation: <input type="text" value="CP says that there has been a bad odor emanating form TreeTop's wastewater ponds."/>			
findings: <input type="text" value="Called TreeTop and let them know of the complaint."/>			
actions taken: <input type="text" value="None. Verbal warning issued. RL-4"/>			



Complaint Form

[Find or Edit a Complaint](#)[Add a New Complaint](#)

complaint_number	3981	Help: find #	DAN	AP65-01-02 Rev.	
Date received	7/22/2019	Time	3:00:00 PM	Date of Destruction	
active	<input type="checkbox"/>				
Date occurred	7/19/2019	Time	8:35:00 PM	Investigator	Kelsey
received via	email			Investigation Date	7/30/2019
received by	Kelsey			Investigation Time	1:00:00 PM
violation type	odor	Violation Address	Hornby Rd. to Waneta		
		Zip Code	98930		
Pictures		City	Grandview		
AOD?		NOV?	<input type="checkbox"/> non-disclosure		
Responsible Party		Complaint Party			
contact_name		First Name	Kathleen		
contact title		Last Name	Rogers		
First Name	Unknown	Address	1920 Braden Rd.		
Last Name	Unknown	Zip Code	98930		
Address	Hornby Rd. to Waneta	City	Grandview		
Zip Code	98930	Home phone #	(509) 830-6637		
City	Grandview	Cellphone #			
State	WA	Email	kakaleena1@yahoo.com		
Home phone #					
Cellphone #					
description alleged violation	CP says there's "Ambient cow pen dirt from Hornby west to Waneta and further. Particle dirt filling the air around us can be seen on video with lights. It smells like urine but you don't care about that".				
findings	CP says she has video of the dust that will be emailed over to YRCAA.				
actions taken	RL-3 See complaint #3990 for findings and actions taken. RL-4				

Complaint Form		Find or Edit a Complaint	Add a New Complaint
complaint_number 3982		DAN AP65-01-02 Rev.	
Date received 7/22/2019 Time 3:00:00 PM		Date of Destruction 	
active <input type="checkbox"/>		Investigator Kelsey	
Date occurred 7/21/2019 Time 11:30:00 PM		Investigation Date 7/30/2019	
received via email		Investigation Time 1:00:00 PM	
received by Kelsey			
violation type odor		Violation Address Hornby/Stover/Tear Roads	
Zip Code 98930		Pictures 	
City Grandview		AOD? 	
NOV? 		non-disclosure <input type="checkbox"/>	
Responsible Party		Complaint Party	
contact_name 		First Name Kathleen	
contact title 		Last Name Rogers	
First Name Unknown		Address 1920 Braden Road	
Last Name Unknown		Zip Code 98930	
Address Hornby/Stover/Tear Roads		City Grandview	
Zip Code 98930		Home phone # (509) 830-6637	
City Grandview State WA		Cellphone # 	
Home phone # 		Email kakaleena1@yahoo.com	
Cellphone # 			
description alleged violation	CP says that "Foul cloud of ambient open pen dirt and lagoon storage. Strong smell of ammonia/urine permitting our property and home. Gagging, sinus headache and inability to breath even with high power filtering system."		
findings	<div style="border: 1px solid black; height: 40px;"></div>		
actions taken	RL-3 See complaint #3990 for findings and actions taken.		

Complaint Form		Find or Edit a Complaint	Add a New Complaint
complaint_number 3983		DAN AP65-01-02 Rev.	
Date received 7/24/2019 Time 8:30:00 AM		Date of Destruction 	
active <input type="checkbox"/>		Investigator Kelsey v	
Date occurred 7/22/2019 Time 11:15:00 PM		Investigation Date 7/30/2019	
received via email v		Investigation Time 1:00:00 PM	
received by Kelsey v			
violation type odor v		Violation Address Hornby/Tear/Stover Roads	
Zip Code 98930		City Grandview	
Pictures 		non-disclosure <input type="checkbox"/>	
AOD? 		NOV? 	
Responsible Party		Complaint Party	
contact_name 		First Name Kathleen	
contact title 		Last Name Rogers	
First Name Unknown		Address 1920 Braden Road	
Last Name Unknown		Zip Code 98930	
Address Hornby/Tear/Stover Roads		City Grandview	
Zip Code 98930		Home phone # (509) 830-6637	
City Grandview State WA		Cellphone # 	
Home phone # 		Email kakaleena1@yahoo.com	
Cellphone # 			
description alleged violation CP says that "The ambient pen dirt air was sucked into her home and her sons through open windows around 11:00pm, when she was cooling her house down with the evening air. Horrible dirty feeling ambient pen dirt filled with horrid ammonia and manure AND			
findings 			
actions taken RL-3 See complaint #3990 for actions taken. RL-4			

Complaint Form		Find or Edit a Complaint		Add a New Complaint	
complaint_number <input type="text" value="3984"/>		Help: find #		DAN <input type="text" value="AP65-01-02 Rev."/>	
Date received <input type="text" value="7/25/2019"/> Time <input type="text" value="8:00:00 AM"/> active <input type="checkbox"/>		Date of Destruction <input type="text"/>			
Date occurred <input type="text" value="7/24/2019"/> Time <input type="text" value="9:35:00 AM"/> received via <input type="text" value="email"/>		Investigator <input type="text" value="Kelsey"/>			
received by <input type="text" value="Kelsey"/>		Investigation Date <input type="text" value="7/30/2019"/>			
		Investigation Time <input type="text" value="1:00:00 PM"/>			
violation type <input type="text" value="odor"/>		Violation Address <input type="text" value="Braden/Hornby/Tear/Stover Roads"/>			
		Zip Code <input type="text" value="98930"/>			
Pictures <input type="text"/>		City <input type="text" value="Grandview"/>			
AOD? <input type="text"/>		NOV? <input type="text"/>		non-disclosure <input type="checkbox"/>	
Responsible Party			Complaint Party		
contact_name <input type="text"/>			First Name <input type="text" value="Kathleen"/>		
contact title <input type="text"/>			Last Name <input type="text" value="Rogers"/>		
First Name <input type="text" value="Unknown"/>			Address <input type="text" value="1920 Braden Road"/>		
Last Name <input type="text" value="Unknown"/>			Zip Code <input type="text" value="98930"/>		
Address <input type="text" value="Braden/Hornby/Tear/Stover Roads"/>			City <input type="text" value="Grandview"/>		
Zip Code <input type="text" value="98930"/>			Home phone # <input type="text" value="(509) 830-6637"/>		
City <input type="text" value="Grandview"/> State <input type="text" value="WA"/>			Cellphone # <input type="text"/>		
Home phone # <input type="text"/>			Email <input type="text" value="kakaleena1@yahoo.com"/>		
Cellphone # <input type="text"/>					
description alleged violation		<input type="text" value="7/23/19 - after wonderful rain and thunder showers last night no smells! Wonderful sweet clean air! But tonight, Wednesday, 7/24/2019 9:25, windows open screen doors letting in fresh air until this very moment! Boom! Ambient pen ammonia stench coming in."/>			
findings		<input type="text"/>			
actions taken		<input type="text" value="RL-4 See complaint #3990 or actions taken. RL-4"/>			

Complaint Form		Find or Edit a Complaint	Add a New Complaint
complaint_number 3986		Help: find #	
Date received 7/25/2019 Time 9:30:00 AM		DAN AP65-01-02 Rev.	
Date occurred 7/25/2019 Time 8:27:00 AM		Date of Destruction 	
active <input type="checkbox"/>		Investigator Kelsey	
received via email		Investigation Date 7/30/2019	
received by Kelsey		Investigation Time 1:00:00 PM	
violation type odor		Violation Address Braden/Hornby/Waneta/Stover Roads	
Zip Code 98930		City Grandview	
Pictures 		non-disclosure <input type="checkbox"/>	
AOD? 		NOV? 	
Responsible Party		Complaint Party	
contact_name 		First Name Kathleen	
contact title 		Last Name Rogers	
First Name Unknown		Address 1920 Braden Rd.	
Last Name Unknown		Zip Code 98930	
Address Braden/Hornby/Waneta/Stover Roads		City Grandview	
Zip Code 98930		Home phone # (509) 840-0521	
City Grandview		Cellphone # 	
State WA		Email kakaleena1@yahoo.com	
Home phone # 			
Cellphone # 			
description alleged violation "Kelsey this has to stop! More and more ambient air full of CAFOs stench. I've written several complaints and no response from yrcaa! Come on you guys! Do your job. Kathy Rogers"			
findings 			
actions taken RL-4 See complaint #3990 for actions taken. RL-4			

Complaint Form		Find or Edit a Complaint	Add a New Complaint
complaint_number 3987		DAN AP65-01-02 Rev.	
Date received 7/25/2019 Time 8:45:00 AM		Date of Destruction 	
active <input type="checkbox"/>		Investigator Kelsey	
Date occurred 7/25/2019 Time 8:00:00 AM		Investigation Date 7/30/2019	
received via email		Investigation Time 1:00:00 PM	
received by Kelsey			
violation type odor		Violation Address Braden/Stover Roads	
Zip Code 98930		City Grandview	
Pictures 		non-disclosure <input type="checkbox"/>	
AOD? 		NOV? 	
Responsible Party		Complaint Party	
contact_name 	First Name Kathleen		
contact title 	Last Name Rogers		
First Name Veldhuis Klompe	Address 1920 Braden Road		
Last Name Veldhuis Klompe	Zip Code 98930		
Address Braden/Stover Roads	City Grandview		
Zip Code 98930	Home phone # (509) 839-6475		
City Grandview State WA	Cellphone # 		
Home phone # 	Email kakaleena1@yahoo.com		
Cellphone # 			
description alleged violation		"Awoke to horrid smell of dead cow composting. Veldhuis Klompe CAFOs is composting turning dead cow compost and it's gross. The ambient air is bringing this cloud of stench to my property this morning! Go to sleep with smells of urine wake up to manure	
findings		<div style="border: 1px solid black; height: 40px;"></div>	
actions taken		RL-3 See complaint #3990 for findings and actions taken. RL-4	

Complaint Form		Find or Edit a Complaint		Add a New Complaint	
complaint_number 3988		Help: find #		DAN AP65-D1-02 Rev.	
Date received 7/26/2019 Time 9:00:00 AM active <input type="checkbox"/>		Date of Destruction			
Date occurred 7/25/2019 Time 11:14:00 PM received via email received by Kelsey		Investigator Kelsey Investigation Date 7/30/2019 Investigation Time 1:00:00 PM			
violation type odor		Violation Address Stover/Hornby/Tear Roads			
		Zip Code 98930			
Pictures		City Grandview			
AOD?		NOV?		non-disclosure <input type="checkbox"/>	
Responsible Party			Complaint Party		
contact_name			First Name Kathleen		
contact title			Last Name Rogers		
First Name Unknown			Address 1920 Braden Road		
Last Name Unknown			Zip Code 98930		
Address Stover/Hornby/Tear Roads			City Grandview		
Zip Code 98930			Home phone # (509) 837-6637		
City Grandview State WA			Cellphone #		
Home phone #			Email kakaleena1@yahoo.com		
Cellphone #					
description alleged violation		CP says "Cool nights are once more and very appreciated. However, opening our windows and screened doors is a negative. The ambient pen dirt full of odor from the cafo open pens surrounding our home and the neighbors is restricting the enjoyment of fresh			
findings					
actions taken		RL-3 See complaint # for actions taken. RL-4			

Complaint Form		Find or Edit a Complaint	Add a New Complaint
complaint_number 3989		DAN AP65-01-02 Rev.	
Date received 7/29/2019 Time 9:00:00 AM		Date of Destruction 	
active <input type="checkbox"/>		Investigator Kelsey	
Date occurred 7/26/2019 Time 1:20:00 AM		Investigation Date 7/30/2019	
received via email		Investigation Time 1:00:00 PM	
received by Kelsey			
violation type odor		Violation Address Braden, Stover, Hornby, Roads	
Zip Code 98930		City Grandview	
Pictures 		non-disclosure <input type="checkbox"/>	
AOD? 		NOV? 	
Responsible Party		Complaint Party	
contact_name 		First Name Kathleen	
contact title 		Last Name Rogers	
First Name Unknown		Address 1920 Braden Road	
Last Name Unknown		Zip Code 98930	
Address Braden, Stover, Hornby, Roads		City Grandview	
Zip Code 98930		Home phone # (509) 839-6475	
City Grandview State WA		Cellphone # 	
Home phone # 		Email 	
Cellphone # 			
description alleged violation	CP says " Awakened by stench from ambient open pen dirt infiltrating our home! Cool night, windows open, sleeping well, then BOOM, I can't sleep because I'm breathing in this heavy dirt, band like dust in my house. Our large Austin Air filters is always		
findings	<div style="border: 1px solid black; height: 40px;"></div>		
actions taken	RL-3 See complaint #3990 for findings and actions taken. RL-4		

Complaint Form		Find or Edit a Complaint	Add a New Complaint
complaint_number <input style="width: 100px;" type="text" value="3990"/>		DAN <input style="width: 100px;" type="text" value="AP65-01-02 Rev."/>	
Date received <input style="width: 100px;" type="text" value="7/30/2019"/> Time <input style="width: 100px;" type="text" value="9:55:00 AM"/>		Date of Destruction <input style="width: 100px;" type="text"/>	
active <input type="checkbox"/>		Investigator <input style="width: 100px;" type="text" value="Kelsey"/>	
Date occurred <input style="width: 100px;" type="text" value="7/29/2019"/> Time <input style="width: 100px;" type="text"/>		Investigation Date <input style="width: 100px;" type="text" value="7/30/2019"/>	
received via <input style="width: 100px;" type="text" value="email"/>		Investigation Time <input style="width: 100px;" type="text" value="1:00:00 PM"/>	
received by <input style="width: 100px;" type="text" value="Kelsey"/>			
violation type <input style="width: 100px;" type="text" value="odor"/>		Violation Address <input style="width: 150px;" type="text" value="Braden, Stover, Hornby, Tear Roads"/>	
Zip Code <input style="width: 100px;" type="text" value="98930"/>			
Pictures <input style="width: 150px;" type="text" value="S:\Compliance\Assurance\Complaints\C"/>		City <input style="width: 100px;" type="text" value="Grandview"/>	
AOD? <input style="width: 100px;" type="text"/>		NOV? <input style="width: 100px;" type="text"/>	
non-disclosure <input type="checkbox"/>			
Responsible Party		Complaint Party	
contact_name <input style="width: 150px;" type="text"/>		First Name <input style="width: 150px;" type="text" value="Kathleen"/>	
contact title <input style="width: 150px;" type="text"/>		Last Name <input style="width: 150px;" type="text" value="Rogers"/>	
First Name <input style="width: 150px;" type="text" value="Klompe Dairy"/>		Address <input style="width: 150px;" type="text" value="1920 Braden Road"/>	
Last Name <input style="width: 150px;" type="text" value="Klompe Dairy"/>		Zip Code <input style="width: 100px;" type="text" value="98930"/>	
Address <input style="width: 150px;" type="text" value="Braden, Stover, Hornby, Tear Roads"/>		City <input style="width: 100px;" type="text" value="Grandview"/>	
Zip Code <input style="width: 100px;" type="text" value="98930"/>		Home phone # <input style="width: 100px;" type="text" value="(509) 830-6637"/>	
City <input style="width: 100px;" type="text" value="Grandview"/> State <input style="width: 50px;" type="text" value="WA"/>		Cellphone # <input style="width: 100px;" type="text"/>	
Home phone # <input style="width: 100px;" type="text"/>		Email <input style="width: 150px;" type="text" value="kakaleena1@yahoo.com"/>	
Cellphone # <input style="width: 100px;" type="text"/>			
description alleged violation	CP says "Kelsey, once more Klompe CAFO is composting and the ambient dirt from that is just nasty atmy home. The wind was blowing from the east as well. I believe they've been told not to compost in the wind. Kelsey I have photos! This needs to be handled		
findings			
actions taken	RL-3 Dairies and CAFO's in the vicinity of Hornby, Braden, Stover, and Tear Roads were contacted and made aware of the complaints. RL-4		

Complaint Form		Find or Edit a Complaint		Add a New Complaint	
complaint_number 3842		Help: find #		DAN AP65-01-02 Rev.	
Date received 7/12/2018 Time 10:00:00 AM <input type="checkbox"/> active Date occurred 7/10/2018 Time 3:04:00 PM received via voice mail received by Kelsey		Date of Destruction Investigator Kelsey Investigation Date 7/18/2018 Investigation Time 11:00:00 AM			
violation type CFO dust		Violation Address 1420 Outlook Rd.			
		Zip Code 98938			
Pictures		City Outlook			
AOD?		NOV? non-disclosure <input checked="" type="checkbox"/>			
Responsible Party			Complaint Party		
contact_name			First Name Redaction log#1		
contact title			Last Name Redaction log#2		
First Name WASHINGTON DAIRY HOLDINGS LLC			Address Redaction log#3		
Last Name WASHINGTON DAIRY HOLDINGS LLC			Zip Code 98938		
Address 170 S Lincoln St suite 150			City Outlook		
Zip Code 99201			Home phone # Redaction log#4		
City Spokane State WA			Cellphone #		
Home phone #			Email		
Cellphone #					
description alleged violation		CP says that the heifer pens across the street from his house is causing fugitive dust in the evenings when the cows become more active. The dust comes straight across the street and goes right into his property. He says its so bad it obscures the road.			
findings		No fugitive dust seen at time of investigation. Dirt in the pens seemed moist.			
actions taken		None. Told the gentleman to call the police department regarding the dust obscuring the road because it is a traffic safety issue. RL-4			
additional comments					

COVID 19 Incidence and Death Rates for Yakima County
Comparing the Upper Yakima County with the Lower Yakima County

Yakima County

Zip Code	Community	2020 Est. Population	% of Population	COVID Cases	% of Cases	COVID Deaths	% of Deaths
98901	Union Gap & Yakima	33,675	13.00%	3,466	12.04%	21	4.71%
98902	Yakima	47,924	18.49%	5,150	17.88%	115	25.78%
98903	Union Gap & Yakima	15,294	5.90%	1,572	5.46%	36	8.07%
98904	Gleed & Yakima			6	0.02%	0	0.00%
98907	Yakima			90	0.31%	6	1.35%
98908	Yakima	37,239	14.37%	3,067	10.65%	64	14.35%
98909	Yakima			114	0.40%	2	0.45%
98920	Brownstown			43	0.15%	1	0.22%
98921	Buena	516	0.20%	111	0.39%	0	0.00%
98923	Cowiche	1,475	0.57%	134	0.47%	1	0.22%
98930	Grandview	15,711	6.06%	1,995	6.93%	19	4.26%
98932	Granger	6,024	2.32%	866	3.01%	14	3.14%
98933	Harrah	1,329	0.51%	223	0.77%	3	0.67%
98935	Mabton	4,299	1.66%	642	2.23%	8	1.79%
98936	Moxee	6,835	2.64%	675	2.34%	0	0.00%
98937	Goose Prairie/Naches	4,524	1.75%	268	0.93%	2	0.45%
98938	Outlook	2,295	0.89%	251	0.87%	1	0.22%
98939	Parker	191	0.07%	51	0.18%	1	0.22%
98942	Selah	18,139	7.00%	1,475	5.12%	15	3.36%
98944	Sunnyside	23,475	9.06%	3,262	11.33%	35	7.85%
98947	Tieton	3,119	1.20%	334	1.16%	2	0.45%
98948	Toppenish	13,553	5.23%	2,170	7.54%	40	8.97%
98951	Wapato	14,035	5.42%	1,905	6.62%	40	8.97%
98952	White Swan	2,383	0.92%	266	0.92%	6	1.35%
98953	Zillah	7,098	2.74%	662	2.30%	14	3.14%
	Totals	259,132	100.00%	28,798	100.00%	446	100.00%

Zip Codes without populations are zip codes for PO Boxes only

Case Rate = 28,798 for 259,132 people = 0.111132 = 11.1% or 11,113 per 100,000 people

Death Rate = 446 for 259,132 people = 0.001721 = 0.17% or 172 per 100,000 people

Upper Yakima County

Zip Code	Community	2020 Est. Population	% of Population	COVID Cases	% of Cases	COVID Deaths	% of Deaths
98901	Union Gap & Yakima	33,675	13.00%	3,466	12.04%	21	4.71%
98902	Yakima	47,924	18.49%	5,150	17.88%	115	25.78%
98903	Union Gap & Yakima	15,294	5.90%	1,572	5.46%	36	8.07%
98904	Gleed & Yakima			6	0.02%	0	0.00%
98907	Yakima			90	0.31%	6	1.35%
98908	Yakima	37,239	14.37%	3,067	10.65%	64	14.35%
98909	Yakima			114	0.40%	2	0.45%
98923	Cowiche	1,475	0.57%	134	0.47%	1	0.22%
98936	Moxee	6,835	2.64%	675	2.34%	0	0.00%
98937	Goose Prairie/Naches	4,524	1.75%	268	0.93%	2	0.45%
98942	Selah	18,139	7.00%	1,475	5.12%	15	3.36%
98947	Tieton	3,119	1.20%	334	1.16%	2	0.45%
	Total	168,224	64.92%	16,351	56.78%	264	59.19%

Case Rate = 16,351 for 168,224 people = 0.097198 = 9.7% or 9,720 per 100,000 people

Death Rate = 264 for 168,224 people = 0.16% or 157 per 100,000 people

Lower Yakima County

Zip Code	Community	2020 Est. Population	% of Population	COVID Cases	% of Cases	COVID Deaths	% of Deaths
98920	Brownstown			43	0.15%	1	0.22%
98921	Buena	516	0.20%	111	0.39%	0	0.00%
98930	Grandview	15,711	6.06%	1,995	6.93%	19	4.26%
98932	Granger	6,024	2.32%	866	3.01%	14	3.14%
98933	Harrah	1,329	0.51%	223	0.77%	3	0.67%
98935	Mabton	4,299	1.66%	642	2.23%	8	1.79%
98938	Outlook	2,295	0.89%	251	0.87%	1	0.22%
98939	Parker	191	0.07%	51	0.18%	1	0.22%
98944	Sunnyside	23,475	9.06%	3,262	11.33%	35	7.85%
98948	Toppenish	13,553	5.23%	2,170	7.54%	40	8.97%
98951	Wapato	14,035	5.42%	1,905	6.62%	40	8.97%
98952	White Swan	2,383	0.92%	266	0.92%	6	1.35%
98953	Zillah	7,098	2.74%	662	2.30%	14	3.14%
	Total	90,908	35.08%	12,447	43.22%	182	40.81%

Case Rate = 12,447 for 90,908 people = 0.136918 = 13.7% or 13,692 cases per 100,000 people

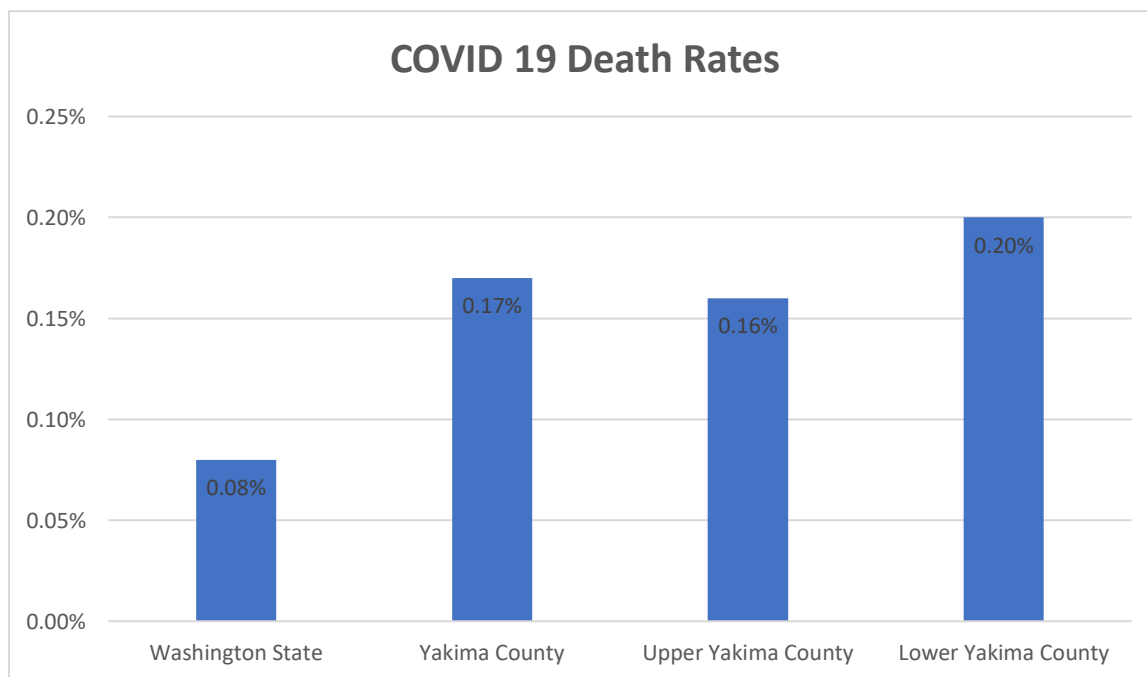
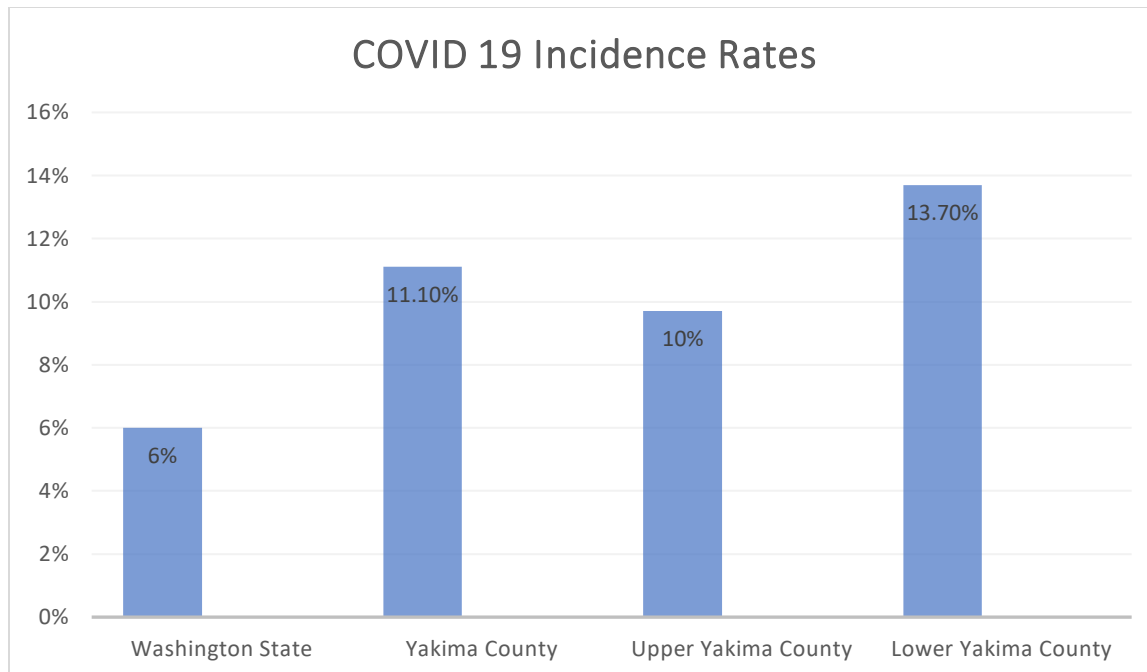
Death Rate = 182 for 90,908 people = 0.002002 = 0.2% or 200 per 100,000 people

Communities with % of deaths less than the % population are: Yakima, Union Gap, Buena, Cowiche, Grandview, Moxee, Goose Prairie/Naches, Outlook, Selah, Sunnyside, Tieton

Communities with % of deaths more than the % population are: Yakima, Union Gap, Granger, Harrah, Mabton, Parker, Toppenish, Wapato, White Swan, & Zillah

Current Population Estimated from the WA Office of Financial Management at <https://ofm.wa.gov/washington-data-research/population-demographics/population-estimates/small-area-estimates-program>

COVID 19 Incidence and Death Rates from the WA State Dept. of Health – See page 5



As of July 14, 2021, the Case Rate for Washington State was approximately 6% or 60 per 100,000 people, and the Washington State Death Rate was approximately 0.08% or 60 per 100,000 people. See WA DOH COVID 19 Data Dashboard at <https://www.doh.wa.gov/Emergencies/COVID19/DataDashboard>

COVID 19 Statistics for Yakima County obtained from the WA State Dept. of Health, and current as of June 18, 2021

Zip Code	COVID-19 Case Counts	COVID-19 Death Counts
98901	3466	21
98902	5150	115
98903	1572	36
98904	6	0
98907	90	6
98908	3067	64
98909	114	2
98920	43	1
98921	111	0
98923	134	1
98930	1995	19
98932	866	14
98933	223	3
98935	642	8
98936	675	0
98937	268	2
98938	251	1
98939	51	1
98942	1475	15
98944	3262	35
98947	334	2
98948	2170	40
98951	1905	40
98952	266	6
98953	662	14

Exposure to air pollution and COVID-19 mortality in the United States: A nationwide cross-sectional study

Xiao Wu, Rachel C Nethery, M Benjamin Sabath, Danielle Braun, Francesca Dominici

Abstract

Objectives: United States government scientists estimate that COVID-19 may kill tens of thousands of Americans. Many of the pre-existing conditions that increase the risk of death in those with COVID-19 are the same diseases that are affected by long-term exposure to air pollution. We investigated whether long-term average exposure to fine particulate matter (PM_{2.5}) is associated with an increased risk of COVID-19 death in the United States.

Design: A nationwide, cross-sectional study using county-level data. **Data sources:** COVID-19 death counts were collected for more than 3,000 counties in the United States (representing 98% of the population) up to April 22, 2020 from Johns Hopkins University, Center for Systems Science and Engineering Coronavirus Resource Center. **Main outcome measures:** We fit negative binomial mixed models using county-level COVID-19 deaths as the outcome and county-level long-term average of PM_{2.5} as the exposure. In the main analysis, we adjusted by 20 potential confounding factors including population size, age distribution, population density, time since the beginning of the outbreak, time since state's issuance of stay-at-home order, hospital beds, number of individuals tested, weather, and socioeconomic and behavioral variables such as obesity and smoking. We included a random intercept by state to account for potential correlation in counties within the same state. We conducted more than 68 additional sensitivity analyses.

Results: We found that an increase of only 1 $\mu\text{g}/\text{m}^3$ in PM_{2.5} is associated with an 8% increase in the COVID-19 death rate (95% confidence interval [CI]: 2%, 15%). The results were statistically significant and robust to secondary and sensitivity analyses.

Conclusions: A small increase in long-term exposure to PM_{2.5} leads to a large increase in the COVID-19 death rate. Despite the inherent limitations of the ecological study design, our results underscore the importance of continuing to enforce existing air pollution regulations to protect human health both during and after the COVID-19 crisis. The data and code are publicly available so our analyses can be updated routinely.

Available at

<https://www.medrxiv.org/content/medrxiv/early/2020/04/27/2020.04.05.20054502.full.pdf>

Heart Attack Hospitalizations: Age-Adjusted Rate per 10,000 (for specified age groupings)

Geography: County, Age Group: 35+, Sex: All (Combined), Time Period: 2010-2014

From WA Health Tracking Network at <https://fortress.wa.gov/doh/wtn/WTNPortal/>

County	Count	Population	Age Adjusted Rate per 10,000	Lower CI	Upper CI
State Total	46804	18253396	24.27	24.05	24.5
Adams	95	42919	21.8	17.57	26.81
Asotin	139	65825	16.73 (NR)	13.96 (NR)	20.13 (NR)
Benton	1072	461513	21.86	20.54	23.25
Chelan	537	203597	21.63	19.8	23.64
Clallam	854	235947	25.68	23.86	27.66
Clark	2909	1149994	25.06 (NR)	24.14 (NR)	26.02 (NR)
Columbia	64	12845	35.95	27.46	48.08
Cowlitz	973	299613	27.77 (NR)	26.02 (NR)	29.64 (NR)
Douglas	274	100024	24.35	21.51	27.5
Ferry	56	20833	22.33	16.48	30.54
Franklin	338	164252	22.65	20.22	25.32
Garfield	26	7570	23.17 (NR)	14.15 (NR)	38.97 (NR)
Grant	715	210177	31.77	29.45	34.24
Grays Harbor	810	220985	31.39	29.19	33.74
Island	708	233440	23.86 (NR)	22.06 (NR)	25.81 (NR)
Jefferson	295	105957	19.77	17.36	22.69
King	10092	5303957	19.34	18.95	19.73
Kitsap	1606	707969	20.27	19.26	21.33
Kittitas	264	96945	23.4	20.57	26.6
Klickitat	97	66709	12.88 (NR)	10.36 (NR)	15.99 (NR)
Lewis	941	221101	35.52	33.21	37.97
Lincoln	134	34536	30.93	25.63	37.46
Mason	625	181515	28.32	26.05	30.77
Okanogan	393	124673	25.77	23.19	28.64
Pacific	171	69510	18.14 (NR)	15.37 (NR)	21.62 (NR)
Pend Oreille	107	40786	22.33	18.02	27.75
Pierce	6044	2072126	28.65	27.92	29.4

San Juan	120	56980	16.38	13.36	20.27
Skagit	1220	336788	30.22	28.5	32.03
Skamania	32	24224	12.26 (NR)	8.27 (NR)	17.98 (NR)
Snohomish	4877	1934687	26.06	25.31	26.83
Spokane	3505	1242028	25.67	24.81	26.56
Stevens	482	145389	27.88	25.33	30.71
Thurston	1902	704353	24.89	23.75	26.07
Wahkiakum	37	13296	21.97 (NR)	15.06 (NR)	33.32 (NR)
Walla Walla	514	155633	26.54	24.23	29.07
Whatcom	1409	528472	23.64	22.39	24.95
Whitman	222	74693	25.47	22.15	29.23
Yakima	2142	581535	34.27	32.81	35.78

Heart Attack Hospitalizations: Age-Adjusted Rate per 10,000 (for specified age groupings)

Geography: County, Age Group: 35+, Sex: All (Combined), Time Period: 2008-2012

County	Count	Population	Age Adjusted Rate per 10,000	Lower CI	Upper CI
State Total	45003	17780556	24.57	24.34	24.8
Adams	94	42733	21.67	17.47	26.64
Asotin	183	64151	23.14 (NR)	19.8 (NR)	27.06 (NR)
Benton	1071	441815	23.43	22.02	24.91
Chelan	456	198815	19.2	17.44	21.12
Clallam	844	232659	26.09	24.27	28.08
Clark	2967	1115030	27.32 (NR)	26.32 (NR)	28.35 (NR)
Columbia	58	12723	34.72	26.18	46.81
Cowlitz	836	294938	25.28 (NR)	23.57 (NR)	27.1 (NR)
Douglas	210	98206	19.26	16.72	22.13
Ferry	53	20357	23.29	17.18	31.73
Franklin	328	152393	24.49	21.84	27.41
Garfield	33	7507	32.31 (NR)	20.96 (NR)	50.29 (NR)
Grant	641	203545	29.79	27.5	32.22
Grays Harbor	785	218495	31.5	29.28	33.86
Island	667	230348	23.82 (NR)	21.99 (NR)	25.81 (NR)

Jefferson	313	103761	22.39	19.8	25.44
King	9645	5157217	19.41	19.01	19.8
Kitsap	1666	691338	22.49	21.39	23.64
Kittitas	236	95331	22	19.21	25.16
Klickitat	101	64967	14.04 (NR)	11.36 (NR)	17.3 (NR)
Lewis	929	217727	36.18	33.83	38.68
Lincoln	130	34316	30.71	25.49	37.14
Mason	558	178445	26.47	24.25	28.89
Okanogan	367	121394	25.67	23.03	28.61
Pacific	188	68568	20.3 (NR)	17.39 (NR)	23.88 (NR)
Pend Oreille	103	40195	22.96	18.48	28.52
Pierce	5751	2029768	28.7	27.95	29.47
San Juan	115	55967	16.8	13.69	20.76
Skagit	1083	331037	28.04	26.36	29.82
Skamania	28	23614	11.37 (NR)	7.44 (NR)	17.03 (NR)
Snohomish	4681	1872045	26.59	25.81	27.39
Spokane	3305	1214305	25.1	24.23	25.99
Stevens	476	143396	29.5	26.79	32.47
Thurston	1808	680649	25.21	24.03	26.43
Wahkiakum	30	13137	17.94 (NR)	11.82 (NR)	28.34 (NR)
Walla Walla	478	152721	25.62	23.32	28.13
Whatcom	1394	513742	24.57	23.27	25.93
Whitman	237	76646	27.31	23.87	31.17
Yakima	2152	566552	35.76	34.25	37.33

Heart Attack Hospitalizations: Age-Adjusted Rate per 10,000 (for specified age groupings)

Geography: County, Age Group: 35+, Sex: All (Combined), Time Period: 2006-2010

County	Count	Population	Age Adjusted Rate per 10,000	Lower CI	Upper CI
State Total	44851	17299822	25.72	25.48	25.96
Adams	96	42193	22.54	18.23	27.63
Asotin	189	62627	25.25 (NR)	21.71 (NR)	29.36 (NR)
Benton	1111	424122	26.03	24.49	27.64

Chelan	456	193703	20.37	18.52	22.39
Clallam	844	227987	27.64	25.73	29.71
Clark	3045	1080273	29.5 (NR)	28.44 (NR)	30.6 (NR)
Columbia	55	12435	32.9	24.58	44.65
Cowlitz	828	288379	26.22 (NR)	24.44 (NR)	28.11 (NR)
Douglas	188	95326	18.05	15.55	20.9
Ferry	57	19682	24.65	18.5	32.97
Franklin	360	141411	28.97	25.98	32.24
Garfield	24	7474	22.93 (NR)	14.1 (NR)	37.99 (NR)
Grant	607	195564	29.52	27.2	32
Grays Harbor	843	215247	34.79	32.45	37.31
Island	602	225813	23.27 (NR)	21.4 (NR)	25.29 (NR)
Jefferson	299	101179	22.74	20.09	25.85
King	9680	5017942	20.35	19.94	20.77
Kitsap	1686	673564	24.19	23.02	25.41
Kittitas	250	92476	24.73	21.69	28.12
Klickitat	127	63207	19.22 (NR)	15.95 (NR)	23.08 (NR)
Lewis	952	212935	38.22	35.79	40.81
Lincoln	114	33961	27.49	22.59	33.54
Mason	580	172665	28.97	26.61	31.53
Okanogan	369	118228	27.66	24.84	30.78
Pacific	201	67836	23.09 (NR)	19.82 (NR)	27.01 (NR)
Pend Oreille	104	39275	23.45	18.95	28.99
Pierce	5539	1990356	28.88	28.12	29.67
San Juan	101	54885	15.43	12.47	19.22
Skagit	1048	323521	28.43	26.71	30.25
Skamania	30	23010	12.89 (NR)	8.59 (NR)	18.86 (NR)
Snohomish	4725	1812141	28.45	27.62	29.3
Spokane	3205	1183320	25.6	24.71	26.52
Stevens	477	140010	31.74	28.86	34.88
Thurston	1776	655753	26.43	25.19	27.72
Wahkiakum	32	12780	19.5 (NR)	13.15 (NR)	29.77 (NR)
Walla Walla	488	149666	27.36	24.93	30
Whatcom	1371	498051	25.7	24.34	27.13
Whitman	242	77556	28	24.53	31.89
Yakima	2148	553270	37.22	35.65	38.86
Heart Attack Hospitalizations: Age-Adjusted Rate per 10,000 (for specified age groupings)					
Geography: County, Age Group: 35+, Sex: All (Combined), Time Period: 2006-2010					
Created: 7/19/2021					

Cardiovascular Effects Consistent with the 2009 PM ISA, this ISA concludes there is a causal relationship between short-term PM_{2.5} exposure and cardiovascular effects (Section 6.1). The strongest evidence comes from epidemiologic studies that reported consistent, positive associations between short-term PM_{2.5} exposure and cardiovascular-related ED visits and hospital admissions across studies that used different approaches to control for the potential confounding effects of weather (e.g., temperature), particularly for ischemic heart disease (IHD) and heart failure (HF), as well as cardiovascular-related mortality. Recent examinations of potential copollutant confounding generally indicate that the associations observed between PM_{2.5} exposure and cardiovascular effects in single-pollutant models remain relatively unchanged in copollutant models, providing evidence that the observed associations with PM_{2.5} are not artifacts due to confounding by another air pollutant. The independence of a PM_{2.5} cardiovascular effect is further supported by recent experimental studies. Controlled human exposure studies expand upon previous findings and demonstrate PM_{2.5}-induced changes in endothelial function, which is coherent with animal toxicological studies demonstrating the same effect. Moreover, experimental evidence demonstrating decreased cardiac contractility and altered left ventricular pressure is coherent with epidemiologic studies observing positive associations between ambient PM_{2.5} and ED visits and hospital admissions for HF. Thus, the collective body of experimental evidence supports and provides biological plausibility for epidemiologic studies reporting associations, particularly between short-term PM_{2.5} exposure and IHD and HF outcomes, as well as a range of other cardiovascular-related effects (e.g., arrhythmia, thrombosis) that can result in more severe outcomes, possibly including death.

The 2009 PM ISA, as well as the current PM ISA, concluded there is a causal relationship between long-term PM_{2.5} exposure and cardiovascular effects (Section 6.2). Epidemiologic studies of multiple recent U.S.-based cohorts along with reanalyses of these cohorts provide strong evidence of consistent, positive associations between long-term PM_{2.5} exposure and cardiovascular mortality. These studies used a variety of exposure assessment and statistical techniques and examined various spatial domains (e.g., 1 × 1-km grid cells, census tract, etc.) in many locations where mean annual average PM_{2.5} concentrations are " 12 µg/m³ . Recent epidemiologic studies of cardiovascular morbidity have greatly expanded upon the body of evidence available at the completion of the 2009 PM ISA by focusing on populations with distinct demographic characteristics (e.g., postmenopausal woman, male doctors, etc.) and extensively considering potential confounders (e.g., socioeconomic status [SES]). Although an

extended analysis of the Women's Health Initiative (WHI) cohort strengthened the initial observation of a relationship between long-term PM_{2.5} exposure and coronary events among postmenopausal women, additional cohorts of women similar to the WHI cohort did not report consistent, positive associations with coronary heart disease (CHD), myocardial infarction, or stroke. Longitudinal studies examining the progression of atherosclerosis in relation to long-term exposure to PM_{2.5} reported inconsistent results that were dependent upon the vascular bed examined, but there was evidence of PM_{2.5}-associated coronary artery calcification, a strong predictor of CHD, within a study focusing on the progression of atherosclerosis in a healthy population (i.e., Multi-Ethnic Study of Atherosclerosis and Air Pollution [MESA–Air]). A limited number of epidemiologic studies examining other cardiovascular effects provide some evidence of associations with HF, blood pressure, and hypertension, as well as subclinical cardiovascular biomarkers. Recent studies also reduce the uncertainty associated with potential copollutant confounding by reporting that associations between long-term PM_{2.5} exposure and cardiovascular mortality remained relatively unchanged or increased in copollutant models adjusted for O₃, NO₂, SO₂, and PM_{10–2.5}. Evidence from animal toxicological studies further supports a direct PM_{2.5} effect on the cardiovascular system and provides coherence with effects observed in epidemiologic studies. For example, animal toxicological studies demonstrating atherosclerotic plaque progression in mice is coherent with epidemiologic studies of atherosclerosis, and animal toxicological studies reporting increased coronary artery wall thickness, decreased cardiac contractility and output, and changes in blood pressure are coherent with epidemiologic studies of HF. Furthermore, when considering the collective body of evidence, there are biologically plausible pathways by which long-term exposure to PM_{2.5} could lead to a continuum of effects potentially resulting in death.

EPA Air Quality Monitors Report – FRM & FEM Monitors

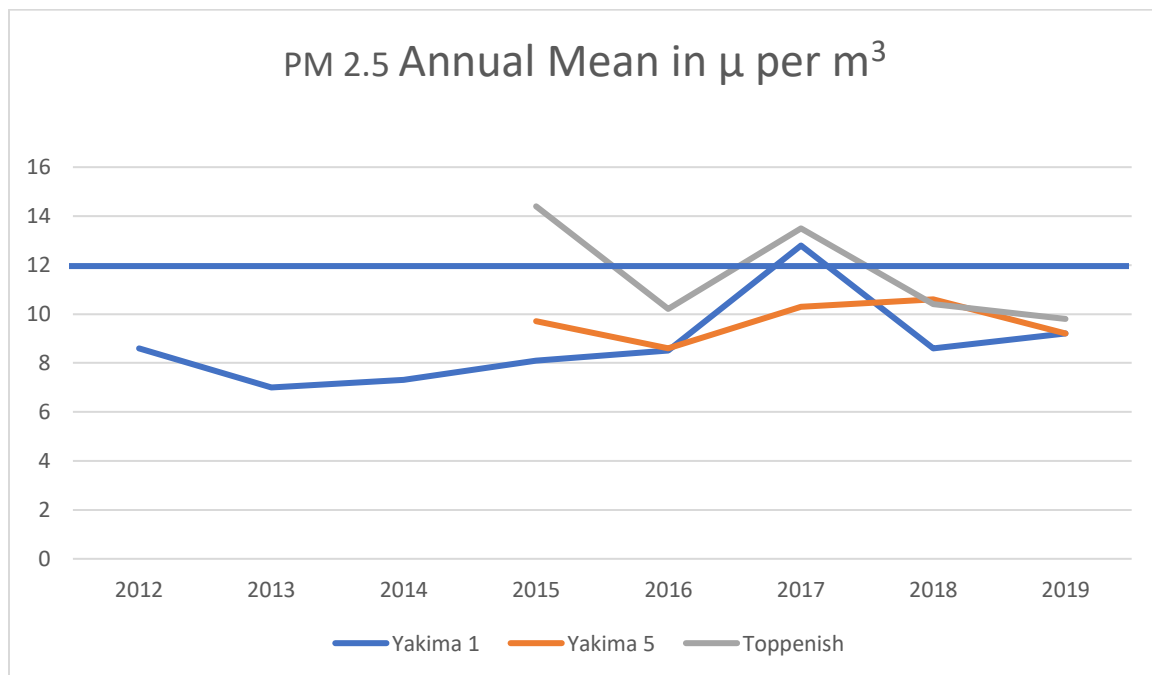
PM 2.5 for Yakima County – Excludes Exceptional Events

Available at <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>

Annual Mean in μ per m^3

Year	402 S. 40 th Ave, Yakima (1)	402 S. 40 th Ave, Yakima (3)	402 S. 40 th Ave, Yakima (5)	141 Ward Rd, Toppenish (1)	141 Ward Rd, Toppenish (5)
2012	8.6				
2013	7.0*	17.2*			
2014	7.3	8.6*			
2015	8.1*	8.9*	9.7*	14.4*	
2016	8.5		8.6	10.2*	9.7*
2017	12.8		10.3		13.5
2018	8.6*		10.6		10.4*
2019	9.2		9.2		9.8
2020	11.6*	12.3*			14.1*
2021	14.6*	9.0*			8.3*

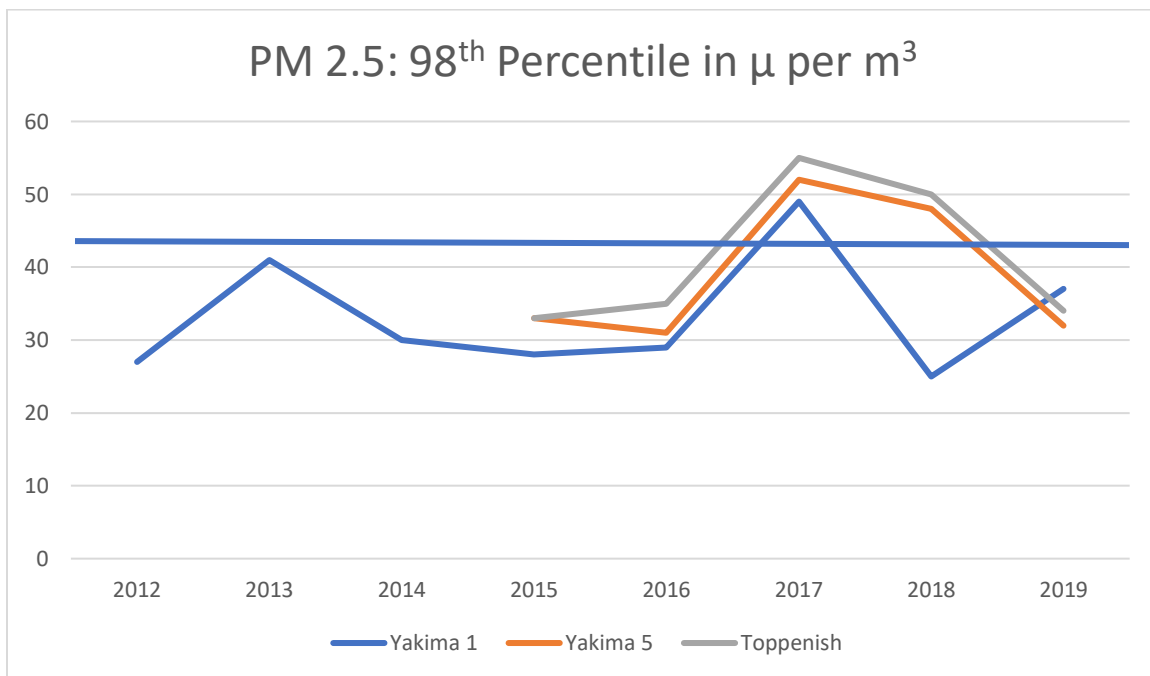
- Indicates insufficient data.
2020 & 2021 may include data from excluded events.



EPA cutoff for compliance = 12 μ per m^3 .

98th Percentile in μ per m^3

Year	402 S. 40 th Ave, Yakima (1)	402 S. 40 th Ave, Yakima (3)	402 S. 40 th Ave, Yakima (5)	141 Ward Rd, Toppenish (1)	141 Ward Rd, Toppenish (5)
2012	27				
2013	41	38			
2014	30	27			
2015	28	25	33	33	
2016	29		31	62	35
2017	49		52		55
2018	25		48		50
2019	37		32		34
2020	135		105		90
2021	30		29		28



EPA cutoff for compliance = 35 μ per m^3 .

First Max in μ per m^3

Year	402 S. 40 th Ave, Yakima (1)	402 S. 40 th Ave, Yakima (3)	402 S. 40 th Ave, Yakima (5)	141 Ward Rd, Toppenish (1)	141 Ward Rd, Toppenish (5)
2012	29.2				
2013	50.1	51.5			
2014	41	44.6			
2015	39.3	28.9	41	32.6	
2016	49.6		63.9	61.8	49.5
2017	161.3		184.6		184
2018	44		132		137.5
2019	39.2		40.8		39.8
2020	250.2	325.4			447.6
2021	30.2	30.6			29.8

Second Max in μ per m^3

Year	402 S. 40 th Ave, Yakima (1)	402 S. 40 th Ave, Yakima (3)	402 S. 40 th Ave, Yakima (5)	141 Ward Rd, Toppenish (1)	141 Ward Rd, Toppenish (5)
2012	26.9				
2013	42.3	43.9			
2014	33.2	40.8			
2015	31.3	25.8	34.8	24.7	
2016	30.9		59.2	29	42.9
2017	76.1		173.3		183.6
2018	31.8		102		124.5
2019	36.8		38.8		37.6
2020	134.5		273.9		378.2
2021	23.5		29.1		27.9

Third Max in μ per m^3

Year	402 S. 40 th Ave, Yakima (1)	402 S. 40 th Ave, Yakima (3)	402 S. 40 th Ave, Yakima (5)	141 Ward Rd, Toppenish (1)	141 Ward Rd, Toppenish (5)
2012	25.9				
2013	37	42.8			
2014	30.2	39.2			
2015	27.7	25.5	33.1	23.5	
2016	29.1		53.5	24.3	35
2017	49.2		166.4		174.1
2018	25.2		59.7		57.4
2019	36.8		37.3		37.1
2020	72.1		254.3		328.2
2021	20.8		25.7		26.9

Fourth Max in μ per m^3

Year	402 S. 40 th Ave, Yakima (1)	402 S. 40 th Ave, Yakima (3)	402 S. 40 th Ave, Yakima (5)	141 Ward Rd, Toppenish (1)	141 Ward Rd, Toppenish (5)
2012	26.2				
2013	23.7	39.5			
2014	29.2	36.5			
2015	25.1	25.1	32.3	21.9	
2016	26.8		50.2	23.6	31.2
2017	48		84.5		100.3
2018	24.1		59.1		56.1
2019	37		32		36.7
2020	42.7		144.1		304.9
2021	19.6		23.5		21

Note: It is likely that the data for 2020 & 2021 includes exceptional events. Therefore, that data was separated from the previous years for graphing purposes.

Data Copied from <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>

2012

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
105	29.2	26.9	26.9	26.2	27	8.6*	Excluded	1	530770009	402 South 4th Ave	Yakima

2013

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
76	50.1	41.3	37	23.7	41	7.0*	None	1	530770009	402 South 4th Ave	Yakima
85	51.5	43.9	42.8	39.5	38	17.2*	Excluded	3	530770009	402 South 4th Ave	Yakima

2014

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
113	41	33.2	30.2	29.2	30	7.3	None	1	530770009	402 South 4th Ave	Yakima
332	44.6	40.8	39.2	36.5	27	8.6*	None	3	530770009	402 South 4th Ave	Yakima

2015

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
25	26.5	24.5	24.2	18.6	27	9.7*	None	1	530770005	810 16thst (Harrison Middle School)	Sunnyside
108	39.3	31.3	27.7	25.1	28	8.1*	Excluded	1	530770009	402 South 4th Ave	Yakima
231	28.9	25.8	25.5	25.1	25	8.9*	Excluded	3	530770009	402 South 4th Ave	Yakima
101	41	34.8	33.1	32.3	33	9.7*	None	5	530770009	402 South 4th Ave	Yakima
13	32.6	24.7	23.5	21.9	33	14.4*	None	1	530770015	141 Ward Rd., Toppenish, Wa	Toppenish

2016

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
21	26.1	21.7	19.9	18.3	26	12.1*	None	1	530770005	810 16thst (Harrison Middle School)	Sunnyside
116	49.6	30.9	29.1	26.6	29	8.5	None	1	530770009	402 South 4th Ave	Yakima
349	63.9	59.2	53.5	50.2	31	8.6	None	5	530770009	402 South 4th Ave	Yakima
47	61.8	29	24.3	23.6	62	10.2*	None	1	530770015	141 Ward Rd., Toppenish, Wa	Toppenish
149	49.5	47.9	35	31.2	35	9.7*	None	5	530770015	141 Ward Rd., Toppenish, Wa	Toppenish

2017

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
113	161.3	76.1	49.2	48	49	12.8	None	1	530770009	402 South 4th Ave	Yakima
356	184.6	173.3	166.4	84.5	52	10.3	None	5	530770009	402 South 4th Ave	Yakima
352	184	183.6	174.1	100.3	55	13.5	None	5	530770015	141 Ward Rd., Toppenish, Wa	Toppenish

2018

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
102	44	31.8	25.2	24.1	25	8.6*	None	1	530770009	402 South 4th Ave	Yakima
360	132	102	59.7	59.1	48	10.6	None	5	530770009	402 South 4th Ave	Yakima
307	137.5	124.5	57.4	56.1	50	10.4*	None	5	530770015	141 Ward Rd., Toppenish, Wa	Toppenish

2019

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
113	39.2	36.8	36.8	35	37	9.2	None	1	530770009	402 South 4th Ave	Yakima
353	40.8	38.8	37.3	35.1	32	9.2	None	5	530770009	402 South 4th Ave	Yakima
322	39.8	37.6	37.1	36.7	34	9.8	None	5	530770015	141 Ward Rd., Toppenish, Wa	Toppenish

2020

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
75	250.2	134.5	72.1	42.7	135	11.6*	None	1	530770009	402 South 4th Ave	Yakima
315	325.4	273.9	254.3	144.1	105	12.3*	None	5	530770009	402 South 4th Ave	Yakima
306	447.6	378.2	328.2	304.9	90	14.1*	None	5	530770015	141 Ward Rd., Toppenish, Wa	Toppenish

2021

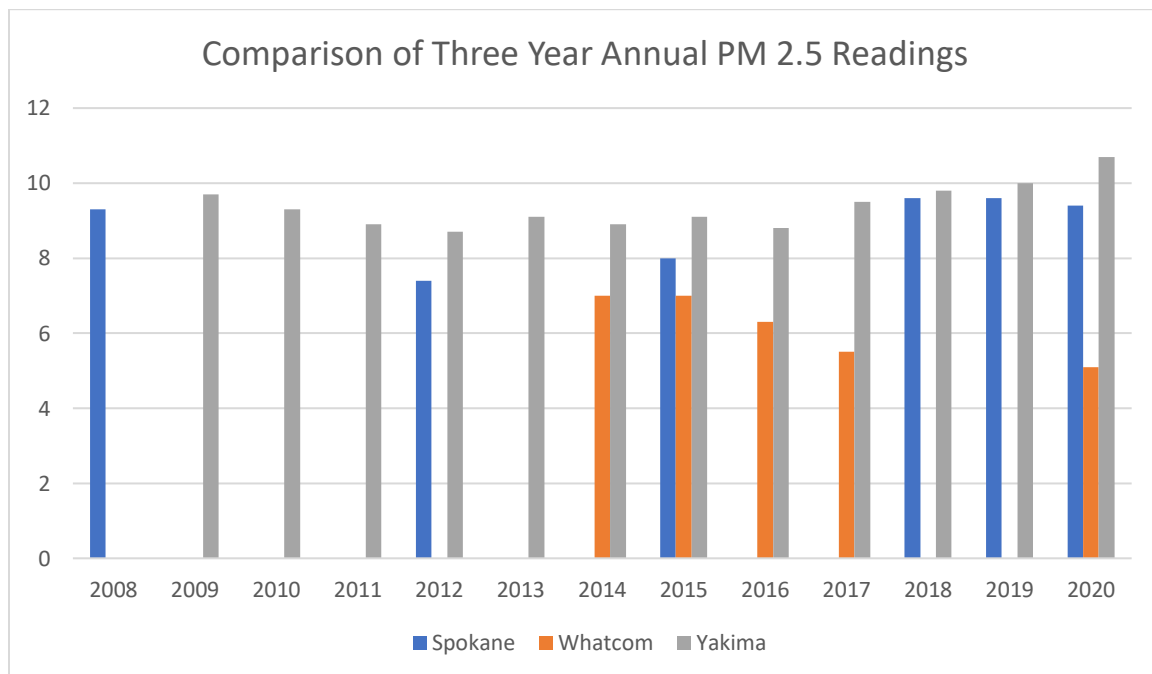
Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City
11	30.2	25.5	20.8	19.6	30	14.6*	None	1	530770009	402 South 4th Ave	Yakima
90	30.6	29.1	25.7	23.5	29	9.0*	None	5	530770009	402 South 4th Ave	Yakima
73	29.8	27.9	26.9	21	28	8.3*	None	5	530770015	141 Ward Rd., Toppenish, Wa	Toppenish

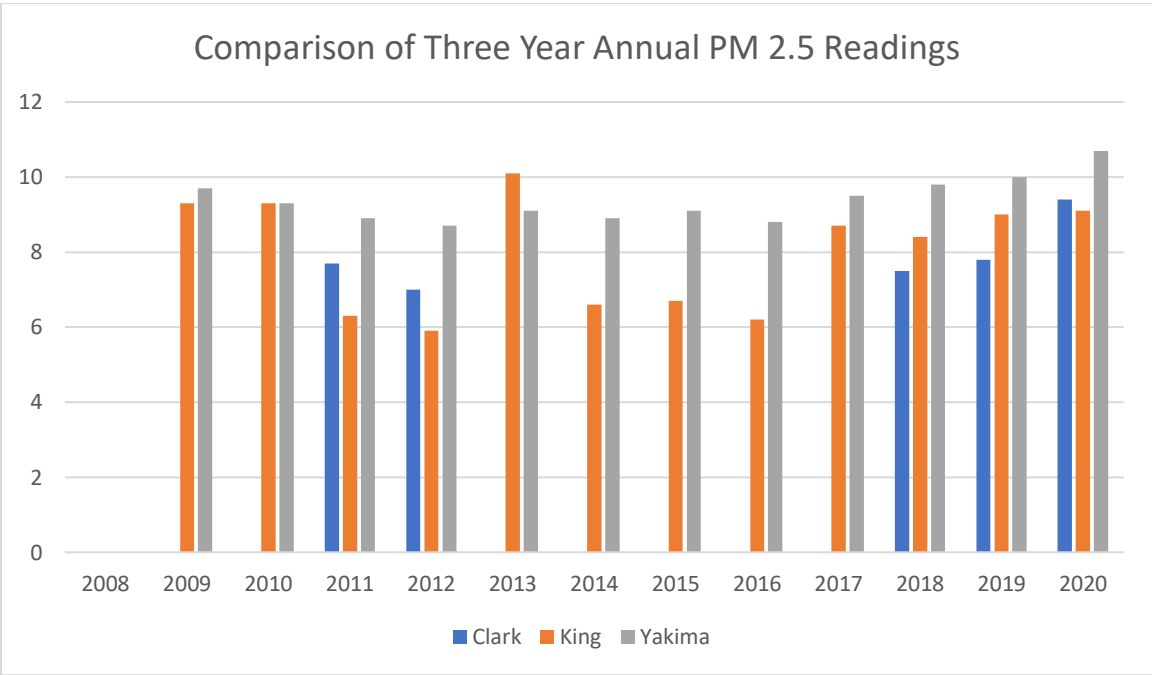
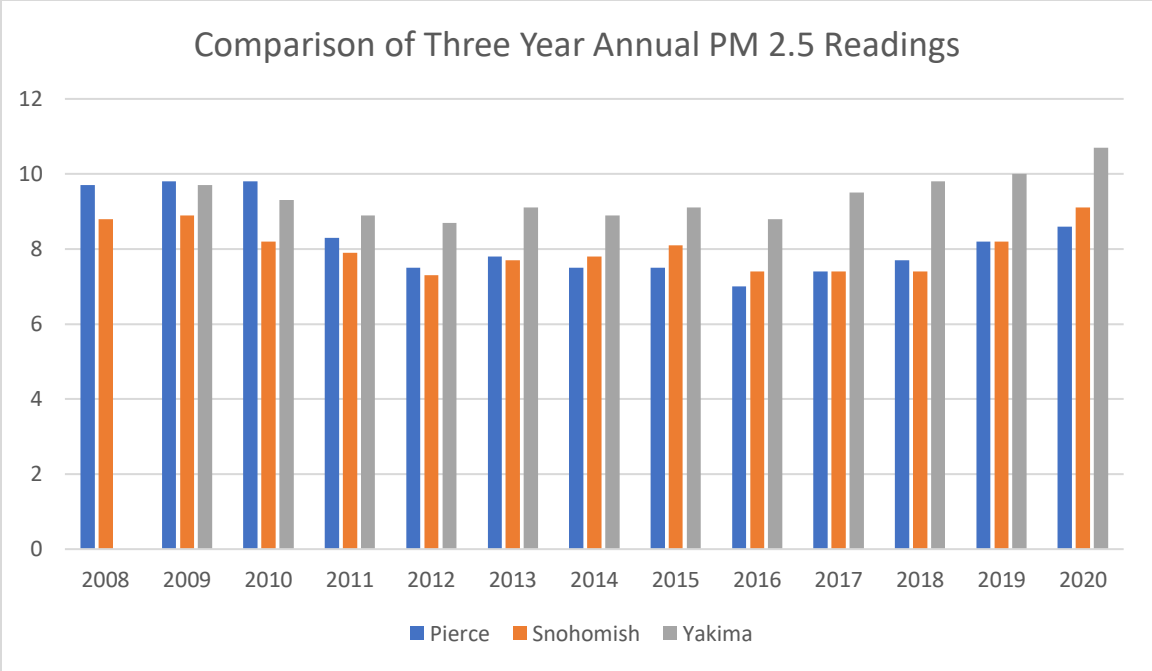
Data from EPA's Design Values Web Page

<https://www.epa.gov/air-trends/air-quality-design-values>

Three Year Annual Average PM 2.5 County Comparison – Washington State

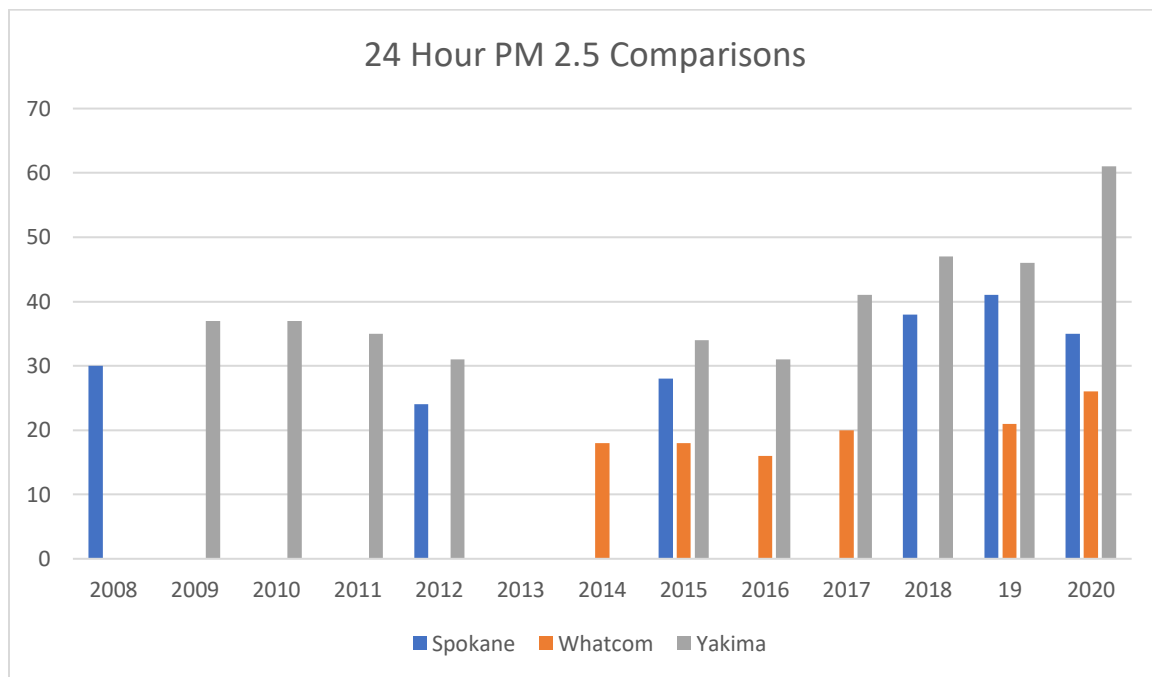
Years	Clark	King	Pierce	Snohomish	Spokane	Whatcom	Yakima
2018 - 2020	9.4	9.1	8.6	9.1	9.4	5.1	10.7
2017 - 2019	7.8	9.0	8.2	8.2	9.6		10.0
2016 - 2018	7.5	8.4	7.7	7.4	9.6		9.8
2015 - 2017		8.7	7.4	7.4		5.5	9.5
2014 - 2016		6.2	7.0	7.4		6.3	8.8
2013 - 2015		6.7	7.5	8.1	8.0	7.0	9.1
2012 - 2014		6.6	7.5	7.8		7.0	8.9
2011 - 2013		10.1	7.8	7.7			9.1
2010 - 2012	7.0	5.9	7.5	7.3	7.4		8.7
2009 - 2011	7.7	6.3	8.3	7.9			8.9
2008 - 2010		9.3	9.8	8.2			9.3
2007 - 2009		9.3	9.8	8.9			9.7
2006 - 2008			9.7	8.8	9.3		
2005 - 2007							
2004 - 2006							
2003 - 2005							

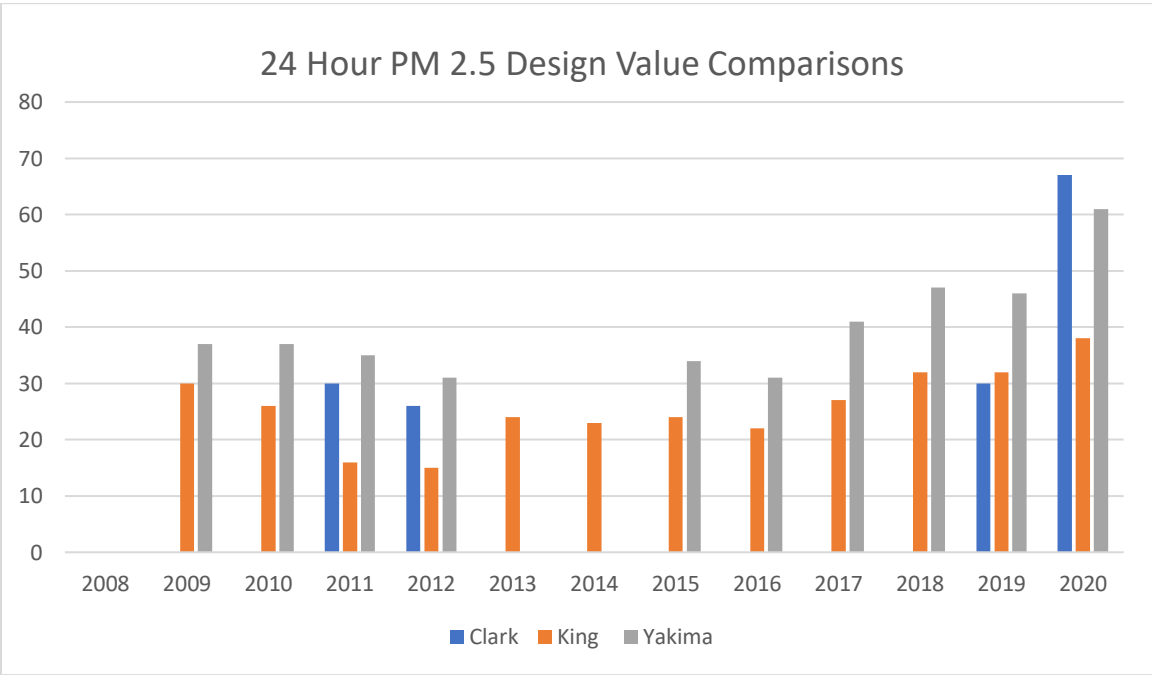
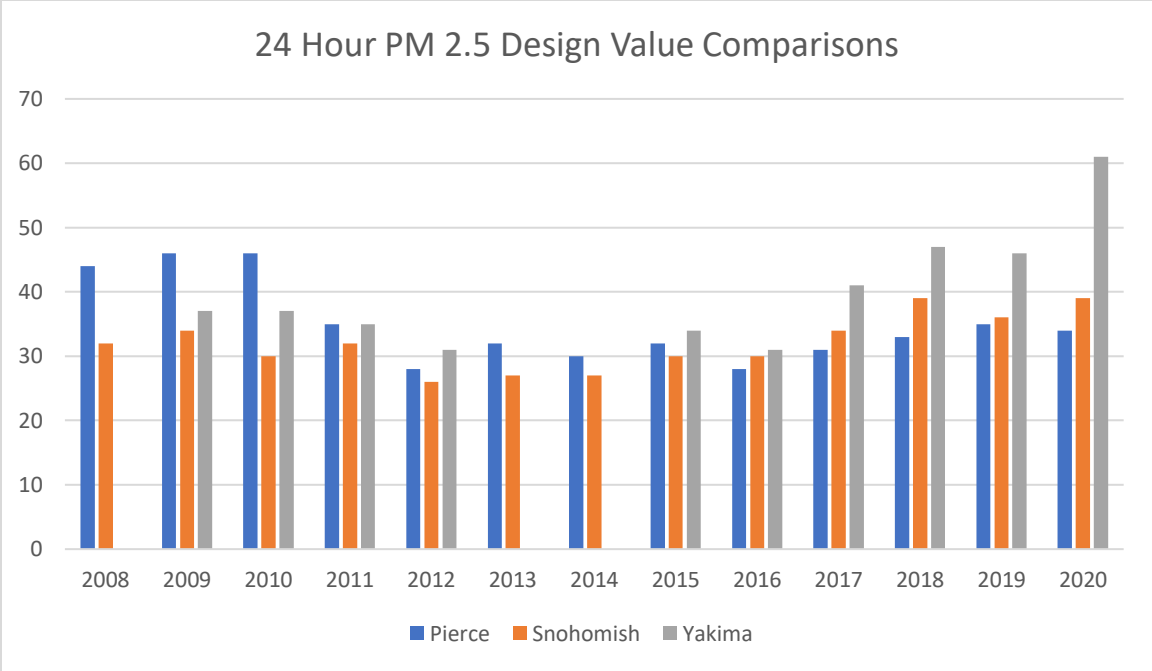




24 Hour PM 2.5 Design Value Comparisons – Washington State

Years	Clark	King	Pierce	Snohomish	Spokane	Whatcom	Yakima
2018 - 2020	67	38	34	39	35	26	61
2017 – 2019	30	32	35	36	41	21	46
2016 – 2018		32	33	39	38		47
2015 – 2017		27	31	34		20	41
2014 – 2016		22	28	30		16	31
2013 – 2015		24	32	30	28	18	34
2012 – 2014		23	30	27		18	
2011 – 2013		24	32	27			
2010 – 2012	26	15	28	26	24		31
2009 – 2011	30	16	35	32			35
2008 – 2010		26	46	30			37
2007 – 2009		30	46	34			37
2006 – 2008			44	32	30		
2005 – 2007							
2004 – 2006							
2003 – 2005							





Data by County

Chelan

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020		
2017 – 2019		
2016 – 2018		
2015 – 2017		
2014 – 2016	5.6	21
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Clark

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	9.4	67
2017 – 2019	7.8	30
2016 – 2018	7.5	
2015 – 2017		
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012	7.0	26
2009 – 2011	7.7	30
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

King

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	9.1	38
2017 – 2019	9.0	32
2016 – 2018	8.4	32
2015 – 2017	8.7	27
2014 – 2016	6.2	22
2013 – 2015	6.7	24
2012 – 2014	6.6	23
2011 – 2013	10.1	24
2010 – 2012	5.9	15
2009 – 2011	6.3	16
2008 – 2010	9.3	26
2007 – 2009	9.3	30
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Kitsap

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	5.8	26
2017 – 2019	4.9	20
2016 – 2018	4.6	19
2015 – 2017	4.7	16
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Kittitas

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	7.8	39
2017 – 2019	8.3	38
2016 – 2018	8.1	40
2015 – 2017	7.6	
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Okanogan

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	11.9	66
2017 – 2019		60
2016 – 2018		62
2015 – 2017		
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Pierce

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	8.6	34
2017 – 2019	8.2	35
2016 – 2018	7.7	33
2015 – 2017	7.4	31
2014 – 2016	7.0	28
2013 – 2015	7.5	32
2012 – 2014	7.5	30
2011 – 2013	7.8	32
2010 – 2012	7.5	28
2009 – 2011	8.3	35
2008 – 2010	9.8	46
2007 – 2009	9.8	46
2006 – 2008	9.7	44
2005 – 2007		
2004 – 2006		
2003 – 2005		

Skagit

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020		
2017 – 2019	5.8	18
2016 – 2018	5.8	18
2015 – 2017	5.9	13
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Snohomish

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	9.1	39
2017 – 2019	8.2	36
2016 – 2018	7.4	39
2015 – 2017	7.4	34
2014 – 2016	7.4	30
2013 – 2015	8.1	30
2012 – 2014	7.8	27
2011 – 2013	7.7	27
2010 – 2012	7.3	26
2009 – 2011	7.9	32
2008 – 2010	8.2	30
2007 – 2009	8.9	34
2006 – 2008	8.8	32
2005 – 2007		
2004 – 2006		
2003 – 2005		

Spokane

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	9.4	35
2017 – 2019	9.6	41
2016 – 2018	9.6	38
2015 – 2017		
2014 – 2016		
2013 – 2015	8.0	28
2012 – 2014		
2011 – 2013		
2010 – 2012	7.4	24
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008	9.3	30
2005 – 2007		
2004 – 2006		
2003 – 2005		

Stevens

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020		38
2017 – 2019		
2016 – 2018		
2015 – 2017		
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Whatcom

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	5.1	26
2017 – 2019		21
2016 – 2018		
2015 – 2017	5.5	20
2014 – 2016	6.3	16
2013 – 2015	7.0	18
2012 – 2014	7.0	18
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Yakima

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	10.7	61
2017 – 2019	10.0	46
2016 – 2018	9.8	47
2015 – 2017	9.5	41
2014 – 2016	8.8	31
2013 – 2015	9.1	34
2012 – 2014	8.9	
2011 – 2013	9.1	
2010 – 2012	8.7	31
2009 – 2011	8.9	35
2008 – 2010	9.3	37
2007 – 2009	9.7	37
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Annual PM 2.5 and 24 Hour PM 2.5 compiled by Three Year Periods

2018 – 2020

County	Annual PM 2.5	24 Hour PM 2.5
Clark	9.4	67
King	9.1	38
Kitsap	5.8	26
Kittitas	7.8	39
Okanogan	11.9	66
Pierce	8.6	34
Snohomish	9.1	39
Skagit		
Spokane	9.4	35
Stevens		38
Whatcom	5.1	26
Yakima	10.7	61

2017 - 2019

County	Annual PM 2.5	24 Hour PM 2.5
Clark	7.8	30
King	9.0	32
Kitsap	4.9	20
Kittitas	8.3	38
Okanogan		60
Pierce	8.2	35
Skagit	5.8	18
Snohomish	8.2	36
Spokane	9.6	41
Stevens		
Whatcom		21
Yakima	10.0	46

2016 - 2018

County	Annual PM 2.5	24 Hour PM 2.5
Clark	7.5	
King	8.4	32
Kitsap	4.6	19
Kittitas	8.1	40
Okanogan		62
Pierce	7.7	33
Skagit	5.8	18
Snohomish	7.4	39
Spokane	9.6	38
Stevens		
Whatcom		
Yakima	9.8	47

2015 - 2017

County	Annual PM 2.5	24 Hour PM 2.5
Clark		
King	8.7	27
Kitsap	4.7	16
Kittitas	7.6	
Okanogan		
Pierce	7.4	31
Skagit	5.9	13
Snohomish	7.4	34
Spokane		
Stevens		
Whatcom	5.5	20
Yakima	9.5	41

2014 - 2016

County	Annual PM 2.5	24 Hour PM 2.5
Chelan	5.6	21
Clark		
King	6.2	22
Kitsap		
Kittitas		
Okanogan		
Pierce	7.0	28
Skagit		
Snohomish	7.4	30
Spokane		
Stevens		
Whatcom	6.3	16
Yakima	8.8	31

2013 – 2015

County	Annual PM 2.5	24 Hour PM 2.5
Clark		36
King	6.7	24
Kitsap		
Kittitas		
Okanogan		
Pierce	7.5	32
Skagit		
Snohomish	8.1	30
Spokane		29
Stevens		
Whatcom	7.0	18
Yakima	9.1	34

2012 - 2014

County	Annual PM 2.5	24 Hour PM 2.5
Clark		
King	6.6	23
Kitsap		
Kittitas		
Okanogan		
Pierce	7.5	30
Skagit		
Snohomish	7.8	27
Spokane	7.9	24
Stevens		
Whatcom		
Yakima	8.9	

2011 – 2013

County	Annual PM 2.5	24 Hour PM 2.5
Clark		
King	10.1	24
Kitsap		
Kittitas		
Okanogan		
Pierce	7.8	32
Skagit		
Snohomish	7.7	27
Spokane	8.0	28
Stevens		
Whatcom		
Yakima	9.1	

2010 – 2012

County	Annual PM 2.5	24 Hour PM 2.5
Clark	7.0	26
King	5.9	15
Kitsap		
Kittitas		
Okanogan		
Pierce	7.5	28
Skagit		
Snohomish	7.3	26
Spokane	7.4	24
Stevens		
Whatcom		
Yakima	8.7	31

2009 – 2011

County	Annual PM 2.5	24 Hour PM 2.5
Clark	7.7	30
King	6.3	16
Kitsap		
Kittitas		
Okanogan		
Pierce	8.3	35
Skagit		
Snohomish	7.9	32
Spokane		
Stevens		
Whatcom		
Yakima	8.9	35

2008 – 2010

County	Annual PM 2.5	24 Hour PM 2.5
Clark	7.8	27
King	6.6	16
Kitsap		
Kittitas		
Okanogan		
Pierce	8.9	38
Skagit		
Snohomish	8.2	30
Spokane		
Stevens		
Whatcom		
Yakima	9.3	37

2007 – 2009

County	Annual PM 2.5	24 Hour PM 2.5
Clark		
King	9.3	26
Kitsap		
Kittitas		
Okanogan		
Pierce	9.8	46
Skagit		
Snohomish	8.9	34
Spokane		
Stevens		
Whatcom		
Yakima	9.7	37

2006 – 2008

County	Annual PM 2.5	24 Hour PM 2.5
Clark		
King		
Kitsap		
Kittitas		
Okanogan		
Pierce	9.7	44
Skagit		
Snohomish	8.8	32
Spokane	9.3	30
Stevens		
Whatcom		
Yakima		

2005 – 2007

County	Annual PM 2.5	24 Hour PM 2.5
Clark		
King	9.0	31
Kitsap		
Kittitas		
Okanogan		
Pierce	10.2	43
Skagit		
Snohomish	9.5	35
Spokane	9.8	31
Stevens		
Whatcom		
Yakima		

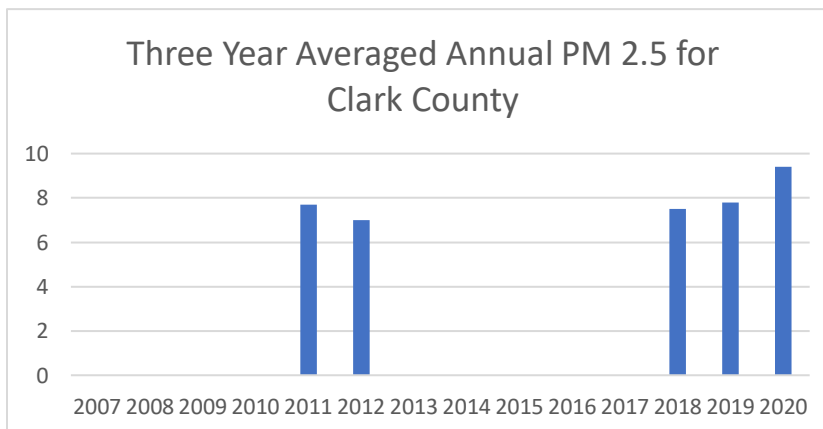
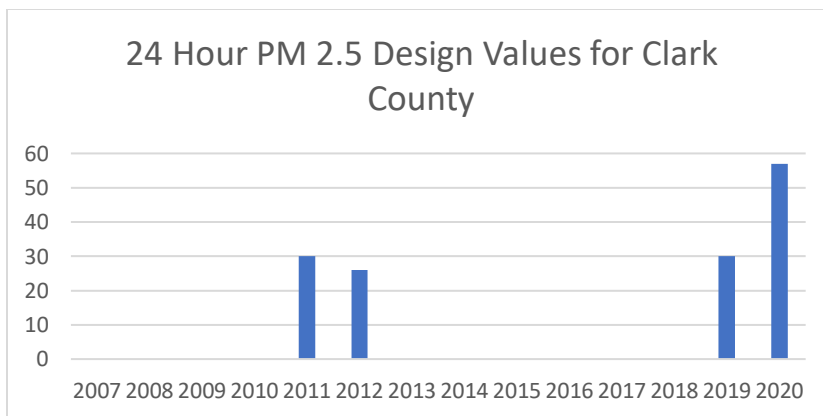
Data by County for Three Year Periods with Graphs

Chelan

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020		
2017 – 2019		
2016 – 2018		
2015 – 2017		
2014 – 2016	5.6	21
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

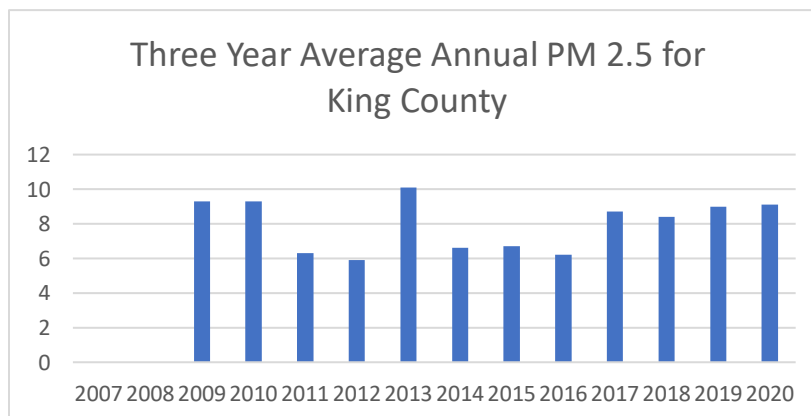
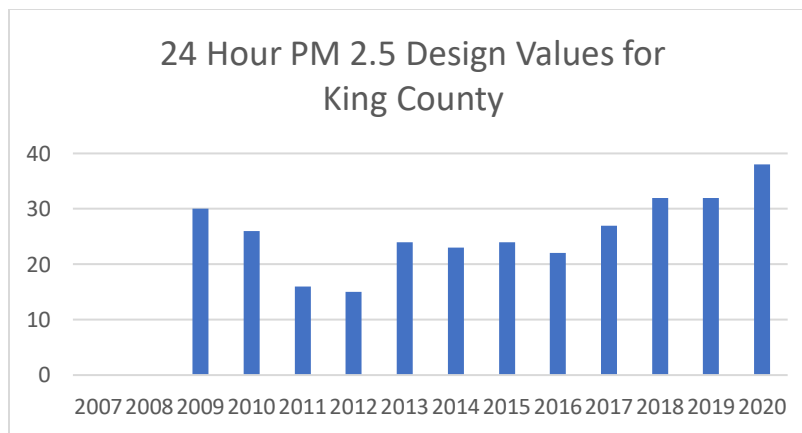
Clark

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	9.4	67
2017 - 2019	7.8	30
2016 - 2018	7.5	
2015 - 2017		
2014 - 2016		
2013 - 2015		
2012 - 2014		
2011 - 2013		
2010 - 2012	7.0	26
2009 - 2011	7.7	30
2008 - 2010		
2007 - 2009		
2006 - 2008		
2005 - 2007		
2004 - 2006		
2003 - 2005		



King

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	9.1	38
2017 - 2019	9.0	32
2016 - 2018	8.4	32
2015 - 2017	8.7	27
2014 - 2016	6.2	22
2013 - 2015	6.7	24
2012 - 2014	6.6	23
2011 - 2013	10.1	24
2010 - 2012	5.9	15
2009 - 2011	6.3	16
2008 - 2010	9.3	26
2007 - 2009	9.3	30
2006 - 2008		
2005 - 2007		
2004 - 2006		
2003 - 2005		



Kitsap

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	5.8	26
2017 – 2019	4.9	20
2016 – 2018	4.6	19
2015 – 2017	4.7	16
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Kittitas

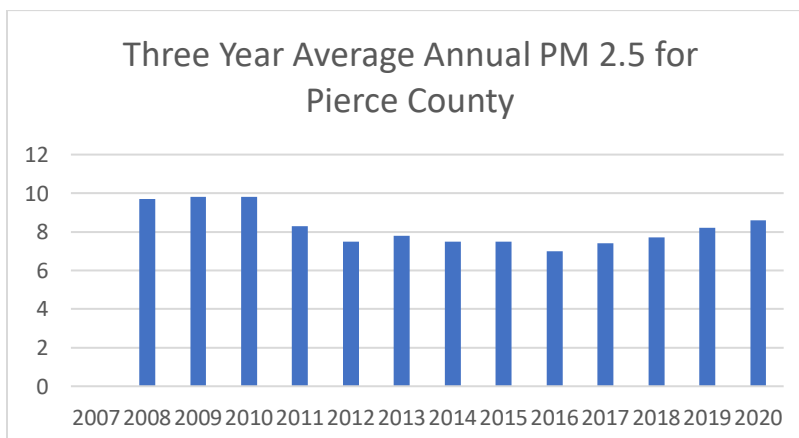
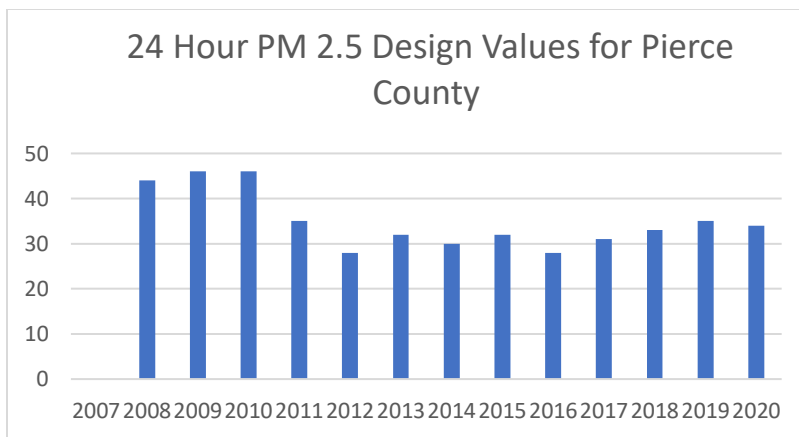
Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	7.8	39
2017 – 2019	8.3	38
2016 – 2018	8.1	40
2015 – 2017	7.6	
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Okanogan

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	11.9	66
2017 – 2019		60
2016 – 2018		62
2015 – 2017		
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

Pierce

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	8.6	34
2017 - 2019	8.2	35
2016 - 2018	7.7	33
2015 - 2017	7.4	31
2014 - 2016	7.0	28
2013 - 2015	7.5	32
2012 - 2014	7.5	30
2011 - 2013	7.8	32
2010 - 2012	7.5	28
2009 - 2011	8.3	35
2008 - 2010	9.8	46
2007 - 2009	9.8	46
2006 - 2008	9.7	44
2005 - 2007		
2004 - 2006		
2003 - 2005		

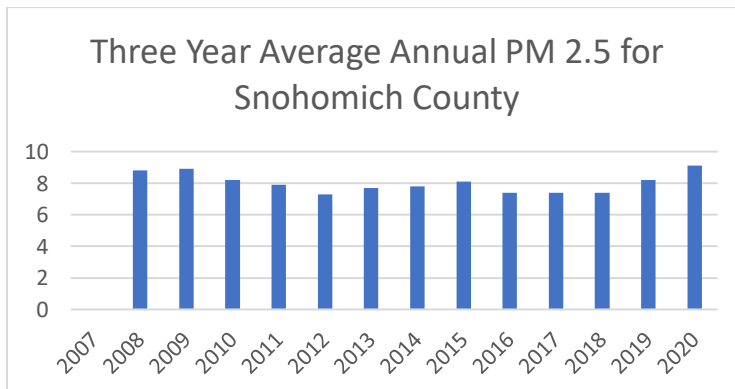
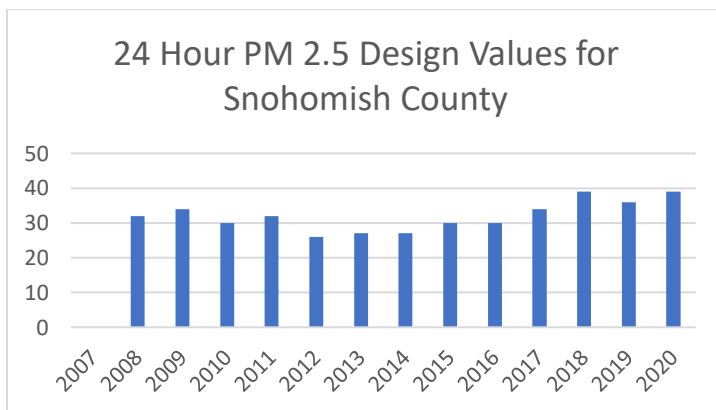


Skagit

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020		
2017 – 2019	5.8	18
2016 – 2018	5.8	18
2015 – 2017	5.9	13
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

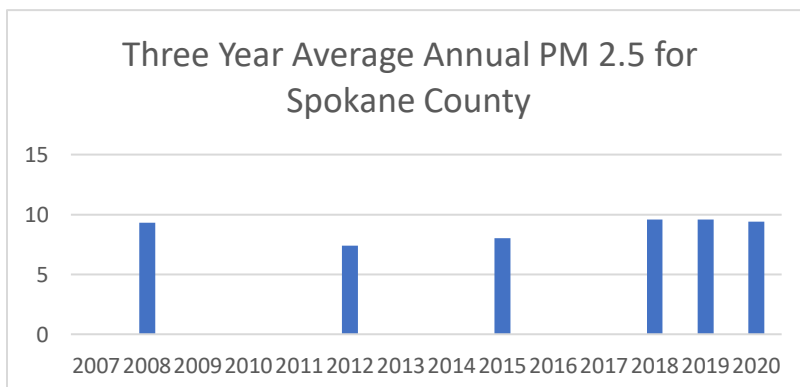
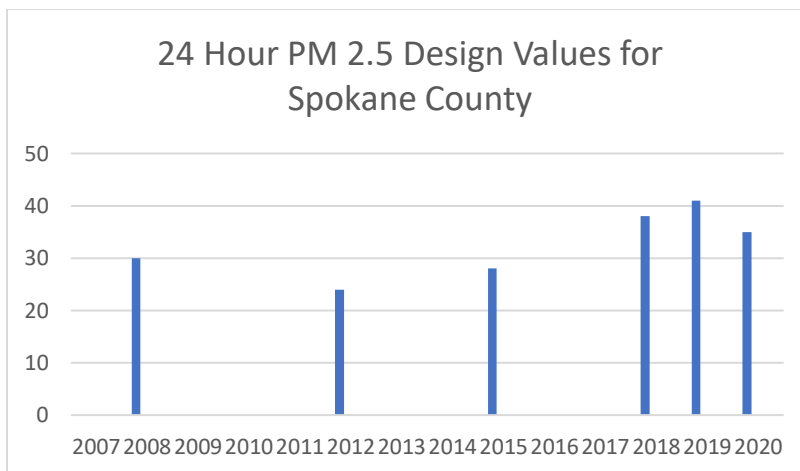
Snohomish

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	9.1	39
2017 - 2019	8.2	36
2016 - 2018	7.4	39
2015 - 2017	7.4	34
2014 - 2016	7.4	30
2013 - 2015	8.1	30
2012 - 2014	7.8	27
2011 - 2013	7.7	27
2010 - 2012	7.3	26
2009 - 2011	7.9	32
2008 - 2010	8.2	30
2007 - 2009	8.9	34
2006 - 2008	8.8	32
2005 - 2007		
2004 - 2006		
2003 - 2005		



Spokane

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	9.4	35
2017 - 2019	9.6	41
2016 - 2018	9.6	38
2015 - 2017		
2014 - 2016		
2013 - 2015	8.0	28
2012 - 2014		
2011 - 2013		
2010 - 2012	7.4	24
2009 - 2011		
2008 - 2010		
2007 - 2009		
2006 - 2008	9.3	30
2005 - 2007		
2004 - 2006		
2003 - 2005		

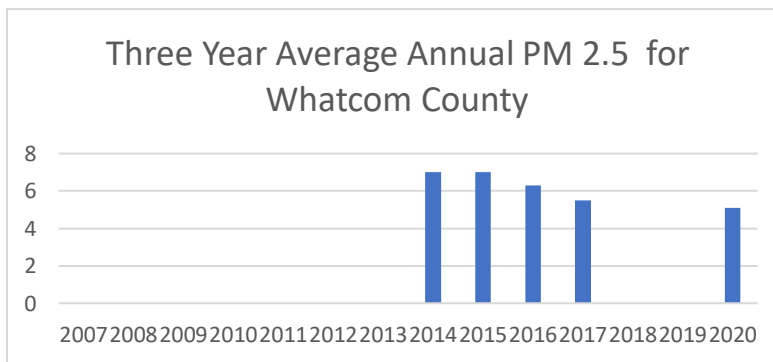
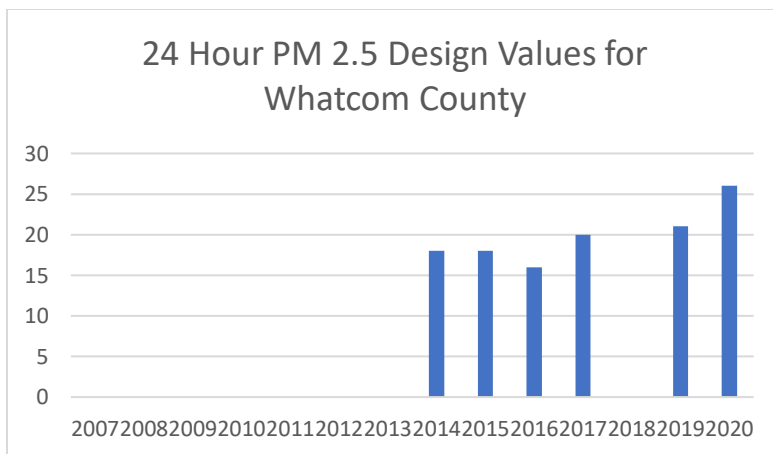


Stevens

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020		38
2017 – 2019		
2016 – 2018		
2015 – 2017		
2014 – 2016		
2013 – 2015		
2012 – 2014		
2011 – 2013		
2010 – 2012		
2009 – 2011		
2008 – 2010		
2007 – 2009		
2006 – 2008		
2005 – 2007		
2004 – 2006		
2003 – 2005		

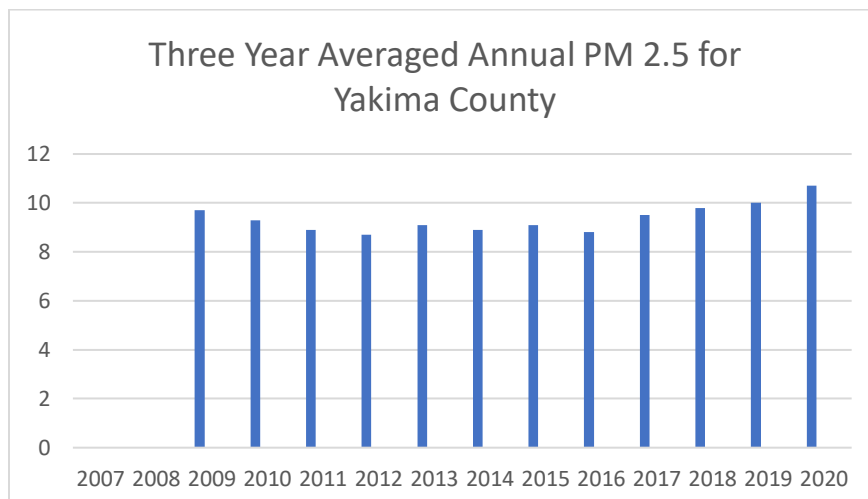
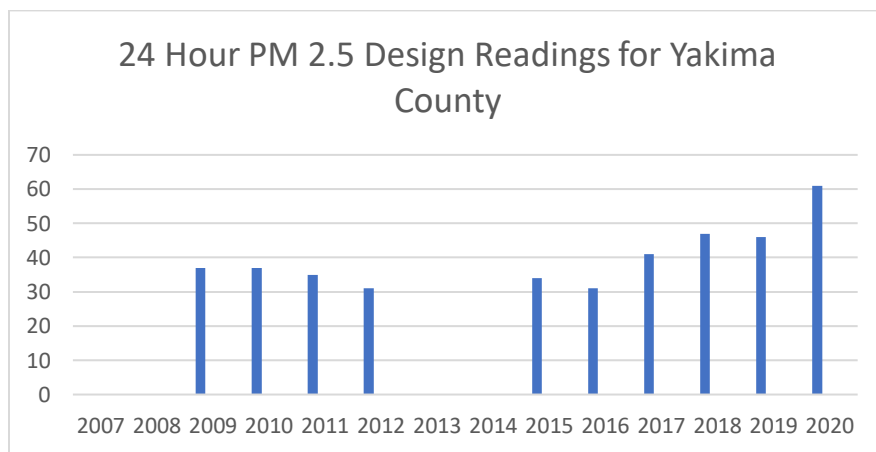
Whatcom

Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	5.1	26
2017 - 2019		21
2016 - 2018		
2015 - 2017	5.5	20
2014 - 2016	6.3	16
2013 - 2015	7.0	18
2012 - 2014	7.0	18
2011 - 2013		
2010 - 2012		
2009 - 2011		
2008 - 2010		
2007 - 2009		
2006 - 2008		
2005 - 2007		
2004 - 2006		
2003 - 2005		



Yakima

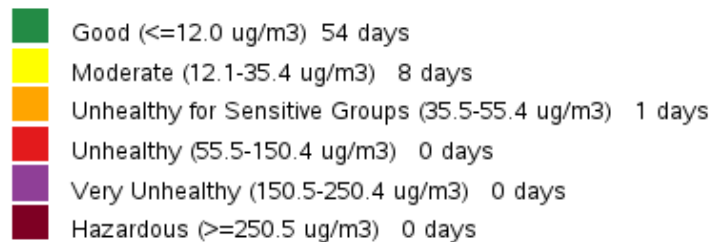
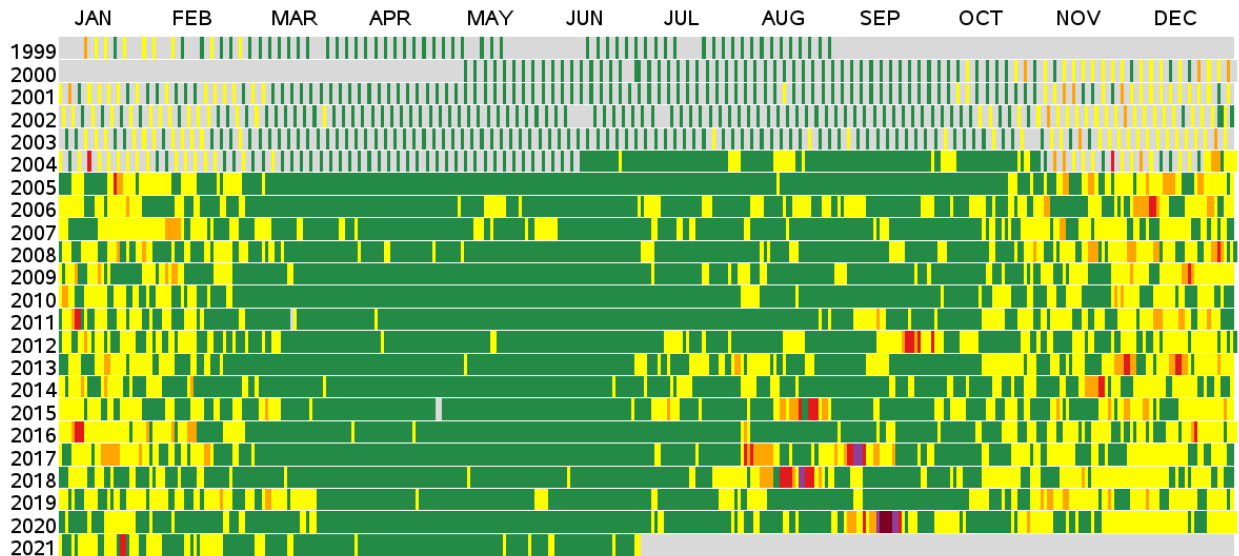
Years	Annual PM 2.5	24 Hour PM 2.5
2018 - 2020	10.7	61
2017 - 2019	10.0	46
2016 - 2018	9.8	47
2015 - 2017	9.5	41
2014 - 2016	8.8	31
2013 - 2015	9.1	34
2012 - 2014	8.9	
2011 - 2013	9.1	
2010 - 2012	8.7	31
2009 - 2011	8.9	35
2008 - 2010	9.3	37
2007 - 2009	9.7	37
2006 - 2008		
2005 - 2007		



EPA Tile Plot Data for Yakima County

From <https://www.epa.gov/outdoor-air-quality-data/air-data-multiyear-tile-plot>

PM2.5 Daily AQI Values, 1999 to 2021 Yakima County, WA



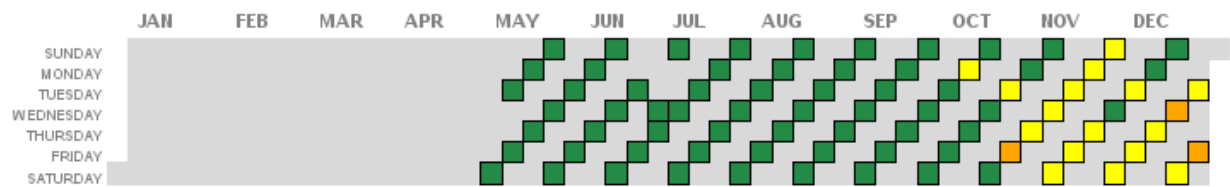
Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: June 30, 2021

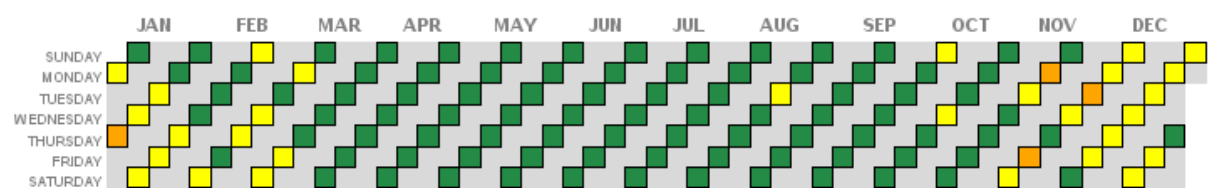
PM 2.5 Daily AQI Values in 1999



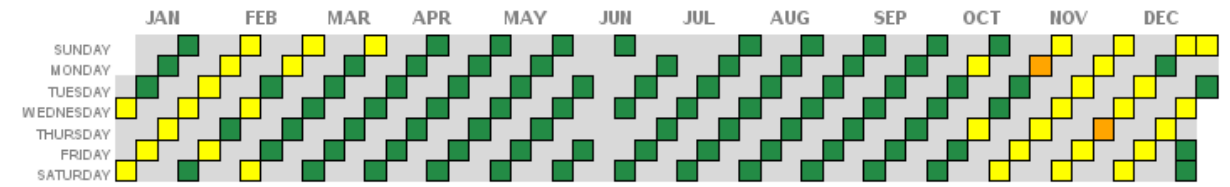
PM 2.5 Daily AQI Values in 2000



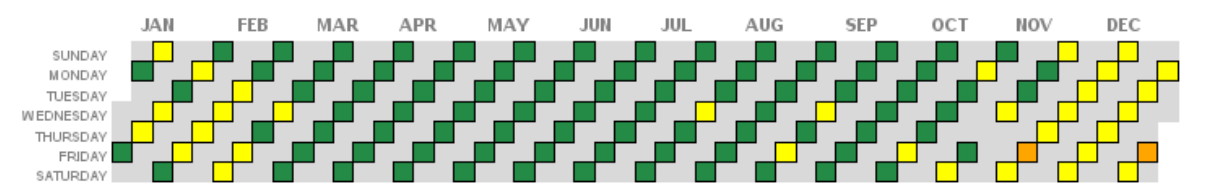
PM 2.5 Daily AQI Values in 2001



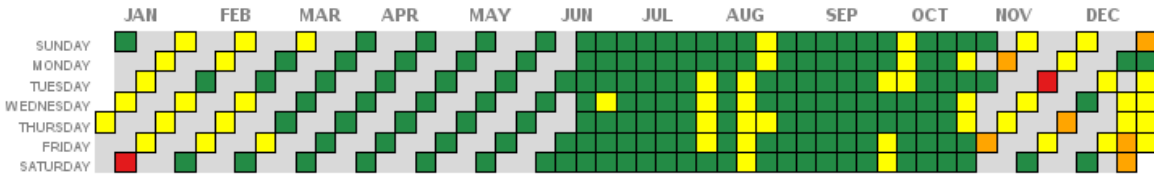
PM 2.5 Daily AQI Values in 2002



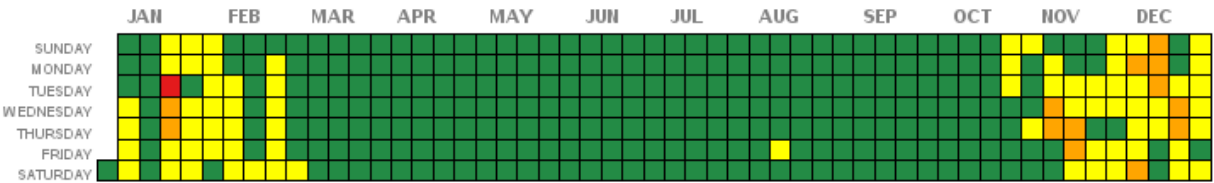
PM 2.5 Daily AQI Values in 2003



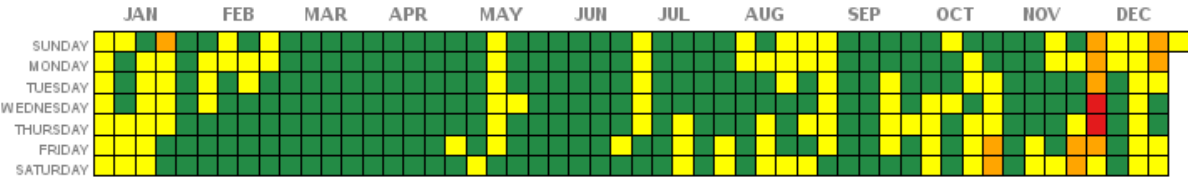
PM 2.5 Daily AQI Values in 2004



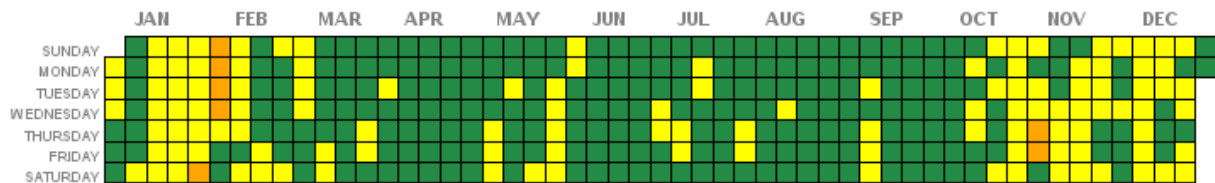
PM 2.5 Daily AQI Values in 2005



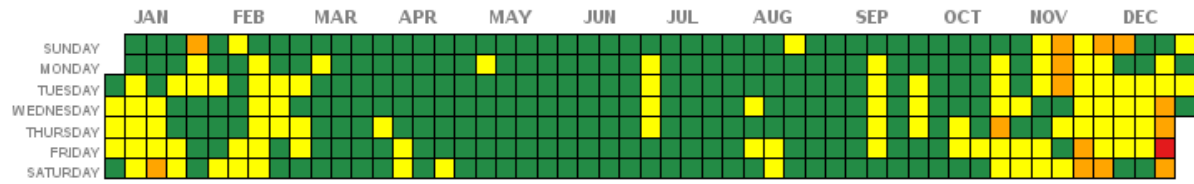
PM 2.5 Daily AQI Values in 2006



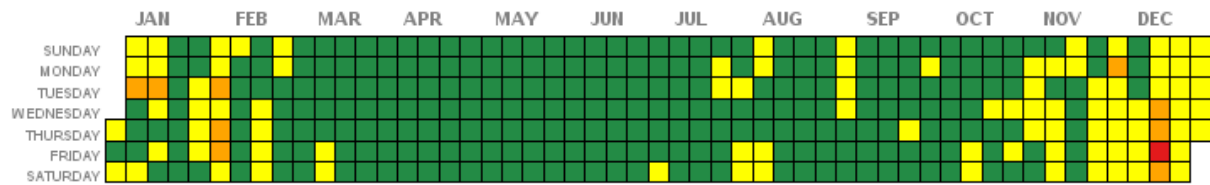
PM 2.5 Daily AQI Values in 2007



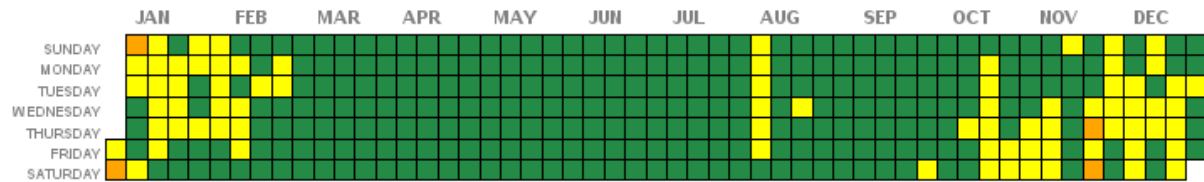
PM 2.5 Daily AQI Values in 2008



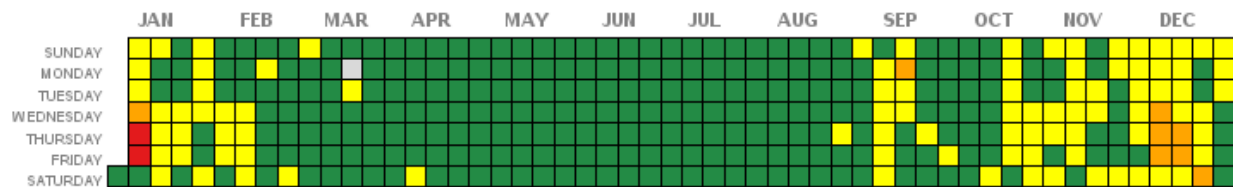
PM 2.5 Daily AQI Values in 2009



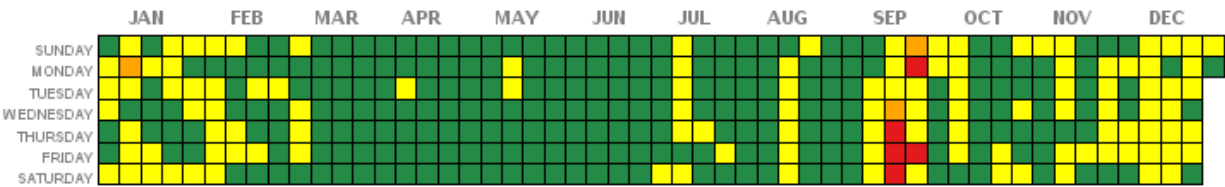
PM 2.5 Daily AQI Values in 2010



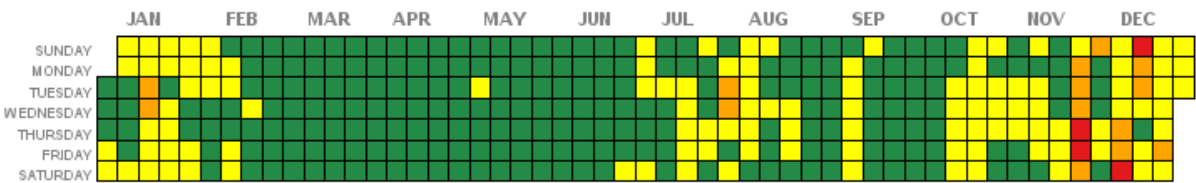
PM 2.5 Daily AQI Values in 2011



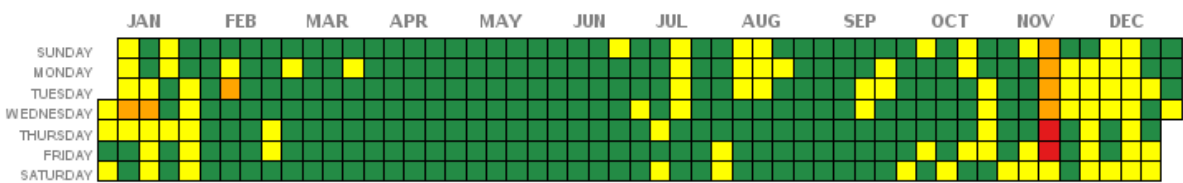
PM 2.5 Daily AQI Values in 2012



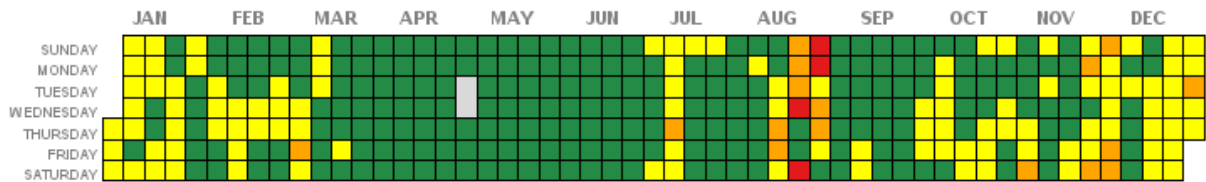
PM 2.5 Daily AQI Values in 2013



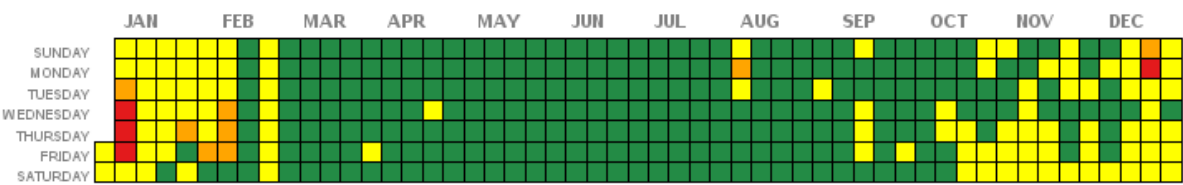
PM 2.5 Daily AQI Values in 2014



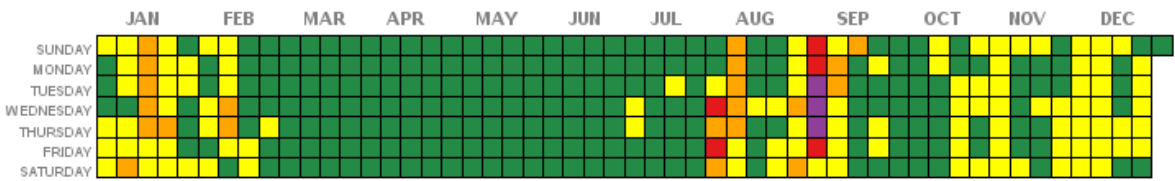
PM 2.5 Daily AQI Values in 2015



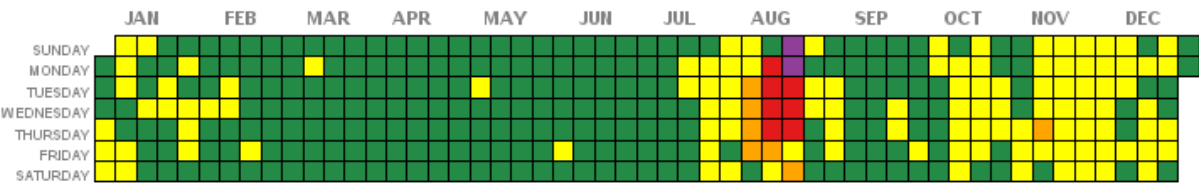
PM 2.5 Daily AQI Values in 2016



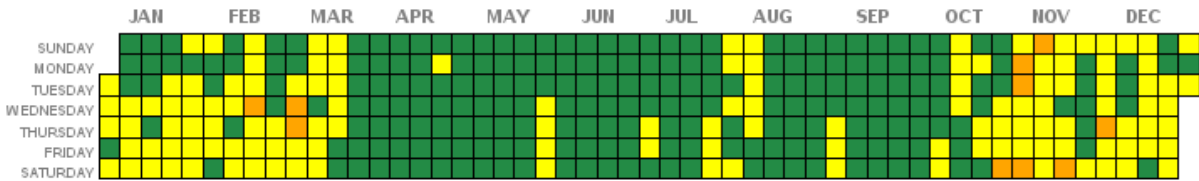
PM 2.5 Daily AQI Values in 2017



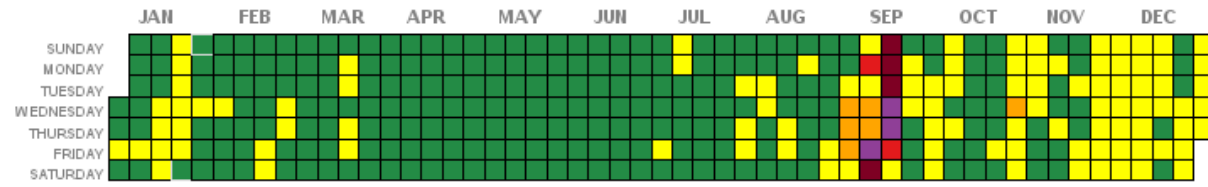
PM 2.5 Daily AQI Values in 2018



PM 2.5 Daily AQI Values in 2019



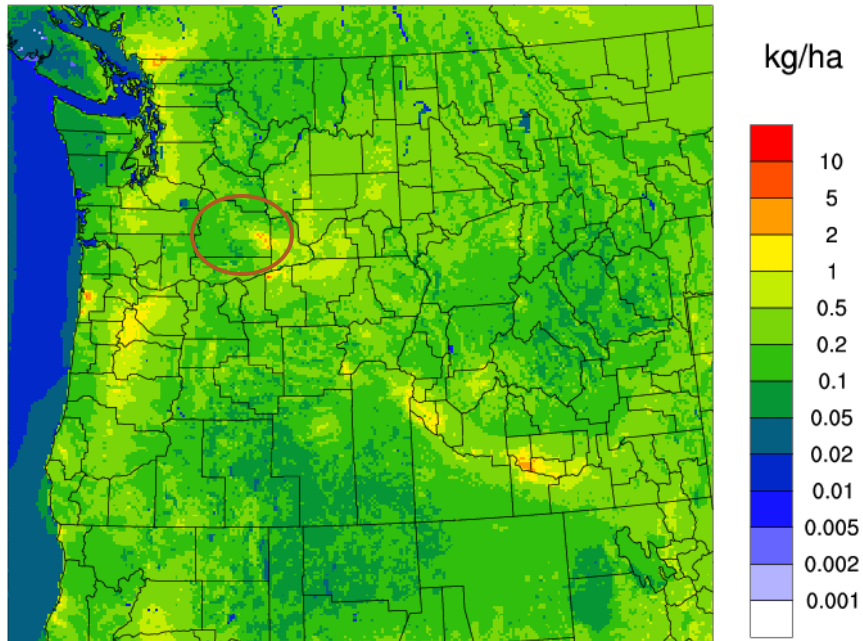
PM 2.5 Daily AQI Values in 2020



Airpact V Maps for Dry N Deposition in August

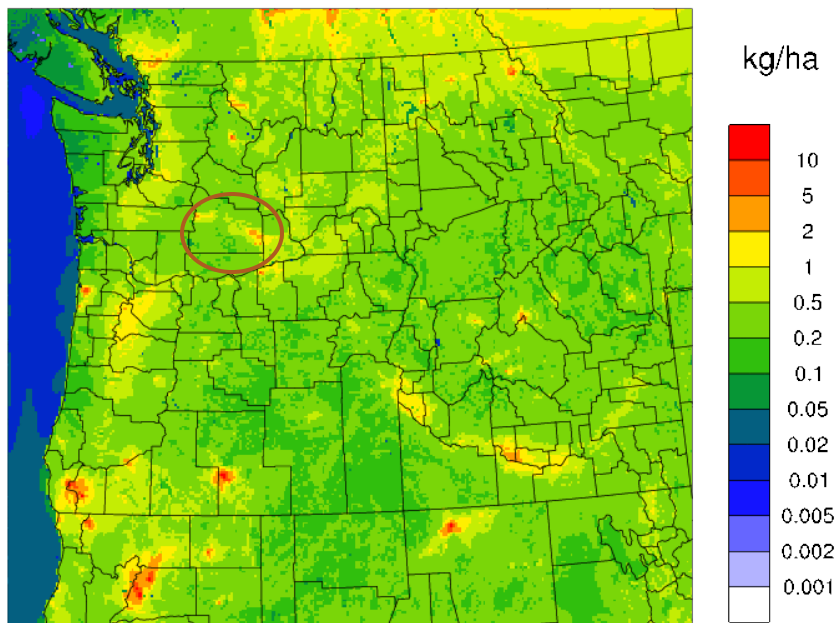
August 2016

Nitrogen Dry Deposition (Total)



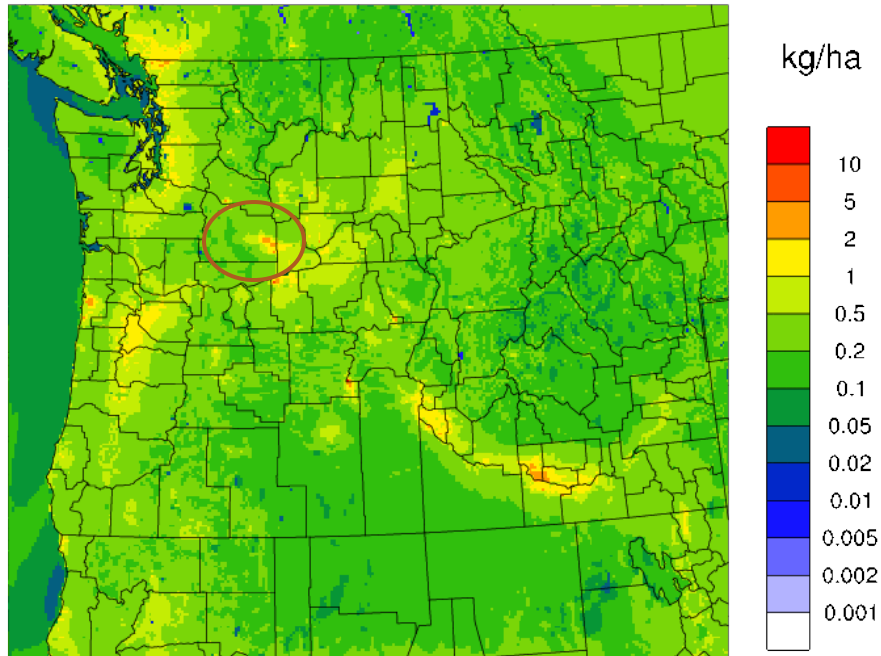
August 2018

Nitrogen Dry Deposition (Total)



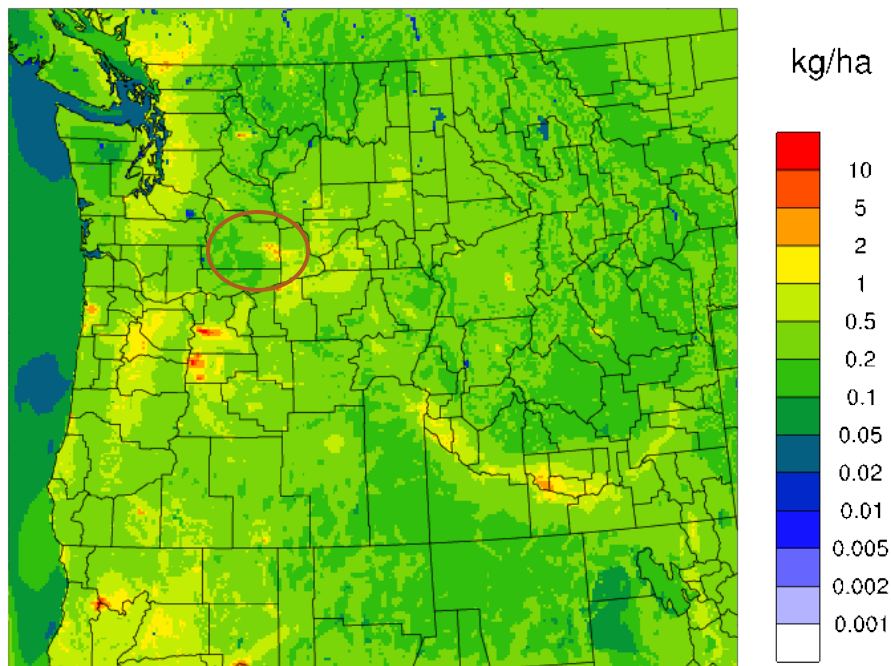
August 2019

Nitrogen Dry Deposition (Total)



August 2020

Nitrogen Dry Deposition (Total)

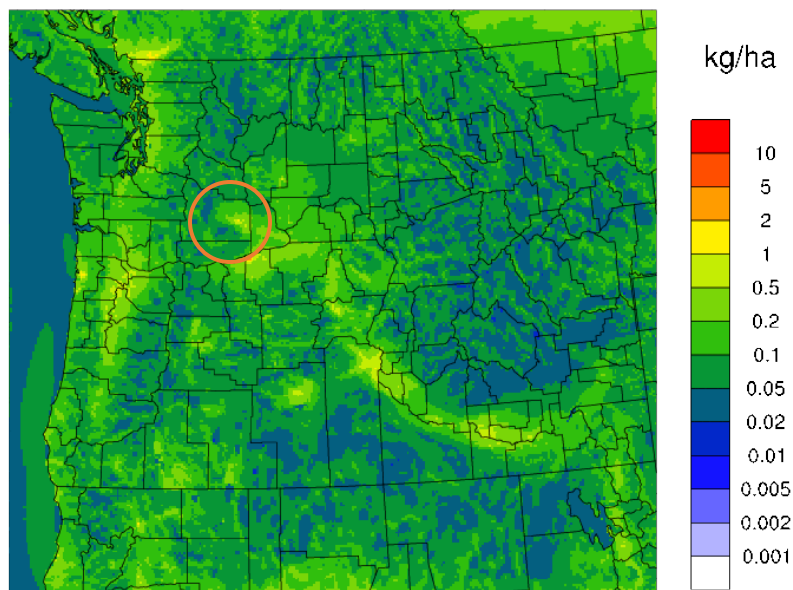


Airpact V Maps for Nitrogen Dry Deposition

January 2020 to the Present

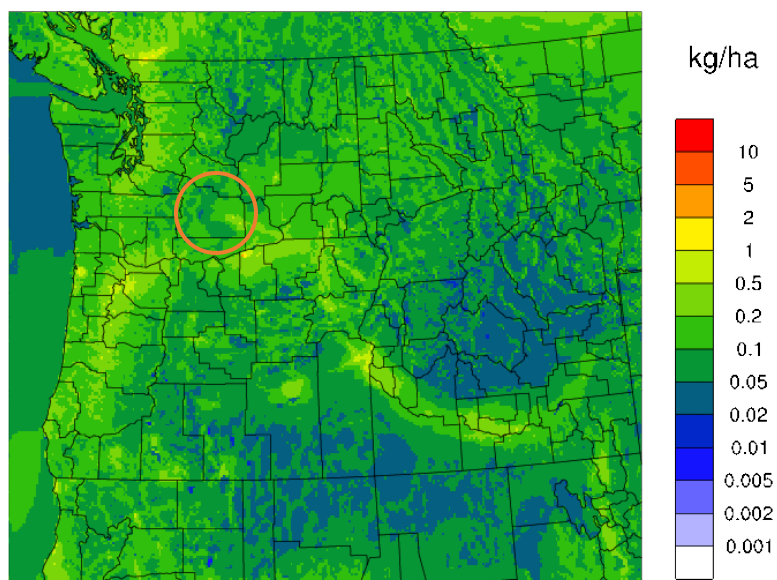
January 2020

Nitrogen Dry Deposition (Total)



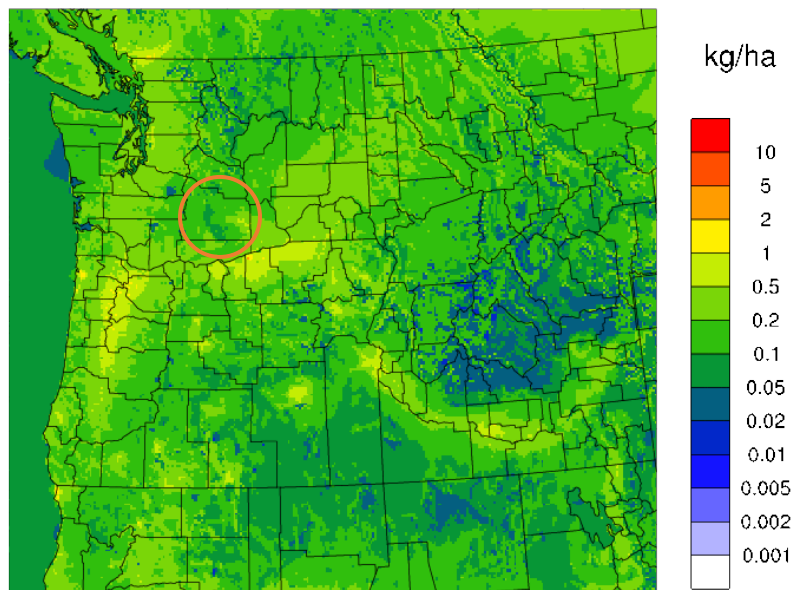
February 2020

Nitrogen Dry Deposition (Total)



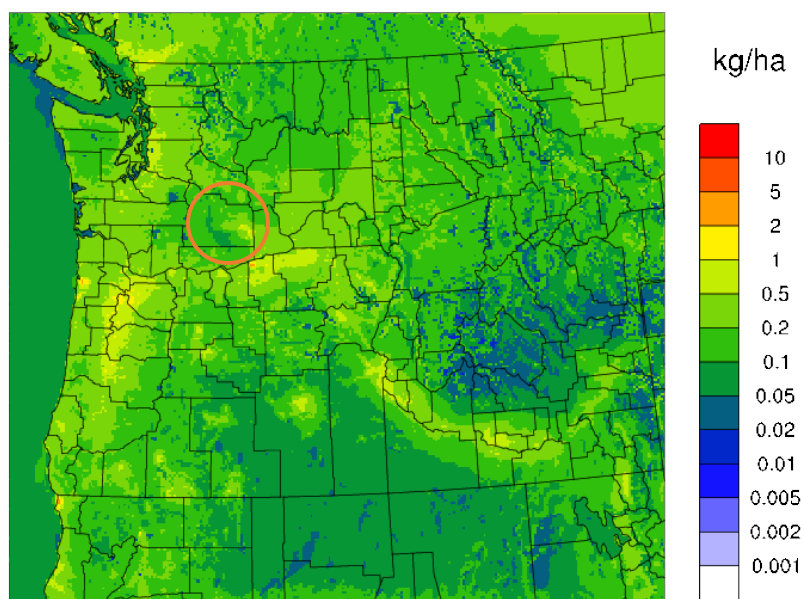
March 2020

Nitrogen Dry Deposition (Total)



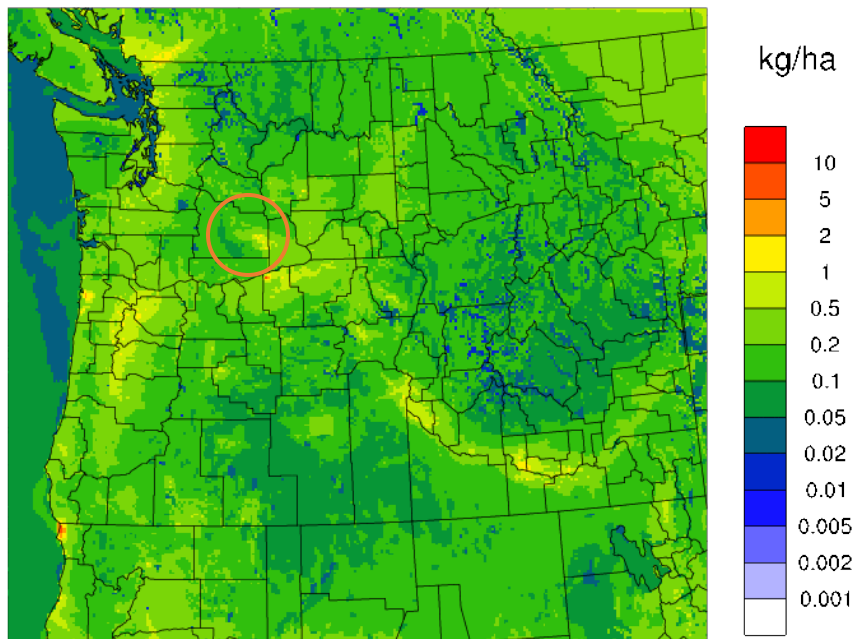
April 2020

Nitrogen Dry Deposition (Total)



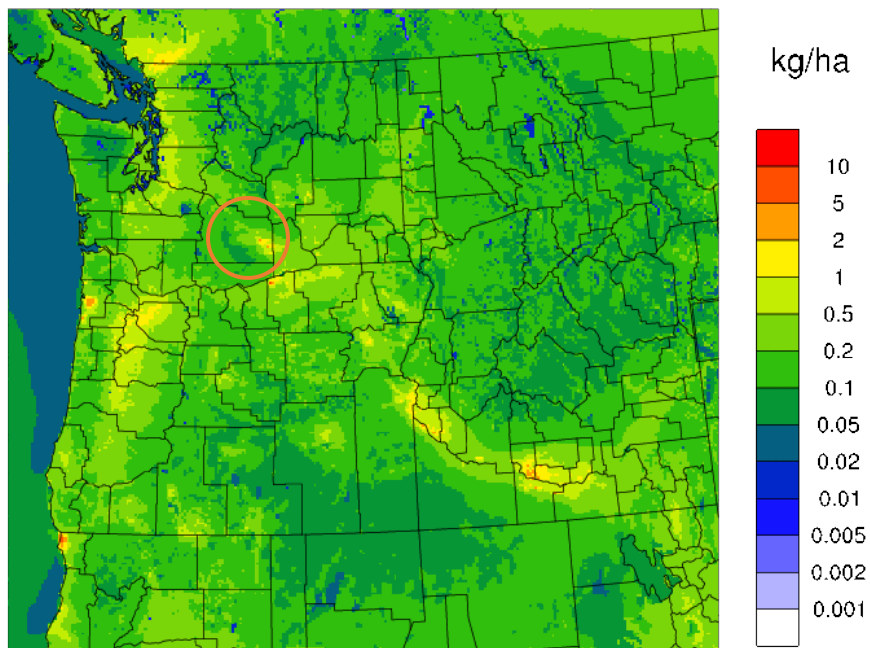
May 2020

Nitrogen Dry Deposition (Total)



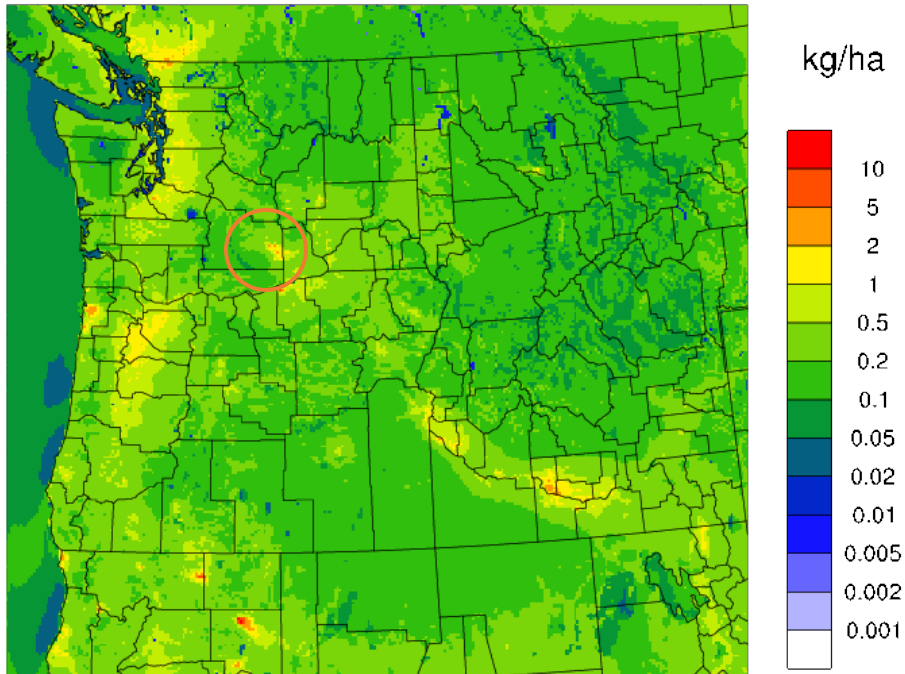
June 2020

Nitrogen Dry Deposition (Total)



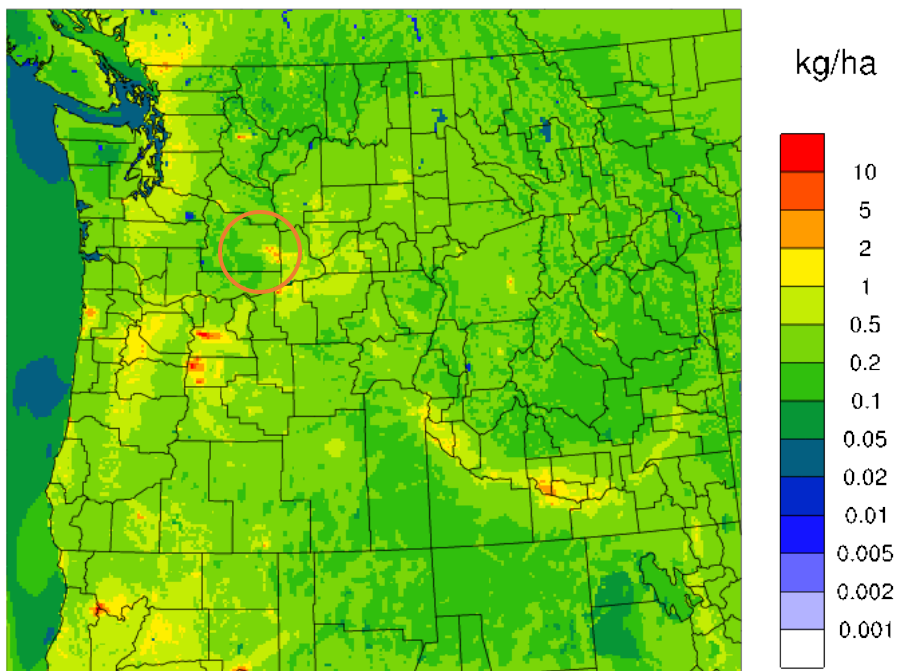
July 2020

Nitrogen Dry Deposition (Total)



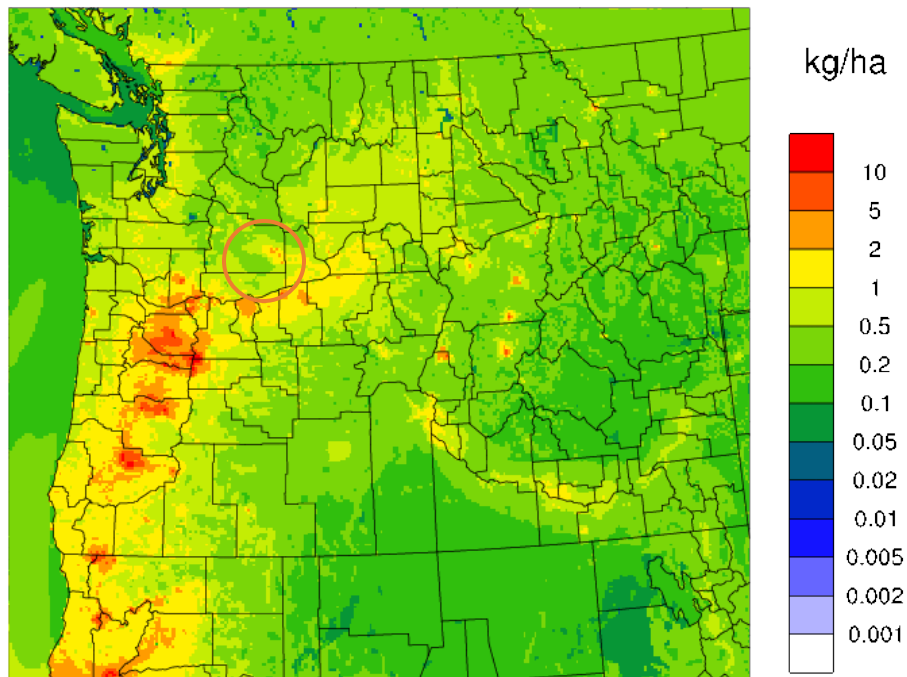
August 2020

Nitrogen Dry Deposition (Total)



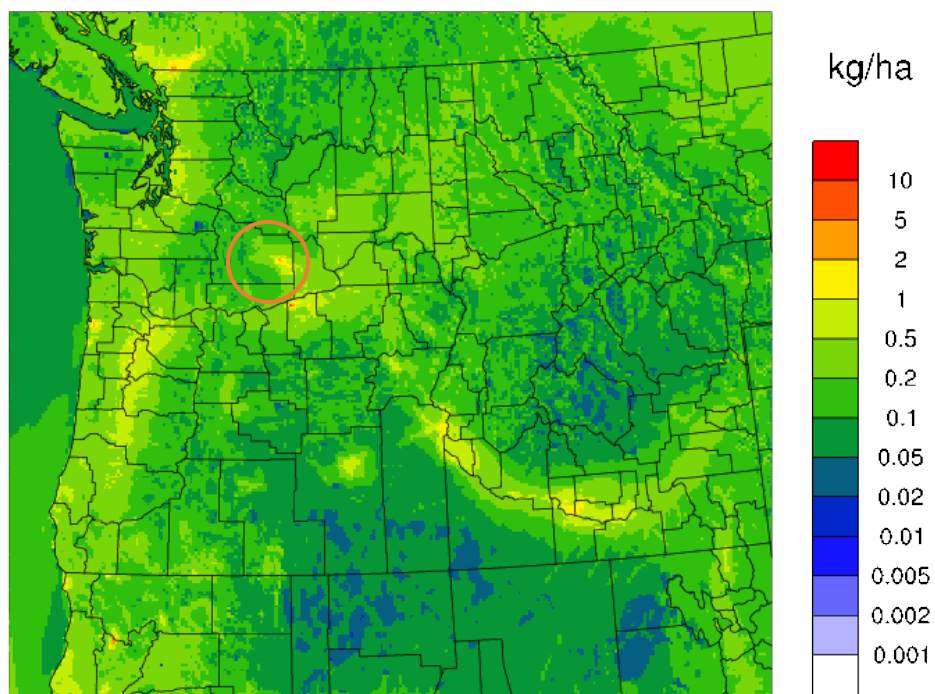
September 2020

Nitrogen Dry Deposition (Total)



October 2020

Nitrogen Dry Deposition (Total)

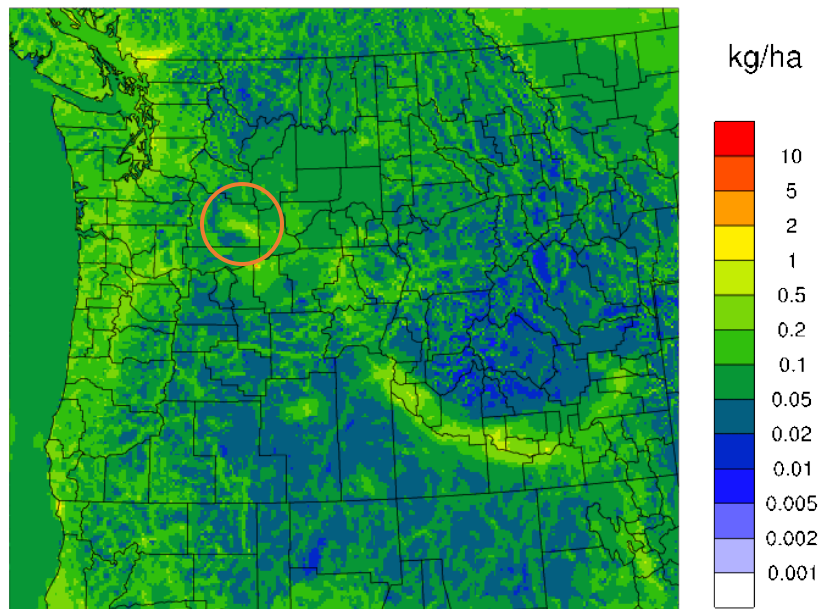


November 2020

No data

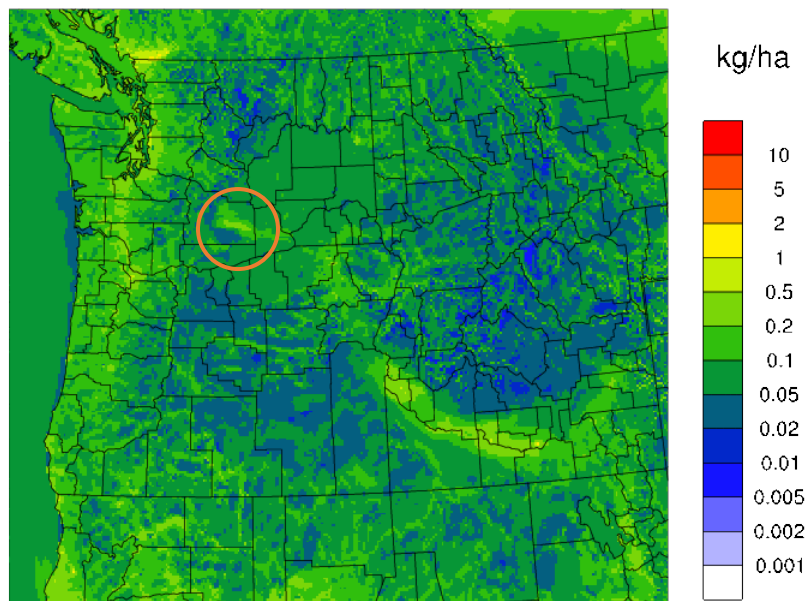
December 2020

Nitrogen Dry Deposition (Total)



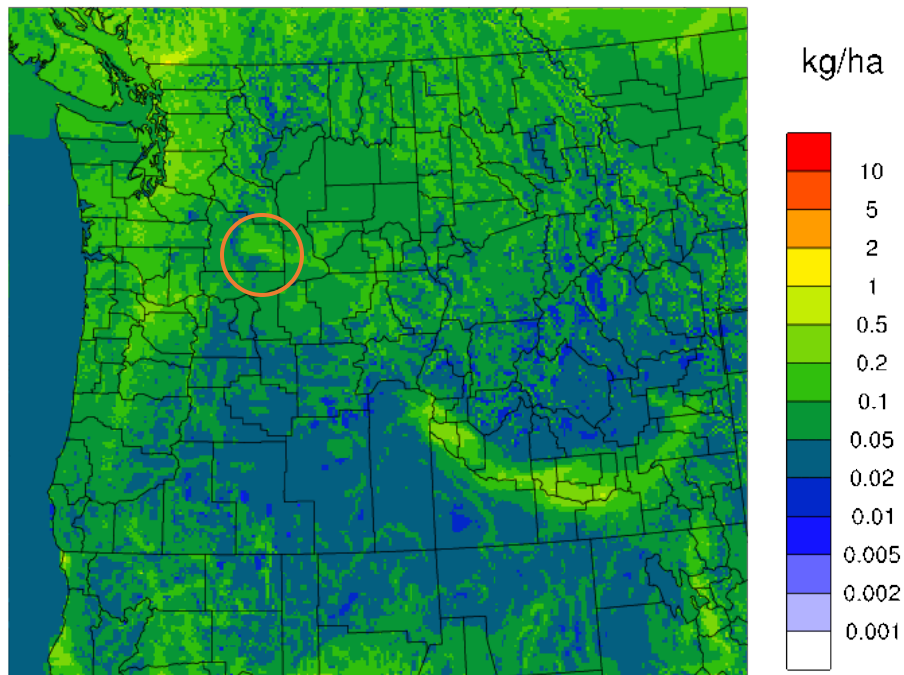
January 2021

Nitrogen Dry Deposition (Total)



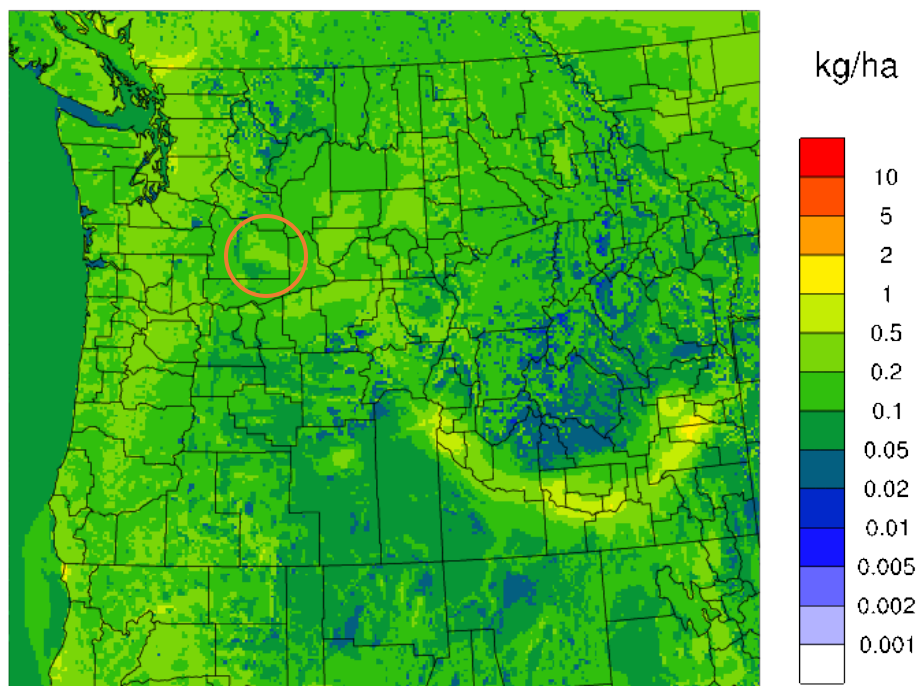
February 2021

Nitrogen Dry Deposition (Total)



March 2021

Nitrogen Dry Deposition (Total)

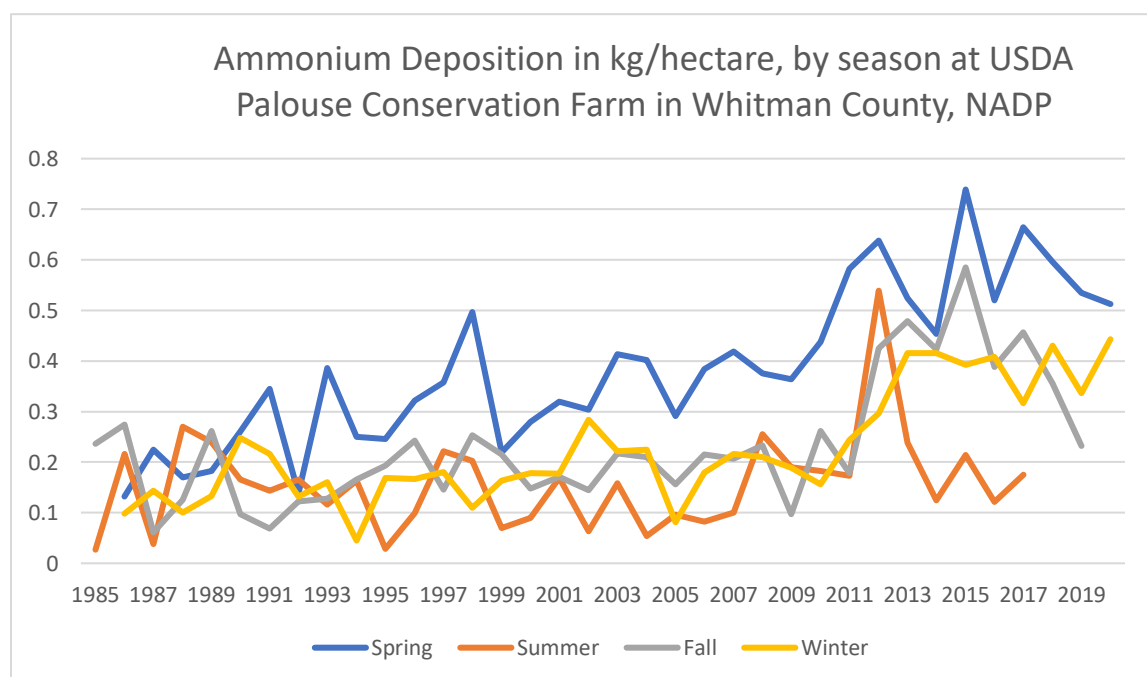
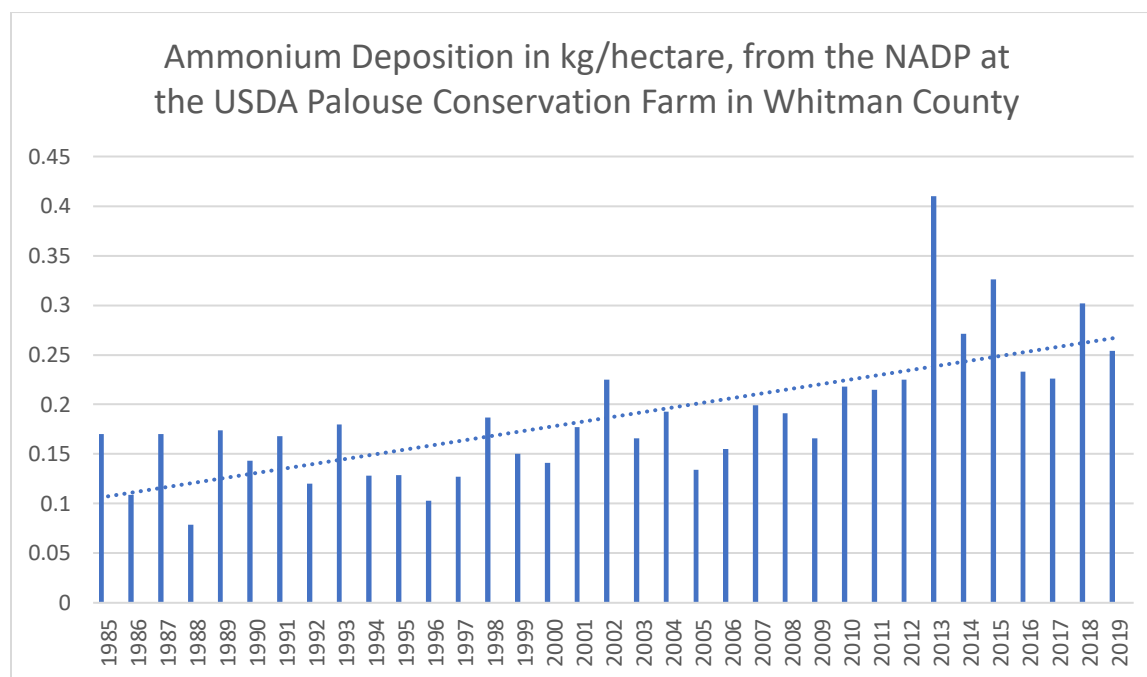


Ammonia Deposition in South & Central Washington

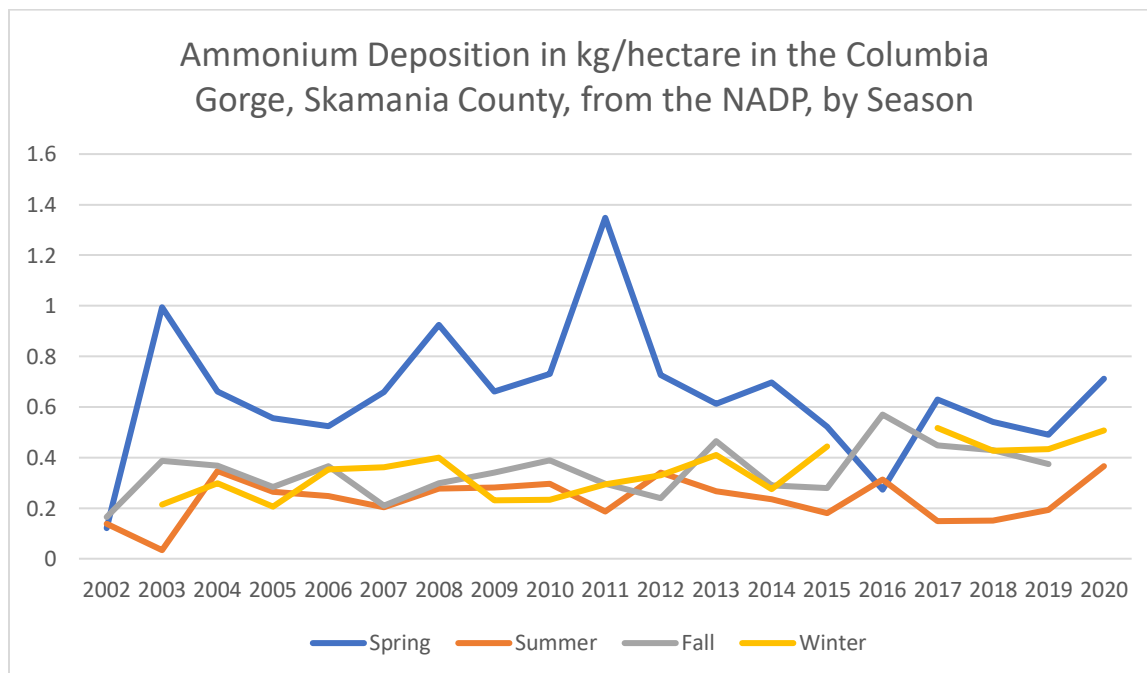
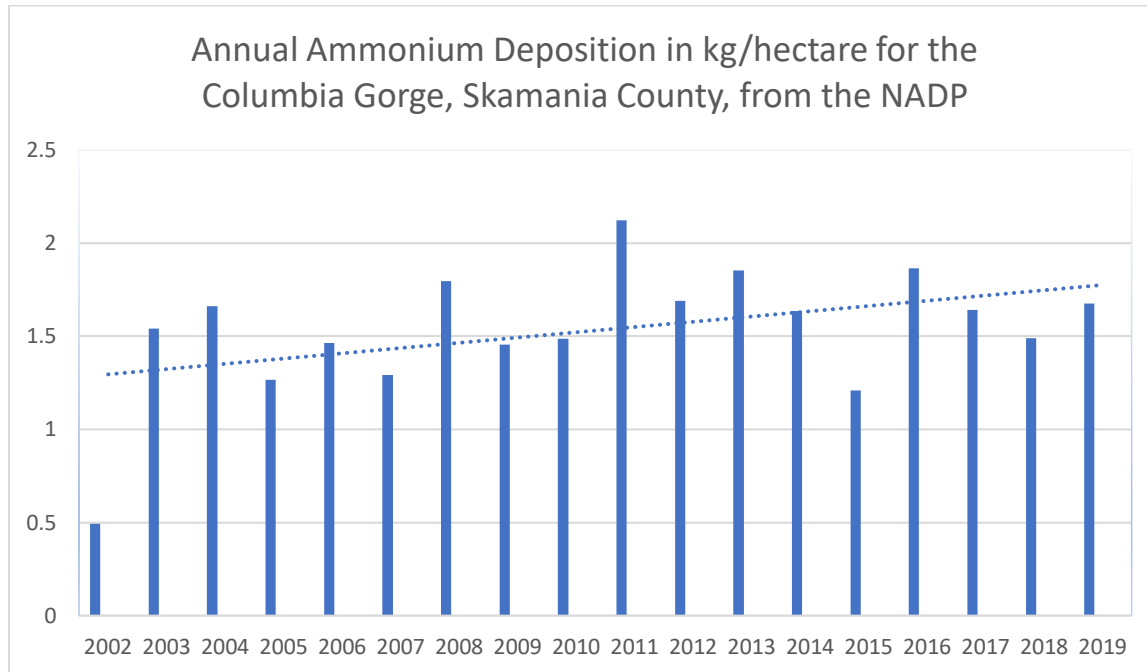
From the National Atmospheric Deposition Program – Three Sites

Data available at <http://nadp.slh.wisc.edu/data/sites/list/?net=NTN>

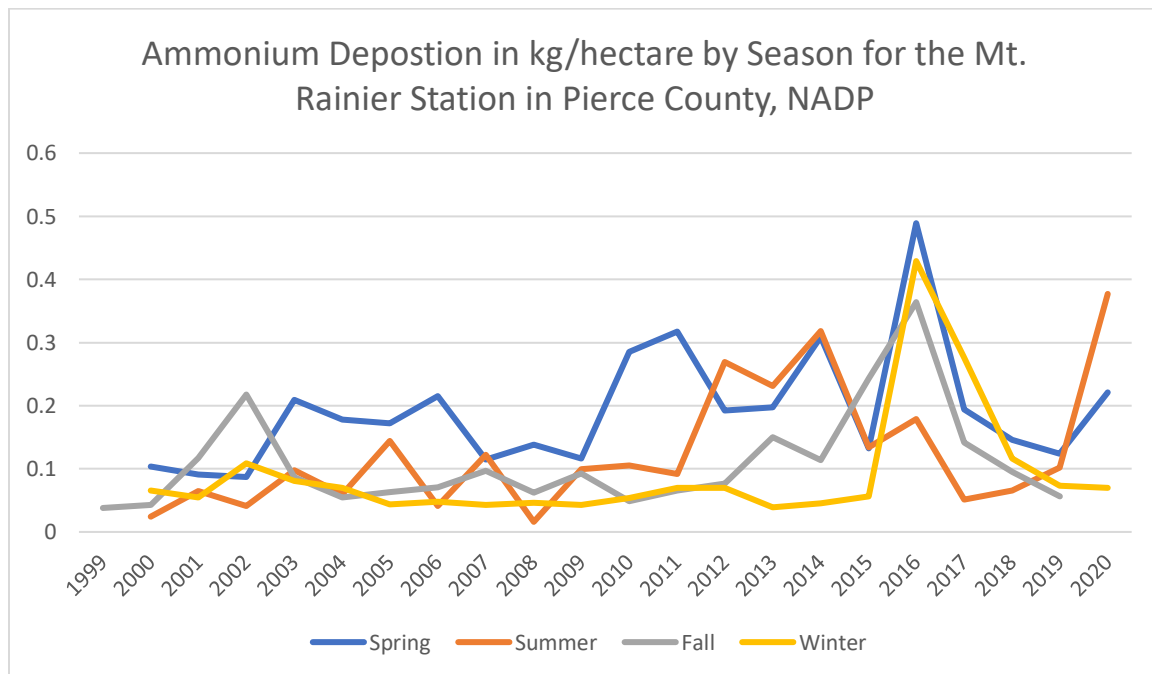
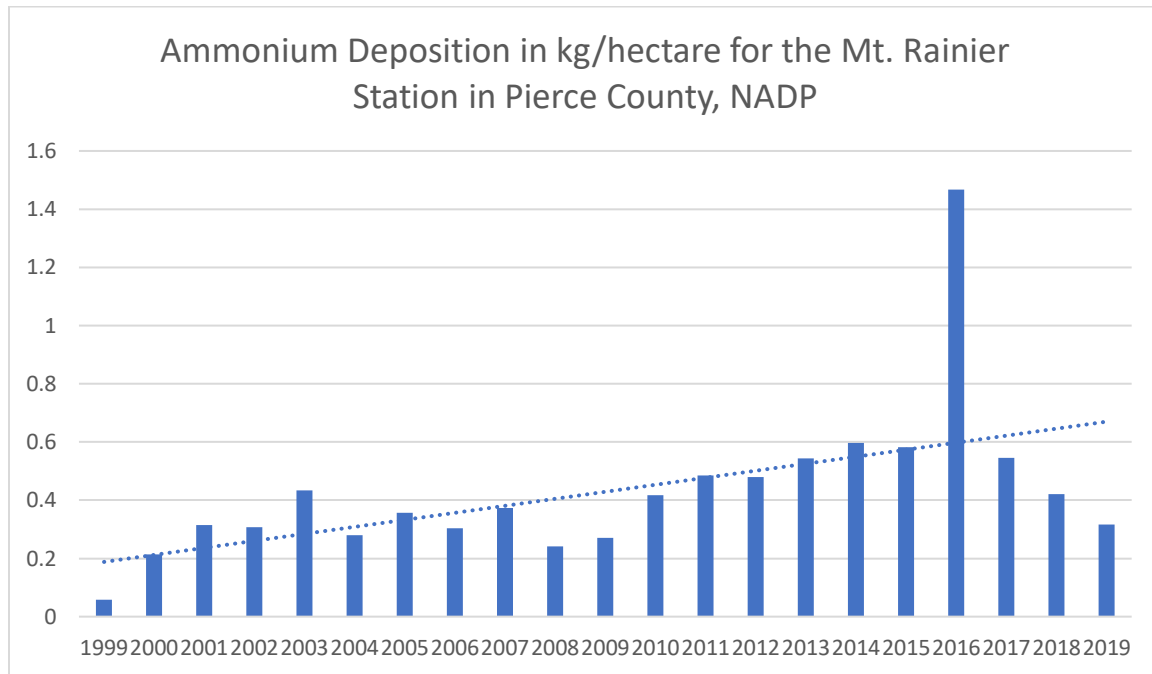
Palouse – Whitman County



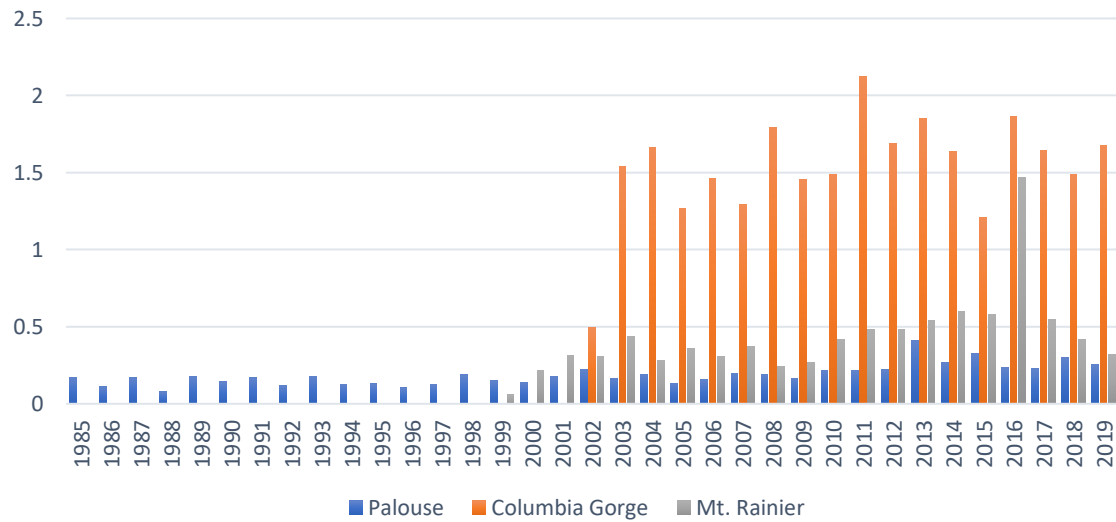
Columbia Gorge – Skamania County



Mt. Rainier – Pierce County



Ammonium Deposition in kg/hectare, at Three Monitoring Sites in South & Central Washington - NADP



Excerpts from the Yakima Air Winter Nitrate Study (YAWNS)

<https://ecology.wa.gov/DOE/files/a6/a67789dd-aed4-461e-b138-e77537dd1952.pdf>

The YAWNS concludes on page 111:

Episodes of elevated particulate nitrate in the Yakima Valley during winter result from a combination of factors. The wintertime meteorology of the region drives gas-particle equilibrium of ammonium nitrate strongly toward the particle phase, and high relative humidity enhances this effect. High ammonia emissions from agricultural sources in the area lead to elevated atmospheric concentrations of the pollutant. This excess ammonia drives virtually all available nitric acid into the particulate phase, forming particulate nitrate, and leads to a condition where any additional nitric acid production would lead directly to greater particulate nitrate levels. The production of particulate nitrate precursors is complicated and sensitive to the varying meteorological and chemical conditions in the valley. Given the backdrop of excess gaseous ammonia, there is usually sufficient reactive nitrogen in the valley to produce elevated levels of particulate nitrate if the right meteorological conditions take hold.

Ammonia emissions in the Yakima Valley are mostly from animal agriculture as depicted in a pie chart on page 99 of the study:

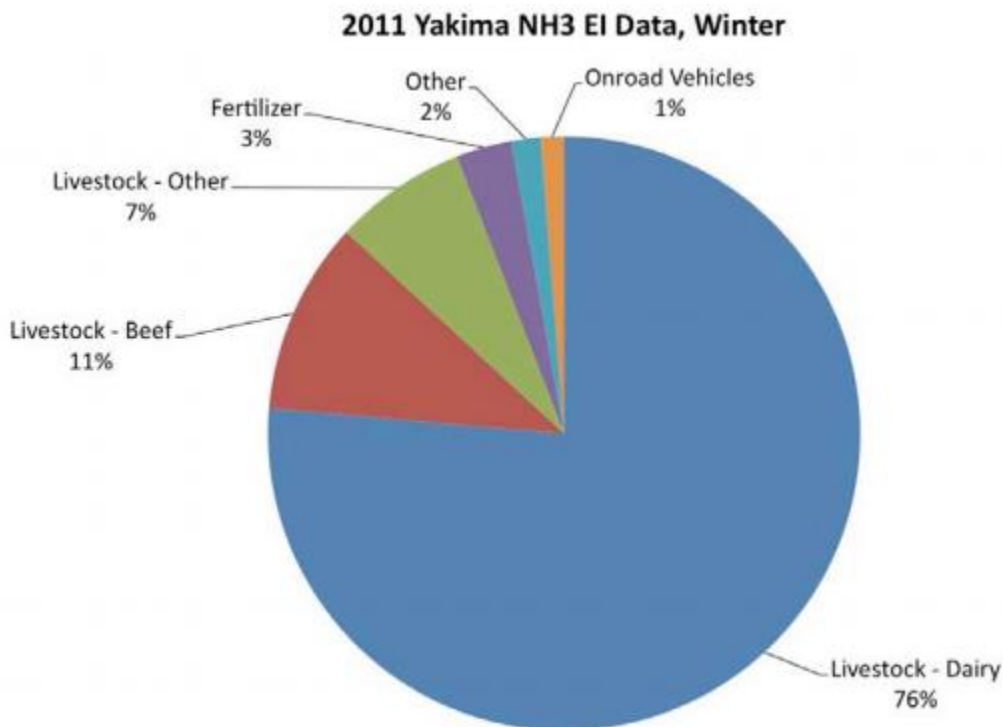


Figure 8.28. Winter season NH₃ emissions contributions by source for Yakima County, from the 2011 Washington Comprehensive Emissions Inventory.

Excerpt from Yakima Air Winter Nitrate Study – pages 17 & 18

Final Report available at <https://ecology.wa.gov/DOE/files/a6/a67789dd-aed4-461e-b138-e77537dd1952.pdf>

Yakima is unusual within Washington in that a significant fraction of the PM_{2.5} during winter is comprised of particulate nitrate, usually in the chemical form of ammonium nitrate (NH₄NO₃). Particulate nitrate makes up a larger fraction of PM_{2.5} in Yakima and south central Washington than it does anywhere else in the state (Figure 1.1). Nitrate levels are especially important during episodes of high PM_{2.5}. Figure 1.2 shows the fractional contribution of ammonium nitrate to total PM_{2.5} on days representing the 75th percentile (in terms of PM_{2.5} mass load) during the heating season, in Yakima. The contribution of ammonium nitrate varied year by year, but was always 15-25% of the total PM_{2.5} on these days with elevated particulate pollution.

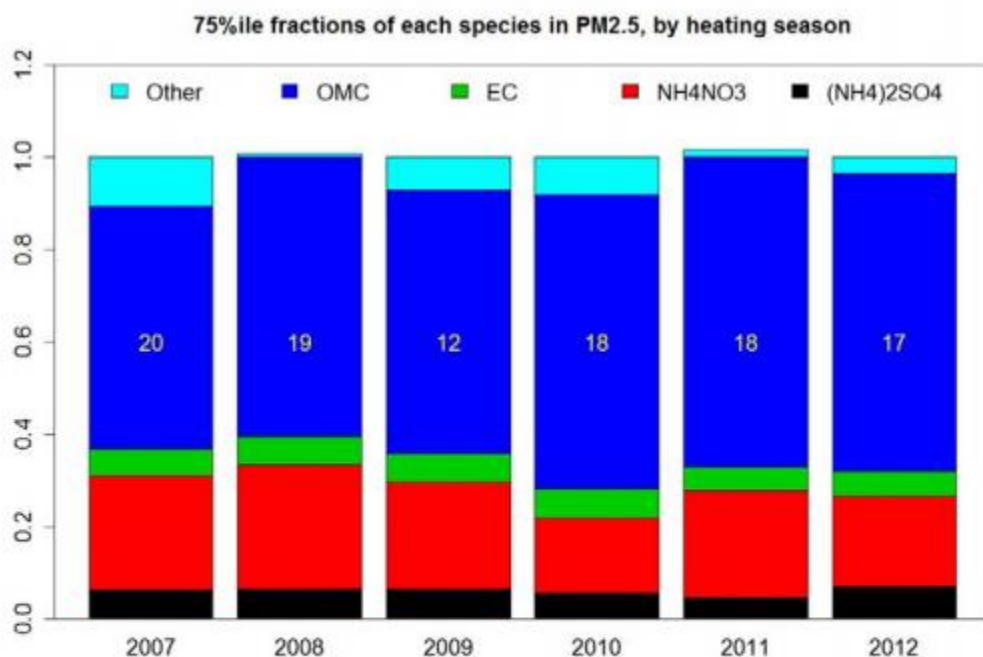


Figure 1.2. Fractional contribution of major chemical constituents to PM_{2.5} on elevated particulate pollution days during the heating season in Yakima. The data shown represent the 75th percentile in PM_{2.5} concentration for each year's heating season when speciation data are available. Numbers on each bar indicate the PM_{2.5} mass measured at the 75th percentile for each year. (NH₄)₂SO₄ is ammonium sulfate; NH₄NO₃ is ammonium nitrate, EC is elemental carbon (i.e., soot); and OMC is organic matter carbon. Figure created and provided by Dr. Ranil Dhammapala, Washington Department of Ecology.

* * * * *

Page 113 states:

“Ammonia emissions reductions are unlikely to result in significant reductions in wintertime particulate nitrate unless order-of-magnitude reductions are viable. As it stands, the ammonia levels in winter are high enough that all available nitric acid is driven to particulate nitrate.”

FOTC points out that the high level of ammonia emissions is due to the way cows are raised in the LYV. Ammonia production is increased when feces and urine mix as happens when animals are kept in close quarters. Bacterial urease from feces promotes the breakdown of urea to ammonia, which is a more volatile form of nitrogen, so more ammonia is emitted.

Harmon, J. Hoff, S., Andersen, D., & Rieck-Hinz, A. (2014) *Animal Housing – Urine and Feces Segregation Overview*. Available at <https://store.extension.iastate.edu/product/14126>

Evaluation of Hydrogen Sulfide, Ammonia, Particulate Matter, and Meteorological Measurements Collected During ATSDR's Ambient Air Monitoring/Sampling Program on the Yakama Reservation

Page 27

Table 5. Comparison of 24-hour and Annual Background PM_{2.5} Data to Measured Concentrations in Harrah (µg/m³).

Measurement	Harrah ^a	4th St ^b	Toppenish ^c	White Swan
Fall				
Mean 24-hr	16.20	12.7	12.9	9.9
Max 24-hr	153.56	41	47.9	37.4
Summer				
Mean 24-hr	10.34	4.9	13.7	9.3
Max 24-hr	47.22	14.5	61.9	35.8
Annual^d				
Mean 24-hr	12.88	8.6	13.6	6.8
Max 24-hr	153.36	63.9	184	62

Source: [WSDE 2018]

^a The annual values reported for Harrah are the combined 24-hr average from the fall and summer sampling events.

^bPM_{2.5} data was not available for the duration of the EI, data from the same dates in Fall 2015 and summer 2016 are presented

^c PM_{2.5} data was not available for the duration of the EI, data from the same dates in Fall 2016 and summer 2017 are presented

^dAnnual data from Harrah are from the dates of the EI, where annual values from other sites cover an entire year (365 days) from the start date of the Fall sampling event in the corresponding year of available data.

Excerpt page 34

Community members in Harrah expressed concerns to ATSDR regarding the proximity of some AFOs to nearby schools. To address those concerns, ATSDR installed sampling and monitoring equipment near Harrah Elementary School (Site 5). Ammonia, hydrogen sulfide, and PM_{2.5} were measured at Site 5 during the Fall 2014 and Summer 2015 sampling. Measured concentrations at Site 5 were close to that of other monitors. Data from Site 5 show the following:

Ammonia- None of the 346 30-min samples exceeded the acute CV for ammonia (1700 ppb), and none of the 24-hour samples exceeded the chronic CV (100 ppb). The Site 5 mean 24-hour ammonia concentration for the entire EI was below the chronic CV, thus ammonia concentrations measured near Harrah Elementary School should not cause adverse health effects;

Hydrogen Sulfide- Seventeen of 100 (17%) 24-hour samples exceeded the reference chronic CV for hydrogen sulfide (1.4 ppb), but none exceeded the intermediate (20 ppb) or acute (70) CVs. The concentration at site 5 averaged over the entire EI was also below

the chronic CV. Sixty-four of 100 (64%) hydrogen sulfide 24-hour samples exceeded the odor threshold, which means on most days during the EI, individuals near Harrah Elementary School would likely smell rotten-egg like odors during some part of the day. Sensitive individuals in the area may experience odor-related health symptoms such as headaches, nausea, and stress or annoyance when hydrogen sulfide and other gases exceeds their odor threshold;

PM_{2.5}- Forty-seven of the 84 (56%) days sampled at Harrah elementary School fall into the good AQI category; 33 of 84 (39%) fall into the moderate AQI category; and 4 of 83 (5%) are categorized as unhealthy for sensitive individuals. See Appendix A, Table A1, for the concentration range of each category and the associated public health statements; and

The mean for the entire EI was 12.88 $\mu\text{g}/\text{m}^3$, which suggest that there is a potential for sensitive individuals to have health effects from PM_{2.5}. Daily exposure to the mean concentration of PM_{2.5} may require some sensitive individuals to reduce prolonged or heavy exertion; the health of other individuals should not be affected. On days when PM_{2.5} is above the NAAQS (12 $\mu\text{g}/\text{m}^3$), there is an increasing likelihood of respiratory symptoms in older adults, children, and people of lower socioeconomic status; aggravation of heart or lung disease; and premature mortality in people with heart or lung disease. People who fall into this category should reduce prolonged or heavy exertion [USEPA 2016].

Because of their size, physiology, behavior, and activity level, the inhalation rates of children differ from those of adults. Factors that might contribute to enhanced lung deposition in children include higher ventilation rates, less contribution from nasal breathing, less efficient uptake of particles in the nasal airways, and greater deposition efficiency of particle and some vapor phase chemicals in the lower respiratory tract. In addition, children spend 3 times as much time outdoors as adults and engage in three times as much time playing sports and other vigorous activities [USEPA 2011b]. Based on these parameters, children are more likely to be exposed to more outdoor air pollution than adults. Further, a child's lower body weight and higher intake rate results in a greater dose of hazardous substance per unit of body weight.

While, it is not clear that children are more toxicologically sensitive to the specific exposures of hydrogen sulfide and ammonia, they are likely more vulnerable due to their increased exposure. In terms of PM, children (and the elderly) have increased susceptibility to PM-related respiratory effects, and the health effects observed in children could be initiated by pre and/or postnatal exposures to PM [USEPA 2009].

Airborne cow allergen, ammonia and particulate matter at homes vary with distance to industrial scale dairy operations: an exposure assessment. Environmental Health

By Williams, D. L., Breysse, P. N., McCormack, M. C., Diette, G. B., McKenzie, S., & Geyh, A. S. (2011). Available at <https://ehjournal.biomedcentral.com/articles/10.1186/1476-069X-10-72>

Abstract

Background

Community exposures to environmental contaminants from industrial scale dairy operations are poorly understood. The purpose of this study was to evaluate the impact of dairy operations on nearby communities by assessing airborne contaminants (particulate matter, ammonia, and cow allergen, Bos d 2) associated with dairy operations inside and outside homes.

Methods

The study was conducted in 40 homes in the Yakima Valley, Washington State where over 61 dairies operate.

Results

A concentration gradient was observed showing that airborne contaminants are significantly greater at homes within one-quarter mile (0.4 km) of dairy facilities, outdoor Bos d 2, ammonia, and TD were 60, eight, and two times higher as compared to homes greater than three miles (4.8 km) away. In addition median indoor airborne Bos d 2 and ammonia concentrations were approximately 10 and two times higher in homes within one-quarter mile (0.4 km) compared to homes greater than three miles (4.8 km) away.

Conclusions

These findings demonstrate that dairy operations increase community exposures to agents with known human health effects. This study also provides evidence that airborne biological contaminants (i.e. cow allergen) associated with airborne particulate matter are statistically elevated at distances up to three miles (4.8 km) from dairy operations.

University of Washington Studies of Asthmatic Children in the Lower Yakima Valley.

This study provides evidence that PM_{2.5} in an agricultural setting contributes to elevated asthma morbidity.

Loftus, C., Yost, M., Sampson, P., Arias, G., Torres, E., Vasquez, V. B., ... & Karr, C. (2015). Regional PM_{2.5} and asthma morbidity in an agricultural community: a panel study. *Environmental research*, 136, 505-512. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4425279/>

Ammonia concentrations were elevated in this community and strongly predicted by proximity to animal feeding operations. Ammonia's association with acute lung function decrements in children with asthma in the surrounding community may be causal or, alternatively, ammonia may be a marker for other pollutants from animal feeding operations associated with respiratory effects.

Loftus, C., Yost, M., Sampson, P., Torres, E., Arias, G., Vasquez, V. B., ... & Bhatti, P. (2015). Ambient ammonia exposures in an agricultural community and pediatric asthma morbidity. *Epidemiology (Cambridge, Mass.)*, 26(6), 794. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4587379/>

Our findings indicate that children with asthma may experience short-term respiratory effects following increased exposure to airborne AFO pollutants, adding to a growing body of research evidence that AFO-related air pollution may cause community-level health effects.

Loftus, C. (2015). Industrial Animal Agriculture in the Yakima Valley, Air Pollution, and Pediatric Asthma Morbidity (Doctoral dissertation). Available at https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/26152/Loftus_washington_0250E_13499.pdf?sequence=1

Emissions from two Lower Yakima Valley Dairy Barns

In 2010 WA State University (WSU) published the results of research on a Lower Yakima Valley dairy to estimate emissions of air contaminants from two free stall dairy barns. This was part of a larger study, the National Air Emissions Monitoring Study (NAEMS), designed to quantify emissions from concentrated animal feeding operations (CAFOs) for the Environmental Protection Agency (EPA). The Washington Report is available at [ASAE Journal | US EPA ARCHIVE DOCUMENT](#)

In a free stall operation cows spend about 20 hours per day in the barn and exercise lot and about 4 hours a day in the milk parlor. WSU researchers measured emissions of ammonia, hydrogen sulfide, particulate matter and twenty volatile organic compounds from the barns. Results are:

		Emissions in kg/day	Emissions in kg/day/cow
Barn 2			
NH3		29.10	0.056615 514 cows
H2S		0.56	0.001082
PM10		3.59	0.006984
PM 2.5		2.72	0.005292
TSP		18.80	0.036576
VOC		52.00	0.101167
Barn 4			
NH3		54.70	0.056802 963 cows
H2S		1.13	0.001173
PM10		10.00	0.010384
PM 2.5		1.86	0.001931
TSP		46.90	0.048702
VOC		102.00	0.105919

To estimate emissions for large herds, we averaged emissions per cows from the two barns and converted to tons per year. The results are:

	1,000 milk cows	2,000 milk cows	5,000 milk cows	100,000 milk cows
NH3	22.77 tons	45.54 tons	113.85 tons	2,277 tons
H2S	0.45 tons	0.9 tons	2.25 tons	45 tons
PM 10	3.49 tons	6.98 tons	17.45 tons	349 tons
PM 2.5	1.45 tons	2.9 tons	7.25 tons	145 tons
TSP	17.12 tons	34.24 tons	85.6 tons	1,712 tons
VOC	41.45 tons	82.9 tons	207.25 tons	4,145 tons

Relevant Washington Laws

1. WAC 173-400-030, General Regulations for Air Pollution Sources Definitions, says

An “Emission threshold” means an emission of a listed air contaminant at or above . . .

- Hydrogen sulfide (H₂S) - 10 tons per year
- Fine particulate matter (PM 2.5) – 10 tons per year
- Coarse particulate matter (PM 10) – 15 tons per year
- Volatile organic compounds (VOCs) – 40 tons per year

2. WAC 173-400-110(b) provides exemption from New Source Review for some emissions:

- PM 10 exempt for < 0.75 tons per year
- PM 2.5 exempt for < 0.50 tons per year
- VOCs exempt for < 2 tons per year

3. WAC 173-460, Controls for New Sources of Toxic Air Pollutants, states in WAC 173-460-020(7):

"Small quantity emission rate (SQER)" means a level of emissions below which dispersion modeling is not required to demonstrate compliance with acceptable source impact levels. SQERs are listed in WAC 173-460-150.

WAC 173-460-150 provides the following SQER's:

- Ammonia – 37 lbs./day or 13,500 lbs./year or 6.75 tons/yr
- Hydrogen sulfide - .15 lbs./day or 54.75 lbs./yr or .027 tons/yr

4. WAC 173-441, Reporting of Greenhouse Gasses, states in WAC 173-441-120 Calculation methods incorporated by reference from 40 CFR Part 98 for facilities in section 2(e)vii:

“40 C.F.R. § 98.362(a), 40 C.F.R. § 98.363 through 40 C.F.R. § 98.368, Equations JJ-2 through JJ-15, and Tables JJ-2 through JJ-7 as adopted by September 1, 2016, remain unchanged unless otherwise modified in this chapter.”

Table JJ-1 to Subpart JJ of Part 98 - Animal Population Threshold Level Below Which Facilities Are Not Required To Report Emissions Under Subpart JJ requires reporting of greenhouse gas emissions for dairies with >3,200 head of milk cows.

5. WAC 173-441-050(3) requires reporting of

- Biogenic CO₂

- CO₂
- CH₄
- N₂O
- Numerous specified VOCs

Large dairies in Yakima County should be reporting air emissions under WAC 173-400, WAC 173-460, and WAC 173-441.

Relevant Ecology Reports

In Ecology's 2011 County Emissions Inventory, the agency estimated ammonia emissions from animal agriculture in Yakima County at 8,053 tons (27% of the state ammonia emissions for livestock). In 2017, using a different model, Ecology estimated ammonia emissions from animal agriculture at 5,194 tons (25% of the state ammonia emissions for livestock)

If we assume emissions from cows in dry-lot operations are similar to emissions from free-stall barns (the type of operation in the WSU study) and that there are 100,000 milk cows in the LYV, then dairy cows in this area emit about 2,277 tons of ammonia per year from their living quarters. The remainder of the ammonia in Ecology's Emissions Inventory comes from milk parlors, manure lagoons, composting operations, and field applications.

Ecology does not estimate VOC emissions for animal agriculture. Using the WSU study number as a base, milk cows likely emit over 4,145 tons of VOCs per year (100,000 cows). Perhaps VOC estimates should be required.

Email Conversation with the YRCAA regarding Yakima County Compliance

From: Jean Mendoza [<mailto:jeanrmendoza@icloud.com>]

Sent: Sunday, June 20, 2021 8:46 PM

To: APCO

Subject: Air Quality Question

Hello Director Hurley,

I have been studying Washington rules and regulations and I learned that WAC 173-476-110 provides a more stringent standard than federal law. Here is a copy of that code:

WAC 173-476-110

Ambient air quality standards for PM-2.5.

(1) Standards for PM-2.5.

(a) The three-year average of the annual arithmetic mean concentration of PM-2.5 must not exceed 12.0 $\mu\text{g}/\text{m}^3$.

(b) The three-year average of the ninety-eighth percentile twenty-four-hour average concentration of PM-2.5 must not exceed 35 $\mu\text{g}/\text{m}^3$.

(2) Measurement method. The levels of PM-2.5 in the ambient air must be measured by:

(a) A FRM based on 40 C.F.R. Part 50, Appendix L and designated according to 40 C.F.R. Part 53; or

(b) A FEM designated according to 40 C.F.R. Part 53.

(3) Interpretation method. The interpretation method found in 40 C.F.R. Part 50, Appendix N must be used.

[Statutory Authority: Chapter [70.94](#) RCW. WSR 13-24-010 (Order 12-05), § 173-476-110, filed 11/21/13, effective 12/22/13.]

According to the Washington Tracking Network at [Washington Tracking Network \(WTN\)](#) the average PM 2.5 levels for Yakima County were:

Year	PM 2.5 in $\mu\text{g}/\text{m}^3$	3 Year Average	5 Year Average
2010	9.1		
2011	10.2		
2012	11.7	10.33	
2013	12.8	11.57	
2014	10.1	11.53	10.78
2015	13.3	12.07	11.62
2016	11.6	11.67	11.90
2017	15.0	13.30	12.56
2018	12.4	13.00	12.48
2019	12.1	13.17	12.88

Is Yakima County in danger of non-compliance with state law?

Thanks

Jean Mendoza

June 22, 2021

RE: Air Quality Question

4 weeks ago at 9:57 AM

From [APCO](#) >

[Hide](#)

To [Jean Mendoza](#) > [Board Position 1](#) > [Board Position 2](#) > [Board Position 3](#) > [Board Position 4](#) > [Board Position 5](#) >

Ms. Mendoza,

The short answer to your question is no, Yakima County is not "in danger of non-compliance with state law" as far as YRCAA's jurisdiction is concerned. Furthermore Chapter 173-476 WAC *does not* "provide a more stringent standard than federal law". Washington State standards for PM_{2.5}, as stated within Chapter 173-476-110 WAC, mirror the Federal National Ambient Air Quality Standards (NAAQS). In essence the state of Washington adopted the Federal NAAQS for all Criteria Pollutants.

Your chart does not show any Design Values. Design Values determine if an area is attaining or not attaining the NAAQS for any Criteria Pollutant. Official Federal Design Values use the Annual Mean, averaged over three years. The data within your chart may include data obtained during wildfires. When official Design Values are computed, data from wildfires may be excluded under the EPA's Exceptional Events criteria.

Respectfully,



Keith M. Hurley

Executive Director

Yakima Regional Clean Air Agency

(509) 834-2050, ext.112

apco@yrcaa.org

WSDA estimate of nitrogen emissions from confined animal feeding operation (CAFO) dairies.

Available at <https://www.yakimacounty.us/DocumentCenter/View/22177/GWMA-VolumeI-July2019> page 25

The national statistical average of manure production of milk cows (in 2000) was 15.24 tons per animal unit of manure excreted per year. The national statistical average of nitrogen per ton of manure excreted is 10.69 pounds of nitrogen per ton (Kellogg et al. 2000). The formulas used by the Washington State Department of Agriculture (2010) to calculate animal manure production, nitrogen production, and losses due to volatilization or denitrification for Holstein cows are as follows:

- **Annual manure production** is calculated using the following formula:

$$[(\text{number of milking cows}) (1.4) (108)] + [(\text{number of dry cows}) (1.4) (51)] + [(\text{number of heifers}) (0.97) (56)] + [(\text{number of calves}) (0.33) (83)] (365)/2000$$

- **Nitrogen production** is calculated using the following formula:

$$[(\text{number of milking cows}) (1.4) (0.71)] + [(\text{number of dry cows}) (1.4) (0.3)] + [(\text{number of heifers}) (0.97) (0.27)] + [(\text{number of calves}) (0.33) (0.42)] (365)/2000$$

- **Losses due to volatilization** during storage are estimated at 35 percent. This does not include application losses.

Study Finds Elevated Ammonia Levels at Lower Yakima Valley Site Near Large CAFO Dairies

May 10, 2019

The Friends of Toppenish Creek (FOTC) share with the public the results of yearlong air testing for ammonia at a site in the Lower Yakima Valley (LYV) near a large concentrated animal feeding operation (CAFO) dairy. The study was paid for with a grant from Legends Casino and private donations.

The FOTC study measured average ammonia levels for two week periods from February, 2018 to February, 2019. Due to the type of sampling we do not know the peak ammonia levels. Control samples were measured at a site in the Upper Yakima Valley, far from any CAFOs. The average of all LYV samples in the study exceeded the Minimum Risk Level (MRL) for chronic ammonia exposure.

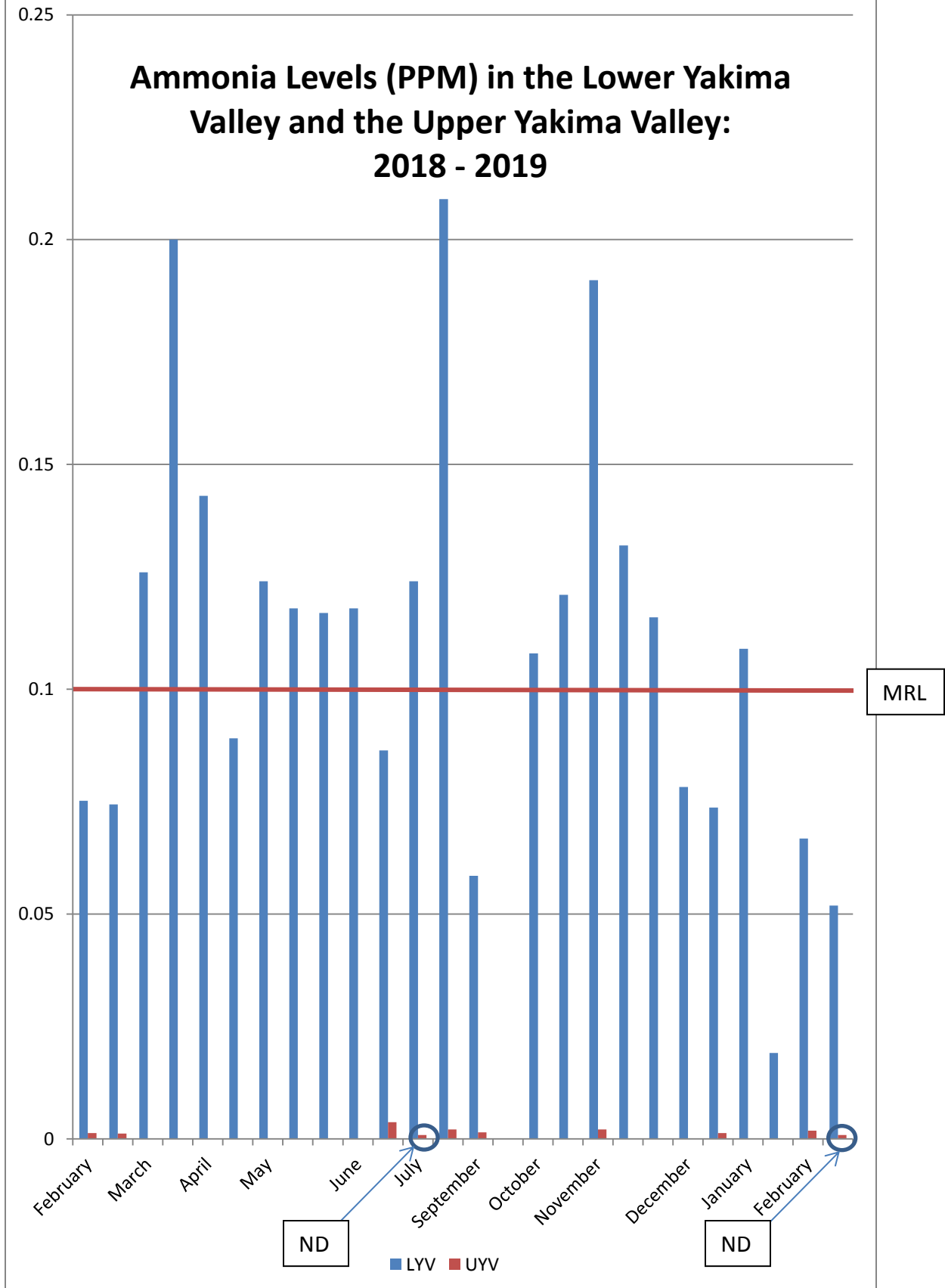
The average of all samples at the LYV site was 0.1092 parts per million (ppm) with a range of 0.0191 ppm to 0.209 ppm. The average of all samples at the UYV site was 0.0016 ppm. Ammonia levels in the lower valley averaged sixty eight times higher than those in the upper valley.

The Agency for Toxic Substances and Disease Registry (ATSDR) at the Center for Disease Control (CDC) has determined that the Minimum Risk Level (MRL) for long term (≥ 1 year) exposure to ammonia is 0.10 ppm. According to the CDC, "An MRL is an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse non-cancer health effects over a specified duration of exposure."

The FOTC data agrees with findings from a University of Washington study of asthmatic LYV children that found 24 hour ammonia levels ranging from .00027 ppm to .3175 ppm. That study concluded (page 84), "Ammonia may serve as a marker for the complex airborne emissions from CAFOs, and the observed decreases in lung function may have resulted from exposure to one or more co-pollutants with established respiratory system toxicity, such as endotoxin, particulate matter or hydrogen sulfide."

The FOTC data agrees with the results of a Yakima Air Winter Nitrate Study by Ecology that found high levels of ammonia lead to high levels of fine particulate matter in Yakima County. That study stated (page 111), "Given the backdrop of excess gaseous ammonia, there is usually sufficient reactive nitrogen in the valley to produce elevated levels of particulate nitrate if the right meteorological conditions take hold."

Ammonia Levels (PPM) in the Lower Yakima Valley and the Upper Yakima Valley: 2018 - 2019



Date	LYV $\mu\text{g}/\text{m}^3$	LYV ppm	UYV $\mu\text{g}/\text{m}^3$	UYV ppm
2/8/2018	56.4	0.0752	1.0	0.00133
2/22/2018	55.8	0.0744	0.9	0.00120
3/8/2018	94.6	0.126		
3/22/2018	150	0.200		
4/5/2018	107	0.143		
4/19/2018	66.8	0.0891		
5/3/2018	92.8	0.124		
5/17/2018	88.5	0.118		
5/31/2018	87.6	0.117		
6/14/2018	88.3	0.118		
6/28/2018	64.8	0.0864	2.8	0.00373
7/12/2018	93.2	0.124	ND	0.0009
7/26/2018	157	0.209	1.6	0.00213
9/20/2018	43.9	0.0585	1.1	0.00147
10/4/2018	81.1	0.108		
10/18/2018	90.4	0.121		
11/1/2018	143	0.191	1.6	0.00213
11/15/2018	99.1	0.132		
11/29/2018	86.8	0.116		
12/13/2018	58.7	0.0783		
12/27/2018	55.3	0.0737	1.0	0.00133
1/10/2019	82	0.109		
1/24/2019	14.3	0.0191		
2/6/2019	50.1	0.0668	1.4	0.00187
2/20/2019	38.9	0.0519	ND	0.0009

This bar graph depicts ammonia levels gathered by the Friends of Toppenish Creek from a home in the Lower Yakima Valley and a control home in the Upper Yakima Valley in 2018 and 2019. The red horizontal line is the ATSDR Minimum Risk Level of 0.1 ppm.

Data was reported in micrograms per cubic meter. Conversion to parts per million – PPM was performed using the Lenntech Calculator at <https://www.lenntech.com/calculators/ppm/converter-parts-per-million.htm>

* For graphing purposes we entered values of .0009 ppm for non-detect (ND) readings in the Upper Yakima Valley on 7/12/2018 and 2/20/2019. The Inter-Mountain Labs reporting limit for ammonia is .0008 micrograms per cubic meter or .00107 parts per million.

Quality Assurance:

The FOTC study used a low-cost, passive, radiello diffusion sampler that was developed by the National Atmospheric Deposition Program (NADP) for their Ammonia Monitoring Network (AMoN). Product data is available at <https://www.sigmaaldrich.com/technical-documents/articles/analytical/environmental/air-sampling-ammoniaradiello.html>

FOTC followed a modified EPA Method 325 sampling protocol. (There was only one site and one control site in our study, while the EPA Method 325 recommends multiple sites.) Temperatures were recorded using WA State Dept. of Ecology web-based data.

Samples were sent in batches to Inter-Mountain Labs in Sheridan Wyoming and analyzed under standard lab protocols. All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories.

One sample, collected on September 6, 2018, showed no readings and was rejected for summary data analysis since this made no sense in this study setting.

References:

ATSDR, U. (2004). Toxicological profile for ammonia. *US Department of Health and Human Services, Agency for Toxic Substances and Disease Registry*. Available at <https://www.atsdr.cdc.gov/toxprofiles/tp126.pdf>

Environmental Protection Agency (2015) Method 325A—Volatile Organic Compounds from Fugitive and Area. Available at <https://www.epa.gov/sites/production/files/2016-07/documents/m-325a.pdf>

Environmental Protection Agency (2015) Method 325B—Volatile Organic Compounds from Fugitive and Area. Available at <https://www.epa.gov/sites/production/files/2016-07/documents/m-325b.pdf>

Loftus, C. (2015c). *Industrial Animal Agriculture in the Yakima Valley, Air Pollution, and Pediatric Asthma Morbidity* (Doctoral dissertation). Available at https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/26152/Loftus_washington_0250E_13499.pdf?sequence=1

Puchalski, M. A., Rogers, C. M., Baumgardner, R., Mishoe, K. P., Price, G., Smith, M. J., ... & Lehmann, C. M. (2015). A statistical comparison of active and passive ammonia measurements collected at Clean Air Status and Trends Network (CASTNET) sites. *Environmental Science: Processes & Impacts*, 17(2), 358-369. Available at <https://pubs.rsc.org/en/content/getauthorversionpdf/c4em00531g>

VanReken, T., T. Jobson, B. Lamb, H. Liu, and S. Kaspari (2014), The Yakima Air Wintertime Nitrate Study (YAWNS) final report, Washington State Department of Ecology. Available at <https://ecology.wa.gov/DOE/files/a6/a67789dd-aed4-461e-b138-e77537dd1952.pdf>



2019
Report

COMMUNITY ECOLOGY REPORT

BY LATINO COMMUNITY FUND
www.latinocommunityfund.org

ACERCA DE LATINO COMMUNITY FUND

ABOUT LATINO COMMUNITY FUND

Latino Community Fund of Washington State (LCF) is an organization that strives in cultivating new leaders, supporting cultural and community based non-profits organizations, and improving the quality of life for all Washingtonians. To achieve its mission and address the needs of Latinos, LCF programs create a vibrant community through civic engagement, healthy families, arts and culture.

MISSION AND VISION

GUIDING PRINCIPLES

The members of the Latino Community Fund believe in:

A Strength and Asset-Based Approach – We pledge to start every process by focusing on what is best in people and communities and then building on those assets (e.g.: people, culture, existing programs, business, money, etc.) we already have.

Participatory Processes – We value efficiency, transparent decision-making, and devoted leadership. We welcome people of all incomes, races, ethnic backgrounds, languages, sexual orientations, genders, and abilities to participate in Latino Community Fund processes, activities and events.

Latino-Led and Latino Accountable Work – We consciously accept the duty to solve the challenges we face. Latinos must be active participants in the development of our future.

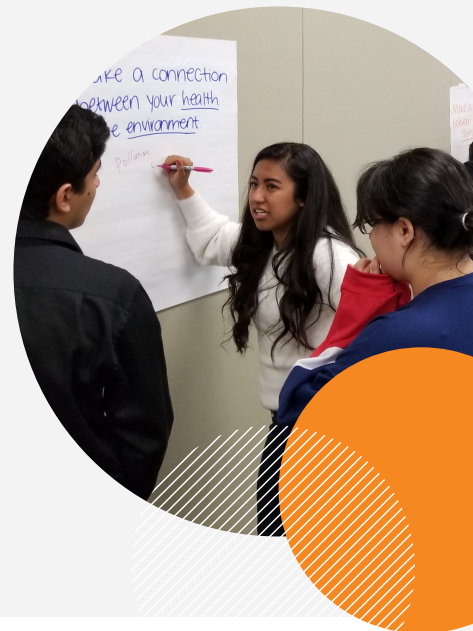


RESEARCH OVERVIEW

This study was funded by the Washington State's Department of Ecology in order to generate additional information from the community on waste management to better inform and provide additional prevention steps for diverse communities. The study focused on outreach and engaging the Latino community to initiate partnerships and working relationships among low-income leaders and stakeholder groups in highly-impacted communities of Yakima County. The goal was to support further capacity to convene and mobilize local residents in addressing nearby toxic sites and other environmental hazards.

TAKING A COMMUNITY PARTICIPATORY APPROACH:

Community-based participatory research (CBPR) is a collaborative approach to research that equitably involves community members, organizational representatives, and researchers in all aspects of the research process and in which all partners contribute expertise, share decision making and exercise ownership.



THE TOP 5 COMMUNITY ENVIRONMENTAL HEALTH ISSUES OF CONCERN:



Clean drinking water and health effects of water pollution



Recycling and composting



Reducing use of toxic production



Climate change



Pesticides

HOW WE ACHIEVED THIS

A PARTICIPATORY APPROACH

Through this research project LCF facilitated a participatory approach to bring together government officials, state and community leaders where they collectively drew their vision of community waste management.

MOBILIZING YOUTH

LCF mobilized and involved local youth as volunteers, especially engaging them to serve in leadership roles during the implementation of activities, such as being moderators and leaders in community dialogues implemented in different locations across Yakima County.

COMMUNITY DIALOGUES

In October - December 2018, LCF hosted **4 community dialogues** in Granger, Sunnyside, and Yakima with Latino communities, local nonprofit organizations, community leaders, volunteers, and state organizations. Workshops brought together 25-50 community members per workshop.



Photo Credit:
Merivet Lombera



"My biggest health/safety concern for my children would be the malpractice of pesticide use and the exposure of hazardous conditions out in the general public."

OVERVIEW OF YAKIMA COUNTY

Latino Community Fund hosted a series of community dialogues in Yakima County, outreached to community through phone banking, surveys, canvassing, and emails. Yakima County has a high Hispanic population in Eastern Yakima which includes City Council districts 1 and 2.

YAKIMA POPULATION

251,446

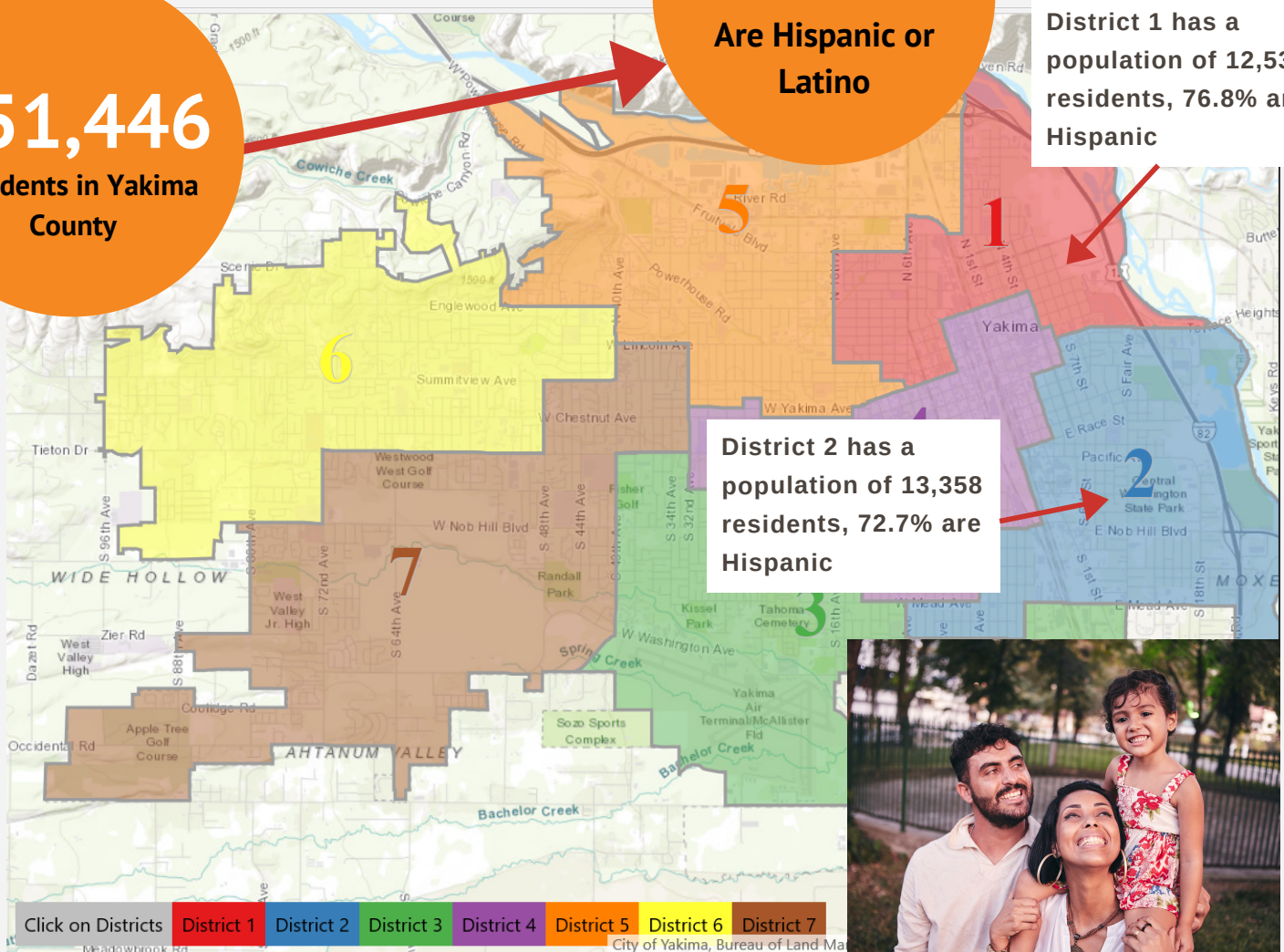
**Residents in Yakima
County**

49.43%

**Are Hispanic or
Latino**

**District 1 has a
population of 12,533
residents, 76.8% are
Hispanic**

**District 2 has a
population of 13,358
residents, 72.7% are
Hispanic**



COLLECTING DATA

Latino Community Fund identified communities in locations needing resources to address issues: access to clean drinking water and health effects of water pollution; recycling and composting; climate change; and reducing the use of toxic products at home. We developed a coalition made up of state, federal, and local agencies to share information and to pinpoint locations to outreach to the Latino community. We hosted the first coalition networking meeting on May 19, 2019 where members collaborated on survey questions and identifying important resources to offer the community.



QUESTIONS FORMULATED BY THE COMMUNITY PARTNERSHIP COALITION:

- 1** What do Latinos need to support the well-being of their families, practically in terms of environmental factors of waste and pollution of land, air, water, and climate change?
- 2** What is your biggest health/safety concern for your children?
- 3** What type of information would Latino families like to receive from government agencies that support your family's well-being?
- 4** How do Latino families prefer to receive information that supports their families' well-being from government agencies?
- 5** What can government agencies do to improve the well-being of Latino families through waste and pollution issues impacting the community thorough land, air, water, and climate change?
- 6** What activities in the Yakima community do you think may have a negative impact on the environment?

COLLECTING DATA

We collected

200 Surveys in Spanish

500 Surveys in English



400 individuals reached by email



200 individuals reached through canvassing



500 participants reached in the Yakima County



200 non-English speaking Latino community members in Yakima County



*"Finding products and ways to improve our existence - less plastic for instance."
-Community member*

OUTCOMES AND INSIGHTS

Yakima County residents filled out surveys and shared ideas, ranking the top activities that they see as having a negative impact on the environment.



ACCORDING TO THE
COMMUNITY, THE TOP 3
ACTIVITIES THAT HAVE A
NEGATIVE IMPACT ON THE
ENVIRONMENT:

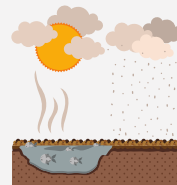
"General plant and warehouse contaminants and manure from cow farms escape. Also certain agricultural pesticides" - Community member



66

PEOPLE

said climate
change



72

PEOPLE

said air
pollution



78

PEOPLE

said land
pollution

OUTCOMES AND INSIGHTS

WHAT ACTIVITIES IN YOUR COMMUNITY DO YOU THINK HAVE A NEGATIVE IMPACT ON THE ENVIRONMENT?

Community said:

- Air contamination
- Fruit tree pesticides
- Run off from dairy farms
- Pesticides
- Littering
- Man-made products
- Auto and corporate truck emissions
- Water pollution Smoking



WHAT IS YOUR BIGGEST HEALTH/SAFETY CONCERN FOR YOUR CHILDREN?

"Clean air because pesticides from orchards and fumes from construction or roadways can have severe effects on the health of children"

"Unclean water my children drink from our Lower Valley wells we have that are not clean"



"It's hard to tell a person to take care of the environment when they're thinking how am I going to provide food for my kids this week?"

- Elizabeth Torres, Radio KDNA

OUTCOMES AND INSIGHTS

WHAT CAN GOVERNMENT AGENCIES DO TO ADDRESS THESE CONCERNS?

132 said engage community members

60 said to be transparent about information provided to community

56 said to improve air quality



Preferred form of communication for Latino families:



180 said television



168 said mail



114 said text message

"Text message with a link to more info, email, mail. (In that order of importance)"

"I feel it's best to get some of this information from Health Providers because community trusts them and sees them."

OUTCOMES AND INSIGHTS



WHAT CAN GOVERNMENT AGENCIES DO TO ADDRESS THESE CONCERNS?

Community said:

"Outreach to educate families and communities about these issues."

"I think government agencies can be able to reach the Latino community through innovating ways; social media, putting events together to invite community members etc. Also, I think having people designated to establish relationship-building with the Latino community would greatly help government agencies addressing issues such as land, air, water, and climate change with the Latino community."

"Share plans of action and collaborate with school institutions and City Hall."

"Do an honest effort to provide educational programs directly with the targeted communities"



COMMUNITY ACTION STEPS:

Latino Community Fund hosted community dialogues to listen to community voices for recommendations to solutions and provide prevention steps to waste management.



RECOMMENDATIONS FROM COMMUNITY MEMBERS:

- **Recycle** and **reuse** plastic water bottles for drinking;
- Reuse plastic tupperware from restaurants;
- Use reusable bags for grocery shopping.
- **Reduce** the number of trips driving;
- Reduce or eliminate fireplace and wood stove use.
- **Avoid** burning leaves, trash, and other materials;
- Avoid using gas-powered lawn and garden equipment.
- **Engage** with other local organizations working on Waste Management resources and environmental issues.
- **Attend** local town-hall meetings with local officials in Yakima County.
- Attend Yakima City Hall, town halls, commissioners meetings to voice one's concerns on community issues.
- **Join the Yakima Ecology Coalition**, a network with community members to provide access to resources for Yakima County residents.
- **Access** tools, resources, and research from the Department of Ecology:
<https://www.epa.gov/environmental-topics>
- **Contact Latino Community Fund** for more information about how to get involved at www.latinocommunityfund.org

COMMUNITY ACTION STEPS

If you have concerns about water pollution:

Within Yakima County, there are 3 certified water laboratories where residents can take samples of their drinking water for water quality testing. The samples must be taken to the lab directly; the Yakima Health District does not have testing facilities or testing supplies (e.g., bottles, kits, etc.).

DRINKING WATER TESTING FACILITIES:

Cascade Analytical, Inc

1008 W Ahtanum
Yakima, WA 98903
(509) 452-7707

Valley Environmental Laboratory

201 E. 'D' St.
Yakima, WA 98901
(509) 575-3999

Ag Health Laboratories

445 Barnard Blvd
Sunnyside, WA 98944
(509) 836-2020



THANK YOU TO OUR COMMUNITY PARTNERS

Latino Community Fund developed and formulated survey questions, outreach events, and resources in collaboration with our community partners from a coalition of organizations that are currently engaged in health and environmental justice outreach.

COALITION COMMUNITY PARTNERSHIPS:

- MSFW Advocacy Group (MAG)
- La Casa Hogar
- Pacific Islanders Coalition
- Nuestra Casa
- Working WA
- People for People
- Worksource Department
- One America
- Opportunities Industrialization Center (OIC)
- Central WA Hispanic Chamber of Commerce
- Washington Resource Conservation Development Council (WA RC&D)
- School Safety Operations and communication Center
- Friends of Toppenish Creek
- Yakima Valley Conference of Governments
- University of Washington
- University of Heritage
- Lee Martin Farms
- Lopez Farms



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The Following are the five questions and survey results gathered from the community.

Question 1: What do Latinos need to support the well-being of their families, particularly in terms of environmental factors such as waste and pollution of land, air, water, and climate change?		Question 2: What is your biggest health/safety concern for your children?		Question 3: What type of information would Latinos families like to receive from government agencies that support family's well-being?	
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Question 4: How would Latino families want to receive information that supports their families' well-being from government agencies?		Question 5: What can government agencies do to improve the well-being of Latino families through waste and pollution issues impacting the community thorough land, air, water, and climate change?		Question 6: What activities in your community do you think may have a negative impact on the environment?	
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For more information or questions, contact:

Micaela Razo, Program Manager

Micaela@latinocommunityfund.org

509-902-1750

www.latinocommunityfund.org



**68 S. Washington Street
Seattle, WA 98104**

**info@latinocommunityfund.org
www.latinocommunityfund.org**

Presentation to the Yakima County Commissioners

Arguments for Dissolving the Yakima Regional Clean Air
Agency as Authorized by RCW 70A.15.2570

May 11 & 12, 2021

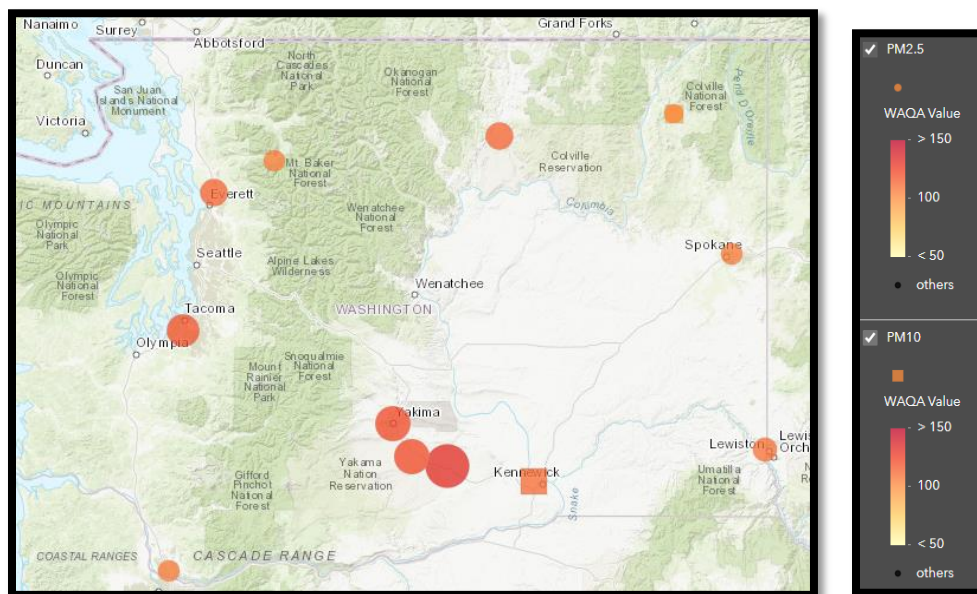
Friends of Toppenish Creek



The YRCAA should be dissolved because:

- We all care about the health and wellbeing of the people.
- The YRCAA lacks the expertise to address the most serious air pollution in WA State. Ecology has more resources.
- Yakima County is at risk for non-compliance with the Clean Air Act.

Introduction: WA Areas of Concern for Particle Air Pollution 2021



From <https://ecology.wa.gov/Regulations-Permits/Plans-policies/Areas-meeting-and-not-meeting-air-standards>

All States are required to compile an air emissions inventory every five years. Washington evaluates Criteria Air Pollutants and Precursors to Criteria Air Pollutants for this inventory. Ecology estimates emissions for:

- Ammonia (NH_3)
- Carbon monoxide (CO) (Criteria)
- Hazardous air pollutants
- Nitrogen oxides (NO_x) (Criteria)
- Particles (or particulate matter, PM) (Criteria)
- Sulfur dioxide (SO_2) (Criteria)
- Volatile organic compounds (VOCs)

In the Lower Yakima Valley about 31% of fine particulate matter (PM 2.5) is composed of ammonium nitrate. Ammonium nitrate is acidic when dissolved in water. Ammonium nitrate contributes to acid rain.

According to Ecology, in 2011 Yakima County livestock emitted 8,053.58 tons of ammonia into the ambient air. In 2017, using a different model, the number was 5,194 tons of ammonia = 10,388,000 lbs. = 28,460 lbs./day. Most of these emissions take place in the 500 square mile Lower Yakima Valley*.

*To put this into perspective, in 2020 the EPA fined Kenyon Zero Storage \$34,000 for the accidental release of about 100 pounds of ammonia into the air from its cold storage facility in Grandview.

Why Yakima County Should Disband the YRCAA

Yakima County has public health problems related to air pollution.

The Yakima Regional Clean Air Agency has a duty to address this issue.

Much of the air pollution in Yakima County is related to emissions from concentrated animal feeding operations (CAFOs).

Those emissions include:

- Dust
- Odor
- Ammonia
- Hydrogen sulfide
- Volatile Organic Compounds (VOC's)

One third of all WA dairy cows are housed in the 500 square mile Lower Yakima Valley (LYV).

Large LYV dairies are major sources (a legal term) of air pollution.

The YRCAA does not register and regulate CAFO dairies as required by law.

The YRCAA marginalizes the citizens.

- Citizen complaints at public meetings are met with disinterest or disdain.
- Dairy industry interests are supported while there is no citizen representation on the YRCAA board.
- Site visits to investigate citizen complaints are not timely or do not happen at all.
- Valid citizen science is ignored.
- YRCAA has been successfully sued twice because of their lack of responsiveness to citizen requests.

Other counties use the WA State Department of Ecology to manage air quality issues.

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Public Health in Yakima County

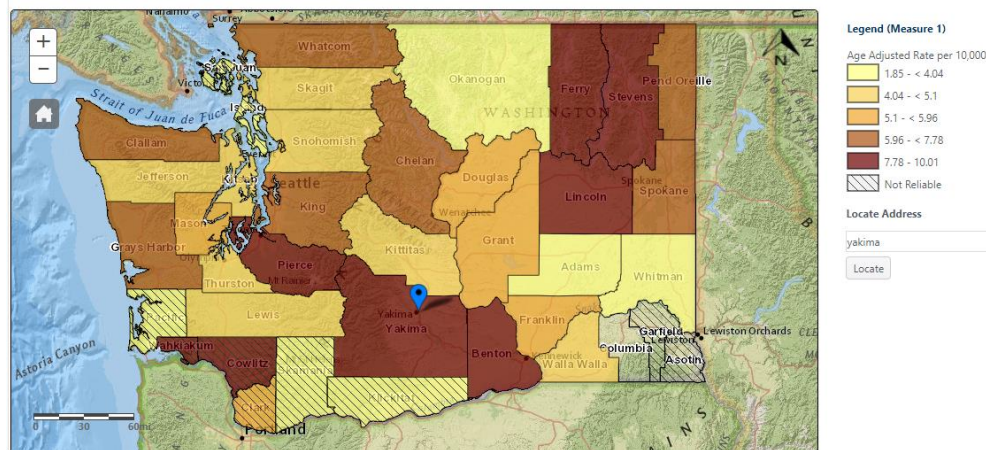
Health issues related to air pollution include:

- Premature Death
- Asthma Attacks
- Cardiovascular Disease
- Lung Cancer
- Developmental Damage
- Susceptibility to Infections
- Low Infant Birth Weight
- Wheezing, Coughing & Shortness of Breath
- Death rates from COVID 19 are higher in areas with elevated fine particulate matter.

Examples of increased disease in Yakima County, often related to air pollution:

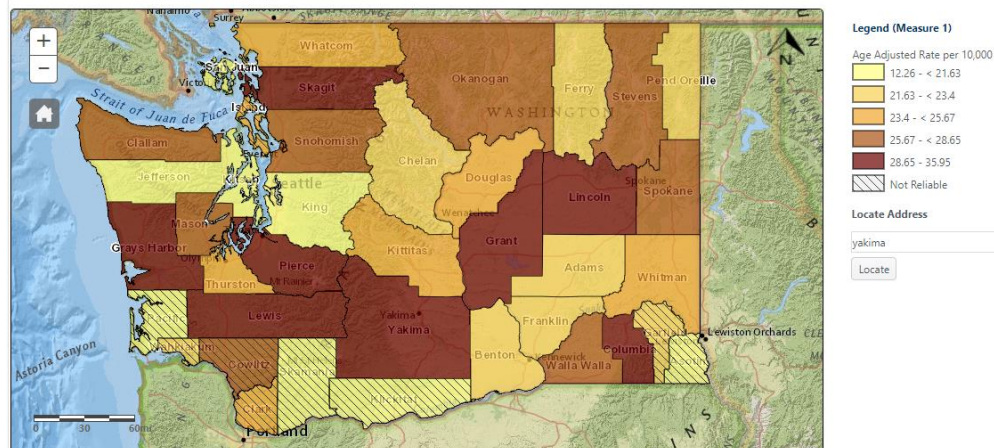
Asthma Hospitalizations: Age-Adjusted Rate per 10,000

Geography: County, Age Group: All (Combined), Time Period: 2010-2014



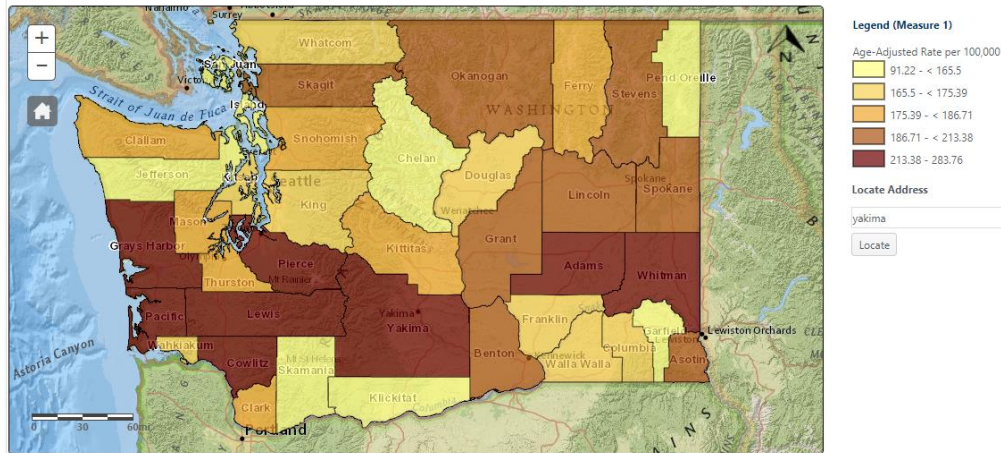
Heart Attack Hospitalizations: Age-Adjusted Rate per 10,000 (for specified age groupings)

Geography: County, Age Group: 35+, Sex: All (Combined), Time Period: 2010-2014



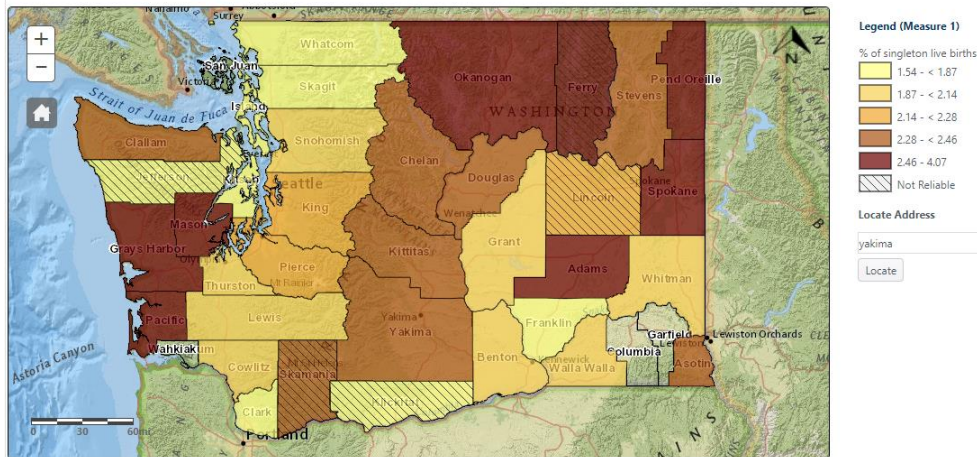
Cardiovascular Disease Mortality - Age Adjusted rate per 100,000

Geography: County, Sex: All (Combined), Time Period: 2015-2019



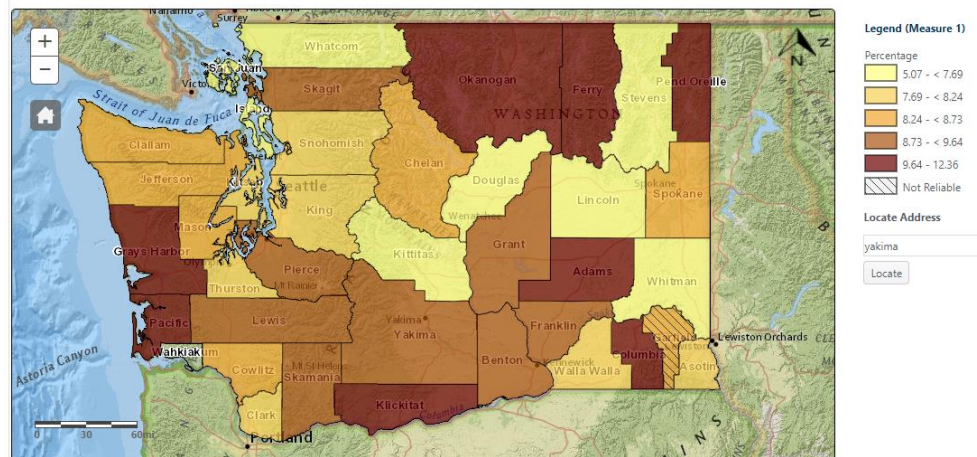
Low Birthweight (<2500 grams) Singleton Fullterm Births

Geography: County, Maternal Age: All (Combined), Time Period: 2015-2019



Preterm (less than 37 weeks) Singleton Births

Geography: County, Maternal Age: All (Combined), Time Period: 2015-2019



From the WA State Dept. of Health Washington Tracking Network at <https://fortress.wa.gov/doh/wtn/WTNPortal/#!q0=370>

Studies of Air Pollution and Health in Yakima County

Here is research that was performed in Yakima County regarding health impacts from air pollution. This research belongs on the YRCAA website, but it has never been posted.

This study provides evidence that PM_{2.5} in an agricultural setting contributes to elevated asthma morbidity.

Loftus, C., Yost, M., Sampson, P., Arias, G., Torres, E., Vasquez, V. B., ... & Karr, C. (2015). Regional PM_{2.5} and asthma morbidity in an agricultural community: a panel study. *Environmental research*, 136, 505-512. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4425279/>

Ammonia concentrations were elevated in this community and strongly predicted by proximity to animal feeding operations. Ammonia's association with acute lung function decrements in children with asthma in the surrounding community may be causal or, alternatively, ammonia may be a marker for other pollutants from animal feeding operations associated with respiratory effects.

Loftus, C., Yost, M., Sampson, P., Torres, E., Arias, G., Vasquez, V. B., ... & Bhatti, P. (2015). Ambient ammonia exposures in an agricultural community and pediatric asthma morbidity. *Epidemiology (Cambridge, Mass.)*, 26(6), 794. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4587379/>

Our findings indicate that children with asthma may experience short-term respiratory effects following increased exposure to airborne AFO pollutants, adding to a growing body of research evidence that AFO-related air pollution may cause community-level health effects.

Loftus, C. (2015). Industrial Animal Agriculture in the Yakima Valley, Air Pollution, and Pediatric Asthma Morbidity (Doctoral dissertation). Available at https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/26152/Loftus_washington_0250E_13499.pdf?sequence=1

These findings demonstrate that dairy operations increase community exposures to agents with known human health effects. This study also provides evidence that airborne biological contaminants (i.e. cow allergen) associated with airborne particulate matter are statistically elevated at distances up to three miles (4.8 km) from dairy operations.

Williams, D. L., Breysse, P. N., McCormack, M. C., Diette, G. B., McKenzie, S., & Geyh, A. S. (2011). Airborne cow allergen, ammonia and particulate matter at homes vary with distance to industrial scale dairy operations: an exposure assessment. *Environmental Health*, 10(1), 72. Available at <https://ehjournal.biomedcentral.com/articles/10.1186/1476-069X-10-72>

Air Quality in Yakima County

Percentage of Ammonium Nitrate in Fine Particulate Matter in WA State

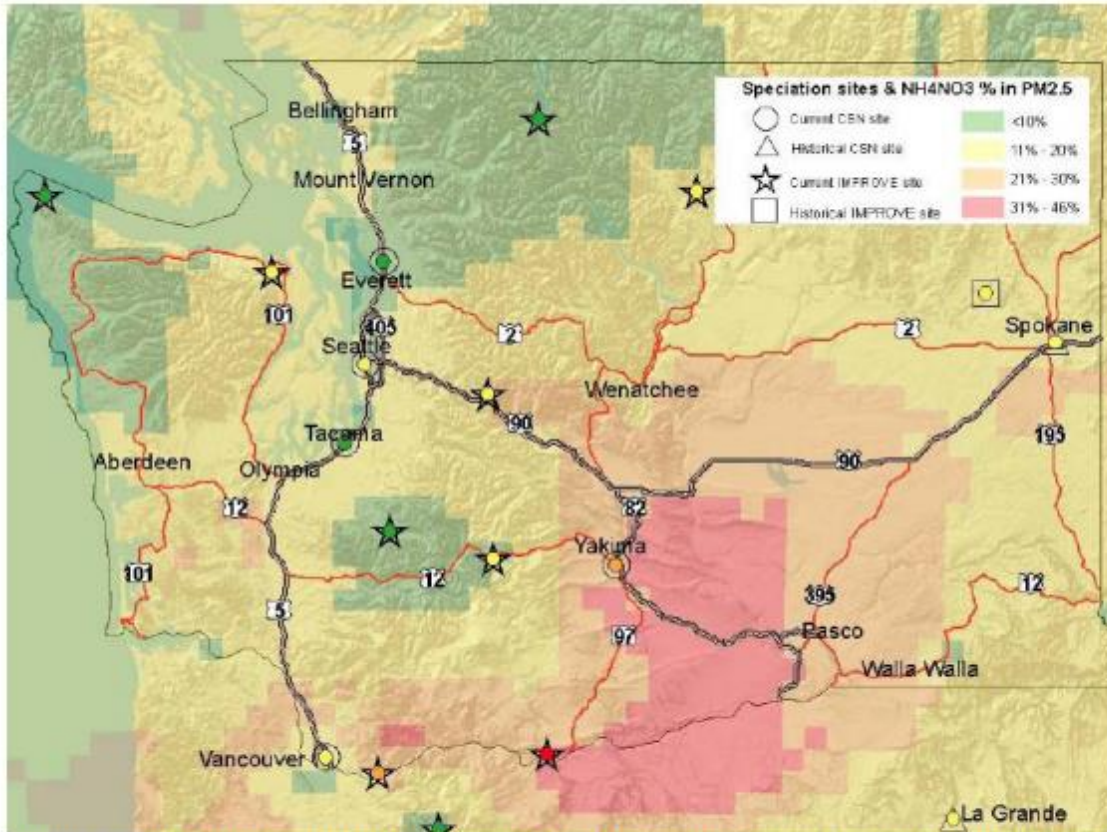


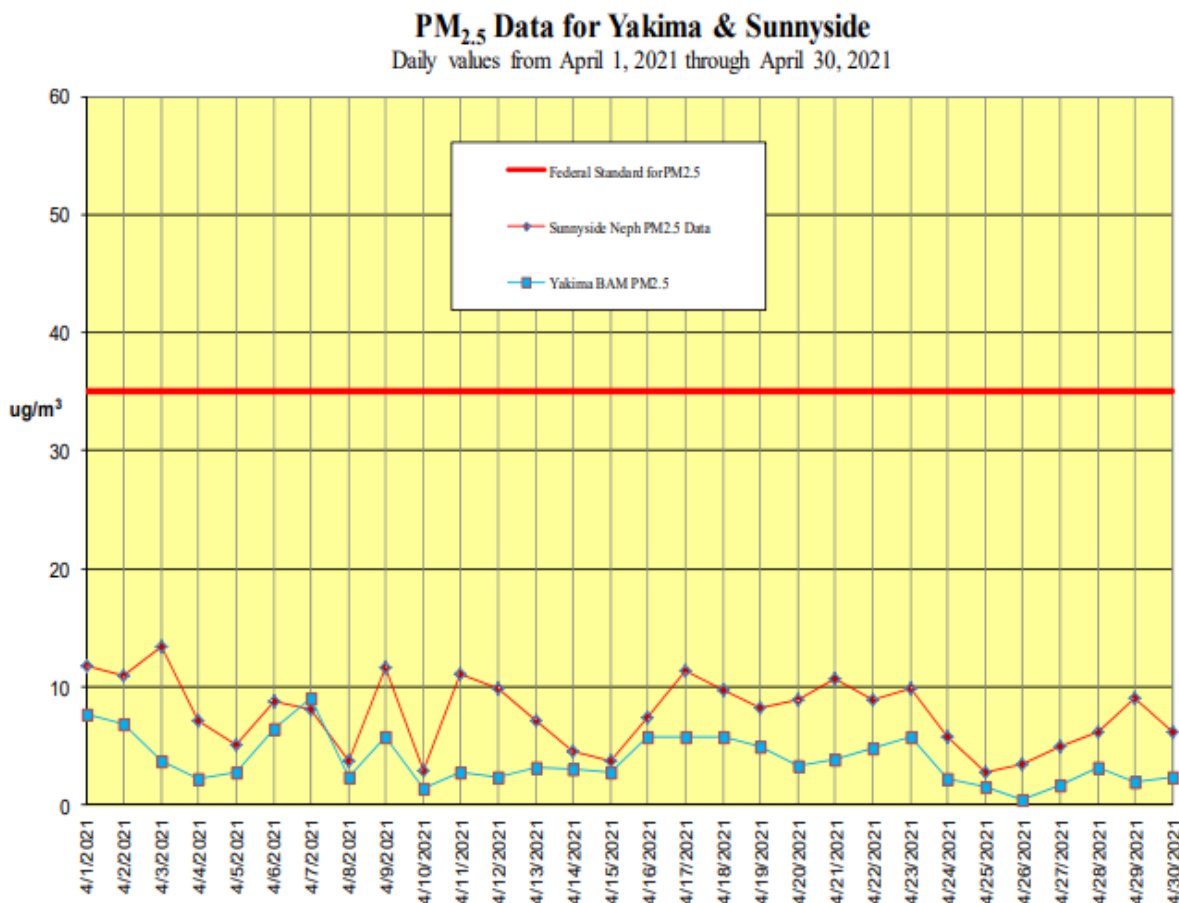
Figure 1.1. Contribution of ammonium nitrate (NH_4NO_3) to total $\text{PM}_{2.5}$ in Washington. Map is based on measured aerosol speciation data collected through 2009, spatially interpolated with CMAQ-modeled data at a 12km resolution. Map created and provided by Dr. Ranil Dhammapala, Washington Department of Ecology.

The 2015 Yakima Air Winter Nitrate Study found:

Episodes of elevated particulate nitrate in the Yakima Valley during winter result from a combination of factors. The wintertime meteorology of the region drives gas-particle equilibrium of ammonium nitrate strongly toward the particle phase, and high relative humidity enhances this effect. High ammonia emissions from agricultural sources in the area lead to elevated atmospheric concentrations of the pollutant. This excess ammonia drives virtually all available nitric acid into the particulate phase, forming particulate nitrate, and leads to a condition where any additional nitric acid production would lead directly to greater particulate nitrate levels. The production of particulate nitrate precursors is complicated and sensitive to the varying meteorological and chemical conditions in the valley. Given the backdrop of excess gaseous ammonia, there is usually sufficient reactive nitrogen in the valley to produce elevated levels of particulate nitrate if the right meteorological conditions take hold.

YRCAA Data: Air quality in the LYV is usually worse than air quality in the Upper Yakima Valley (UYV). Here is a recent typical example from a monthly director's report to the YRCAA Board of Directors.

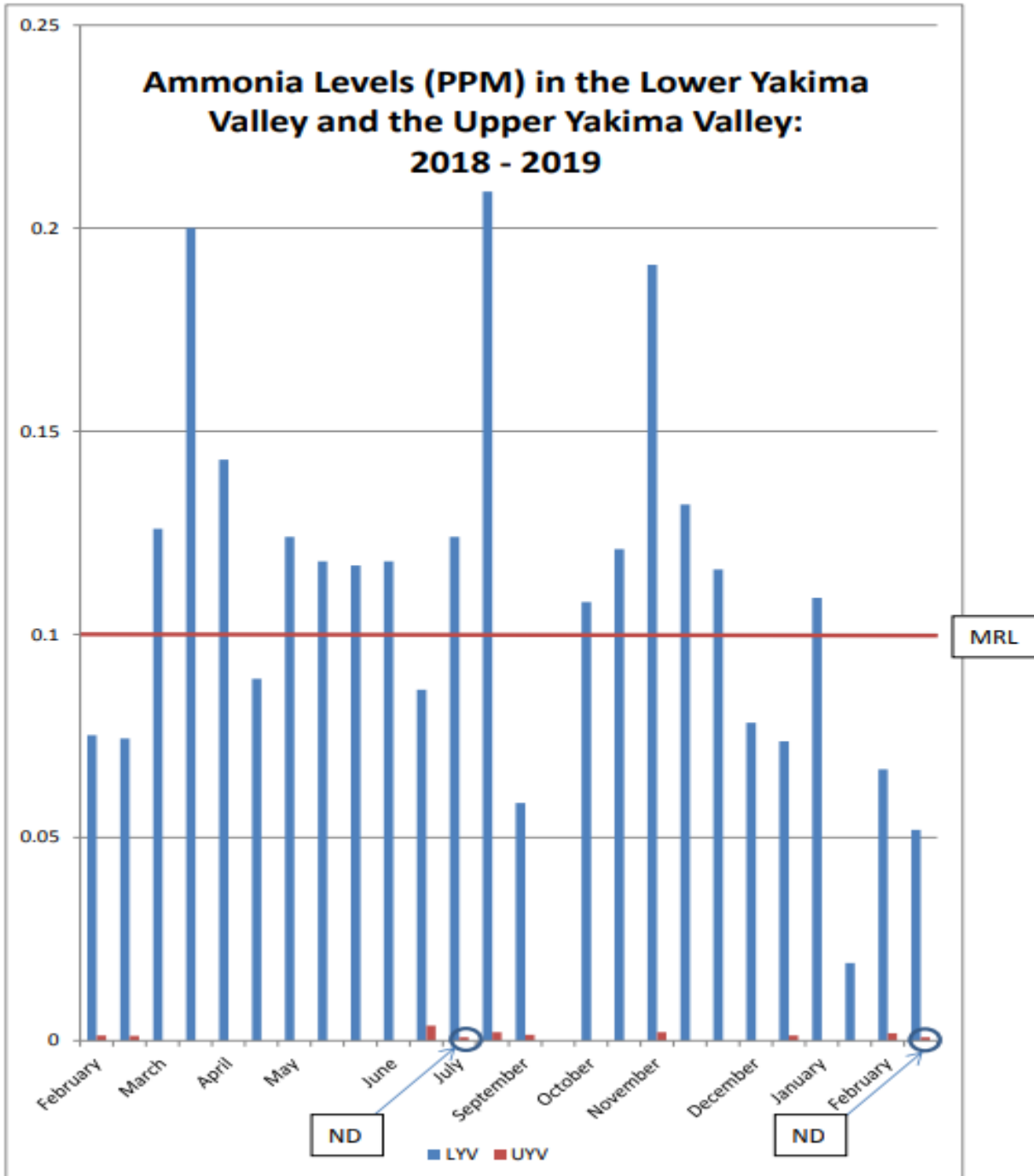
4. Air Monitoring Data for April 2021



Citizen Science: The Friends of Toppenish Creek measured average ammonia levels for two week periods from February 2018 to February 2019, at a home site in the LYV and a control site in the UYV. The average of all samples at the LYV site was 0.1092 parts per million (ppm) with a range of 0.0191 ppm to 0.209 ppm. The average of all samples at the UYV site was 0.0016 ppm. Ammonia levels in the lower valley averaged sixty eight times higher than those in the upper valley.

The Agency for Toxic Substances and Disease Registry (ATSDR) at the Center for Disease Control (CDC) has determined that the Minimum Risk Level (MRL) for long term (≥ 1 year) exposure to ammonia is 0.10 ppm. According to the CDC, “An MRL is an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse non-cancer health effects over a specified duration of exposure.”

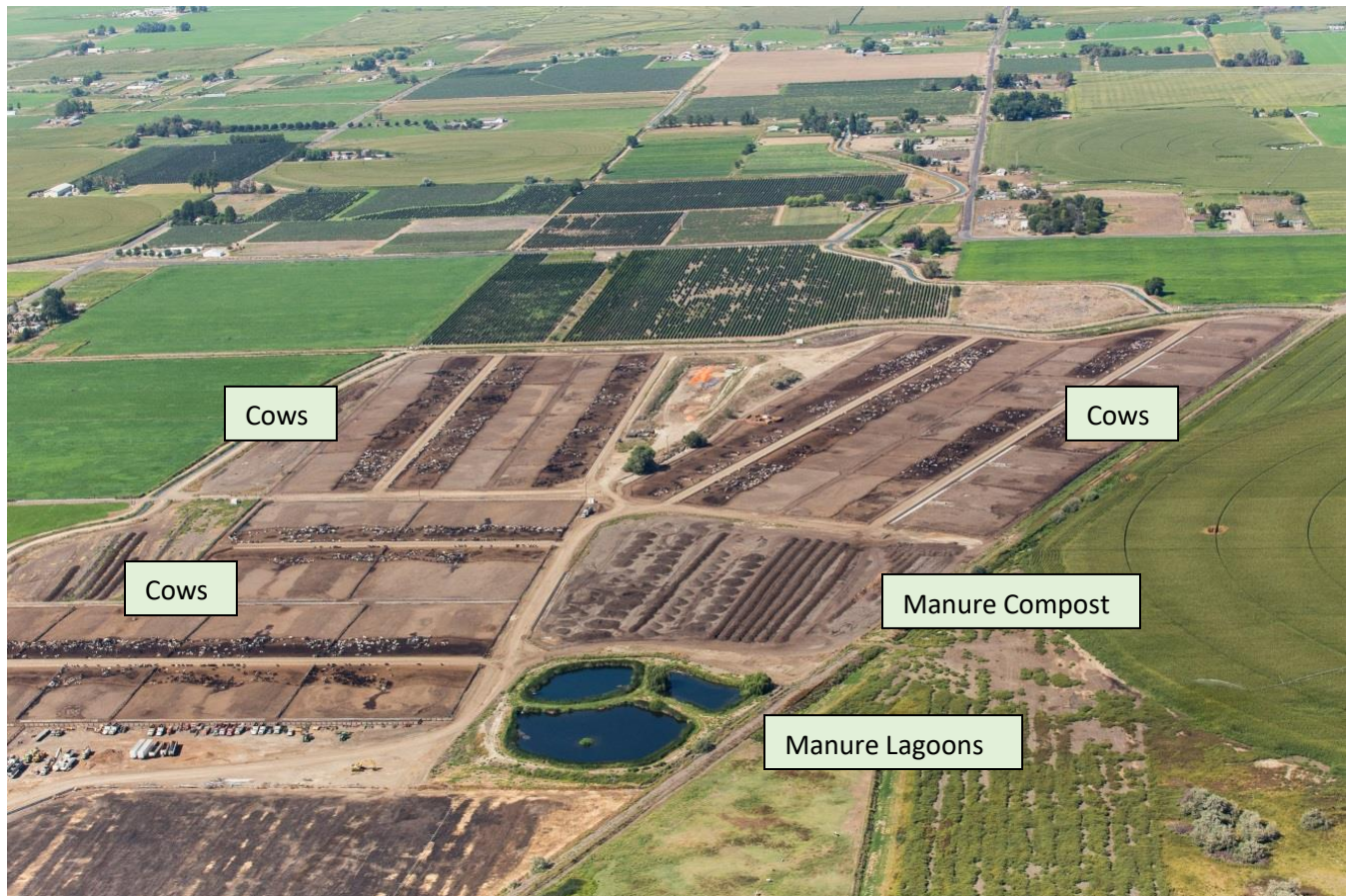
Below is a graph of the FOTC findings:



FOTC shared these results with the YRCAA. The agency did not respond.

In 2016 the YRCAA staff brought a proposed ammonia study to the YRCAA board for consideration. The board rejected the proposed study.

Dairy Emissions: This aerial photo shows the sources of emissions from LYV dairies:



The WA State Dept. of Agriculture estimates that 35% of the nitrogen in waste from dairy cows volatilizes and ends up in the atmosphere. This happens in the production area, before manure is composted or applied to crops. See Lower Yakima Valley Groundwater Report, Vol. I, page 25 at <https://www.yakimacounty.us/DocumentCenter/View/22177/GWMA-VolumeI-July2019>

Regulation of Air Pollution in Yakima County

Timeline

1967

The Yakima Regional Clean Air Authority, later the Yakima Regional Clean Air Agency, is formed per RCW 70.94.081

1997

YRCAA adopts a Beef Cattle Feedlot Air Policy

2002

YRCAA approves Confined Heifer Operations Dust Control Policy

2005

Les Ornelas, Director of the Yakima Regional Clean Air Agency tells a WSU Dairy Workshop in Sunnyside WA,

Now, I receive the largest number of odor complaints currently for my jurisdiction against feedlots, dairies, other kinds of chicken farmers, and other sorts of activities like this. We have people in the field who have been trained to evaluate odors, to be able to discern from a level 1, 2, 3 or 4 (4 typically is the one that causes a gag reflex). We go out and respond to all these numerous complaints every year and we have not yet issued a citation to any of the dairy people on odors in Yakima County, even though we have hundreds and some years over a thousand complaints.

Not much has changed since then. The YRCAA still fails to cite Lower Yakima Valley dairies for odor and dust.

2010

YRCAA discussion re AQMP for Dairies begins

Publication of *Emission Data from Two Dairy Freestall Barns in Washington*. Study performed in the LYV by WA State University for the National Air Emissions Monitoring Study.

2011

John Hopkins study, *Airborne cow allergen, ammonia and particulate matter at homes vary with distance to industrial scale dairy operations: an exposure assessment*. The lead author presents the study to the YRCAA. There is no agency action.

February, YRCAA published public comments for the AQMP for dairies.

February, YRCAA Board of Directors approved the dairy air policy as a pilot research project.

2012

Presentation of Draft AQMP for Dairies at YRCAA Board Meeting

2013

May, Citizens present a petition to ban spreading and spraying of manure during burn bans and air inversions. The YRCAA Director recommends rejecting the petition and the YRCAA Board agrees.

June, the YRCAA Board of Directors approves an *Air Quality Management Policy and Best Management Practices for Dairy Operations (AQMP)*.

November, FOTC presents a critique of the Literature Review used to rebut a need for Ban on Spraying Manure during Inversions

2014

YRCAA adopts a *PM Advance Program Path Forward*

January, YRCAA forms an Agricultural Task Force and a Dairy Work Group

The Yakima Air Winter Nitrate Study is completed

November, Board Study Session: *Report to the YRCAA Board of Directors of the July, 2013 to October 2014 Policy Implementation Period* – two board members hear the report.

Publication of Ecology's *2011 County Emissions Inventory*.

2015

YRCAA Board of Directors tables a proposed Five-Year Strategic Plan

University of Washington publishes studies on asthmatic children in the Yakima Valley.

2016

FOTC asks the WA Dept of Health and the Yakima Health District for an “expert opinion on when and under what conditions it is safe to apply manures, especially aerosolized manures, to cropland when human and animal exposures and health risks are taken into consideration.” To date there has been correspondence but there have been no substantive answers.

FOTC responds to an article in two local newspapers that quotes the YRCAA Director and states that ammonia emissions from animal agriculture are insignificant.

FOTC files a Civil Rights Complaint to the EPA re YRCAA

FOTC asks Ecology to investigate the YRCAA under RCW 70A.15.3000(8)

Complaints about Conflict of Interest for a YRCAA Board Member

2017

Steve George from the Yakima Dairy Federation tells the YRCAA Board of Directors that he can speak for the dairy farmworkers.

YRCAA denies a second petition to ban manure spraying during burn bans and inversions.

2018

AQMP for Dairies rescinded

2019

FOTC repeats a request for Ecology to investigate YRCAA. The request is denied.

Complaint because WA State helps a mushroom operation, with known odorous air emissions, to relocate from the west side of the state to the Sunnyside area.

The EPA Office of Civil Rights External Compliance comes to an agreement with the YRCAA regarding engagement of Spanish speaking residents.

FOTC analyzes ammonia emissions in Yakima County and shares the study with YRCAA. The YRCAA takes no action.

2020

University of Washington publishes studies on asthmatic children in the Yakima Valley.

Violations of Rules & Regulations

RCW 17A.15.2000(6) Wherever a member of a board has a potential conflict of interest in an action before the board, the member shall declare to the board the nature of the potential conflict prior to participating in the action review. The board shall, if the potential conflict of interest, in the judgment of a majority of the board, may prevent the member from a fair and objective review of the case, remove the member from participation in the action.

WAC 173-400-260 Conflict of interest: All board members and officials acting or voting on decisions affecting air pollution sources, must comply with the Federal Clean Air Act, as it pertains to conflict of interest (Section 128).

FOTC Comment: Dr. Steven Jones is a dairy nutritionist who works for the dairy industry in Yakima County. He was part of the group that developed the YRCAA Air Quality Management Policy (AQMP) for Dairies beginning in 2011. Dr. Jones has served on the YRCAA Board of Directors since January 2014 as the designee for the Yakima County Commissioners when the commissioners chose him over two citizen applicants. He has been reappointed without consideration of other candidates since that time.

- In 2015 Dr. Jones voted against a YRCAA Strategic Plan stating that he disagrees with the proponents of environmental justice. (Attachment L)
- In 2017 the YRCAA staff brought a proposed project to the board that would measure ammonia emissions in the LYV. The Dairy Federation opposed the project. Dr. Jones actively criticized the value of the project and voted against it. (Board Meetings March 2017 & April 2017).
- In 2017 the YRCAA Board of Directors made changes to the public comment section of board meetings at the request of the Dairy Federation. Dr. Jones voted in favor of the changes. (Board Meetings October 2017 & November 2017).
- In 2018 the YRCAA voted to rescind the AQMP for dairies. Dr. Jones voted for an option to rescind the AQMP, to eliminate a requirement for dairies to register and to eliminate registration fees for dairies. The elimination of registration fees resulted in a reduction of \$20,000 to \$22,000 that would have been used to address this source of air contaminants. This decision resulted in the reduction of YRCAA FTEs by one employee. (Board Meeting, October 2018)
- Dr. Jones has voted on every YRCAA budget since 2014.

* * * * *

RCW 70A.15.1005 Declaration of public policies and purpose.

Paragraph 6 states:

It is the policy of the state that the costs of protecting the air resource and operating state and local air pollution control programs shall be shared as equitably as possible among all sources whose emissions cause air pollution.

RCW 70A.15.2270

Annual fees from operating permit program source to cover cost of program.

(1) The department and delegated local air authorities are authorized to determine, assess, and collect, and each permit program source shall pay, annual fees sufficient to cover the direct and indirect costs of implementing a state operating permit program approved by the United States environmental protection agency under the federal clean air act. . . .

(2) The fee schedule developed by each permitting authority shall fully cover and not exceed both its permit administration costs and the permitting authority's share of statewide program development and oversight costs.

RCW 70A.15.3060

State financial aid—Application for—Requirements.

(1) Any authority may apply to the department for state financial aid. . . .

(2) Before any such application is approved and financial aid is given or approved by the department, the authority shall demonstrate to the satisfaction of the department that it is

fulfilling the requirements of this chapter. If the department has not adopted ambient air quality standards and objectives as permitted by RCW 70A.15.3000, the authority shall demonstrate to the satisfaction of the department that it is acting in good faith and doing all that is possible and reasonable to control and prevent air pollution within its jurisdictional boundaries and to carry out the purposes of this chapter.

FOTC Comment: YRCAA acknowledges that CAFO dairies are a source of air pollution in Yakima County. YRCAA does not register dairies and collects no fees to pay for actions to address air pollution from this source. YRCAA does not do all that is possible and reasonable to control and prevent air pollution in Yakima County.

* * * * *

WAC 173-400-100

Source classifications.

(1) **Source classification list.** In counties without a local air pollution control authority, or for sources under the jurisdiction of ecology, the owner or operator of each source within the following source categories must register the source with Ecology:

(j) Cattle feedlots with operational facilities which have an inventory of one thousand or more cattle in operation between June 1st and October 1st, where vegetation forage growth is not sustained over the majority of the lot during the normal growing season;

(l) Composting operations, including commercial, industrial and municipal, but exempting residential composting activities;

RCW 70A.15.3050

Emission control requirements.

(1) Every activated authority operating an air pollution control program shall have requirements for the control of emissions which are no less stringent than those adopted by the department of ecology for the geographic area in which such air pollution control program is located.

FOTC Comment: Rules and Regulations for Local Clean Air Agencies cannot be less stringent than state rules and regulations.

The YRCAA does not require registration of dairies, despite the fact that CAFO dairies are de facto cattle feedlots with inventories of one thousand or more cattle in operation year round, where vegetation forage growth is not sustained over the majority of the lot during the normal growing season. (Board Meeting, October 2018)

The YRCAA does not require registration of dairies, despite the fact that Ecology requires registration of cattle feedlots.

The YRCAA does not require registration of dairy composting operations despite the fact that there are over 500 acres in the LYV devoted to manure composting.

* * * * *

RCW 70A.15.3150

Penalties.

(1) Any person who knowingly violates any of the provisions of this chapter or chapter **70A.25 RCW**, **RCW 70A.45.080**, or any ordinance, resolution, or regulation in force pursuant thereto is guilty of a gross misdemeanor and upon conviction thereof shall be punished by a fine of not more than ten thousand dollars, or by imprisonment in the county jail for up to three hundred sixty-four days, or by both for each separate violation.

(2) Any person who negligently releases into the ambient air any substance listed by the department of ecology as a hazardous air pollutant, other than in compliance with the terms of an applicable permit or emission limit, and who at the time negligently places another person in imminent danger of death of substantial bodily harm is guilty of a gross misdemeanor and shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for up to three hundred sixty-four days, or both.

FOTC Comment: Animal agriculture in Yakima County releases

- between 5,000 and > 8,000 tons of ammonia every year (Attachment M, page 101/108 & Attachment N, page 88/94).
- approximately 1,771 tons of PM 10 every year (Attachment N, page 82/94)
- approximately 366 tons of PM 2.5 every year (Attachment N, page 83/94)
- approximately 416 tons of volatile organic compounds (VOCs) every year (Attachment N, page 86/94)

(3) Any person who knowingly releases into the ambient air any substance listed by the department of ecology as a hazardous air pollutant, other than in compliance with the terms of an applicable permit or emission limit, and who knows at the time that he or she thereby places another person in imminent danger of death or substantial bodily harm, is guilty of a class C felony and shall, upon conviction, be punished by a fine of not less than fifty thousand dollars, or by imprisonment for not more than five years, or both.

(4) Any person who knowingly fails to disclose a potential conflict of interest under **RCW 70A.15.2000** is guilty of a gross misdemeanor, and upon conviction thereof shall be punished by a fine of not more than five thousand dollars.

FOTC Comment: See Dr. Steve Jones' voting record on the YRCAA Board of Directors.

See the WA State Emissions Inventories for 2011 and 2017 (Attachments M & N)

* * * * *

RCW 70A.15.4530

Odors or fugitive dust caused by agricultural activities consistent with good agricultural practices exempt from chapter.

(1) Odors or fugitive dust caused by agricultural activity consistent with good agricultural practices on agricultural land are exempt from the requirements of this chapter unless they have a substantial adverse effect on public health. In determining whether agricultural activity is consistent with good agricultural practices, the department of ecology or board of any authority shall consult with a recognized third-party expert in the activity prior to issuing any notice of violation.

FOTC Comment: To the best of FOTC's knowledge, the YRCAA has never consulted an expert to determine consistency with good agricultural practices. In Yakima County, due to a winter storm emergency, it is now an accepted agricultural practice to compost 950 dead cows in 2,300 feet of windrows. (Attachment O)

(2) Any notice of violation issued under this chapter pertaining to odors or fugitive dust caused by agricultural activity shall include a detailed statement with evidence as to why the activity is inconsistent with good agricultural practices, or a detailed statement with evidence that the odors or fugitive dust have substantial adverse effect on public health.

FOTC Comment: To the best of FOTC's knowledge, the YRCAA has never consulted an expert to determine whether there is evidence that fugitive dust and odor has a substantial adverse effect on public health. FOTC has provided YRCAA with research on the adverse public health effects of emissions from CAFO's. FOTC has offered the expertise of a physician and a masters prepared nurse to help YRCAA better understand health effects. YRCAA declined citizens' assistance.

(6) The exemption for fugitive dust provided in subsection (1) of this section does not apply to facilities subject to RCW **70A.15.2200** as specified in WAC 173-400-100 as of July 24, 2005, **70A.15.2210**, or **70A.15.2260**. The exemption for fugitive dust provided in subsection (1) of this section applies to cattle feedlots with operational facilities which have an inventory of one thousand or more cattle in operation between June 1st and October 1st, where vegetation forage growth is not sustained over the majority of the lot during the normal growing season; except that the cattle feedlots must comply with applicable requirements included in the approved state implementation plan for air quality as of July 23, 2017; and except if an area in which a cattle feedlot is located is at any time in the future designated nonattainment for a national ambient air quality standard for particulate matter, additional control measures may be required for cattle feedlots as part of a state implementation plan's control strategy for that area and as necessary to ensure the area returns to attainment.

FOTC Comment: WAC 173-400-100 requires registration of

(j) Cattle feedlots with operational facilities which have an inventory of one thousand or more cattle in operation between June 1st and October 1st, where vegetation forage growth is not sustained over the majority of the lot during the normal growing season;

(l) Composting operations, including commercial, industrial and municipal, but exempting residential composting activities;

CAFO dairies are de facto animal feedlots, yet YRCAA does not regulate them. There are over 500 acres of manure compost in the LYV, yet YRCAA does not regulate these operations.

YRCAA uses the exemption for odor and dust as a reason not to address emissions of ammonia, hydrogen sulfide and volatile organic compounds (VOCs). This is a false interpretation of the statutes.

* * * * *

RCW 70A.15.6200

Legislative declaration—Intent.

The legislature recognizes that:

(1) Acid deposition resulting from commercial, industrial or other emissions of sulphur dioxide and nitrogen oxides pose a threat to the delicate balance of the state's ecological systems, particularly in alpine lakes that are known to be highly sensitive to acidification;

(2) Failure to act promptly and decisively to mitigate or eliminate this danger may soon result in untold and irreparable damage to the fish, forest, wildlife, agricultural, water, and recreational resources of this state;

(3) There is a direct correlation between emissions of sulphur dioxides and nitrogen oxides and increases in acid deposition;

(4) Acidification is cumulative; and

(5) Once an environment is acidified, it is difficult, if not impossible, to restore the natural balance.

It is therefore the intent of the legislature to provide for early detection of acidification and the resulting environmental degradation through continued monitoring of acid deposition levels and trends, and major source changes, so that the legislature can take any necessary action to prevent environmental degradation resulting from acid deposition.

RCW 70A.15.6210

Definitions.

As used in RCW 70A.15.6200 through 70A.15.6220, the following terms have the following meanings.

(1) "Acid deposition" means wet or dry deposition from the atmosphere of chemical compounds with a pH of less than 5.6.

(2) "Critical level of acid deposition and lake, stream, and soil acidification" means the level at which irreparable damage may occur unless corrective action is taken.

RCW 70A.15.6250

Evaluation of information on acid deposition in Pacific Northwest—Establishment of critical levels—Notification of legislature.

The department of ecology, in consultation with the appropriate committees of the house of representatives and of the senate, shall:

- (1) Continue evaluation of information and research on acid deposition in the Pacific Northwest region;
- (2) Establish critical levels of acid deposition and lake, stream, and soil acidification; and
- (3) Notify the legislature if acid deposition or lake, stream, and soil acidification reaches the levels established under subsection (2) of this section

FOTC Comment: The pH of a 0.1 M solution of ammonium nitrate in water is 5.43. Ammonium nitrate contributes to acid rain.

Since 1993 Ecology has performed samplings of Washington waters for pH. WRIA 37 contains the Lower Yakima River. Ecology has recorded 25 samples from WRIA 37 with sufficient data to make determinations.

- 9 of the 25 samples (36%) were classified as “Waters of Concern”.
- 11 of the 25 (44%) samples were classified as “Impaired”.
- 5 of the 25 samples (20%) were classified as “meets the standard”.

See Ecology’s Washington State Water Assessment at

<https://apps.ecology.wa.gov/ApprovedWQA/ApprovedPages/ApprovedSearchResults.aspx>

Citizen Complaints

Excerpts from YRCAA Board Meeting Summaries

March 2012: Larry Fendell (Citizen) states, *I brought a few pictures showing the smell problems we have. They push up berms. Make lagoons wherever, usually on property lines. They spread it out to dry right next to people's homes. This is a rig spreading the manure out. This is what it looks like after they harrow it. They haul it everywhere. This is Roza Drive in one drive. How do you incorporate manure on asphalt? One of the pictures they have dead calves laying out there. Here are the Big Guns. This is brown water. There supposed to be cutting that with something. Dr. Pius has said this is the thing they can do. Aerating it through irrigation. Here is a barn that hasn't been cleaned.*

Jan Whitefoot (Citizen) states, *On Monday the day the wind was blowing, 40 miles or more. Helen and I invited a reporter to go with us on a poop tour. You couldn't hardly see the road. In the Best Management Plan, it said they wouldn't do anything in the wind. We saw truck after truck applying manure. They are not following it now. What will make them follow the plan?*

YRCAA Board Chairman Tom Gasseling states, *The problem with the pictures is you cannot tell what they are. They could be dust blowing or anything. . . . I'm getting real tired being told that I'm sneaky, deceitful, devious. . . . I 'm getting real tired of being called devious. . . . Don't come here every month and being told I'm some useless piece of crap. I personally, I'm fed up with it. This has got to stop. I'm not going to tolerate it anymore.*

Jan Whitefoot: *You were bad mouthing me in an email.*

Gasseling: *I meant what I said.*

April 2012: Doug Moore (Citizen) says, *There is a lagoon with 3 million gallons of raw manure 187 feet from my house. I've filed complaints against it. They bulldozed down cat tails because that was a wetland. One time the gate broke and the whole 3 million gallons drained into Black Rock Creek. Nothing has ever been done. I'm so mad I have just about given up.*

May 2012: Helen Reddout (Citizen) tells the YRCAA Board of Directors that the April YRCAA Board Minutes said she had been invited to be on the Dairy Work Group. In fact, she was never invited. Ms. Reddout stated, "If I had been invited, I would have been there with bells on."

Director Pruitt clarified that he had intended to invite her but never got the opportunity.

Ms. Reddout added that she would still like to be on the work group. That never happened.

December 2012: Larry Fendell (Citizen) Community meetings. I've asked a question for three meetings now. No answer. Why are dairies allowed to spread manure during burn bans? The reason we bring things to the board is when we bring things to the agency nothing happens. Need to have concerns recorded. For the last three months we have asked about ammonia. We have to

stop using wood stoves and fireplaces. We go out and they are spreading manure and the air is bad. I want the board to know that there is a problem.

Director Gary Pruitt: “You’re so full of crap.”

January 2013: Larry Fendell (Citizen) quotes from a TV interview of Mr. Pruitt, “Frankly the money just isn’t there. Testing wouldn’t produce credible evidence of anything. It would cost tens of millions of dollars to set up testing in the lower valley.” Does that statement bother anyone?

November 2014: Jean Mendoza explained to the YRCAA Board that Dr. Nicole Embertson gave them mis-information in her Literature Review on the Spraying of Manure During Inversions. Among other points:

- Referenced 40 pieces of research. Only 13 pieces looked at community health. 12 of the 13 found significant health impacts related to public health.
- Incorrect statement of a chemical reaction
- Misstated statistics regarding the impact of ammonia on PM 2.5
- Stated that manure is not typically applied during winter months. This is not true in Yakima County.
- Misquoted the John Hopkins study and said it addressed pollutants carried by winds. It does not and the lead author said that Dr. Embertson’s statements do not represent her work.
- Ignored other studies done in the Yakima Valley.

Dr. Embertson responded in writing that she did not have to justify her work. The YRCAA Board took no action.

March 2015: Jan Whitefoot asks the YRCAA to investigate solar panels as a way of reducing air pollution from wood smoke. No response.

April 2015: The contract for Smoke School was given to a newly retired YRCAA employee. The contract was broken into two parts, each < \$25,000 so that there was no requirement for open bidding.

August 2015: Jan Whitefoot asks why the number of cows is not listed on the AQMP Dairy Air Score Cards. *If you don’t know how many cows, how do you know how much ammonia or hydrogen sulfide?*

Director Pruitt replies, *There is no reason to look at cow numbers.*

September 2015: Request from FOTC that YRCAA address Global Warming. FOTC provides information on reactive nitrogen in the atmosphere. Director Pruitt replies that 80% of the atmosphere is nitrogen and it is not a pollutant.

Jean Mendoza offers to volunteer her time to help YRCAA with evaluation of Global Warming in the Yakima Valley. Not accepted.

December 2016:

Steve George from the Yakima Dairy Federation states: *The government is providing services to two chronic dairy complainers who have demonstrated that their complaints are frivolous, being used as harassment, and, according to agency staff that I have had conversations with, wasting public resources.*

Jim Dyjak (Citizen): *I'm going to rebut that. He just gave you a false statement, that all the complaints have never been verified at my house. Do you know why? Not one person from this agency in sixteen years has ever been to my house. Not one. When you report something on Monday and they might come out a week later, it ain't going to be there. The study he cites was done inside the barns. Dr. Pius is using an assumption that the drift is less. I resent being told my complaints are wrong when no (investigators) have ever been to my house.*

Larry Fendell (Citizen): *All the testing has been done on dairies. The neighbors really don't care what is on the dairy. We care about what comes across the fenceline. We care about all the fields where they apply manure, don't disc it in, make two or three applications. The neighbors get to smell it for a month. So, let's be fair about this. He (Steve George) is a paid person who gives you half-truths. Too many of us live with this. We want to know what is coming over the fence. We want it reported.*

Regarding an ammonia study, Steve George tells the YRCAA Board of Directors that, *Although the research reveals small amounts of ammonia emissions from farms, these emissions are insignificant and do not pose an overall risk to human health.*

March 2017: FOTC asks Dr. Jones to recuse himself from voting on the ammonia project.

April 2017: Mayor Childress votes to reject the proposed ammonia study. If they find something, then they will have to address a problem. Commissioner Anderson votes in favor of the ammonia project. Councilwoman Mendez, and Dr. Jones vote against the project.

May 2017: Jean Mendoza & Sandy Braden, after jumping through many hoops, arrived at the YRCAA offices for a scheduled community forum. Although the Director was in his office, he refused to have a meeting because his staff was not present. They were told that the meeting was cancelled, and they should come back in August.

Public testimony regarding the Agriculture Advisory Committee: The previous month's report sounded like everything was going well. Attendees disagree. YRCAA shared no data at the meeting. No data from the AQMP. The only evidence at the meeting was testimony from two people who live close to dairies. In one home a woman's son came to her and said he could not breathe.

The last report on the Air Quality Management Policy for Dairies was done in 2014. Beginning in 2015 dairies with a grade of D were supposed to be inspected every 6 months and dairies with a grade of C were supposed to be visited yearly. This was not done.

September 2017: Sandy Braden attempts to inform the YRCAA Board regarding the WA State Attorney General's opinion on conflict of interest. The Acting Chair cuts her off:

Acting Chair Norm Childress – *that item is not on today’s agenda.*

Director Hurley – *You are absolutely correct. that item is not on the agenda. Her characterization is incorrect. It is wrong. It’s off. There were three opinions.*

Braden - *Which were two maybes and a no*

Hurley – *No, it is pretty clear. Much more . . .*

Braden is forced to sit down.

After another citizen, who was invited by a County Commissioner to the meeting, is allowed to speak Ms. Braden is allowed to comment.

Jean Mendoza states that she tried and failed to get an item on the agenda. She asks how to do this. The Acting Board Chair and the YRCAA Director do not know the answer.

Francisco Maltos asks the YRCAA to address Global Warming. There is no response.

October 2017: Director Hurley incorrectly tells the YRCAA board that prohibiting spraying of manure during inversions would conflict with RCW 90.64 the Dairy Nutrient Management Act and RCW 90.48 the Water Pollution Control Act. Director Hurley incorrectly tells the Board that there is no evidence that spraying manure into the air during inversions has a negative impact on public health.

June 2018: FOTC shares research regarding “manure irrigation”. A permit is required in Wisconsin. They looked only at bacterial infections. Three different bacteria – Salmonella, Campylobacteria and E-coli 0.157. They found an increase in infections when manure is sprayed and spread. In Wisconsin manure spraying is prohibited within 500 feet of a home. They recommended that manure irrigation should not take place during inversions. YRCAA takes no action.

August 2018: Study Session to Review the AQMP

Director Hurley introduces Laurie Crowe from the South Yakima Conservation District as an expert on nutrient management. He suggests that she has a doctorate. In fact, Ms. Crowe does not even have a bachelor’s degree.

Ms. Crowe states, *Most eastside producers are doing a really good job.* This is untrue. One of the largest producers has applied manure to crops at up to seven times agronomic rates.

October 2018: Board votes to rescind the AQMP for dairies. Dr. Jones votes.

March 2019: Jean Mendoza (Citizen): *Am I allowed to talk about the study session?* Previously was a member of the AG task force and disagreed with Director Hurley’s summary of the meeting. Asked to be put on the next agenda to make corrections at the next meeting. Was not placed on the agenda. Emailed each of the board members. Asked them to let her know if they received the emails and there were no replies.

Sandy Braden (Citizen): Clarification of the type of burn permits and enforcement methods if an inspection officer determines that the permit is not the correct one. Initially talked to Director Hurley at a community forum. Relates a case. Appears that someone used an incorrect permit for land clearing and there were no consequences.

February 2020:

Sandy Braden (Citizen): Question for Director Hurley. 20 – 25 acres off of Washington and 64th due north of Ahtanum View Correction area. It appears they have taken out the orchard and there are house size piles of removed trees ready for burning. Appears to require a land clearing permit. There are restrictions, including population limitations.

Director Hurley: It is not land clearing so the restrictions for land clearing do not apply. Has visited and there have been approved burns because it is not land clearing. It is inside the UGA. Land clearing and residential are prohibited within the UGA. Ag burning within a UGA is permissible and permits have been permitted previously. Aware of citizen concerns on the internet. Will have a meeting with the orchardists to resolve issues. Must let stuff dry for at least 30 days before burning.

What type of permit?

Agriculture.

So, you are saying that land will be re-planted with something?

Yes

Ms. Braden later researched the property and learned that it was not zoned agricultural. Instead, it had been zoned as a Small Convenience Center District in 2008. Mr. Hurley mis-informed both Sandy Braden and the YRCAA Board of Directors.

December 2020: At a YRCAA Community Forum Director Hurley told citizens that the graphs on Ecology's air quality website do not show actual concentrations of particulate matter. When citizens asked him to explain what the graphs show, he said that he could not and advised us that we would have to get that information from Ecology. FOTC sent questions to Ecology and received answers four months later. It is disturbing that YRCAA does not understand these processes well enough to explain them to lay people. It is disturbing that citizens must use public records requests, study the technological processes on our own and then endure disparagement from the experts at YRCAA because we are not experts in air quality. Citizens should not have to acquire degrees in engineering and the law in order to compel the YRCAA to protect our appeal for clean air.

See Attachment B for a more comprehensive summary of YRCAA Board Meetings

Example of YRCAA Investigations of air quality complaints in the LYV

July 19, 2019 (Friday) at 7:35 PM a resident left a voice mail message with YRCAA that was picked up on Monday, July 22, 2019 at 3:00 PM.

CP says there's "Ambient cow pen dirt from Hornby west to Waneta and further. Particle dirt filling the air around us can be seen on video with lights. It smells like urine but you don't care about that."

According to the report the complaint received a Response Level 3 and an investigation was not begun until eleven days later on July 30, 2019 at 3:00 PM.

July 21, 2019 (Sunday) at 11:30 PM the same resident left a message that was picked up on Monday, July 22, 2019 at 3:00 PM.

CP says that "Foul cloud of ambient open pen dirt and lagoon storage. Strong smell of ammonia/urine permitting our property and home. Gagging, sinus headache and inability to breathe even with high power filtering system."

Although the resident clearly states health complaints that are impacting her, the complaint is assigned a Response Level 3 that implies no health risks. An investigation was begun eleven days later, on July 30, 2019 at 3:00 PM.

July 22, 2019 at 11:15 PM the complainant left another message:

CP says that "The ambient pen dirt air was sucked into her home and her sons through open windows around 11:00 PM when she was cooling her house down with the evening air. Horrible dirty feeling ambient pen dirt willed with horrid ammonia and manure AND

The YRCAA recorded the message the next morning but took no action. Initially the assignment was Response Level 3.

July 24, 2019 at 9:35 AM the complainant called again, this time in the morning, but the message was not picked up until 22.5 hours later.

After wonderful rain and thunder showers last night no smells! Wonderful sweet clean air! But tonight, Wednesday, 7/24/2019 9:25, windows open screen doors letting in fresh air until this very moment! Boom ! Ambient pen ammonia stench coming in.

YRCAA assigned a Response Level 4 that signifies no previous complaints. There was no investigation.

July 25, 2019 at 8:00 AM the complainant called and YRCAA documented the call 45 minutes later.

"Awoke to horrid smell of dead cow composting. Velduis Klompe CAFOs is composting turning dead cow compost and it's gross. The ambient air is bringing this cloud of stench to my property this morning! Go to sleep with smells of urine wake up to manure

The YRCAA did not investigate and made a Response Level 3 assignment to the complaint.

July 25, 2019 at 8:27 AM the complainant called again and the YRCAA recorded the call one hour later.

"Kelsey this has to stop! More and more ambient air full of CAFOs stench. I've written several complaints and no response from yrcaa! Come on you guys! Do your job. Kathy Rogers"

The YRCAA did not investigate and made a Response Level 4 assignment to the complaint.

July 25, 2019 at 11:15 PM the complainant called and left a message that was picked up the next morning at 9:00 AM.

CP says "Cool nights are once more and very appreciated. However, opening our windows and screened doors is a negative. The ambient pen dirt full of odor from the cafo open pens surrounding our home and the neighbors is restricting the enjoyment of fresh

The YRCAA did not investigate and made a Response Level 3 assignment to the complaint.

July 26, 2019 (Friday) at 1:20 AM the complainant left an email message. YRCAA had all day Friday to pick up but they did not record the message until Monday morning on July 29, 2019. Not being able to sleep due to odor qualifies as a health concern but YRCAA made a Response Level 3 assignment and did not investigate.

CP says "Awakened by stench form ambient open pen dirt infiltrating our home! Cool night, windows open, sleeping well, then BOOM, I can't sleep because I'm breathing in this heavy dirt, band like dust in my house. Our large Austin Air filters is always

July 29, 2019 with no time recorded the complainant left an email message that was picked up the next day at 9:55 AM.

CP says "Kelsey, once more Klompe CAFO is composting and the ambient dirt from that is just nasty at my home. The wind was blowing from the east as well. I believe they've been told not to compost in the wind. Kelsey I have photos! This needs to be handled

The YRCAA initiated an "investigation" on July 30, 2019 at 1 PM. This was their investigation:

Dairies and CAFOs in the vicinity of Hornby, Stove, Braden and Tear Roads were contacted and made aware of the complaints

This was the final response for all of the above odor complaints during this episode of foul air. YRCAA is well aware that FOTC research in this area found average ammonia levels that exceed the Minimum Risk Level (MRL) for chronic ammonia exposure. The YRCAA cannot

state that composting dead cows next to family homes is an acceptable agricultural practice. YRCAA performed no onsite investigations and took no odor measurements. Based on the evidence no one can state how high the odor or ammonia levels were during this week or what the risks were to complainant health. See Attachment C for more information.

Riverview Dairy: In March of this year seven citizens who live next to the Riverview Dairy signed a petition asking agencies, including the YRCAA, to address pollution from that dairy. The petitioners stated:

Respected Officials:

These are the facts:

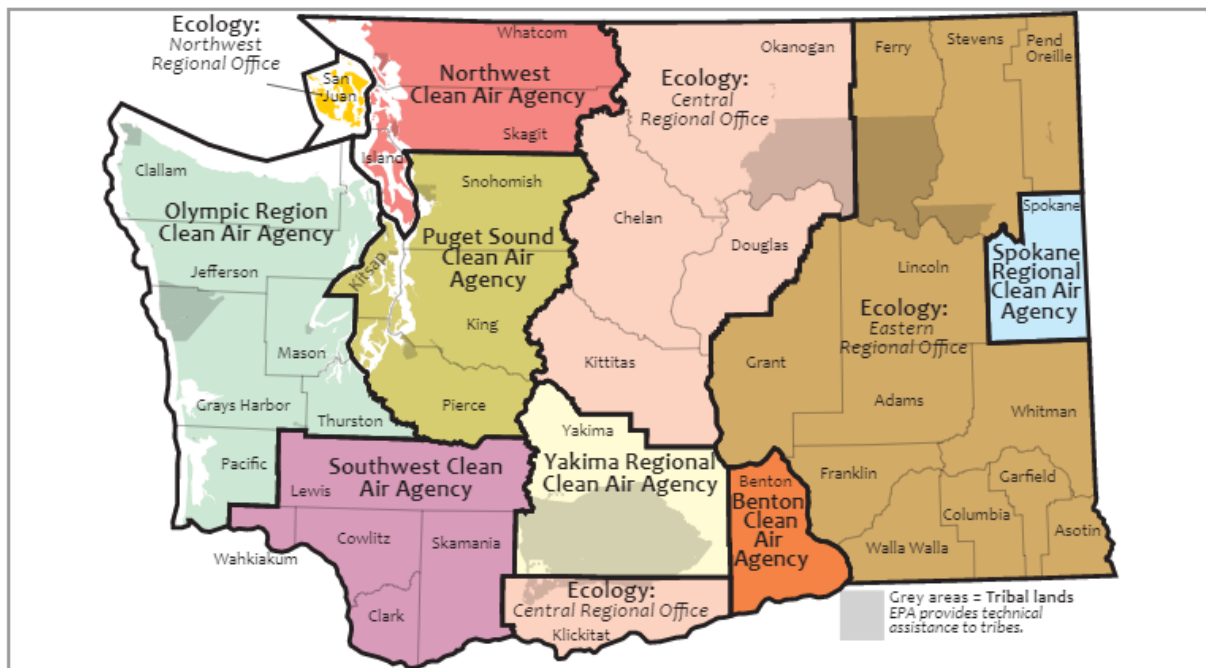
- *Rural county roads in the Lower Yakima Valley (LYV), for example Vance Road north of Mabton, are frequently covered with manure track out from trucks that transport manure from dairies to farmland.*
- *People in the LYV cannot walk to their mailboxes, cannot jog, without stepping in manure.*
- *Large trucks and heavy equipment on rural roads break down the edges of the pavement and create potholes.*
- *When dairies do not address the problem, flies from manure piles proliferate and make it impossible for rural neighbors to enjoy the outdoors, to barbecue or entertain family and friends.*
- *Dust from pens, corrals and compost areas are a major problem for rural neighbors, perhaps the biggest problem. We know that dust and fine particulate matter harm our health and reduce our life spans. There are actions that dairies can take to reduce dust, but they often do not take them. The Yakima Regional Clean Air Agency does nothing to address air pollution from dairies.*

For these reasons, we the undersigned, ask the Yakima County Commissioners to:

- *Estimate the cost to taxpayers for maintenance of rural county roads that experience heavy use by dairy trucks and heavy equipment.*
- *Assess whether users that damage the roads adequately compensate the county.*
- *Provide a hotline so people in the LYV can report manure spills to people who can compel quick clean up.*
- *Encourage Ecology and WSDA to enforce the anti-spill provisions of Nutrient Management Plans.*
- *Require the Yakima Health District to actively address the problem of flies from dairies.*
- *Require the Yakima Regional Clean Air Agency to respond to citizen complaints; to follow their own guidelines for complaint investigation, measure air quality near dairies, and appropriately issue citations.*

The YRCAA response was defensive and self-serving, with no acknowledgement of specific requests and no promise of relief. See Attachments T, U, & V.

Parts of Washington State where Ecology manages air quality.



From <https://ecology.wa.gov/About-us/Our-role-in-the-community/Partnerships-committees/Clean-air-agencies>

Air quality in large parts of Eastern Washington is managed by the WA State Department of Ecology.

Ecology's Eastern Regional Office manages air in Ferry, Stevens, Pend Oreille, Lincoln, Grant, Adams, Whitman, Franklin, Walla Walla, Columbia, Garfield and Asotin Counties.

Ecology's Central Regional Office manages air in Okanogan, Chelan, Douglas, Kittitas, and Klickitat Counties.

See the chart below for Clean Air Agency Demographics

Clean Air Agency	# Counties	Total Pop.	Land Area in sq. mi.	Employees	People per FTE	Sq. Mi. per FTE	People per Sq. Mi.
NW CAA	Whatcom, Skagit, Island, San Juan = 4	446,087	4,220	24	18,587	176	105.7
Puget Sound CAA	Snohomish, King, Pierce = 3	3,871,323	5,766	25	154,853	231	671.4
Olympic CAA	Clallam, Jefferson, Grays Harbor, Mason, Thurston, Pacific = 6	541,946	8,058	16	33,872	504	67.3
SW CAA	Lewis, Wahkiakum, Clark, Skamania = 4	674,196	6,091	17	39,659	358	110.7
Yakima CAA	Yakima = 1	249,697	4,295	10	24,970	430	58.1
Benton CAA	Benton = 1	197,518	1,700	4	49,360	425	116.2
Spokane CAA	Spokane = 1	505,505	1,764	21	24,072	84	286.6

Thank you for considering our request that Yakima County dissolve the Yakima Regional Clean Air Agency and ask the WA State Dept. of Ecology to manage air quality in Yakima County.

Sincerely,

The Friends of Toppenish Creek & Others

Attachments

- A: WSU Dairy Workshop – Les Ornelas Statements
- B: Citizen Testimony at YRCAA Board Meetings
- C: Descriptive Analysis of YRCAA response to citizen complaints
- D: Public Comments on Air Quality Management Program Pilot Project (begin on page 24)
- E: FOTC Ammonia study in the LYV
- F: Literature review of health impacts from spraying manure commissioned by the WA Dairy Commission
- G: FOTC response to Dairy Commission Literature Review
- H: Letter to Ecology Director Bellon, January 2019
- I: Letter to Ecology Director Bellon, March 2019
- J: Timeline of YRCAA actions to address air pollution
- K: Partial list of misinterpreted rules and regulations
- L: Dr. Steve Jones statement on environmental justice
- M: WA State County Emissions Inventory 2011
- N: WA State County Emissions Inventory 2017
- O: Agency’s statement on composting dead cows
- P: WSU study of air emissions from a LYV dairy for the National Air Emissions Monitoring Study (NAEMS)
- Q: Yakima Air Winter Nitrate Study
- R: Research related to health impacts from CAFOs
- S: FOTC description of ammonia emissions in WA State 2016
- T: Letter and petition from neighbors of Riverview Dairy
- U: YRCAA reply to Riverview petition
- V: FOTC response to YRCAA reply re Riverview
- W: YRCAA Fact Sheet for New Source Review (NSR)



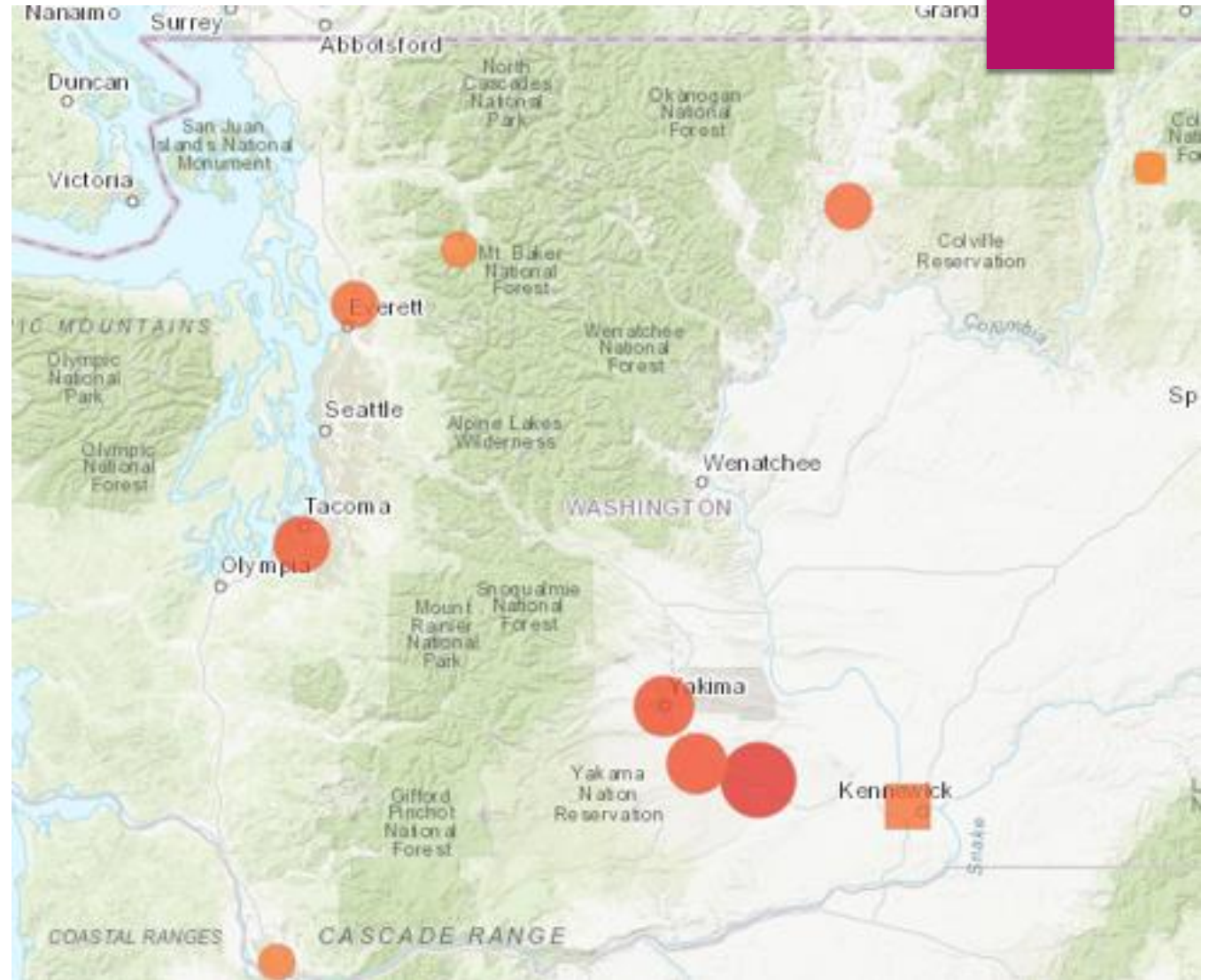
Reasons to Disband the Yakima Regional Clean Air Agency

PRESENTATION TO YAKIMA COUNTY COMMISSIONERS

MAY 2021

Yakima County has the worst air quality in Washington

<https://ecology.wa.gov/Regulations-Permits/Plans-policies/Areas-meeting-and-not-meeting-air-standards>



Reasons to Disband the YRCAA

- **Yakima County cares about the health and wellbeing of all citizens**
- **The YRCAA lacks the expertise to address the most serious air pollution in WA State**
- **Yakima County is at risk for non-compliance with the Clean Air Act**

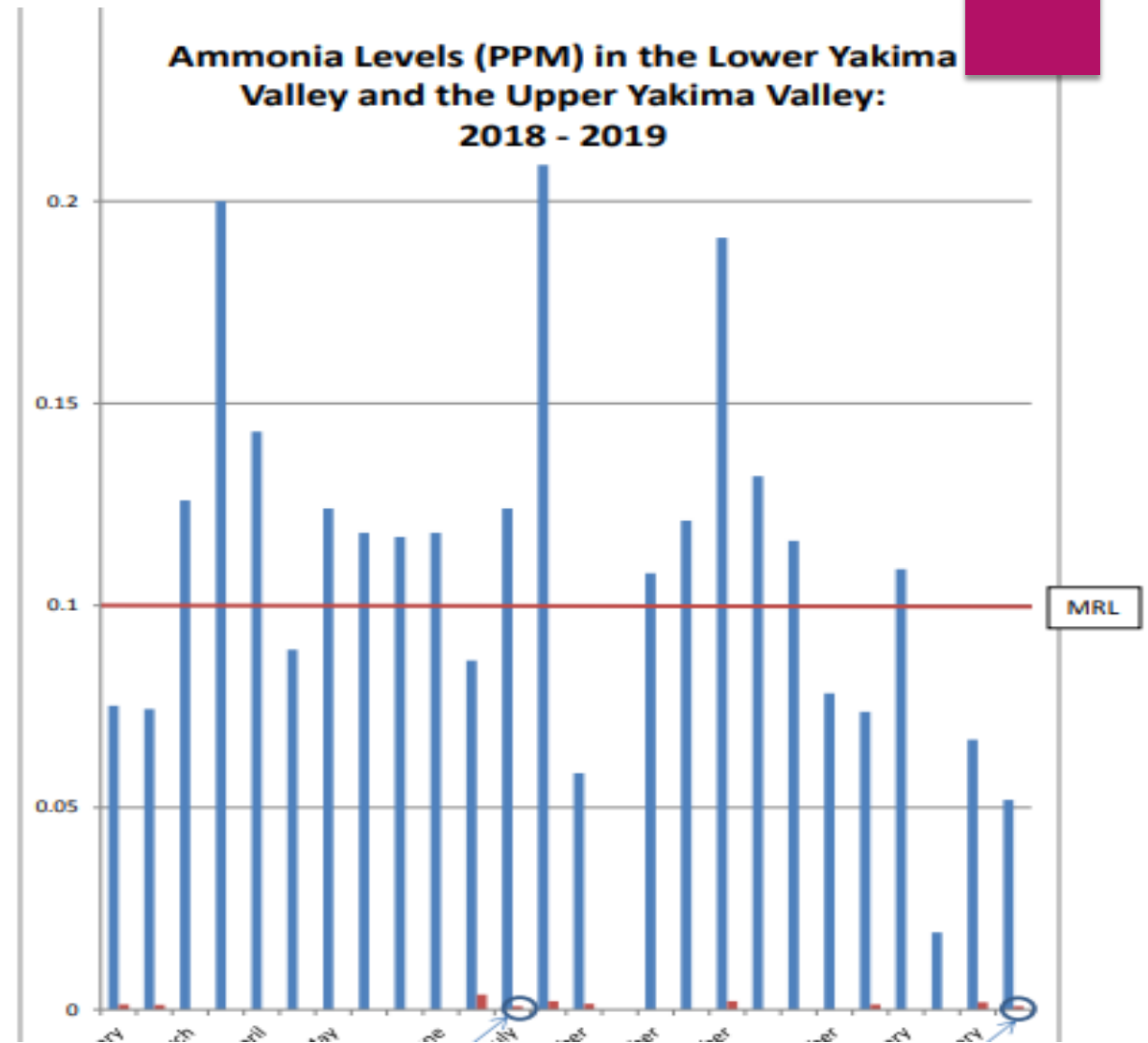
Yakima County cares about the health and wellbeing of all citizens

- ▶ Heart Disease
- ▶ Lung disease
- ▶ Low Birth Weight
- ▶ Birth Defects
- ▶ COVID 19
- ▶ Made worse by polluted air



FOTC Ammonia Study

- ▶ Blue bars are from the Lower Valley
- ▶ Red bars are from the Upper Valley



The background of the slide is a dark purple color with a faint, repeating pattern of stylized human figures in various poses, suggesting a crowd or a public gathering. In the top right corner, there is a solid pink vertical rectangular bar.


CITIZEN COMPLAINTS AT
PUBLIC MEETINGS ARE MET
WITH DISINTEREST OR
DISDAIN.




THE DAIRY INDUSTRY'S
INTERESTS ARE SUPPORTED
WHILE THERE IS NO CITIZEN
REPRESENTATION ON THE
YRCAA BOARD



VALID CITIZEN SCIENCE IS
IGNORED



OTHER COUNTIES USE THE
WASHINGTON STATE
DEPARTMENT OF ECOLOGY
TO MANAGE AIR QUALITY
ISSUES



YRCAA HAS BEEN
SUCCESSFULLY SUED TWICE
BECAUSE OF THEIR LACK OF
RESPONSIVENESS TO
CITIZEN REQUESTS.

A dark purple background with a faint image of a magnifying glass. A pink tab is visible in the top right corner.

SITE VISITS TO INVESTIGATE
CITIZEN COMPLAINTS ARE
NOT TIMELY OR DO NOT
HAPPEN AT ALL



THE CURRENT DIRECTOR
HAS NO BACKGROUND IN
AIR QUALITY SCIENCE

The YRCAA lacks the expertise to solve our air problems

- ▶ YRCAA knows nothing about health issues, so they ignore them
- ▶ But . . . RCW 70.A.15.4530 requires an air agency to balance health against economics
- ▶ YRCAA investigators do not take air samples, do not take pictures, do not record the testimony of complainants that describes their health problems.

WAC 173-400-260: YRCAA Board Member Steven Jones has a conflict of interest

- ▶ **Voted against an ammonia project that the Dairy Federation opposed**
- ▶ **Voted in favor of a revision to the YRCAA public comment period that was requested by the Dairy Federation**
- ▶ **Opposed restrictions on spraying of manure during inversions.**
- ▶ **Voted to rescind the Air Quality Management Policy for Dairies. Dairies no longer register and no longer pay a fee to address air pollution. The YRCAA now has one less inspector.**

RCW 70A.15.1005 says that all sources of air pollution must share in the cost of mitigation

- ▶ **YRCAA acknowledges that CAFO dairies are a source of air pollution in Yakima County.**
- ▶ **YRCAA does not register dairies and collects no fees to pay for actions to address air pollution from this source.**
- ▶ **YRCAA does not do all that is possible and reasonable to control and prevent air pollution in Yakima County as required by law.**

RCW 70A.15.4530 says that air agencies must determine if air pollution endangers health

“Odors or fugitive dust caused by agricultural activity consistent with good agricultural practices on agricultural land are exempt from the requirements of this chapter unless they have a substantial adverse effect on public health. In determining whether agricultural activity is consistent with good agricultural practices, the department of ecology or board of any authority shall consult with a recognized third-party expert in the activity prior to issuing any notice of violation.”

- ▶ **YRCAA does not consult public health experts**
- ▶ **YRCAA does not determine what are good agricultural practices in Yakima Co**

WAC 173-400-100 requires registration of cattle feedlots and composting operations

- ▶ **CAFO dairies are de facto animal feedlots, yet YRCAA does not register or regulate them.**
- ▶ **There are over 500 acres of manure compost in the LYV, yet YRCAA does not register or regulate these operations.**
- ▶ **YRCAA uses the exemption for odor and dust as a reason not to address emissions of ammonia, hydrogen sulfide and volatile organic compounds (VOCs). This is a false interpretation of the statutes.**

Thank You

Public Comments from YRCAA Board Meetings

Access video tapes of YRCAA Board Meetings at
<https://videos.yakimawa.gov/CablecastPublicSite/search?channel=2&query=yakima%20regional%20clean%20air%20agency>

December 2011

Jan Whitefoot (Citizen): Against CAFO air pollution. Object to Tom Silva, former director, as a citizen rep on the AQMP work group. No information from Mr. Silva. Picture of Mr. Silva's house with burning during a burn ban. Study by D'Ann Williams – air testing on 40 YV homes showed that it is bad to live next to a dairy/feedlot. Particulates can travel over ¾ miles. Today smelled stench of CAFOs. Have you read D'Ann Williams report. Have asked copies of the notes from dairy WG meetings. Have not received them. Violation of the law. She volunteers to be the female rep on the dairy meetings. Gary Pruitt says the dairy meetings are not public meetings and they do not have to share minutes with the public. Invited the board to tour the LYV. There is more manure in the county than there is land for application. Has photos of manure application for two straight weeks during the winter. That is why you need a genuine citizen rep on the dairy WG.

Tom Gasseling (YRCAA Board Chairman), "let's see what comes out with this report and this work group. . . . we still don't know exactly the final outcome of this workgroup. . . we may not have a legal recourse, but we have an ethical recourse."

Jan, Whitefoot "We should be there working with you." "The people of the community need to know that we are not being represented by Clean Air."

Larry Fendell (Citizen): Ongoing inversion. No outdoor burning. Asked for no more liquid manure spreading. They are spreading it next to me, . . . every day. A ban would help a lot.

Chairman Gasseling: I don't think we have the jurisdiction.

January 2012

Presentation of Air Quality for Dairies by YRCAA Director Gary Pruitt

Dr. Nicole Embertson, Nutrient Management Specialist from Whatcom County participated.

Louie Aguilar (Citizen): When he visits his 90-year-old mother in Sunnyside the smells are bad. Will this policy make a difference or is it just a procedural document that says, maybe in 15 – 20 years Sunnyside will smell better.

County Commissioner Rand Elliott: Appreciate the question. No intention of getting into a public debate.

Jim Dyjak (Citizen):

Only seven people got the packet. What about the hundreds of people who did not get the packet?

What if a dairyman removes manure from pens and gets high points, then moves the manure to another place? What if he takes the manure off the dairy and places it on another site?

No scientific instruments were used. Re NAEMS – Where is the baseline for neighboring homes?

Karen Cook Gulley (Citizen):

Lived in Toppenish all her life as well as grandparents. Health is decreasing in value. Has asthma, sinus infections, migraines, now chest pains. Why can the Beef Plant burn whatever they want any time they want, while residents cannot use their wood stoves.

Every time there is a problem, they sell the plant and pass the problem on to someone else. Have you ever studied the asthma rates in Toppenish?

The air quality leaves deposits on Toppenish murals.

Jan Whitefoot (Citizen):

Vision Statement – To protect public health and safety from air pollution

Score Card is based on the assumption that BMPS work. Have been in place for 20 years. Not enforceable. Following BMPs has led to the mess we are in today.

YRCAA received \$30,000 to conduct the Pilot Project. This is unethical. No environmental representatives were allowed to attend the meetings. Consider this a conflict of interest.

Quotes Attorney Charlie Tebbutt: “The proposed policy does nothing . . . but allow the industry to claim they are regulated.”

You cannot separate a lagoon with aeration from water.

“Why do you allow the poop sprinklers on the dairies?” People have experienced poop sprayed on their cars while driving to work. Under BMPs the poop sprinklers are legal.

Why are poop sprinklers not addressed?

John Hopkins study. Why did the YRCAA say the study has holes in it. Why are you not paying attention to this study, peer reviewed, etc.

Say you are going to use eyesight as a mode of measurement. Not scientifically acceptable.

RCW 70.94 requires scientific measurement. HOUND has been used at Monson feed lot and by the EPA.

We have had horrible inversions. Cows don't stop pooping during inversions.

Dairy Score Card does not address public health during inversions.

Voluntary participation has never worked.

Pumping liquid manure from a lagoon onto 40 acres next to an area where children are playing. And this is legal under the AQMP.

Dust control.

Acting YRCAA Board Chairman Bill Lover tries to cut her off.

Whitefoot continues: Why would you allow dairies to recycle wastewater to be used for dust control?

AQMP creates a paper tiger that protects industry and does nothing to protect the air.

Are there monitors at dairy sites?

EPA did not participate in development of AQMP.

Much of the information in the score card will not be available to the public.

Ask them to stop and work with the public to write a viable plan.

Jean Mendoza (Citizen):

Report looks very nice. Goal should be to make report relatable to reality. Goal to improve and maintain public health with respect to air quality.

Baby's lungs are not mature until age five. Pollution impacts children differently.

Studies on young people with asthma.

Chairman Lover questions relevance

Mendoza – trying to make the link to human health as well as animal health. Encourage YRCAA to put a human health component into the project.

Suggested additions:

- Look at impact on human health
- Micro-organisms in particulate matter
- Difference between Pm 2.5 and PM 10

- Look at fecal dust – can cause disease in people
- Look at how much pollutant there is – Can look at how many cows per acre

Chairman Lover intervenes – have to close meeting by law

Suggest rejection of Appendix G – A lot of people will accept this as the truth, It is more virtual than real. There was no baseline air study. YRCAA says they cannot measure odor, but says they reduced odor by 24% in Appendix G

Adjourn study session and re-open to public comments for regular meeting. Lover, Elliott and Camp present.

Louie Aguilar (Citizen):

If you held these sessions in an environment where people are exposed to the pollution all the time, it might bring a different incentive, able to observe changes. We are sitting here in a beautiful, air-conditioned environment. Need to consider the issues where the problem exists. Otherwise, will be here 20 years from now discussing the same problem.

Gerald Gefre (Citizen):

Downwind from the DeVries Dairy – means anyone within 3-4 miles of a dairy. There was no true citizen representation at the workshops. Impacted people were not heard. Maybe the board should get into an airplane in June or July and smell the odors from the dairies – causes N/V.

Suggests implementation of BAT – Best Available Technology instead of BMPs. Dairymen who make a good living, should be looking out for their neighbors.

Pollution will affect people down the road.

No reference to what happens to manure after it comes off the dairy.

Asa Washines (Citizen):

From West Wapato area. The document lacks the partnerships with the Yakama Nation, part of Yakima County.

There have been cases in which tribal areas have higher standards than neighboring areas. Tribal standards can supersede neighboring rules.

Disappointing to see lack of collaboration.

Chairman Lover says he tried to reach out, not successful.

Do you remember the name of the person from the Yakama Nation.

Rebecca Hauk, Elizabeth Sanchez, Noelle Saluskin & Phil Rigdon per Gary Pruitt. YRCAA presented to the Tribal Council.

Lavina Wilkins (Citizen):

Tribal member who lives on West Wapato. Moved to her home for fresh air for her grandchildren. Now all her family has allergies and asthma. Every morning when you go outside you smell cow manure. Raising a grandchild with asthma who is on a machine. I have an inhaler.

Jurisdiction. Air does not have jurisdiction. The cities are affected by pollution.

Need to see a better plan and more people involved. Our children are our most valued possession.

“If you can see the air its OK” Is this the policy you are pushing. I can’t for the life of me see how you can see the air. Applause.

Steve George (Citizen):

Works for the dairy federation. The industry was invited to participate and did so voluntarily. Appreciate the professionalism of the YRCAA staff and others. There has been a lot of chaff spread round here today. Believes the wheat needs to be separated from the chaff.

Industry looks forward to working with staff. Believes they have made great headway. Great program. Looks forward to working with YRCAA.

Larry Fendell (Citizen):

A lot of work involved, even though I don’t agree. Appendix G-1. Pie Charts. Ammonia and odor. Could not find a baseline anywhere. Says they reduced ammonia and odor. But there is no baseline.

I live down there. I don’t notice a 24% reduction. It stinks. There’s too many cows on a confined area. You end up with > 6 cows per area. This is not agronomic. The main thing dairies produce is manure. But we have just too many cows.

Only eight people participated in the workshops.

Not the first in the nation. Have found projects in Idaho and California. They are used to get more laws passed and a propaganda tool.

Putting up trees at stage three. Creates problems – mites and aphids.

Running manure through wheel lines, or through a honey wagon, pollution hangs in the air till the cows come home.

There is nothing scientific about the AQMP. They should have established a baseline. Dr. Ndgwa has state that spraying manure is the worst way to spread manure. People's homes and cars have been sprayed.

Dr. Nicole Embertson (Consultant):

Good comments, etc. Good to compile so the scientists can reply and provide resources.

Lover was an observer throughout. Not an expert but has comments:

Public should believe the dairy industry made a good faith effort and should be commended. In particular the article in the paper from Dr. Williams made irrelevant comments.

Conclusions are consistent with pro-active problem solving with CQI. Same processes used in major industry.

States he is still open to opinions. Believes it will improve air quality. Commends the industry.

February 2012

Study Session – YRCAA Director Gary Pruitt – Purpose to comply with the WAC. Identified BMPS that impact human health. Investigate whether BMPs were being implemented. Summarized in a Score Sheet. Emissions can't be measured adequately and accurately for fugitive sources such as dairies.

There are public impressions and concerns:

- Measurement of ambient air is necessary.
- Measurement of fugitive emissions cannot be done.
- Public was not involved.
- No new BMPs created.
- Therefore, the public could not and should not have been involved.
- Perception of conflict of interest because of dairy funding
- CAA declares that the cost of air quality control should be funded by polluters.
- BMPs don't work.
- National Academy of Science disagrees. 2003 report on Regulation of Air Emissions from Animal Sources says there should be no delay.
- Industry has concerns – Not totally on board – Policy is another layer of govt regulation.
- Prefer no consequences.
- Gary disagrees.
- Industry says there is already a high degree of BMP utilization.
- Information given to the agency can be used to support lawsuits.

- YRCAA would not disclose.

YRCAA has the legal authority to require all dairies to register.

Registration does not mean a permit. Need to be able to determine if a facility has the potential to permit that would trigger a permit requirement under federal law.

March 8, 2012

Larry Fendell (Citizen):

Involved in clean air for a number of years. No problems getting information. All of a sudden it is hard to get information.

Dave Caprile wrote a deal into the paper – best approach to the dairies. He's writing and talking about people twisting facts. This leads a lot to be deserved too. I brought a few pictures showing the smell problems we have. They push up berms. Make lagoons wherever, usually on property lines. They spread it out to dry right next to people's homes.

This is a rig spreading the manure out. This is what it looks like after they harrow it. They haul it everywhere. This is Roza Drive in one drive. Where do you think that goes when you can't get your mile? How do you incorporate manure on asphalt? One of the pictures they have dead calves laying out there. Here are the Big Guns. This is brown water. There supposed to be cutting that with something. Dr. Pius has said this is the thing they can do. Aerating it through irrigation. Here is a barn that hasn't been cleaned.

When Dave writes a deal for the paper, he shouldn't be so single minded. There are lots of reports that are ignored. They were supposed to be doing something since 2003.

Jan Whitefoot (Citizen):

On Monday the day the wind was blowing, 40 miles or more. Helen and I invited a reporter to go with us on a poop tour. You couldn't hardly see the road. I the Best Management Plan it said they wouldn't do anything in the wind. We saw truck after truck applying manure. They are not following it now. What will make them follow the plan.

Concerned about transparency. You didn't share that the dairy industry provided \$30,000 until we brought it up. We are never offered the choice of participating. The citizen rep has not showed up for the last meetings. We all volunteered to serve in that position.

I would like to formally request that we do gasses. Asked for tracking and way to go back and see results. It is an EJ issue to include the public, and a matter of fairness. We never have the opportunity to share what we know.

Did anyone work with Ecology on the AQWMP card.

Did any members of the YRCAA lobby for a bill that would limit public request records. Kevin Bouchey might have done this.

You wouldn't be getting all these PRRs if we could access the records.

Steve George (Citizen):

Reiterate items from dairy industry perspective.

Industry participated 110%. Worked toward a positive goal. Had significant participation – at least half of the cattle. Had academia. High compliance rate.

Dairy should not be saddled with a mandatory program.

YRCAA Board Chairman Tom Gasseling:

The problem with the pictures is you cannot tell what they are. They could be dust blowing or anything.

Fendell: You mean you don't know shit from shinola.

Gasseling: That's right, I don't.

Gasseling: I'm getting real tired being told that I'm sneaky, deceitful, devious . . I 'm getting real tired of being called devious. . . Don't come here every month and being told I'm some useless piece of crap.

I personally, I'm fed up with it.

This has got to stop. I'm not going to tolerate it any more.

Jan Whitefoot: You were bad mouthing me in an email.

Gasseling: I meant what I said.

April 12, 2012

Steve George (Citizen): Industry appreciates the tact you took at the last meeting. Over half of the cows in the program. Thanks from the industry to continue with a voluntary program.

Doug Moore (Citizen): Fighting this problem since Feb. 1991. I quit counting how many calls I have made. They go to the dairy. They don't go to the complainant. The dairies take them to a different area. I have had visitors that visited the boundary and almost vomited. Dr. Williams

said the air at my place is the second worst in the LYV. When I see that crap in the paper that says no one complains I throw my hands up in the air. Like I said, I have been complaining since 1991. I get pretty upset. As you can see my hands are shaking right now. There is an extra lagoon. The stuff is going into Ditch 9, Black Rock Creek. I know they are dumping, and no one investigates. They put in a plastic pipe that discharges right into Ditch 9. Now the discharge is covered up. It's been 21 years and I am still fighting the bureaucratic BS. Brought pictures. I got a dairy on Stover Road with manure this high. (five feet) Now they are coming down Braden Road. That's not good management practices . . and you want them to decide what is good management practices. There is a lagoon with 3 million gallons of raw manure 187 feet from my house. I've filed complaints against it. They bulldozed down cat tails because that was a wetland. One time the gate broke and the whole 3 million gallons drained into Black Rock Creek. Nothing has ever been done. I'm so mad I have just about given up.

Dale Coder (Citizen): I really don't know what I'm doing here because it sounds like no one is doing anything. I get up every morning and go out to get my paper and the air is so bad I can't hardly stand it. Who pays you guys wages? When are you going to get off your butts?

Chairman Gasseling tries to intervene.

"Come out and take a look. It's crazy."

Eleanor Hungate (Citizen): Former full-time faculty at WSU Dept of Ag Economics. Talks about externalities and CAFOs. Don't think you are concerned about the vastness of the externalities. Pediatric asthma cases are real costs. Increased among people who live down wind. You don't seem to have much power to regulate. I think you have too nice a relationship with those you regulate. If dairies can say they are performing within guidelines their liability is reduced. Concerned about the over concentration of CAFOs. We have other agriculture that is of equal or greater value, that is being adversely affected.

Doug Moore: Many years ago I was affiliated with a dairy in Southern California, one of the largest, and they didn't do this stuff. At one time I helped service about 57 dairies in this area. A lot of them came from Simi Valley, through Maple Valley, they started moving here in the 1990s. So they didn't really sell their dairies like they were supposed to. I'll bet a lot of them have another dairy over by Twin Falls, Idaho.

Jan Whitefoot: Questions. At last meeting I was embarrassed by the way Tom Gasseling yelled at us. Where is the code of conduct for board members?

Chairman Gasseling: I'm going to cut you off.

Jan Whitefoot: Last month someone said that only a few people complained. Brought presentation from Les Ornelas. Brought documentation of many complaints.

Have requested exact changes to policy. We should not have to FOIA this information. Need differences between new and old policy. Requested this information three weeks ago. Still has not received. Feel that only meeting with the dairy industry is prejudicial. Request meeting with the public so people can present information more than allowed in two minutes.

Five months that the public representative has not showed up for board meetings.

What scientific instruments should be used to measure air pollutants. Going out and having a guy roll down his window and take a sniff is not scientific. Dairies say an official came out and took a sniff and said we are in compliance.

Let's work together. You need to involve the citizens.

Recently one of the CAFOs on the reservation applied for an expansion. Why is YRCAA included in the permit application. Hasan says it is because of the SEPA review. Did Dr. Tahat visit the site? No. The dairies fill out the paperwork.

You have members that have attended dairy symposiums and have presented dairy symposiums. Why not attend health symposiums.

Marlene White (Citizen): Member of the Yakama Nation. As a resident of Harrah dairy smells are getting worse. Becoming significantly far, far worse. I have family members that suffer from allergies. Now we smell it during the winter. Have had problems with flies. New problem. Need a response to the people who come to you with these problems. When you permit establishments to come onto a reservation and you don't regulate it, this is concerning. Lots of cancer on the reservation. Listen to some of the things that are being said. I assume that this is part of your jobs. No one has come to the little town of Harrah and asked what we think. I beg you people to do something and then get back to us.

Jan Whitefoot: In your statistics include the hundreds of complaints to the EPA.

Chairman Gasseling: Agency has no authority on the reservation. (Incorrect because the county permits)

Marlene White: Cites the permitting that takes place on the reservation. If you are going to permit find a way to cooperate on regulation. We meet resistance regarding regulation of non-Indian people on the reservation. I would say, extend an olive branch regarding regulation of CAFOs.

Larry Fendell: This has been going on for 20 years. It got really bad in 2002. There were stacks of complaints. When we talked to Clean Air they had no record. We had stacks of records. People are angry. Has only had one person set foot on his property after a complaint.

They are still not incorporating. The dairies are clean but the neighborhoods are a mess. It is spread all over the roads. Manure is just laying out there on the fields since winter.

Jan Whitefoot: Of all the dairies on the reservation only one has a legal permit to operate. Yakima County permits dairies on non-tribal land, permits pipes. Only one operator has a legal permit.

May 10, 2012

Helen Reddout (Citizen): Minutes of last meeting said that he invited Helen to be on the dairy committee. If I had been invited, I would have been there with bells on. I went back to 2010, the only face to face conversation with Mr. Pruitt took place in 2011. Mr. Pruitt came up to me and thanked me for my professionalism. If it is an oversight on my part, I would like for Mr. Pruitt to produce the emails asking me to be on the committee. Asked for clarification.

YRCAA Director Gary Pruitt: I placed a phone call. Intent was to aske her to meet and be on the committee if we talked. Never got the opportunity to invite Helen.

Helen Reddout would like to be on the committee.

Jan Whitefoot: Corrections to last months minutes. Also, comments on Les Ornelas exaggerating. Please add to minutes. Mr. Silva has now missed six meetings. Asked for clarification. We ask questions but don't get answers. YRCAA did a SEPA review on the Steve Bangs Dairy.

EPA has air monitoring devices available. Public asks for air monitoring when you do an investigation. Some people are voting on CAFO issues and have never seen a CAFO. Invitation to tour the area.

Director Gary Pruitt: Will post comments on the YRCAA website.

Jean Mendoza (Citizen)

Are several vacancies on the board. FOTC supports Jan Whitefoot for the small cities position. She is knowledgeable. Has necessary contacts. She is female. Feel the need for a female perspective.

Chairman Gasseling: Board has no control over small cities rep.

Mendoza: Response to review of John Hopkins by Ndgwa, Harrison, Embertson. Clarifies a longitudinal study versus a cross sectional study. They talked about ammonia. Not the only component of odor. There are over 200 chemicals that impact odor in the air. You can have sub threshold levels for all compounds but when you put them all together you get bad odor.

When people have asthma, they respond to lower levels of BOS D2 antigen. That is why there are no threshold levels.

Antigens can 1. Sensitize the lungs – develop asthma over time. 2. Cause an asthma attack with exposure.

June 21, 2012

No public comments

July 12, 2012

Jan Whitefoot (Citizen): Asked for clarification re PM 2.5 number of times out of compliance. What measuring devices are you using and is it different from EPA devices. How do you differentiate between particulates from CAFOs and wood smoke?

Acting Chairman Bill Lover: Do you want to wait until the next meeting?

Director Pruitt: Would be a qualified answer. Needs to make assumptions in order to answer.

Use a federal reference monitor approved by EPA.

Differentiating particles from CAFOs and wood smoke. There is really no way to differentiate. Are running a set of chemical speciation monitors. But no way to differentiate between either crustal or organic.

Will make an attempt to answer.

Steve George (Citizen): Understanding is that the air quality issue is primarily during the wintertime when wood stoves are being used and there is little agricultural activity

August 9, 2012

Jan Whitefoot reads letter from Helen Reddout. Letter says that the RCW does not say YRCAA cannot enforce air quality on CAFOs. At no time was a position on the dairy committee mentioned or a position on the committee. If he wanted me on the committee not mention it on the call or send a letter. In June Helen said she would like to serve. Did Mr. Pruitt forget?

Minutes forgot to tell about air monitoring in Harrah. Citizens still do not support AQMP. No reason not to have air monitoring.

Title VI says there should be diversity on the committee. Would like to see more women and minorities on committees.

Provides data from the federal govt on the number of cattle. Contradicts numbers from YRCAA. Left data with the board.

For the record, Do not repeat that Jan Whitefoot is against all CAFOs in the Yakima Valley because that is not true.

Chairman Lover - will answer at next meeting.

October 11, 2012

Jan Whitefoot: Last meeting gave YRCAA the numbers for cows in Yakima Co. Working on data through NASS. The number does not include beef and slaughter cows.

Hot spots for water pollution are in Granger, Mabton, Sunnyside, Grandview. Lagoons lead to air monitor. Want air monitoring near the Outlook School.

Why wasn't Hydrogen sulfide included in YAWNS.

Need to test downwind from facilities.

Still asking YRCAA how they monitor poop sprinklers?

Impacted communities are supposed to be included in the studies.

Larry Fendell: Last month was a tough month for smoke and things. We were socked in and yet we had neighbors that were aerating the manure. You know where it stayed. What do you think hangs in the air? I've asked in the past and I'm asking again. If there is a Stage II burn ban, and I can't burn a fireplace or any outside burning, I don't know why people should be allowed to go out and spread liquid manure. I've asked before and I'm asking again for a discussion.

Jean Mendoza: As advocates for people in the LYV Ammonia is a precursor to nitrates in the air. Every dairy cow produces about 80 lbs. of ammonia per year.

Director Gary Pruitt: We'll communicate with Jan, Larry and Jean outside the meeting.

Acting Chair Lover: There were some jurisdiction questions in WA. All contributors of airborne nitrates will be considered. Even the ammonia that each of us emits on a daily basis. It's a "must do" study. We support.

Legal action by Citizens for Sustainable Development – hearing date set for October 30.

New Mission Statement

November 8, 2012

Jan Whitefoot (Citizen): New information on dairy cow numbers. 226,000 non-dairy cows. 58,000 milkers, other Total 318,687 head of cattle.

Lagoon surface area in 1,211,127 meters squared. Need to address this.

How will you incorporate the new numbers into your policy.

Letter from Mendoza,

Spraying of manure during air inversions. Would you be willing to discuss and write regulations re manure spraying during burn bans?

Helen Reddout (Citizen): I would like to look at your definition of a dairy. Should include heifers, calves and other.

Larry Fendell (Citizen): Need discussion. It was a simple question. I want an answer in an open forum. I want a discussion. Let's talk about it between the board and citizens.

Don't need any more cows in this county. We have polluted air and water.

When did the policy lower the time between pulling out trees and burning to 30 days?

Kathleen Rogers (Citizen): Neighborhood formed a group called AWARE. They stopped a calf operation in their neighborhood. Close to her home two dairies have merged. They have added so many more calves, cows, lights at night, piles of poop. Used to have 5 acres of manure. Now they have started more. I don't understand why you have to be so angry. Enough is enough. Draw the line. We have to do something to contain the smell of the lagoons, urine, cow poop. I want to protect my home and I know you would too.

Director Gary Pruitt: Have experienced ineffective information exchange. Asked about an open forum.

December 13, 2012

Jim Dyjak (Citizen): Major health problem. Haystack fire burned and smoldered for a week. I am now the proud owner of an inhaler.

Facilitator at community forum needs to be independent from the agency. (Facilitator was Dave Caprile from YRCAA)

Larry Fendell (Citizen): Feels for Jim Dyjak. In Larry's area there was a huge barn fire. The fire dept. stayed until the fire was out. No smoke the next morning.

Community meetings. I've asked a question for three meetings now. No answer. Why are dairies allowed to spread manure during burn bans? The reason we bring things to the board is when we bring things to the agency nothing happens. Need to have concerns recorded. For the last three months we have asked about ammonia. We have to stop using wood stoves and fireplaces. We go out and they are spreading manure and the air is bad. I want the board to know that there is a problem.

Director Gary Pruitt: "You're so full of crap."

Jan Whitefoot (Citizen): We have been asking for several years for scientific air monitoring in the LYV. \$9,000 on incentives. Spent \$12,000 on a reader board. We need a 1-800 number so people can call in complaints. YRCAA says they still have a 1-800 number. A lot of people do not have computers.

Community Forum no decision-making power.

Did Tom Silva attend the dairy meetings? Still no citizen representation.

County Commissioner Kevin Bouchey – The board needs to address Mr. Silva's absence.

Director Pruitt: There are others that are no longer attending.

Whitefoot: The fact is that throughout the whole procedure you had no citizen representation.

Cow numbers were not put in last months minutes.

Mary Baechler (Citizen): Is it true we don't have any air monitoring in the LYV.

Dr. Hasan Tahat (YRCAA): We have them in Yakima, Toppenish and White Swan. None in Sunnyside.

Baechler: Are we monitoring nitrates? I recall that nitrates are carcinogens.

Tahat: No.

Baechler: Why not?

Tahat: What we are monitoring is the criteria pollutants.

We have a speciation monitor in Yakima. By law we are required to have basically the criteria pollutants.

January 1, 2013

Larry Fendell (Citizen): From a TV interview Mr. Pruitt, “Frankly the money just isn’t there. Testing wouldn’t produce credible evidence of anything. It would cost tens of millions of dollars to set up testing in the lower valley.” Does that statement bother anyone?

Requests for items on the community forum agenda. Its also been stated that they are going to take this nationally. Other studies have PhDs and peer review. Don’t see this on the AQMP.

Board Chairman Gasseling We don’t have any authority so anything we can do to move it forward is a good thing.

Fendell: Mr. Pruitt said that Helen Reddout would not be on the work group.

First Community Forum – Led by Dave Caprile of YRCAA

Outlined the purpose of the forum – to address air quality questions from the public. Only air quality issues. Provide answers that can’t be provided at board meetings.

Will start with points of information. Point of view from the laws and regulations.

Larry Fendell (Citizen) Spraying manure during an air inversion

Several days when manure just stayed on the fields. The pollution just hung in the air.

Dr. Tahat (YRCAA): We do not have the authority to shut down an operation

Fendell explains that originally dairies had to have enough storage. Now they haul every day of the winter.

Helen Reddout (Citizen): I’m astonished that you have no idea what is happening in the valley. Why don’t you come down and we will take you around the valley? Over 400 pathogens held near the ground surface. What are those pathogens doing to people’s lungs.

YRCAA Director Gary Pruitt: We have no authority to regulate emissions during emissions except for wood stoves. There is a piece of legislation that would change that – specific to banning heating devices and outdoor burning.

Monitor in Yakima is situated to find the highest readings in the Yakima urban area. The type of pollutants of primary concern would not measure the pollutants of concern.

Steve George (Citizen): Not aware of a certain time frame in the fall or spring when manure from lagoons could be applied. Only aware of weather conditions or soil conditions.

Reddout: SYCD handbook 1995 talks about fall applications only.

Fendell: roads covered with manure, liquids and solids.

Caprile: looking for our ability to stop manure applications during a burn ban.

Reddout: provided scientific studies – PEW, John Hopkins, etc.

Caprile: this is based on a model, not sampling.

Reddout: but we have used the Cerex air monitoring device. We had readings clear off the graph.

Caprile: maybe we should offer discussions on modeling and sampling.

Reddout: you turned down our offer to use the Cerex air monitor.

Fendell: Dr, Ndigwa used this type of monitor in the NAEMS

Dyjak: the dairies are clean and getting high scores. They just move it across the street and you ignore it.

If they lease land it is not attached to the dairy.

Pruitt: we are looking at the whole farm operation, all the land under his control.

Rogers: Veldhuis stored manure 50 feet from a neighbors' home. Composting manure across the street from her house. He says this manure doesn't stink and there won't be any flies. There shouldn't be manure dust in my home. That is an invasion of my home.

Keith Hurley (YRCAA): Agrees with her. But we are paid to be dispassionate. We are constrained by the law. My guys will continue to act within the letter of the law. If we see a violation we will act. We have sat down and we have examined the law. Because of the complaints that were lodged we did something.

I'm going to speak to D'Ann Williams study. She wrote it. John Hopkins did not endorse that study. We all know there is a dilution level after air leaves a dairy. The problem I have is there were serious technical issues with it. There was no correlating to a health issue threshold. If there was there would have been actionable intelligence. The NAEMS is going to do that. We are kind of tied until the results arrive.

In this particular case the fight is at the legislature. We aren't moving fast enough for you guys.

June 13, 2013

Jim Dyjak: Changes in Item 9 from the material presented to the public. Need to sit down with the public at a study session. A lot of unanswered questions and different from the material that was presented last month.

Larry Fendell: Item 10. Started this discussion earlier. We were berated, reprimanded and ignored. We have brought things up at the community meeting and it gets thrown away. You wonder why we want to come to the board. If we can't have open communications; if things are being covered up then some changes need to be made.

Item 9, is not what the public reviewed a year ago. It is a blank check.

Jan Whitefoot: Agrees that the public was left out of the dairy score card. Cannot think about any public suggestions that have been implemented. Does nothing to protect public health. Ecology has public hearings for their air permits for CAFOs. YRCAA does not do this. You all were elected to protect all of the people, not just dairy. Using eyesight to measure air quality is junk science.

It's a logical concern to put poop into the air that people breathe. Would you accept this for your children?

Helen Reddout (CARE): Over a decade of advocacy. Each time we had to go to court. That is not a good way to go about protecting a neighborhood. You represent all of us, not just one group. Supposed to be making decisions on the basis of the needs of the constituency. This is the agency that is being paid to do that.

Kathleen Rogers: Invitation to visit the LYV and see what is surrounding homes in the LYV. Last month Mary Baechler spoke, and someone asked why she spoke since she is from west valley. Mary does visit the LYV.

Jean Mendoza: Response to Ex Memo, Item 10. Would have been good if the agency had consulted Ecology, DOH and SYCD. WSDA does not address inversions in their implementation of the nutrient management act. Do address high winds. Appears some producers ignore these provisions.

Regarding the Ex. Memo. It is not the role of YRCAA to protect groundwater. Not the role to protect industry. Primary role of clean air is to protect the most vulnerable members of society,

A member of a community advisory board for asthma in the LYV. Looks at what happens to asthmatic children. Have measured ammonia and other pollutants. Data shows a relationship between decreased lung function and air pollution. U of W wants to share the data.

Gary Pruitt: Lawsuit against YRCAA by Citizens for Sustainable Development has been settled in the amount authorized by the board. Dismissed with prejudice in process. Agency denies any liability. Settlement chose to avoid continued litigation.

Item 9: AQMP for Dairies.

Director Pruitt: Changes were made specifically to address non-substantive requirements.

- Open to advice from Ecology, EPA, etc.
- Changes related to applicability.
- Number of site visits & frequency. Code B, Part 5 address site visits.
- Fees. Treat all the sources the same. Would fit into the minor source category. Some might be considered a complex minor. Won't know until the visit.
- AG Task Force has been existence since 1995, not always active. Has been dormant, and primarily dealt with ag burning. Dairy Task Force has completed their work. Would entertain suggestions on who should serve on the task force. Will bring a recommendation.

Board Member Lover: Is there an appeal process for a task force ruling?

Pruitt, doesn't know of an appeal process.

Lover, so it would just be a citizen appeal to the board.

- How AQMPs are submitted added to the policy.
- When will policy be evaluated? Will be accomplished jointly by YRCAA and Ag Task Force, based on effectiveness of reducing pollution and reasonableness. Board would approve any changes.
- Recommends adopting the policy.

Board Member John Gawlick abstains from voting on policy and rulemaking because he does not know enough.

Yakima County Commissioner Elliott willing to support with the proviso that it is appropriately reviewed.

Lover questions answered include evaluation, dispute resolution, updates, timelines, etc. Prepared to go forward with the current document.

Yakima County Commissioner Bouchey believes the policy represents the interests of all people in Yakima County. Delay is not advisable. Passes with 2 for and 1 abstention.

Item 10: Ban of manure spraying.

Director Pruitt: The guiding statute is the Administrative Procedures Act. Talked to Laurie Crowe, SYCD. Dairy Nutrient Management Act (DNMA) is the only law that deals with manure. Emailed Virginia Prest at WSDA. She responded yesterday.

Part of the tenet of the Clean Air Act is to support economic development.

Reasons are not stand alone.

Nutrient management is managed by the DNMA. Must be agronomic.

There is no evidence that there would be a difference of health risks during a burn ban. Burn bans are sometimes called to prevent fires. Air quality burn bans don't exist during windy conditions.

Could impact groundwater.

We don't want to be responsible for overflowing someone's lagoons. Also, there would be an enforcement issue. We can't do that.

If board choses to deny the petition I will give further reasons.

Commissioner Elliott not willing to adopt petition. Does not think petitioners will run and appeal to the Governor. It deserves further consideration.

Commissioner Bouchey if we do not take action then the rulemaking process begins.

Board needs more time. Will commence rulemaking.

July 11, 2013

Jim Dyjak (Citizen): Questions

- Can the public participate in the study sessions? Pruitt – When it is appropriate. There would be some cases in which it would not be of value. Depends. Elliott – No hard and fast rule.
- Re AG Task Force – need a study session. In the past I tried to be on it and was told I could not join.
- How often the AQMP for dairies is reviewed needs to be clearly stated.
- Petitioners need to meet with YRCAA – It is being dragged out. Suggestion of back room dealings. Let's fill in that two month hole and meet with the petitioners. We ask for the same respect YRCAA gave the dairies.

Kathleen Rogers (Citizen)

- Directors report re rulemaking – When will the first stakeholders meeting be held? How many meetings? Why the 60 day delay? What are the criteria for acceptance or rejection?
- Why did YRCAA reject the nomination of Jim Dyjak for an award? Larry Fendell was also nominated. Believes the criteria needs revision to make citizens eligible.
- Advocates for ammonia monitors

Larry Fendell (Citizen)

- Supports the need for LYV monitors. Have been calling for this for 12 years.

- Delays in Item 6 – another drag out that prolongs suffering of the people from air pollution.
- Cow numbers are increasing. Manure hauling increases during the winter months. Let's don't sit on our hands. We're ready to go. You need scientific evidence. We have it. No reason to have to go through another winter like last winter.

July 15, 2013

Community Forum

Dave Caprile, Gary Pruitt, Hasan Tahat, Patty Walker, Jim Dyjak, Linda Dyjak, Kathleen Rogers, Dan DeGroot, Genny DeRuyter, John Gawlick, Mary Baechler

Open Agenda: Rule Making, Final Thoughts

Kathleen Rogers (Citizen): Few other ways to express Yakima County concerns. Has not seen Mr. Pruitt report concerns from the meetings to the Board of Directors. No assurance that concerns would be brought to the board so they could provide solutions. Only insulates the board from community complaints. Some meetings have been intimidating. Regular citizens would be inhibited by this format. Sees value in the forums if the alternative is no venue whatsoever. Hope the forum continues.

Question: Has the YRCAA staff communicated with the board after community meetings?

Director Pruitt: Communicates by providing a meeting summary. It is their decision to decide whether or not to come.

Question: Can we presume that the forum meetings are only designed to placate the community? Partially answered.

Pruitt: I personally have reported that the meetings have been productive. We can provide this in any format that provides information.

Mary Baechler (Citizen): How do you publicize the community forum?

Dave Caprile (YRCAA): Website & board meetings. Community Announcements in Yakima Herald, Sunnyside Sun & El Sol.

Genny DeRuyter (Dairy): How has attendance been recorded. Disappointed that so few people attend and we talk about the same old things.

Mary Baechler: You have to leave work. I had to leave work for example.

Genny DeRuyter: We have to hear from more people.

Jim Dyjak: Twice I have asked to have something put on the board agenda. The board gets to put on a presentation with their spin. We have to spend our time correcting their statements. That's why I will not tell the agency what I plan to say ahead of time.

August 8, 2013

Study Session: Discuss a Petition to Disallow the Spraying of Manure during Inversions

Director Gary Pruitt:

There is an executive memo, and a summary of the two public meetings.

Very little attempt at consensus building.

Four key points

- Does the agency have the authority to write a rule?
- Adverse health effects.
- Is the rule needed?
- Where to go from there, continue the rule making process?

There is apparent consensus that YRCAA should not continue the rule making process.

Comments from the Farm Bureau, Yakima Dairy Federation, WA Dairy Federation, Attorney Shawn Russell. Late comments came in late, consistent with those comments against:

- No clear statutory authority.
- No adverse health effects.
- already regulated.
- potential damage to crops, soil and water.
- unreasonable operating and management impacts.
- probable adverse effects on non-dairy operations.
- uncertainty of agency's ability to enforce.
- does not apply to Yakama Nation.
- best addressed by recently adopted AQMP for dairy operations.
- lack of consensus to proceed.

Summary of comments in favor:

- 50 signers
- 3 Individual letters of support.
- Literature in support.
- Rule is needed.
- No conflict with other laws.
- No less expensive alternative.
- Should not apply differently to public and private entities.
- Rule is simple.
- Rule does not differ from federal law that applies.

Comments from meetings:

- BMPs are not being used.
- BMPs don't work.
- There are adverse health effects.
- Air quality is worsening.
- There is a lack of air sampling in the LYV.

Emails received in support of the rule. Made no progress on consensus on that the rule should say. Are at the end of negotiations. Need to decide whether to proceed with the rule making process and if they do proceed how to accomplish that.

If they decide to proceed with rulemaking there is a period for further public comment. Have up to 100 days to complete the rule making.

Both meetings resulted in unanimous decisions not to proceed with rulemaking. No hands raised in favor of pursuing.

Elliott – Have we fulfilled our obligations. If there is no interest in going forward, do we need to go on.

Gary Cuillier (YRCAA Attorney): Are past the 60 days to deny the proposal. At the exact point to chose

- Stop proposed rule, discontinue the process.
- Refer the effort to committees such as the AG Task Force.
- Continue effort by agency staff.

Regular Meeting:

Jim Dyjak: Put together a package. Flow chart for agency rulemaking.

- Agency must make the rule
- Optional paths – rulemaking process
- Earliest you can take public comments on the rule

Does anyone know where negotiated rulemaking came from? 1990 Congress enacted the National Rulemaking Act. Public Law 104-320 signed in 1996.

No rule was ever proposed.

Why the rule is needed or might accomplish. But that is not what he sent to the state. The statement to the state should have been given to the public.

Commissioner Elliott asked who the rule writer is. It doesn't have to be Mr. Pruitt. No qualifications.

The intent is for people to come together on the writing of the rule. The agency can still write a rule without consensus. I myself got upset at the meeting. It was like, “lets go out and lynch somebody.” The statute doesn’t say let’s get a bunch of people together and ask them to fill in the blanks.

Questions about AG task force. Why are we making for dairies their own little world where they are judged only by their peers and insulates them from the process. Why aren’t Jim Dyjak and Larry Fendell on the list? We have been coming to these meetings for 11 – 14 years. Debra Suzuki from EPA said that her people couldn’t make the meetings, but they are happy to advise.

Larry Fendell (Citizen): Agrees with Jim Dyjak. The two meetings – Consensus of what? I had to ask to have the petition read so people would understand it. At the second meeting other things were discussed. Meetings provided no information. There was no rule written. Nothing explained.

This valley is getting worse on air quality. I don’t need someone from Whatcom County or anyplace else to tell me what’s going on in my neighborhood. It all boils down to too many cows. They shouldn’t be putting manure on their fields in the winter. Rules and regulations are not being fields.

Doug Moore (Citizen): Lived in the valley for 22 years at the same spot next to a 3 million gallon lagoon. Last night at 3 o’clock I had to get up and close my windows due to the manure smells. Last winter, five weeks in a row, my neighbor spread this stuff on the ground next to my home, within fifty feet. Ammonia releases at a packing house brings closure of a highway. But not for the dairy. I have had to fix electrical problems on dairies due to ammonia destroying the wiring. I would guess 20% of dairies are not very good. Especially during a burn ban, that should be a no brainer. Family is being bitten by vicious flies.

Steve George representing the Yakima Farm Bureau and Yakima Dairy Federation (app 70 dairies)

Item 9. Did not see the legal brief from Groen, Stevens & Klinge on the table of documents.

- Proposed rule prohibited by the ag exemption.
- No substantial effect on public health
- From Ginny Prest from WSDA – request to comment. Can’t endorse a proposal that might have unintended consequences in other areas.
- Farm Bureau requested data from Dept. of L & I. – 90% of injuries are open wounds & bruises. No complaints from harmful air quality.
- No scientific data
- Clients do not support moving forward.

Yes, ammonia is corrosive. But this does not happen just on dairies. Also for fertilizers.

Steve attended both meetings. Did not hear confusion. A large majority of the attendees were dairymen. Dairy is still committed to working on the issues.

Jan Whitefoot, a Petitioner:

Has talked to families where children have played in sprinklers when they did not know manure was in the water. Spraying manures have been banned in other areas due to the pathogens and particulate matter. Referenced El Proyecto Bienestar regarding asthma. Have asked YRCAA to do further studies with the same inexpensive equipment. We never hear about asthma at YRCAA meetings. In favor of proceeding with the rule. Attended both meetings. Opposes Gary Pruitt as Rule writer. Our health studies were not shared at the meetings. But dairy information is shared. I felt intimidated and others felt intimidated. No Latinos at the Granger meeting. I get phone calls because people are afraid of losing their jobs and homes. I have been threatened and followed.

You all didn't listen until we brought a lawyer. We have come time after time. We have told you about the problem. EPA does want to be involved. I would encourage you not to take the staff's words at face value. Do your homework.

Doug Moore: Five years ago I had the Hound installed at my place for three months. We have had scientific proof and it's been delivered to the department. She said the air at Harrah was the worst, mine was second worst and there were several others that were similar.

Fendell: There was scientific evidence turned in with the petition. The agency hid it.

Kathleen Rogers: I have to tell you, scientific data or not, my nose and my lungs are scientific instruments. It is urine in your window.

Terry Brooks (Citizen): This winter one of the dairy farmers that has a new lagoon right in my front door. Last night my neighbor had so much manure on the road you can't see the line. This stuff is getting in my throat. I just hope and pray that something can be done. I don't think we are asking too much. I have lived there all my life, longer than any of my neighbors.

Steve George: Some people have relied on a report from John Hopkins by Dr. Williams. Dr. Embertson did a review of that report. She states, the study examining allergens found levels below National OSHA levels. In some cases, children born on farms have lower incidences of allergies. You have to make your decisions based on science and the law, not impassioned pleas.

Genny DeRuyter: Not all dairies have the same practices. Since 1997 we have spent millions of dollars to address issues. There are different degrees of manure separation. At our dairies we have a three-stage separation. We end up with brown water. We have more than enough storage. Where we get into a problem is different storm events with rain and snow melt. We can't predict the weather. There are lots of extenuating circumstances. I'm not convinced that it is the responsibility of this agency to address. Some lies with WSDA and Ecology.

Report on six Community Air Forums

AG Task Force:

Gary Pruitt: At the July board meeting you agreed to the formation of an Ag Task Force. Has a proposed list.

Item 9: Petition

Board Member Lover moves to suspend the rulemaking process. Second. Discussion.

Board Member Gawlick: Having another rule when others already exist and need to be enforced. Can revisit the rulemaking process after we see the implementation of the practices that were approved by the board in January. I have been told by staff that there was a positive effect. We should put it into action. For those who are not participating compliance should come into play.

Commissioner Elliott: Lots of contradicting opinions and evidence. Believes that 90% of problems are created by 10% of dairies. We need to put pressure on WSDA to do their job. Agrees on stopping the process.

Lover: This was excluded from the BMP study. Maybe this is where it should land. To me we are headed right into court. We should wait for EPA to complete their work. Obviously, there are problems in certain areas and with certain operators. I don't believe a rule is the way to go.

Commissioner Bouchey: Currently the rules and regulations are not being followed. We need to look at the agencies that have oversight. We have approved the AQMP for dairies. I'd like to see the staff focus on that.

Motion passed.

October 10, 2013

Jon DeVaney joins the board as an at-large citizen representative, replacing Tom Gasseling.

Larry Fendell (Citizen): E-coli can travel on air. Would like to hear from the Health Department on how people can protect themselves. The manure trucks are going really heavy. It is falling of and blowing all over. Other trucks have to cover up their loads. Manure trucks should also.

Jim Dyjak (Citizen): Jean Mendoza would like time to address the study session of removing Dr. Embertson from the Ag Task Force. 90% of the members are from ag. But I see you adding more dairies. You need some citizens on there. Again, what happened to the public? What about the victims? When will we be included? Everything is geared to protect ag. If I bring an academic is the agency going to pay them. The last time we had to pay them. But the agency pays the academics for the dairies. If you are going to pay one you should pay them all.

November 14, 2013

Jean Mendoza (Citizen): Re Dr. Embertson.

- Provided misinformation and false information to the agency and the board
- Embertson's Literature Review was made available to the public and was posted on the YRCAA website.
- Statement regarding scientific misconduct
 - Fabrication
 - Falsification – manipulating data or results
 - Plagiarism – appropriation of another person's ideas
- Definition of a Literature Review

Chairman Bouchey asks for information in addition to letter.

- Referenced 40 pieces of research. 13 pieces actually look at community health. 12 found significant health impacts related to public health. Reads some conclusions.
- No restrictions regarding high temperatures, inversion, or wind events in the Dairy Nutrient Management Act. Not part of AQMP for dairies. It is a fact that people complained to YRCAA when one of the creators of the AQMP sprayed manure into the air during 40 mph winds.
- Incorrect use of references.
- Incorrect statement of a chemical reaction
- How much does ammonia from agriculture impact PM 2.5. Misstates the statistics.
- States manure is not typically applied during winter months. This is not true.
- O'Conner study rejected all but 9 out of > 4,000 studies on health

Chairman Bouchey – Asks Mendoza to stay focused.

Do you get my point that she is saying studies say one thing and they say something different?

- Misquoted the John Hopkins study and said it addressed pollutants carried by winds.
- Ignored studies done in the Yakima Valley.

Jan Whitefoot (Citizen):

Granger meeting, proposal was not presented to the public. Only dairy information was shared. Dave Caprile gave the board misinformation.

Dick Camp, former YRCAA board member, has applied to increase his operation. Why could a person be a board member when they are regulated? Mr. Camp's operation (Bay Zinc/Kronos) was the biggest polluter of SO₂ in Yakima County. Why was a permit even given to a facility that was classified as a category 5 hazardous waste site? EPA is currently investigating a spill at Kronos (Camp's facility). Kronos self-monitors.

Jim Dyjak (Citizen):

Summary says that Jim Dyjak declined an opportunity to participate. I don't believe in the program, and I'm not being involved in kick starting it. Summary did not convey what he meant.

33 – 38 dairies have not come on board yet. Now fees are going up. We want your money because we need a pay raise.

Item 12: Ms. Rogers asked about the status of a grant for monitors. Tell us what the monitors are, what they will be used for, and where.

Steve George representing Dairy Federation & Yakima Farm Bureau. Organizations do not agree with accusations against Dr. Embertson. Swine operations are not relevant.

Mendoza: Dr. Embertson is the one who brought swine information to the table.

Bouchey: Need to give Dr. Embertson the opportunity to respond. (Dr. Embertson wrote a letter in which she rejected the need to respond. The board took no action against her.)

December 19, 2013

Kathleen Rogers (Citizen): Questions re monitors in Sunnyside. There was a monitor at the Sunnyside Schools around 2000. How to get the monitor back. The bases are still in place. Also, the "Hound" is available. Invasive air in the area. Keeps my in my home. I can hardly breathe.

Jan Whitefoot (Citizen): Has received training on how to read the PM 2.5 monitors. In Toppenish for six days in a row the readings were above 35 mcg/sq meter in November. Horrible inversions for weeks. Has friends with bad COPD. Need to inform the public. Risk of non-attainment. Ten days of non-attainment so far this year. It would be good to have a report on asthma. YHD said e-coli in the air can affect people. How many extra people are hospitalized during periods of high PM 2.5? Please do air monitoring.

Jim Dyjak (Citizen): Asks for details on grant request for monitors. For years you have said you cannot afford monitors. When we brought the "Hound" to the board we had to provide information.

Larry Fendell (Citizen): November and December have been pretty bad. Tuesday night there were three fires going along the old Sunnyside Highway. Seems like people are burning more. There are just lighting them up. Someone needs to impress on them that there is a burn ban.

Can we get the health district to talk to us about e-coli in the air?

I asked Nicole Embertson to tell us where she got her information. She said that only 5% of the people spread manure during the winter. I asked where she got the information. She said that Stuart Turner told me that. I asked, Is Stuart Turner running experiments? I don't think so. That's the reason we don't like your paper. You don't have any facts to back it up.

Jean Mendoza (Citizen): Presented a paper last week regarding Dr. Embertson's Literature Review. I read her response that is in your packet. She essentially said, I don't have to justify what I said. By implication the Clean Air Agency is saying, we can put out any information and we don't have to support it. It is a cruel thing to do to the public, to put out information and say, it is your job to research and find if it is true. I hope you will take some action on my request.

Board discussed complaint against Dr. Embertson. Took no action.

January 9, 2014

Dr. Steven Jones joins the board in place of County Commissioner Kevin Bouchey.

Jim Dyjak (Citizen): Board and staff do not answer citizen questions. Cites unanswered questions.

Kathleen Rogers (Citizen): Please continue in your efforts to understand what is happening in the lower valley. Need a monitor.

February 13, 2014

Kathleen Rogers (Citizen): Monitoring is a huge step. Without the data, we have no comparison on what the task force is doing.

Jim Dyjak (Citizen): We do need monitors. Talks about a contract for a monitor. Asks for a citizen's group to discuss. Dyjak hand carried the grant application to EPA trying to help the agency. Need more communication with the citizens.

Mayor Micah Cauley joins the board as representative for large cities in place of Bill Lover.

March 13, 2014

Jean Mendoza (Citizen): Provides information to the new board members. Participates in the ag task force with the goal of improving air quality. Talks about spreading/spraying manure during inversions. WA Dairy Commission asked Dr. Nicole Embertson to write a letter. She opined that there is no danger to human health. Mendoza analysis is that Dr. Embertson is biased and gave the agency misinformation. Passed on half-truths. Embertson said producers do not spread manure during the winter. This is not true.

April 10, 2014

Study Session for Budget.

Jim Dyjak (Citizen): Will citizens receive the complete board packet. Will the agency post the complete packet on their website? Clerk Patty Walker says the complete packets will be emailed to the addresses she has for board members and for interested citizens.

Item 6, the Dairy Work Group Meeting. Russ Davis is an instigator? Is this insulting? Director Pruitt agrees. Why are we still testing on the dairies? The problem is on properties next to the dairies, in the homes of people who are impacted.

Ask that the public be made part of the budget process. People get five minutes or less to testify. There is no discussion. The public is left out of the process. Written comments never make it to the board.

At one time there was discussion at the board meetings, but no longer. The board assumes that the YRCAA staff is correct. Not always true. For example, giving a pay raise and a bonus at the same time is wrong. Bonuses should not be automatic.

Larry Fendell (Citizen): Seems to be a whole new atmosphere on the board, an improvement. There has been a study in Idaho re spreading of liquid manure. Injection reduced the ammonia and air emissions by 78%. Idaho started with a baseline. The YRCAA policy did not. There is a huge difference in application rates. Be cognizant. Testing needs to be done off the dairies also.

Dr. Tahat (Agency): What is the baseline you referenced?

Fendell: They place monitors on a 22-acre field. Applied manure from tankers. Had another field with circles. Had another field with injection. The baseline was before application.

Genny DeRuyter (Dairywoman): In response. If you were to come to our dairy and measure the differences in tank applications and compare to other dairies, there will be a big difference based on manure separation technology. We are trying for better separation and get cleaner water. Our applications will be different from others. Lots of variables involved.

Don Day (City Manager for Sunnyside): Introduced himself. States concern and awareness of odor problems. SS wants to work with dairies and others to find solutions.

Kathleen Rogers (Citizen): Thanks for open attitude and improved communication. She has talked with neighboring dairymen. All we can do is hope. The door is open. She has talked with Director Pruitt about dust control and flies.

Jean Mendoza (Citizen): Compares YRCAA budget to family budgets when children are sick, for example asthma. References letter from WA Dairy Commission. Concerned that the letter became part of clean air thinking. You all do not answer to anyone but the legislature. You are the only people who can address respiratory problems re air quality.

Shares SIP for YTCAA. No person shall make a false statement to the board.

May 8, 2014

Presentation on Yakima Air Winter Nitrate Study (YAWNS).

Jim Dyjak (Citizen): YAWN Study identified potential health risks to people in the valley. Opened a lot of eyes and will help everyone.

Questions re the study. Do you need further study?

Jan Whitefoot (Citizen): Questions for Ecology. Is ozone higher in the summer? Where is the proof of a NO₂ max compliance? A couple of years ago the EPA Environmental Justice division came to Yakima and found serious problems. 100,000 cows contribute to much of this air pollution. We learned of a difference in air monitors. Any monitor should be certified. Need to monitor for a large number of pollutants in order to know where the pollution is coming from.

Answer – off-gassing of ammonia from application happens during the summer. There are probably other forms of nitrate in other parts of the year but may not be gaseous.

Whitefoot: Ammonia is a precursor?

Yes.

There was a NO_x monitor at the community college. Nothing close to the standard.

Whitefoot: You mentioned other areas with similar problems. Do those areas have CAFOs?

Yes.

Alvin Atlee (Businessman from Selah): Concerns about a big smoker and barbecues. Smoke impacts businesses. It is not illegal to have a smoker in town. Smoke is worst during non-business hours for YRCAA. Several complaints to YRCAA.

Director Pruitt: YRCAA will address the complaints.

Inspector Hurley: The smoker is legal. Invading other properties is not. Ideal solution is for parties to work things out. Trying to get the smoke up and out of the breathing zone. Put a stack on it.

Theresa Lua (Citizen and another Selah business owner): Concerned about the health of her employees who now have breathing problems.

Rick Moen (Owner of the Smoker): Prior to this meeting we would have openly taken discussion about the problem and tried to rectify it. We start it in the morning and bring it up to heat. and this eliminates the smoking later in the day. I've always tried to accommodate them. I sat down

with these gentlemen and explained the smoking process. We have looked at bids for extending the stack. We will continue to do everything we can.

Kathleen Rogers (Citizen): Applauds people for coming together and talking. Keep communication open.

Larry Fendell (Citizen): Thanks people who presented the YAWN Study. People who testified on manure spraying during inversions proved health problems during inversions. Asks board to revisit a ban.

Dean Effler (Citizen): Ran into a grandma recently with four grandchildren, ages 3 to 10. About forty years ago she bought a rural home. There was a neighbor with a few cows. About ten years ago that property was purchased by a dairy. She can no longer let her grandchildren go out and play. Two of them have asthma. There is a lot of particulate matter in the air. Lots of spraying of manure right next to her property. So frustrated. It is no longer a good place for family. Property values have dropped. If this was your property, what would you want? If these were your grandkids, what would you want? I am making an assumption that everyone in the Yakima Valley has a right to clean air. Monitoring units should be on the property right next to the CAFOs. They have as much right to clean air as someone who lives in the middle of Yakima next to Yakima Valley Community College.

Mayor Gawlick: As always, the problem is the budget. We have to do the best we can with current resources.

Steve George (WA Dairy Federation): Dairy industry went into an effort with the YRCAA on a mandatory reduction program. Asked the YRCAA to give it time. Already addressing the ammonia issue. Give it time to work and gather real data, rather than use some model from outside the area.

It appears that claims are made that animal agriculture is not healthy. I would challenge you to come up with the data that shows agriculture is not healthy. There is data that shows people on farms are more healthy than the national average.

Mayor Gawlick: Board members visited the LYV. Are aware that the dairy industry is using the AQMP for dairies. Board is hopeful that they will see positive results.

June 12, 2014

No public comments. Discussion about additional monitor in Sunnyside and proposal for more monitoring.

August 14, 2014

Study Session re Open Government Training. John Gawlick and Steve Jones present for the board.

General Session.

No public comments

Rand Elliott joins.

September 11, 2014

No public comments

October 8, 2013

Jim Dyjak (Citizen): Questions about Item 8, Item 9 on the agenda. Shares documents. Suggestions regarding posted data from the new monitor.

Jan Whitefoot (Citizen): Thanks YRCAA for setting up the new monitor. The CDC will do some ammonia and hydrogen sulfide monitoring in Harrah. Concerns because the SS monitor is not certified. A citizen called her and stated that the Steve Bangs Dairy is expanding. Does it need an air permit for expanding? Citizen called Yakima Planning and was told there was no need for action. 1. Does he have an air quality permit. 2. Does he need an updated permit.

Question: Do you have any dairies with air quality permits?

Director Pruitt: No.

Kathleen Rogers (Citizen): This year has been better than last year re neighboring dairies and air quality. Pleased about new monitor. Hoping for progress.

Director Pruitt: YRCAA asked for an FRM monitor. Were denied. Will continue to request an FRM. Looking forward to a large data set.

December 11, 2014

No public comments

January 7, 2015

Jim Dyjak (Citizen): If there is an item on the agenda, do I come up now or during the discussion.

Rand Elliott: Comments now. John Gawlick agrees.

Dyjak: Comments on Strategic Plan. Is this a requirement of some sort?

Elliott: Not that he is aware.

Director Pruitt: No

Dyjak: Input from key stakeholders. In the AQMP plan public was excluded. Will this happen again? Question re highly impacted communities. What is the definition of highly impacted communities?

Elliott: When the plan came up, I was going to ask to table it. I think it would be better for the board to prepare a presentation to the public, rather than a presentation from staff.

Dyjak agrees. Has lots of concerns.

Dyjak: Concerns about statement re declining cancer. Now we have an agency with no expertise that thinks they can do something by 2020. Goals have to be measurable.

Larry Matson (New Director for the Yakima Council of Governments): Introduces himself.

February 12, 2015

No public comments

March 12, 2015

Jim Dyjak (Citizen): Effectiveness evaluation of AQMP for Dairies assigned to Dairy WG. Will the victims be allowed to comment? Asked whether YRCAA contracted out Smoke School to a former employee?

Director Pruitt: Yes

Dyjak: I asked the board specifically to watch that. Caprile retired and he got the contract. Asks someone to look into it. Was the contract advertised, or was it set up?

Larry Fendell (Citizen): Did not attend Tuesday meeting of the Dairy WG. Heard that some of the information he passed on was inaccurate. Justifies his statements about increasing dairy herds. Cows from outside the area are coming through the Toppenish Auction. This is where the market is.

Jan Whitefoot (Citizen): Questions about solar energy. There are some really good programs for solar panels. Would be pleased to see YRCAA pursue solar in addition to wood stove change outs. On the east coast people can lease solar panels.

Talks about NPDES permits for CAFOs – under consideration by Ecology. There is a dire need. Curious why dairies are not permitted while others are.

Dairy Air Score Card. Has not seen a change in air quality. Hardly any burn bans called this year, because we can see hazardous air.

Monitor in Sunnyside is frequently down. How can you calculate impaired days when the monitor does not work during bad air events?

Where does the public get information on hazardous waste facilities? Is it ever put on the YRCAA website? Specifically, how to get information on Kronos in Moxee.

April 9, 2015

Jon Devaney assumes the role of Board Chair.

Jim Dyjak (Citizen): Questions on Item 7. Does this policy cover contractors, or just employees?

Director Pruitt: Applies to contractors.

Dyjak: Is it customary to issue credit cards to contractors?

Pruitt: No. Only if the Director administers a credit card?

Dyjak: How does a contractor purchase gasoline?

Pruitt: They use a gas card that is assigned to a vehicle.

Further discussion. Discussion of Smoke School and former employees. Anything > \$25,000 must come to the board. So you divided Smoke School into two sections, each < \$25,000. This is a sweetheart deal that was set up before the employee retired. Also an employee was terminated for cause and then received a contract with YRCAA. YRCAA does not know if the contractor is bonded and insured or has a contractor's license.

Devaney: You have raised some good questions. The board needs to investigate.

Jan Whitefoot (Citizen): Was the contract put up for bids?

Pruitt: No. Does not reach \$25,000 bar.

Whitefoot: Comment on Dairy Air Score Card. Describes John Hopkins study, YAWNS. Concerned about using eyesight to measure air quality. How does YRCAA evaluate off gassing of hydrogen sulfide? No baseline. No scientific air monitoring equipment in AQMP for dairies. Dairies are supposed to use AKART and BACT. The CDC will do scientific studies in the valley using scientific equipment. SS monitor did not work for a month. Dairy Air Score Card does not address off gassing from lagoons, nor manure spreading.

Larry Fendell (Citizen): Number of cows has increased. Lots of studies since 2009. So much ammonia in the air according to YAWNS.

May 14, 2015

Jan Whitefoot (Citizen): Article in YHR says Yakima is one of the most polluted cities in the nation, worse than Seattle. No stage 2 burn bans last year? The year before there were about 66 burn bans. Has anyone looked into the solar information? Did a PRR on Yakima Air monitors. Response says there are five monitors. Four are in Yakima, so they do not measure anything near the dairies. For Director Pruitt to imply that YRCAA is monitoring air on dairies is incorrect. The only relevant monitor is in Sunnyside and that is for PM 2.5. That monitor was down from January 9, 2015 to March 10, 2015. This is a period with the worst air quality. EPA said they would place the monitor for a year and see if there were problems. Having the monitor down skews the data. Please ask us questions.

June 11, 2015

No public comments

August 13, 2015

FOTC asked YRCAA to address global warming and climate change.

Larry Fendell (Citizen): Over the years we have had public comments during meetings. Sometimes we have question that arise during the meeting. Asks to have public comments moved to the end of the meeting.

Commissioner Elliott: Yakima County has comments at the beginning. Board meetings are business meetings. Should welcome questions ahead of time, take them under advisement and respond.

Dr. Jones: Could this take place in another setting?

Rainey Haws (Alternate for Jon Devaney) Agrees

Bill Lover: At City Council Meetings have sign in slips for agenda comments. Otherwise, there is a public comment period at the beginning.

Mayor Gawlick: Will continue as done in the past and address at next meeting.

Jim Dyjak (Citizen): At one time we could talk during study sessions. Now we cannot. All you get is what the agency wants you to hear. Item 8 – approval of SS air monitor – should be upgraded. Hopes you vote in favor. The public has fought hard for the monitor. Has worked with EPA.

Environmental Justice is big in the federal government. YRCAA should not be getting funds when the public is left out. I am pushing hard to stop federal funds until we get an EJ program.

The SS monitor was off for a week and no one noticed.

YRCAA needs the public and should realize it. Dyjak hand carried a grant request to EPA officials in Seattle. Work with the public.

Jan Whitefoot (Citizen): Hx of not working with the public. We had to go to the CDC to get air monitors that would tell us where the pollution is coming from. CDC sent a team, and they are in the second phase. The YRCAA Board has turned your backs on the public. YRCAA has refused to monitor for ammonia, hydrogen sulfide and VOCs. Many monitors are easy to program.

Dairy Air Score Cards – Lots of redactions on PRR information. They did not list the number of cows. No scientific measurement of the pollutants that the scoring says they measure. Why are the numbers of the cows not listed? If you don't know how many cows, how do you know how much ammonia or hydrogen sulfide? Does YRCAA measure the pH in manure piles and lagoons? She shows cards with major redactions.

Director Pruitt: If there is reaction RCW 70.94.205 provides for redaction. Dairies have to certify in writing that the information would adversely impact their business.

Mayor Gawlick: What about multiple facilities in one operation. Title V insists that the agency document all facilities under one operation as one operation. They are registered as one operation.

Director Pruitt: There is no reason to look at cow numbers.

Whitefoot disagrees. The pollutants are listed at the top.

Kathleen Rogers (Citizen): Shares an album of pictures and pictures from the previous night. There is no water applied to the dust from the pens. Drove around and took pictures of the neighborhood. There is no reason why people should have to breathe that air. Some dairies are improving. They have gone to expense and effort. Others have not. Instead, they buy more property and expand. Do not even take care of the facilities they have.

Mayor Gawlick re the photos: What part of the BMPs addresses dust control.

Director Pruitt: Most of the dust is PM or larger. You can water, cross fencing in which urine stops dust and compacts, additives. These practices are listed in the policy. I've never been a cow inspector, but I've been a building inspector. You have to manage dust.

Director Pruitt: Cites the law. Have to prove public health problems. The law really says that nuisance is OK. This is the major complaint we receive. We don't like the nuisance exemption. Obviously, the people that are being annoyed do not agree with what we are doing. I would not either. Describes limited resources.

Larry Fendell (Citizen): Dry year. Once a pollutant leaves your problem you are in violation of the law. There are laws that cover that also.

Genny DeRuyter (Dairywoman): Single family-owned farm. Clarifies how dairies operate. She has two milk barns classified by WSDA as two facilities. But they are contiguous. There are different methods of classification.

Jean Mendoza (Citizen): Who wants to do something about Global Warming?

No response.

Mendoza: That is sad. YRCAA is the most important agency re Global Warming. Presents a mini-lesson. In Europe, the amount of ammonia in the air has increased by 50% over 100 years. Here to ask YRCAA to get involved. Ask YRCAA to do this type of analysis. Here to volunteer to help.

September 10, 2015

Study Session – Comments and Appearance before the Board: Request to move the comment period to the latter part of the meeting.

Commissioner Elliott prefers keeping comments at the beginning.

Director Pruitt: Administrative Code Part A says people could engage with the board during action items. Fill out a request prior to the meeting. Was never implemented because the board changed. It is your choice. There are no rules.

Mayor Gawlick: Concerned about prolonging the discussion. Can be a problem.

Commissioner Elliott: Needs to be ahead of time in writing. No back and forth.

Devaney agrees.

Jones agrees.

Make a change. Comments during the public comment period. Consider changing Code A.

Second Item – Proposal from Jean Mendoza. Commissioner has not heard from staff. Postpone to next meeting. Pruitt – needs to look at from an engineering viewpoint and also from an administrative viewpoint. They are dissimilar.

Director Pruitt comments on paper. Lots of works. Large body of information. Does not fit into any of their work programs. Are some disagreements. “Nitrogen is not an air pollutant. It is not even an air contaminant. It can become an air contaminant.” “Our atmosphere is extremely durable, and resilient.” “We need to deal with pollution one pollutant at a time.” YRCAA can ask the DOH to discuss asthma and health problems. We are not health officials. We use advice from others. This is a request from FOTC asking YRCAA to:

1. Analyze impact of agriculture on air quality – Ecology does that.
2. Analyze impact of wet and dry deposition of ammonia – We are not going to do that.
3. Estimate costs and benefits from PM 2.5 and Ammonia with respect to public health – We are not going to do that.
4. Seek funding for research and mitigation projects – Yes, absolutely.
5. Inform outside researchers and agencies about the unique characteristics of the Yakima Valley – If you want us to do that, we can.

6. Discuss the ways that pollution impacts life in the Yakima Valley – Yes, absolutely
7. Read and consider the document “Hidden Costs of Agriculture” by Harvard scientists Paulot and Jacob – Yes. We have read it and do not disagree. But we are not economists and do not pretend to be.
8. Inform decision makers that lung health is not addressed in the Yakima Valley in spite of the fact that we have the worst air in the state. – That is an opinion.
9. Impose appropriate regulations to control Yakima Valley air pollution – YRCAA disagrees with statements.

Will address at next meeting.

Regular Meeting

Kathleen Rogers (Citizen): Wrote a letter to the editor regarding dust from dairies. “It seems to me there ought to be a conscience there of taking care of their pen dirt when there is already an air issue.” They should have been out there with some water. Question about Mr. Pruitt’s answer last month about how dairies chose how to deal with pen dirt. What does YRCAA do if they make poor choices.

Jean Mendoza (Citizen): Thank you for reading my request. There is a strong connection between air and water. Sometimes when you decrease water pollution there is increased air pollution. I am here to volunteer my skills and work. At the meeting for the Integrated Plan yesterday people acknowledged Global Warming. I want to help.

October 8, 2015

No public comment

November 11, 2015

Devaney & Jones present. No Quorum.

Kathleen Rogers (Citizen): Urgency of air pollution in her neighborhood.

Larry Fendell (Citizen): Can vouch for the bad air quality last night. Poop sprinklers are still going. Lots of manure that has not been incorporated into the ground. Air quality is worse.

December 10, 2015

Larry Fendell (Citizen): Four months ago I asked for public comments to be moved from the beginning to the end of the meeting. Bringing up the request again.

Commissioner Elliott thought it was discussed and agreed to leave it as it was.

Dr. Jones agrees.

Fendell – cannot bring additional information that disagrees with the staff at the meeting.

Dr. Jones – Was discussed and agreed to leave it as it was.

Jon Devaney – Move it to a future agenda item when Director Pruitt returns.

Mayor Gawlick – Put it on a future agenda.

We've had burn bans for some time, but manure is still being spread. If you can't burn wood stoves people should not be spreading manure.

Mayor Gawlick – Put it on a future agenda?

Fendell – Future agenda.

Jim Dyjak (Citizen):

Example – Item 8 Budget Revision. Suppose I have a question after the report? In order to ask I have to come back next month. It is hard to ask an agenda question if you don't know what people are going to say.

Where does the citizen award program stand?

The citizen representative on the board is always from industry. This agency is corrupt. The agency is discriminating against the public.

Dr. Tahat: Not sure about the citizen award?

Mayor Gawlick: The accusation of corruption is offensive to me. I have taken my job very seriously and have worked with several of the staff members. The things that I have seen do not substantiate the allegations.

Dyjak: You have done an outstanding job. From Day One when the Dairy Program began, citizens could not participate. When is the Five Year Strategic Plan coming back?

Commissioner Elliott: It was tabled. Will not come back.

Dyjak: Where is the enforcement on business during burn bans. Why only private citizens? There is discrimination.

Kathleen Rogers (Citizen): Sent a letter. Received an answer from Nancy Helms. Dr. Catherine Karr is doing health studies. EPA is working on the problem. Hoping the CDC will provide useful information. Thanks Mayor Gawlick for his hard work.

Steve George (Yakima Dairy Federation): Clarification on the YHR article by Dr. Seeman. He supported some valid studies.

January 14, 2016

Jean Mendoza (Citizen): YRCAA is the only agency with the responsibility of protecting public health re air quality. One method is education re risk factors. Uses the media. Last week there was an article in the Toppenish Review Independent. Quotes the YRCAA. Says ammonia emissions are insignificant. This is inaccurate information. Review Independent said the article was approved by the YRCAA. Shared U of W research from November 2015 in the LYV re asthmatic children. Article talks about ammonia in the LYV. Found a relationship. When ammonia levels rise the children's respiratory function decreases. The closer to dairies, the more ammonia. People in the workplace are expected to tolerate higher levels of pollution than young children. Hopes the board will direct YRCAA staff to request a correction to the newspaper.

Kathleen Rogers (Citizens): Agrees with Mendoza. Received a report from Dr. Wasserman from DOH about asthma in Yakima County. Last year the air in my home was intolerable. Begs her neighbors to do something. Too many calls on such a small area. There is more than smoke in the air.

Jim Dyjak (Citizen); Item 9. The chart on PM 2.5. The monitor was down for a week. We had the same problem last year. Does it take a week to change a battery? Dec 27 to 30, the monitor was off again, during a peak of pollution. Dr. Seeman was talking about farms, not CAFOs. On page 13, tables 13 & 14. Who is the QA person? If no evaluation was performed, how do you get valid data?

March 16, 2016

Kathleen Rogers (Citizen): Impact on her health last week. In spite of promises, her neighbor began stockpiling manure across the road from her. Nothing he could do because of the wet winter, he said. They have no other place to use. I begged him not to place manure there.

Dr. Tahat, you can come to my house any time and test the air. She has asked to join inspections. No one every invited her.

Jean Mendoza (Citizen): Talks about NAEM Study in the LYV by WSU. Studied Hydrogen Sulfide. Average level of hydrogen sulfide in the ambient air was high. Some states do regulate it. Levels in the study were above regulatory limits in California and Minnesota. In Minnesota the state sanctioned a dairy for hydrogen sulfide.

WA state has a law that regulates toxic air substances and the air in this study exceeded WA regulatory limits.

According to Regulation 1, if a business emits more than 40 tons per year of VOC, they must get a permit. According to the NAEM Study LYV dairies emit > 40 tons.

Jan Whitefoot (Citizen): Since yesterday people in Harrah are getting sick. Has been coming to meetings for ten years. Sees no attention to public health. Only cares about industry. Talks about

Ecology fines at the Wallula Feedlot. YRCAA is supposed to be doing this. If YRCAA cannot do this, you need to step down.

Larry Fendell (Citizen): Recalls smudging. Was involved in moving away from that practice. This problem went away. That problem lasted one month out of the year. The dairy problem lasts all year long. Talks about inability to respond to misstatements until the next month. Talks about spraying manure during inversions.

Jim Dyjak (Citizen): When you started the AQMP for dairies, Director insisted it could be enforced. A few meetings ago Director Pruitt said it could not be enforced. In this newspaper article Hasan says it can be enforced. Which is it? If they are only going to inspect dairies with a D or below, this is just a money-making project. No inspection but we will take your money. Where is the report and evaluation? Where is the baseline? Need to measure what is off the dairies. Come to my yard. I have told you that many times. YRCAA needs to make money so they can get their pay raises and guaranteed bonuses.

April 14, 2016

Mayor Norm Childress from Grandview joins the board.

Kathleen Rogers (Citizen): Several years later expressing disappointment. This is her sixth year coming to YRCAA meetings and making comments. Had hoped that things would change. Maybe a little bit. Last year was one of the most horrific. Doesn't expect anything better this year. Her neighbor is turning a green field into a compost area. Doesn't know how some neighbors survive the stench. Disappointed that there are no handheld monitors. Director Pruitt asked her to organize neighbors to put together a grant application for handheld monitors and bring it to the board. Buying out your neighbors is not a solution. I am not going to sell. I've been in my home for 35 years. Asking for board's help.

Jean Mendoza (Citizen): Correction to last meeting. Dr. Tahat said that a study was a snapshot in time. Actually, it was a two-year study. There was an article in the Toppenish Review and the Yakima Times saying there is no danger to public health from ammonia emissions from Yakima dairies. Publisher said the article was endorsed by YRCAA. It is a bad policy for the agency to deny health hazards. The research shows that there is a health hazard. I presented this information to the board in January and Commissioner Elliott said he would look into it. I haven't heard a response since then.

Jan Whitefoot (Citizen): Clarification re what she said last month. Why doesn't YRCAA address fugitive dust the way that Ecology does in Wallula. YRCAA has refused to implement enforcement against dairies as the law says they should. A local agency cannot institute less restrictive rules than the state. Meeting after meeting we come here and you guys have turned your backs on us. Linda Dyjak has been reporting the DeVries dairy to YRCAA for 15 years. Air quality is not improving. It is YRCAA's legal responsibility to do something. Questions re which monitors are used for determining attainment/non-attainment. You have purposefully turned your

backs on the people of the Yakima Valley. People cannot sit in their own back yards, but YRCAA gives dairies high scores.

Larry Fendell (Citizen): I'm going to sound like a broken record. When the people ask about something it is discussed behind closed doors. This is not a public meeting. If you have three board members together that is a public meeting. Things are getting worse. Who gets marked down for all the manure on the roads in the LYV? Air quality is not getting better. Don't think that anyone who lives there believes the statements about improved air quality. Let's actually do something or save the \$1.2 million and let Ecology take over.

Steve George (Dairy Federation): We discuss with what has been said. We feel that the dairy industry has stepped up to the plate to work with the YRCAA. Guidelines were put together by professionals in the field. I looked into the DeVries Dairy. YRCAA said there were no violations. Tom DeVries does everything he can. His dairy is a showcase dairy. There were no obnoxious odors when I was out there last Friday. I know that YRCAA went out there last Friday and did not find the conditions that these people describe. They make these claims that are not substantiated. In regard to the claims that there are health issues, WSU and others have done studies on dairies. We have provided the information to staff. They have not found health issues directly associated with the dairies. I don't know where this is coming from. The dairies are willing to come to the table.

Sandy Braden (Citizen): Happy to take Mr. George to the LYV when odors are high. Why is Dr. Jones on the board, considering that he is a dairy nutrition consultant? He is here in a position of decision making while he has financial ties to dairies.

August 11, 2016

Study Session – Process for Selecting Next Executive Director

Jean Mendoza (Citizen): Asks the board to add a member of the community to the search committee. Be aware of public health related to air quality. YHD is seriously underfunded. YHD cannot even send a representative to YRCAA work groups. Asks the board to find a director with knowledge about public health. Asks the board to add Jim Dyjak to the search committee.

Jim Dyjak (Citizen): Why is there no emergency back-up for the director? What if he is killed in an auto accident? Most clean air agencies in this state have a director who is an environmental attorney. Let's make sure you hire a director with the educational qualifications. Avoid the good old boy system. Do they have the background, the knowledge, the people skills?

Sandy Braden (Citizen): Do you have any information from the Attorney General's office based on complaint re Dr. Jones conflict of interest?

Chairman Jon Devaney: Still awaiting an AG opinion. Will be asking YRCAA attorney for an opinion.

Braden: Has called the AG office to learn whether they have received a complaint. They said they have received no complaint. In essence, the supposed complaint has not reached them. Braden submitted her own complaint. Received confirmation.

Chairman Devaney; YRCAA submitted it as a general request, not a complaint.

Braden: Asked if there was a record of anything coming from Rep. Johnson. She will share her data with the chair.

Steve George (Yakima Dairy Federation): In regard to the selection committee. If you are going to open it up to persons other than the board, then please include someone from the regulated community.

Kathleen Rogers (Citizen): Reiterates what she has said before. Need someone from the public on the search committee.

December 8, 2016

Study Session for Proposed Ammonia Project

YRCAA presented a proposed ammonia study. Prepared by staff after conversations with Dyjak, Mendoza & Rogers. To assess the contribution of ammonia to aerosol emissions inventory. Suggested use of National Ammonia Program methods.

Proposed: Four sites, two in upper valley, two in LYV.

“will provide YRCAA with a better estimate of nitrogen inputs to the Yakima County airshed and a better understanding of the county’s emission inventory.”

Proposed Budget: \$14,400.44

Questions:

Costs? Come from profits from NOC or penalties. Those are discretionary funds. Absorbable.

Will establish additional baseline data? Yes.

Will not tell us anything about sources? Yes.

What will the decision tree look like? What would the board’s actions be after data is collected?

Answer: What we are trying to find out is how much ammonia is in the ambient air and how it contributes to the 25% of PM 2.5 in the UYV air and 33% of PM 2.5 in the LYV. Long term that might point to methods for reduction in the winter of PM 2.5. Might lead to changes in the YRCAA PM 2.5 Advance Program that we submit and change every year. There is no National Ambient Air Quality Standard for ammonia.

Dr. Jones: Disturbed by the phrase, “it is hoped”. Did you have a thesis or hypothesis for this study?

It doesn’t appear like there is randomization for sampling. This biases the study from the beginning.

Commissioner Elliott: How did you arrive at these four locations?

Dr. Tahat: About 3 years ago we submitted a grant for half a million dollars. There would have been 20 sites.

In this case, as far as I am concerned, ammonia is going to exist whether it is in an urban area or a rural area. No question. It is really a matter of time, temperature and humidity for contribution of PM 2.5. There are several ammonia sources in addition to dairies. Year long study will give you an idea of how much ammonia we have. It could come from fertilizer, or from other sources.

The objective, as far as I am concerned, is to say how much ammonia is in the lower and the upper valley. We can do some modeling eventually. Take those numbers and do some modeling county-wide.

Dr. Jones: Is there any agency policy about doing sampling on private property versus public property?

No.

Dr. Jones: So the YAWNS said that 97% of ammonia comes from agriculture and dairy was 94% of that. That’s really, really high. I’m suspicious of that number. Hristov studies estimated that only 50% of ammonia comes from agricultural operations.

Dr. Tahat: I don’t remember that number. If that number is true, I would also question that number.

Dr. Jones: If we know that ammonia is not the driver of PM 2.5, why do we need to measure it in the first place?

Dr. Tahat: We are talking about the primary source and the secondary source. Regarding secondary you are talking about the NOx, part of the combustion process.

Dr. Jones: But you are not going to get PM 2.5 unless you have the NOx. As long as you have the NOx available it is going to create aerosol nitrates.

Dr. Tahat: If you look at the ammonia by itself, then you can look at other reduction strategies. Going back to the National Academy of Science paper, either you are going to wait for the emission factors, or you measure. That is the dilemma, how much is there. We know it is there, but we don’t know how much.

The question we are being asked is, you don’t have the scientific data to show how much you reduce emissions with BMPs. With the data you can implement some modeling and develop control strategies.

In this agency we have never had the chance to say how much ammonia is in the air. Even though it is limited, I don't believe it is a bad idea.

Dr. Jones: To me it is like wetting your finger and sticking it in the air and saying, OK the wind is blowing. I don't see how you are going to come up with any definitive numbers.

Dr. Jones: Is there any approved method accepted across the United States for ammonia sampling?

Dr. Tahat: There are several. There is a lot. But you have got to look at the budget and how much you can do.

Keith Hurley: Initially we had two sites. I talked with Dr. Lehman at the national monitoring lab in Illinois and he said it would be better to have four sites. What you really need is a large array of sites.

Dr. Jones: What you are telling me is what you will get will be a number. It won't be worth a lot.

Mayor Childress: With the lack of a national standard, do you guys have an idea, what will you use as a baseline to tell us, this is a lot of ammonia, or this is not a lot of ammonia?

Dr. Tahat: What we have right now is the YAWNS and the subsequent study.

Jon Devaney: My understanding is that we will have the opportunity to question staff further as we need to.

Regular Meeting

Jean Mendoza (Citizen): Comment on ammonia project. No NAAQs. The CDC does have standards for chronic exposure. The U of W has studied asthmatic children in the LYV. At least three board members are presumed to have the public interests at heart. Please put public health at the top of your agenda as you think about this study.

Jim Dyjak (Citizen): Now if you have some numbers to show ammonia is here, it may give us data to get more grants. If you have the numbers, it may make a lot of sense to the people holding the purse strings.

Sandy Braden (Citizen): Back again for the eighth month. Have you heard from the AG's office about my complaint that Dr. Jones has a conflict of interest?

Board Chair Jon Devaney: I have not.

Kathleen Rogers (Citizen): There is nothing like getting your hopes up about something being done and then see someone on the board squelch it. We want monitoring because our dedication to this program has gone on for a decade or more. We don't come up here for our jollies. We come here because of what is going on in our homes. It feels like Dr. Jones is putting the industry ahead of the citizens. We have been battling YRCAA to get attention for many, many

years. And it is here. We are finally going to get something that will tell us what we are seeing and smelling and feeling.

Steve George (Dairy Federation): Has written comments that he will provide to staff. Will give a summary. We contacted Dr. Pius Ndgwa earlier this year because this is the first time this has come up about how ammonia emissions affect the air. I'm going to read an excerpt. Dr. Ndgwa says, "Air quality in Yakima gets worse in winter months from December to February when too many residents keep warm with wood burning stoves that when blended with vehicle emissions bring significant air quality challenges to the valley. Regional Clean Air Authority continues to work on improving air quality with local residents and businesses including farms. Although the research reveals small amounts of ammonia emissions from farms, these emissions are insignificant and do not pose an overall risk to human health."

States that research shows low levels of ammonia at sites outside dairy barns. States levels are below levels set by OSHA and NIOSH

So, a lot of the stuff has already been addressed. For the record, the dairy industry does not support this project as proposed. It is too cursory without enough depth. It targets dairy producers when there are other sources of ammonia. These sites are not random. They are biased.

The government is providing services to two chronic dairy complainers who have demonstrated that their complaints are frivolous, being used as harassment, and, according to agency staff that I have had conversations with, wasting public resources.

The dairy industry has already stepped up. We are in our third year of a mandatory dairy air emission program.

Jim Dyjak: I'm going to rebut that. He just gave you a false statement, that all the complaints have never been verified at my house. Do you know why? Not one person from this agency in sixteen years has ever been to my house. Not one. When you report something on Monday and they might come out a week later, it ain't going to be there. The study he cites was done inside the barns. Dr. Pius is using an assumption that the drift is less. This study will show whether it is there or not. I resent being told my complaints are wrong when no (investigators) have ever been to my house.

Larry Fendell (Citizen): All the testing has been done on dairies. The neighbors really don't care what is on the dairy. We care about what comes across the fenceline. We care about all the fields where they apply manure, don't disc it in, make two or three applications. The neighbors get to smell it for a month. So, let's be fair about this. He (Steve George) is a paid person who gives you half-truths. Too many of us live with this. We want to know what is coming over the fence. We want it reported.

January 12, 2017

Study Session to Interview Candidates for Executive Director

Regular Meeting

Sandy Braden (Citizen): This is my ninth month asking this question. Have you heard from the AGs office yet about my complaint about Dr. Jones presence on your board. I feel there is a conflict of interest.

Chairman Devaney: We have not heard from the AGs office. In the interim it has been the board's determination that there is not a conflict. We are acting according to our own counsel's advice in the interim.

Jim Dyjak (Citizen): Discussion about the ammonia study. Dr. Pius supports what the agency is doing. He supports what you propose to do. He gives them a study by Dr. Ndgwa on measuring odors from dairies. He outlines low cost equipment for measurement because sense of smell is variable from person to person. He provides a form for doing the studies.

If you look at an odor complaint from this agency, none of this information is on there and it is very critical – the wind, the temperature. When you look at a form this agency fills out it just says, I was there, there was no smell. It tells you nothing about it.

I doubt if anyone at this agency has ever had certified training for using your nose.

Board discussion of proposed ammonia project.

Devaney: There were questions about cost and methodology. Do you have answers? No.

What data points would be actionable? It could lead to raised expectations and public disappointment.

Commissioner Elliott: I think that questions remain and I'm not comfortable approving it today.

Dave Edler will get a further report for next month.

Devaney: We'd like to table this till a future meeting where some of those methodological questions can be addressed.

Dr. Jones: Mark, will you accept some written questions from the board? Yes

Devaney: I know there is a lot of public interest. Why don't you communicate with the public and try to get their questions?

February 1, 2017

Commissioner Ron Anderson replaces Commissioner Rand Elliott

Discussion of contract with Keith Hurley, the choice to head the YRCAA.

Regular meeting was cancelled.

March 9, 2017

Study Session – Proposed ammonia project – Bill Lover, Rainey Haas & Steve Jones present

Comments were solicited. Copies provided to the board.

Dr. Jones: With DOE inventory of ammonia why are we doing further study? > 8,000 tons for the county?

Dr. Tahat: Differentiates between ag and animal ag. Basically, ammonia comes from livestock. The purpose is to look at temporal and spatial distribution. We would like to know how much ammonia is available in the atmosphere by season. It is a stretch to say the ammonia by source is the same in the UYV and the LYV.

If we are out of attainment for PM 2.5, We have to look at every source. Without data we have to use the emission inventory.

Dr. Jones: Four sites will give enough information?

Dr. Tahat: Yes

Dr. Jones: I am still not sure the four measurements are sufficient.

Director Hurley: We are not doing this for the dairies. We are looking at ammonia. Don't have the resources to do more studies. We have had 9 exceedances in 2017 so far. In the past we had 2-3. This is due to more sampling. This is purely an exploratory study. We do see value.

Dr. Jones: Drs. Harrison and Leytem said more data is needed.

Director Hurley agrees.

Bill Lover: Hear from the audience. Haas & Jones say No.

Regular Meeting.

Jim Dyjak (Citizens): Request removal of ammonia project under the fairness doctrine. Two board members have not participated in the ammonia discussions.

Public comment

Sandy Braden (Citizen): Month 11 asking if they have heard about complaint that Dr. Jones clearly has financial ties to the dairy industry.

Bill Lover: Our chair has been following this. The agency has received no update.

Rainey Haas: No information.

Kathleen Rogers (Citizen): Thanks Dr. Tahat and Director Hurley for presentations about ammonia studies. Last meeting was so difficult because her complaints were classified as frivolous. Don't vote today. Brought parents because they are also impacted. Dr. Jones does not

know the impact. Problems only began when the CAFO across the road from her began to grow. If the CAFOs are growing then we need to let YRCAA measure the air quality.

Jim Dyjak (Citizen): Questions about the community forum, item 12. Dan DeGroot said that economic incentives reduce emissions. Where is the documentation. The summary says the odor intensity is decreased. Where is the documentation?

Director Hurley: There was no documentation. That was his opinion.

Dyjak: Why not use the EPCRA calculations for animal ag?

Does anyone know if they have even been required to provide this information?

Keith Sparrow (Citizen): Lives in Grandview Sunnyside. Goes for walks in the evening. Sees high clouds of dust from cows that spread for several miles. The smells are in my house. I think the air monitors would show the problem before it gets worse. If the money is there, why not?

Jean Mendoza (Citizen): Provides handouts. Letter to YRCAA re conflict of interest. Response to Chairman Devaney's interim opinion. Formal request for date, time and minutes for the meeting where that decision was made. Mr. Cullier's letter to the board cites a requirement for board members to recuse themselves from discussion and voting on projects in which they have a financial interest. Requests that Dr. Jones not vote on the ammonia project.

Dr. Jones: Took offense when Mr. Fendell referred to PhD as piled higher and deeper.

Larry Fendell (Citizen): Comments referred to submitted letters by PhDs. When people talk about dust, that is not dirt. Let's call it what it is.

Director's Report:

Proposal to eliminate division reports at board meetings.

Ammonia Project – Table till next meeting? Yes.

April 13, 2017

Study Session for Budget

Regular Meeting

Jim Dyjak (Citizen): Approve ammonia research. On AQMP there were lots of questions by the public and we were blown away. Now the public wants research and industry opposes. The public could not attend dairy meetings. Dr. Jones was not a board member at that time and he attended. We need to work together. There has never been an actual citizen on the board.

He applied to be on the YRCAA board and was refused because he stated he would not vote on dairy issues. Then they appointed someone from the industry.

Public comments at the community forums do not reach the board. Why should we go to a meeting if it makes no difference? We are busy just like you.

When the public brought information that disagrees with information presented it is cut out. Now we cannot comment in a timely manner. If I have been slandered at a meeting (by Steve George) I will defend myself. Start working with the public, not just industry.

Devaney: You have spoken for five minutes.

Dyjak wraps up.

Kathleen Rogers (Citizen): Asked classmates about their experiences when they come back home for a class reunion. Several submitted comments. She reads five. She has fifteen. Please vote for ammonia study.

Sandy Braden (Citizen): Month eleven or twelve. Have you heard from the AG's office re conflict of interest?

Devaney: Yes. Will discuss during the agenda. The short answer is an unequivocal No. There are details.

Braden: She received a letter and reads point by point. No. 2 & 3 are in fact maybe. If there is a conflict of interest the member may not participate or vote on related issues. Will the board allow Dr. Jones a vote on the ammonia project?

Larry Fendell (Citizen): In the past things, when he was young, were discussed openly. There were heated discussions among the board members. Have not seen that for a long time. Appears that some things have been discussed outside of public meetings. I think you need to watch what is going on. I'd like to see some dissent. Five people do not agree all the time.

We want to know what is happening on our property. This is the agency's job.

Director Hurley suggests a study session on conflict of interest.

Devaney asks attorney Gary Cuillier if he sees anything in the AG letter that impacts voting at this meeting.

Cuillier: If Dr. Jones earns more than 20% of his income from an industry, he probably should excuse himself from a quasi-judicial hearing. Getting to the legislative issues, it is difficult, because legislators have agendas & constituents. Cuillier goes by the 2016 MRSC book, Knowing the Territory. They look at financial interest. If someone were to be influenced because of their customers, then there is a conflict of interest. The other conflict is if the agency contracts with someone that the board members works with. The other conflict is if the board member feels obligated to disclose confidential information. Sharing confidential information poses a conflict of interest. Doesn't really say that every legislative matter involves a conflict of interest. The AG letter leaves that up in the air.

Does not know about a conflict with the AQMP.

Plan to ask MRSC to present a study session.

Devaney: Re annual adoption of a fee schedule. Has impacted clients.

Cuillier: Schedules are presented by staff. Does not originate with the board. Does not see a financial gain or loss from voting on this issue.

Director: Letter from Steve George re Public Comments at Board Meetings – will formulate guidelines for public comments.

Ammonia Project

Dr. Jones believes he can be fair and impartial but asks for the board to consider.

Bill Lover – At City of Yakima they don't vote on anything without time to study the issue. The Las Vegas rule.

Devaney, the Las Vegas rule has been met.

Childress – I don't intend to make a motion. If Steve says he can be impartial I think he can be impartial.

Lover – To me there are citizens who do not want Jones to vote and they are using the conflict of interest issue to keep him from voting. Do we settle this before voting on ammonia.

Devaney further discussion on the Draft Ammonia Project.

Mayor Childress: Let's presuppose that we do this and get the results. What are the ramifications of the results? Does the agency have enforcement action as a result? Do you have sanctions?

Director Hurley: First of all, this is ammonia and there no NAAQ standards so there is no enforcement. The study will also educate us on the life cycle of ammonia in the valley. I don't see any enforcement.

Motion to take action. Anderson moves to adopt. Second – Childress. Discussion.

Commissioner Anderson: It is a study. I feel we need to have a study so we have a basis for any future actions and determinations.

Lover asks for staff input on the need.

Hurley: relates to non-attainment. May help reduce precursors.

Childress: No standards. I've been in the valley for close to 60 years. I lived across the road from the Monson feedlot. I understand. I smell it in Grandview. I don't know what we are going to do with the information. So, what do we do? Now we know the air stinks and there is dust. There has to be an end result.

Childress: Is ammonia a public health risk? Is there a danger to the public?

Hurley: What if we go through this and we see medium levels and we see something that says we need more monitors?

Dr. Jones: In March, the highest PM 2.5 was around 8. Can you directly relate any reading for ammonia to PM 2.5?

No.

Childress: If we do this it will just get our foot in the door. We'll have people coming to us saying there is ammonia in the air, what are you going to do?

Devaney: If we are solely looking at ambient and monitoring of regulated pollutants, why do we need four sites.

Hurley: I increased the sites at the suggestions of the AMON people.

Devaney: What is the cost difference between two and four sites?

Hurley: Roughly half.

Anderson votes in favor. Others, including Jones, vote no.

May 11, 2017

Jean Mendoza (Citizen): Tried to attend the public forum in April. Jumped through all the hoops she knew about. Was told to go home and come back in August.

Since the YRCAA is not doing an ammonia studies, hopes YRCAA will use the ammonia studies already performed. U of W found levels up to 200 times the state average. Some samples above the minimum risk level for ammonia. Shared MRLs for ammonia from the CDC. If YRCAA cannot do your own studies, need to use the best available information.

Re Ag advisory committee. Last month's report sounded like everything was going well. Disagrees. YRCAA shared no data at the meeting. No data from the AQMP. The only evidence at the meeting was testimony from two people who live close to dairies. In one home a woman's son came to her and said he could not breathe.

April 2016 board meeting. Last report in 2014. Beginning in 2015 dairies with grade D would be visited every 6 months, grade C dairies would be visited every year. This has not happened.

August 10, 2017

Study Session on Ethics and Conflict of Interest

General Session

Jean Mendoza (Citizen): March of this year AG task force met. Later Director presented a review of the AQMP for dairies. I sent you a disagreement with Director Hurley. Will send the disagreement again and requests a response.

Kathleen Rogers (Citizen): In July she took videos of air in her area. She will send a copy. The air in Grandview/Sunnyside is horrid and she will persist until they do something.

Board made changes to the code regarding public comments.

September 14, 2017

Sandy Braden (Citizen): A year and a half ago she asked about conflict of interest re Dr. Steven Jones. Listened to Jim Daugherty from MRCS. No definitive answer whether there was a problem here, whether Dr. Jones is allowed to vote on issues related to dairies.

Dr. Jones is also supposed to address the general public interests

Dr. Jones Mr. Chairman, I have a point of order – Public comments are supposed to address an agenda matter.

Braden: The fact that we were supposed to, according to Mr. Cuillier he brought this gentleman in to address . . . cut off

Childress – that item is not on today's agenda.

Hurley – You are absolutely correct. that item is not on the agenda. Her characterization is incorrect. It is wrong. It's off. There were three opinions.

Braden: Which were two maybes and a no

Hurley – No, it is pretty clear. Much more . . .

Braden: OK, may I finish. Is this something new, that I'm not aware of. People have brought up things before . .

Lover: The first three lines state. . .

Hurley: The admin code is quite clear and was discussed at the last meeting. There is a process now for people to submit comments to me ahead of time.

Braden disagrees.

Lover: He has not ruled on a point of order.

Childress: This board has put things to rest. If you want to bring it to us . . . I don't think this board has any problem with Dr. Jones serving on the board. I think we put this issue to rest.

Braden: You see no problem with Dr. Jones voting on air quality issues related to dairies?

Childress: I personally don't. You would have to go to the board members individually. Case by case. If a conflict arises we will address it.

Lover: Point of order. We have not discussed the point of order.

Childress: You are correct. Her comments addressed something not on the agenda. If you want to continue this submit comments ahead of time.

Braden: Is this something new.

Hurley: The admin code was discussed last month.

Braden: At an open public meeting why is the door locked?

Don Lyon (Citizen): I don't know whether what I want to talk about is on the agenda. I was invited to this meeting by Commissioner Ron Anderson. . . I'm here and I would like to speak.

Childress: What item are you speaking about.

Lyon: I am speaking on clean air . . begins

Jones: Point of Order is it on the agenda

Childress: I don't know

Lover: We have public comments on the agenda. Should we suspend the rules.

Childress: I would entertain a motion to suspend the rules until we get this sorted out.

Jones moves, Second.

Discussion follows. Passes. Will allow Ms. Braden to restate her comments.

Braden cites definition of open public meeting.

Lyon: I'm just trying to get some information out here. Up until 1994 summers were always clean and pristine. We have choices but I think we can make better ones.

The clean air authority does some good things. But . . two weeks ago I called the YRCAA when it was so smoky I could not see Ahtanum Ridge from my home north of Selah. There was no burn ban n effect.

Burn permits in this county are just a source of revenue. Many are not following permits. Some homeowners burn large piles on the weekend when the YRCAA is closed. Some burn large amounts of unpermitted materials.

When are we supposed to get a breath of fresh air around here?

Except for agriculture, outdoor burning should be outlawed countywide – my opinion.

Easter Sunday, I came out of the house. It was so smoky I thought I was in the forest fires of '94. Two houses north of me was a pile burning. Neighbor was burning. He said, "I've got a burn permit". He didn't follow it.

I've had heart palpitations due to bad air. How many people are dying because of the air.

Jean Mendoza (Citizen): "I did attempt to get something on the agenda." Her request is not on the agenda. I want to submit a petition. Can you tell me your preferred method?

Childress, Hurley – don't know

Mendoza: I'm just asking.

Hurley: I would have to research.

Childress: Do you have copies. Go ahead. I don't have a problem.

Mendoza: How soon will you get back to me?

Childress: I don't know.

Hurley: I will have to take a look at the Clean Air Act.

Mendoza: Will you give me time to talk at the October meeting?

Childress: Yes

Mendoza: Will you give me more than three minutes?

More

Can present at a study session.

Mendoza: It is a legal petition from the citizens so I hope you will take it seriously.

Francisco Maltos (Citizen): I want you to think about something. Global warming is for real. Suggest that the YRCAA discuss the benefits of inviting more people to participate, specifically the young people. They are the future and, unfortunately, they have to deal with global warming and climate change. If you set an example by being proactive by trying to engage and think about this issue.

October 12, 2017

Study Petition to Ban Spraying of Manure during Burn Bans

CARE and FOTC asked for the ban.

Director Hurley presents. April 20, 2013 the same petition was presented. This is the second submission. Process ceased after public meetings.

Hurley recommends rejection of petition. No evidence of change. Conflicts with RCW 90.64 and RCW 90.48. Laurie Crowe from SYCD says permit processes have emergency application

provisions. Cites the agricultural exemption. There is no evidence that spraying of manure during burn bans endangers public health. Such a rule would impact many farmers.

Adds a letter from Gary Cuillier. Finds no impediments to deny or initiate rule making. A discretionary legislative policy decision.

Jean Mendoza (Petitioner): Mr. Hurley spent a great deal of time investigating from the perspective of the dairy industry and no time on public health.

No one should be adding pollutants to the ambient air when it is unhealthy. Intentionally adding pollutants to the air when it is unhealthy is unwise.

Rebuttal of five recommendations.

- RCW 90.64 does not address air issues. DNMA is for water.
- Most dairies are not covered by NPDES permits and these only address water.
- Overtopping should only be an emergency situation. Don't see why this is a valid reason for not protecting public health.
- Local regulations cannot be less stringent than state. Reads ag exemption for YRCAA. Reads state exemption – more information “unless the practice has a substantial adverse effect on public health and safety.”
- It is incorrect to say that spraying does not impact public health.
- Section 2.03 A of the SIP – no false statements
- Research shows increased morbidity and mortality with increased pollution.
- There is no proof that farmers would substitute synthetic fertilizers for manures.
- Compares inconvenience to dairies to inconvenience when orchardist cannot burn trees at will.
- Director did not tell us how many lbs. of ammonia in fertilizers are applied and how many lbs. of manure are applied.
- Manures are aerosolized and this increases air pollution.

People of the LYV are more likely to be poor and people of color.

Most manure is spread in a 271 square mile area.

Know the impact of disease related to PM 2.5. Know the percentage of PM 2.5 in the LYV from ammonium nitrate.

Talks about reduced life expectancy and spread of infectious organisms when the air is stagnant.

No questions.

Devaney: This issue is appropriate for the public comment period.

Regular Meeting

Review of Administrative Code Part A, Public Comments

Director Hurley: Letter from Yakima Valley Dairy Federation – concerns with conduct of board meetings. Resolution 22.11.

During the May board meeting the board requested procedures for conduct of public comment period.

Page 5-10. Agenda posted on YRCAA . . . Requires the public to submit comments ahead of time for approval.

Public comment period on page 9-10. Must identify agenda item to be addressed. < three minutes per person.

Will introduce a change to the format for agendas.

Mayor Childress: I voted for it, but I don't like it. There needs to be a way for people from the street to address us. There needs to be civility and decorum. We need a way for people to come to the podium and say their piece.

Chairman Devaney: When there is back and forth, we are getting into an un-advertised discussion of policy.

Mr. Lover: I have always been in favor of public comment. Never too much, maybe too loud.

Devaney: You don't have to come to these meetings to interact with staff or board members.

Public Comments:

Jim Dyjak (Citizen): Comment section needs to be moved to the end of the meeting. It is hard to address items on the agenda until we have the opportunity to hear the presentations.

On the petition, if you go to the state website. There is a form that says, when you say no, you have to reply, say why and provide an alternate method.

None of the material Jean turns in to the agency is sent to the board. The dairy information is shared with the public and the board, but the board does not hear public health. Let's take a look at the documentation.

Devaney: We had issues with emails from the agency not being auto forwarded to our personal emails. At some point my workplace decided this was spam. Forwarded mails are flagged as spam by many systems. It was not intentionally not forwarded by staff.

Lover: There should have been a point of order called as soon as he started talking about the ED. Get in the habit of not allowing negative comments.

Childress: Also had trouble with emails. Has been rectified. You are correct. A lot of information did not reach us.

Larry Fendell (Citizen): Comment period should be moved to the end of the meeting. RE the petition, a burn ban is called because the air is unhealthy. If you ever drive by one of these fields at this time you know. This is in the dead of winter when artificial fertilizer is not spread. They spread manure because they need to get rid of the manure. There is a huge difference when they turn on the big guns in the evenings. There are 84,000 people in the LYV. People can't heat their homes during a burn ban. It seems idiotic that they can spray raw sewage during a burn ban.

Steve George (Dairy Federation); Re the petition:

- Discussion made it sound like the dairies are not regulated. Are the most regulated segment of ag in the state.
- We have the AQMP in place. All dairies are inspected by this agency.
- Nobody talks about the increase in population and the increase in vehicle traffic, the main contributor to pollution.
- There was a burn ban for 60 days last summer and that is during the growing season.
- Best practices are to spoon feed fertilizer to the plants a little at a time.
- "Dairy is second only to apple in Yakima County. Employee nearly 5,000 people. Over 90%, probably closer to 99% is of Hispanic origin. So, those people, I feel I represent, along with the 60 -70 farm owner families. Those people like their full time jobs, They like to buy their houses and their cars. The dairies are a huge employer of minorities and those guys like their jobs. We don't seem to see those health effects with the workers and their families that live on those farms."

I'd like to add to the public comment issue. Keith mentioned that the letter I wrote to the agency is in your file. I wrote that letter because I was tired of the type of conduct I was getting from other people who were making public comments.

I don't know where the comment came from that the dairy industry is running things, because I'm from the industry and I haven't talked to anyone.

Sandy Braden (Citizen): Doesn't claim to be a scientist. If your purpose as an agency is to guard the public health of this valley. When dairymen chose to spray manure into the air during a bad event, common sense says you are adding to the pollution.

November 9, 2017

Study Session re YRCAA Permit Program Revenue Analysis

No comments

December 14, 2017

No public comments

January 11, 2018

No video

February 8, 2018

No video

March 8, 2018

No public comments

April 12, 2018

Study Session re Legal Costs of Exposure for the AQMP for dairies

Director Hurley: December 9, 2011 the agency was sued by Citizens for Sustainable Development. Followed by \$120,000 settlement. Legal fees = \$60,000. Consequently developed Admin Code Part C.

Jan Whitefoot has sued the agency over public records access.

Started tracking PRR.

Annually 425 work hours fulfilling PRR. Dairy issues require more staff time and are more complex. Dairy centered PRRs are about 19%.

Two suits directly related to dairy PRRs. No estimate of future costs re PRR and lawsuits.

Legal costs are allocated under base operations, professional services.

PRR is spread over entire spectrum of YRCAA work.

Childress: What happened in 2011?

Violations of the Public Records act.

Could be a plethora of issues with the PRR. With the new law suit we are concerned with redactions.

Devaney: Understands that by collecting information YRCAA is a target for lawsuits against dairies.

Hurley: Some of the data in AQMP forms there is protected information. Have a duty to protect. On the flip side, there may have been a misunderstanding that anything they turn in was protected. The records open us up to legal liabilities.

Devaney recommends continuing the discussion at a later time. Provide guidelines that reduce emissions without collecting information that may contribute to litigation. Need to more fully explore their options.

Kay Funk: Are your records electronic.

Hurley: They are electronic. There are problems doing redactions electronically. There is some paper. Try to digitize where they can. YRCAA is a lean agency.

Devaney recommends that Hurley brings back more information.

General Meeting

No public comments

May 10, 2018

Study Session for Review of the 2018 Budget Summary and Proposed 2019 Budget

General Meeting

No public comments

June 14, 2018

Study Session to Review the 2019 Budget

General Meeting

Jean Mendoza (Citizen): YRCAA is responsible for implementing the federal CAA. Sent research regarding “manure irrigation”. A permit is required in Wisconsin. Sent the board related research. Looked only at bacterial infections. Three different bacteria – Salmonella, Campylobacteria and E-coli 0.157. Did find an increase in infections when manure is sprayed and spread.

How many people are allowed to get sick before we impose regulations on animal agriculture.

Summarized the research – zoonotic GI infections.

In Wisconsin manure spraying is prohibited within 500 feet of a home. Recommended that manure irrigation should not take place during inversions. Cites pages.

Devaney: Are the documents included in the Monthly Packet? Yes.

August 9, 2018

Study Session to Review the AQMP

Director Hurley: Presents an executive Memorandum. Vast majority of litigation risk relates to the documents collected. Impressive requirement to examine documents for PRRs. If they reduce the data in the collected documents reduces litigation risk.

Maintain the policy in current form.

Terminate in entirety.

Modify by reducing the

Terminate and publish as a resource guide.

Blend of strategies 3 & 4.

Anticipate a federal plan to estimate air emissions from animal ag that will require data collection, if animal emission factors are promulgated.

Devaney asks about conflict of interest.

Dr. Jones does not believe he has a conflict but steps out to avoid problems.

Hurley recommends rescinding the policy and making it a resource guide.

Calls Laurie Crowe from SYCD to add information.

Hurley: I don't know if she is a doctor or not. (In fact, Ms. Crowe does not even have a bachelor's degree).

Devaney: How would you use this document in the future?

Hurley: We would make it available on the website and to anyone who asks. We would continue to provide free consultation. A bookshelf reference.

Laurie Crowe: We (SYCD) gathers our own information gathered from other agencies. Each dairy has a nutrient management plan. Dairies are inspected by WSDA. There is a tool for

producers to evaluate their own properties. She is in the process of adding a web page on dairies. Partnering with YRCAA they could do a fantastic job.

Crowe: Dairy odor and dust has always been part of the nutrient management plans.

Anderson: Would you send out letters that say your web sites are linked. Could send letters to dairies.

Childress: Concerned about changing from a policy to guidelines. Takes the teeth out.

Hurley: Cannot enforce anyway.

Crowe: Most eastside producers are doing a really good job.

Childress: I've found that with any group you have bad apples.

Hurley: If we felt the need, we could always bring in WSDA.

Crowe: A lot of people do call them.

Devaney: How do we require other industries to pay a fee in anticipation of modeling?

Hurley: We don't require people to register for modeling. For ag do not have approved estimated emission factors. Nationwide do not. His opinion that the state will do this first.

Devaney suggests coming back during the regular board meeting.

Regular Meeting

Jean Mendoza (Citizen): More information regarding the dairy policy. Is part of a group looking at atmospheric deposition – wet and dry. The EPA does study atmospheric deposition of ammonia across the nation. There is a monitor in Twin Falls, Idaho. Similar to Yakima County. CDC says that anything > 25 ppm for eight hours is hazardous to human health. Left copies.

September 13, 2018

Study Session re Reducing Litigation Risks

Two proposed resolutions:

1. Simple Rescinding.
2. Maintain registration and publish AQMP as a resource guide.

For purposes of discussion. No action. Action in October.

Dr. Jones: Questions about distribution of BMPs. (Dr. Jones stepped out of this AQMP discussion in August)

Chair Devaney: Do we currently maintain lists of other sources?

Yes. What is different in this is when they pay a registration fee, they go through New Source Review.

Dr. Jones: If other clean air agencies wanted a dairy policy, they would have to get information from other agencies. Or gather the information themselves.

Childress: I assume the fee covers administration costs.

Hurley: \$124 per registration for a scaled down program – for two hours of work. For all sources it is \$423 normally.

Childress: Is there a problem with sharing information? Do you have interlocal agreements? Why do you need a PRR?

Hurley: No intergovernmental agreement with WSDA.

Dr. Jones: The registry would potentially be an inventory?

Hurley: Yes. It would be part of being a good air agency. Would provide a clearer description of the airshed.

Jones: How do CERCLA and EPCRA fit in?

Hurley: We want to be the best agency we can be. There is a recent court decision. CERCLA and EPCRA no longer required. But we owe it to the public to know what is happening in the airshed.

Decision in October.

General Meeting

Jean Mendoza (Citizen): Apology because she brought inaccurate information re Twin Falls. Math error.

Dept. of Ecology is readdressing standards for toxic air pollutants. Will attend meetings.

During unhealthy air days last month, dairies continued to spray manure into the air.

Devaney: Do we post the revision study to our website?

Hurley: Gives an overview. Will not be a complete rewrite. Dr. Tahat sits in on the meetings.

October 11, 2018

No public comments

Board votes to rescind the AQMP for dairies.

November 8, 2018

Study Session Review of Calendar 19 Fee Schedule

Regular Meeting

No public comments

January 10, 2019

No public comments

February 14, 2019

No public comments

March 14, 2019

Study Session to discuss public comments.

Director Hurley: Hx refresher. Took over as Director on February 17, 2017. Soon after the board approved changes to public comments.

Reviewed the community forum so items could be addressed that are not appropriate for the board.

Will make an addition to the policy today. Suggested addition. "The agenda is the business at hand." Comments by public commenters are to be directed to the board chair. Have heard from MRCS, Jim Dougherty - Recommend putting restriction on when public comments are allowed. Limit to matters on the agenda. Time limits are good.

Mayor Childress: I don't know that we should put on restrictions. If people read that we are having a meeting, come down and have an issue that they want to talk about, I don't think we should restrict it to agenda items only.

Dr. Jones: Items were being brought up that the agency had no control over. It got to be pretty frustrating for me personally listening to things we could not address.

Chair Devaney: We had issues brought up that tended to engage the board. We had un notice debates.

Commissioner Childress: I've presided over hundreds of meetings. These are lay people. I know you can get off topic, but people really don't understand. I can go both ways. I think people have a right to express their concerns. Maybe they will say something, and we can give them help.

Chair Devaney: I have not refused to hear a public comment. I don't think anyone else has done so.

Director Hurley: Parliamentary Rules govern. If we are going to suspend rules it takes 2/3 to do that by a motion and vote. Options:

- Suspend the rule for a certain meeting.
- Rewrite the rule, doesn't have to be an agenda item.

Childress: The rule says any item relevant to the business of the board, not an item on the agenda.

Devaney: My view is that when people have detailed information on a specific issue the board may not be prepared.

Childress: We could give people more than three minutes if they ask to be put on the agenda. Items should be for discussion with not action – avoids need to notify the public.

Dr. Jones: I think you will put a lot of pressure on the chair. There were some aggressive comments. Pressure on the chair to calm the public. The chair has to be able to cut off comments if they get out of bounds and that will be difficult. Needs to be something the agency can actually do something about.

Childress: I don't know that we can decide this until we give people the chance to speak.

Dr. Jones: I want people to address something that the board or the agency can actually work on and that is not what we had in the past.

Devaney: They could relate to the Director's report and agency operations. As chair I would interpret it broadly. I would relate it to the agenda and board activities.

Agree on no change and discretion of the chair.

Regular Meeting

Last Monday was a deadline for selection of a representative from the Small Cities. No nominations. Will have to start the process all over again. Not sure if he has the authority to call a meeting of the City Selections meeting. (Norm Childress, former Mayor of Grandview and rep to the YRCAA board, was elected to the Yakima County Comm

Commissioner Childress: I have had two people from the small cities ask and it appeared that the message is not being passed along.

Hurley: Don't know if the process is convening the City Selection Committee or starting communication for the third time. Will target June. We have met our obligations as far as the CAA goes by starting the process.

Sandy Braden (Citizen): Placed on the agenda for “Other Business”

Jean Mendoza (Citizen): Am I allowed to talk about the study session? Knows that people have asked to have public comments at the end of the meeting. Previously was a member of the AG task force and disagreed with Director Hurley’s summary of the meeting. Asked to be put on the next agenda to make corrections at the next meeting. Was not placed on the agenda. Emailed each of the board members. Asked them to let her know if they received the emails and there were no replies.

At a previous board member Board Member asked if private citizens could represent small cities. That is encoded in code A. That is an option. Please let the public know.

It is frustrating when private citizens come here month after month and feel that they are being stonewalled. This is a reason for anger.

Received a letter from Kirk Ellis. Hurley is in communications with the EPA Office of External Civil Rights.

Usually get 2-3 exceedances per year. May be more this year. One in 20 year event.

Sandy Braden: Clarification of the type of burn permits and enforcement methods if an inspection officer determines that the permit is not the correct one. Initially talked to Director Hurley at a community forum. Relates a case. Appears that someone used an incorrect permit for land clearing and there were no consequences.

April 11, 2019

Sandy Braden (Citizen): Addressed the board last month re enforcement of burn permits. Discussed at last month’s community forum which she missed. Asks what happened.

Chairman Devaney: Contents of meeting will be available on the YRCAA website.

May 9, 2019

Study Session to Address on Proposed FY 2020 YRCAA Budget.

Regular Meeting

No quorum

Jean Mendoza (Citizen): Study Session, Composition of the Board, and Inform about an Ammonia Study. Is that alright?

Yes

There is a law that the majority of the board members need to represent the public. Since January there has been a 50/50 split. Two are elected officials. Two are from the regulated community.

Re SIP policy. Asks the agency to follow its own guidelines when reviewing regulations. Shares problems with YRCAA Regulation 1, in place since 2003.

FOTC completed an ammonia study between Sunnyside and Grandview. Results show that on average the samples were above the Minimum Risk Level (MRL) for chronic exposure.

Why has the YRCAA gone from 11 FTEs to 10 FTEs? Gone from 3 inspectors to 2 inspectors. If either of the inspectors takes vacation, that leaves only one inspector to do the work. The cost for salaries and benefits has gone down but the cost per FTE has gone up.

Would like to hear what the YRCAA is doing about SIP.

How are raises determined? Who evaluates whether people reach their job goals?

Director Hurley: State of the Air 2019. Yakima is the sixth most polluted city in the nation for fine particulate matter. Previously was sixteenth. YRCAA attributes this to wildfires.

WA Dept response to FOTC for requested review of YRCAA.

Small City rep. Receiving nominations and will move to balloting portion.

June 13, 2019

Mayor Jose Trevino from Granger joins the board.

Jean Mendoza (Citizen): Questions about pages 11 & 12. Numbers don't agree.

Director Hurley: Probably a data entry error.

Testimony on Budget.

Jean Mendoza (Citizen): Sent an email re the budget to the agency and board members with questions. Received no answers. It is difficult to comment on a budget with so many unanswered questions.

Director Hurley: We are not required by law to respond. I looked at the comments and considered them. There is no requirement to respond. I believe she addressed them to board members. We can respond if you direct me to.

August 8, 2019

Jay Hester (Sunnyside Port District) Speaks about relocation of Ostrom's Mushrooms to Sunnyside. Experience with permitting has been exceptional.

Executive Session re Potential Litigation

September 12, 2019

No public comments

October 10, 2019

No public comments

November 14, 2019

No public comments

January 9, 2020

Vicki Baker replaces Norm Childress as County Commissioner

Jean Mendoza (Citizen): Ask for report on update to SIP revisions. Also, requests a report on how the agency is addressing risks from the composting of dead animals in Yakima County.

SIP will be addressed in March.

Composting of animal carcasses? Article in the YHR. More the purview of the YHD and WSDA. YRCAA visited sites, identified no adverse impacts. Have not identified any odor complaints specifically related to the compost. No air testing.

February 13, 2020

I'm Sandy Braden, Friends of Toppenish Creek. I have a question to Director Hurley. It concerns an observation I made earlier today about, I'd say about 20 acres, maybe 25 acres off of Washington and 64th. Its due north of what is the Work Release buildings, what used to be the Ahtanum Correctional Complex, and then at a diagonal from this portion of land is a large mobile home park, and there's housing all around. It appears they have taken the orchard out on that chunk of land and there are currently some huge, what I would consider huge, house sized piles of orchard trees that look like they are getting to be prepared to burn, and I was looking at my information on burn permits and that sort of thing, and it appears that sort of thing is a land clearing permit, but with that kind of burning there are certain restrictions, and one of them is a population concern, and I was wondering what Mr. Hurley intends to do about this if in fact they burn in this area.

Chairman Devaney: I don't know if we have any particular details on a permit that may or may not have been requested yet, but that may be a follow up item for you after the meeting.

Sandy Braden: OK

Director Hurley: I can address this. First of all, let me correct her on an assumption that is wrong. It is not land clearing, so the restrictions for land clearing do not apply. Second of all, there were in the time I've been there, there have been two, possible three burns conducted there for the exact same reasons, specifically the southwest corner of 64th and West Washington, and then the southeast corner of the south side of Washington. They were approved correctly by the last director because it is not land clearing. It is inside the UGA, the urban growth area. OK? The urban growth area has by state law two types of burning that are prohibited. One is land clearing. The other is residential. That's why we only issue residential burn permits outside the UGA from March 16th to October 15th. So, that's one. Second, we do not have a complete permit. There's issues with the application that was given to us. Agricultural burning within a UGA is permissible. Our job is to identify the risk, mitigate it down to an acceptable level, which we have clearly done with three other burns in that same general area, and then to supervise and make sure that those conditions on the burn permit are followed. And in the previous burns in the exact same area, almost the exact same acreage, were followed. OK? So, I'm well aware of the chatter on the internet, of the citizens' group that lives in the house, of being rightfully so, concerned about smoke impacting that community. By the way, that community has expanded a little since the other burns, but its always been there. So, its not the only housing in that area, by the way. There's a distinct housing area, catty corner, right off of 72nd and West Washington, and I myself when the other two burns were conducted, was living in Valley Brook, which was at the end of 72nd and the t-bone of West Washington. So I'm very aware of it. We have a meeting . . We will have a meeting with the orchard, the agricultural activity that wants to conduct the burning. I actually had a phone call with the individual yesterday. He's out of town. They're not looking to burn until May which makes it even better because one of the strategies is you must let stuff dry at least 30 days prior to burning it. He knows to let it dry 90 or 120 days. But then how they conduct the burn will also identify patrol measures and its not anything that's not been done before and if supervised correctly and conducted on a day when its conducive to the burn, there will be no impact to that neighborhood. So, we're aware of it, we're on top of it, we're gonna do our job, and I don't know what other questions I can answer.

Sandy Braden: What type of permit is going to be used, What type of burn have you identified . .

Director Hurley interrupts: It's an agricultural burn . .

Sandy Braden interrupts: An agricultural burn . .

Director Hurley interrupts: Not a land clearing burn.

Sandy Braden: So, you're saying that land is going to be re-planted with something?

Director Hurley: That is correct.

Sandy Braden: Okey dokey. Thank you very much.

Director Hurley: Just like the other two plots were re-planted.

Sandy Braden: Thank you.

(A verbatim transcription. J. Mendoza)

March 12, 2020

Study Session re SIP Need to update Regulation 1

Sandy Braden (Citizen): Watched a news report on KIMA news re Tree Tops Waste Water Pollution. Director Hurley stated the odor was a solid 2, but not enough to warrant any further investigation. What scientific method was used to establish this conclusion?

Mayor Trevino: Is there a process or method where a concerned citizen can ask the agency that question?

Director Hurley: There is no scientific method for determining odor. This state classifies this as a pollutant. Our field agents used a scale with a four point odor evaluation. Its not as simple as Ms. Braden led you to believe. We get this question all the time. It is not a scientific method, but it has been approved. We draw the line at 3, typically causes people to wretch. Tree Top is well aware. We are working with Tree Top. No action. As APOC I get to decide when to take action. Will take a significant financial investment to fix the problem and they know that. There is no certification for the odor evaluation. We do test inspectors sensitivity. Talks about coffee roasters in the Puget Sound Area.

Rules and Regulations with which the YRCAA does not comply.

RCW 70A.15.2000(6) Wherever a member of a board has a potential conflict of interest in an action before the board, the member shall declare to the board the nature of the potential conflict prior to participating in the action review. The board shall, if the potential conflict of interest, in the judgment of a majority of the board, may prevent the member from a fair and objective review of the case, remove the member from participation in the action.

WAC 173-400-260 Conflict of interest: All board members and officials acting or voting on decisions affecting air pollution sources, must comply with the Federal Clean Air Act, as it pertains to conflict of interest (Section 128).

Dr. Steven Jones has been appointed and reappointed to the YRCAA Board of Directors by the Yakima County Commissioners. Dr. Jones earns a significant amount of his income as a dairy nutritionist. Dr. Jones discusses and votes on issues related to the dairy industry.

* * * * *

RCW 70A.15.1005 Declaration of public policies and purpose. Paragraph 6

It is the policy of the state that the costs of protecting the air resource and operating state and local air pollution control programs shall be shared as equitably as possible among all sources whose emissions cause air pollution.

The Yakima Regional Clean Air Agency does not regulate the dairy industry and does not impose fees on the dairy industry. Air and water pollution from LYV dairies is extensively documented.

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RCW 70A.15.2270 Annual fees from operating permit program source to cover cost of program.

(1) The department and delegated local air authorities are authorized to determine, assess, and collect, and each permit program source shall pay, annual fees sufficient to cover the direct and indirect costs of implementing a state operating permit program approved by the United States environmental protection agency under the federal clean air act. . . .

(2) The fee schedule developed by each permitting authority shall fully cover and not exceed both its permit administration costs and the permitting authority's share of statewide program development and oversight costs.

The Yakima Regional Clean Air Agency does not regulate the dairy industry and does not impose fees on the dairy industry.

RCW 70A.15.3060 State financial aid—Application for—Requirements.

(1) Any authority may apply to the department for state financial aid. . . .

(2) Before any such application is approved and financial aid is given or approved by the department, the authority shall demonstrate to the satisfaction of the department that it is fulfilling the requirements of this chapter. If the department has not adopted ambient air quality standards and objectives as permitted by RCW 70A.15.3000, the authority shall demonstrate to the satisfaction of the department that it is acting in good faith and doing all that is possible and reasonable to control and prevent air pollution within its jurisdictional boundaries and to carry out the purposes of this chapter.

The YRCAA receives funding from the WA State Dept. of Ecology in spite of the fact that it does not regulate the dairy industry and imposes no fees on the dairy industry. The YRCAA shields the dairy industry from scrutiny and from regulation.

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WAC 173-400-100 Source classifications.

(1) Source classification list. In counties without a local air pollution control authority, or for sources under the jurisdiction of ecology, the owner or operator of each source within the following source categories must register the source with Ecology:

(j) Cattle feedlots with operational facilities which have an inventory of one thousand or more cattle in operation between June 1st and October 1st, where vegetation forage growth is not sustained over the majority of the lot during the normal growing season;

(l) Composting operations, including commercial, industrial and municipal, but exempting residential composting activities;

RCW 70A.15.3050 Emission control requirements.

(1) Every activated authority operating an air pollution control program shall have requirements for the control of emissions which are no less stringent than those adopted by the department of ecology for the geographic area in which such air pollution control program is located.

The YRCAA has no requirements for the control of emissions from dairies or from manure composting operations. Dairies are also cattle feedlots where vegetation forage growth is not sustained during the normal growing season.

There are over 500 acres of manure compost in Yakima County. Much of this composting is done on bare ground with no provisions for managing runoff and no air monitoring.

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RCW 70A.15.3150 Penalties.

(1) Any person who knowingly violates any of the provisions of this chapter or chapter 70A.25 RCW, RCW 70A.45.080, or any ordinance, resolution, or regulation in force pursuant thereto is guilty of a gross misdemeanor and upon conviction thereof shall be punished by a fine of not more than ten thousand dollars, or by imprisonment in the county jail for up to three hundred sixty-four days, or by both for each separate violation.

(2) Any person who negligently releases into the ambient air any substance listed by the department of ecology as a hazardous air pollutant, other than in compliance with the terms of an applicable permit or emission limit, and who at the time negligently places another person in imminent danger of death or substantial bodily harm is guilty of a gross misdemeanor and shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for up to three hundred sixty-four days, or both.

(3) Any person who knowingly releases into the ambient air any substance listed by the department of ecology as a hazardous air pollutant, other than in compliance with the terms of an applicable permit or emission limit, and who knows at the time that he or she thereby places another person in imminent danger of death or substantial bodily harm, is guilty of a class C felony and shall, upon conviction, be punished by a fine of not less than fifty thousand dollars, or by imprisonment for not more than five years, or both.

(4) Any person who knowingly fails to disclose a potential conflict of interest under RCW 70A.15.2000 is guilty of a gross misdemeanor, and upon conviction thereof shall be punished by a fine of not more than five thousand dollars.

Yakima County dairies emit particulate matter, ammonia, hydrogen sulfide and volatile organic compounds into the ambient air in amounts that exceed regulatory thresholds. There is documentation that forced expiratory volume for asthmatic children in the LYV has decreased during periods with high ammonia levels. Citizens have complained to the YRCAA about difficulty breathing due to dairy emissions. Dairies in Yakima County do not have air permits.

As a member of the YRCAA Board of Directors, Dr. Steven Jones has voted on dairy related issues without disclosing a conflict of interest.

* * * * *

RCW 70A.15.4530 Odors or fugitive dust caused by agricultural activities consistent with good agricultural practices exempt from chapter.

(1) Odors or fugitive dust caused by agricultural activity consistent with good agricultural practices on agricultural land are exempt from the requirements of this chapter unless they have a substantial adverse effect on public health. In determining whether agricultural activity is consistent with good agricultural practices, the department of ecology or board of any authority shall consult with a recognized third-party expert in the activity prior to issuing any notice of violation.

(2) Any notice of violation issued under this chapter pertaining to odors or fugitive dust caused by agricultural activity shall include a detailed statement with evidence as to why the activity is inconsistent with good agricultural practices, or a detailed statement with evidence that the odors or fugitive dust have substantial adverse effect on public health.

(6) The exemption for fugitive dust provided in subsection (1) of this section does not apply to facilities subject to RCW 70A.15.2200 as specified in WAC 173-400-100 as of July 24, 2005, 70A.15.2210, or 70A.15.2260. The exemption for fugitive dust provided in subsection (1) of this section applies to cattle feedlots with operational facilities which have an inventory of one thousand or more cattle in operation between June 1st and October 1st, where vegetation forage growth is not sustained over the majority of the lot during the normal growing season; except that the cattle feedlots must comply with applicable requirements included in the approved state implementation plan for air quality as of July 23, 2017; and except if an area in which a cattle feedlot is located is at any time in the future designated nonattainment for a national ambient air quality standard for particulate matter, additional control measures may be required for cattle feedlots as part of a state implementation plan's control strategy for that area and as necessary to ensure the area returns to attainment.

There is no YRCAA policy that describes good agricultural practices in Yakima County. Consequently, dairies can confine as many animals as they wish in as small an area as they wish. Dairies can allow manure to accumulate in the pens for months upon months. Dairies can stockpile manure for years. Dairies can turn compost during windy days. Dairies can spray and spread manure during air inversions and burn bans. Dairies can generate fecal dust ad lib.

YRCAA has received complaints of health impacts due to dairy emissions and has not investigated according to their own protocols; has not measured emissions; and has not performed odor evaluations. YRCAA has not considered the research that relates air pollution to cardiovascular disease.

* * * * *

YRCAA Regulation 1, 1.03 POLICY.

This section implements the Washington Clean Air Act (WCAA) by doing the following:

A. PUBLIC POLICY. Securing and maintaining levels of air quality that will:

1. Protect human health and safety;
2. Prevent injury to plant and animal life and property;
3. Foster comfort and convenience;
4. Promote economic and social development;
5. Facilitate the enjoyment of natural attractions;
6. Prevent or minimize the transfer of air pollution to other resources;
7. Ensure equity and consistency with the Federal Clean Air Act (FCAA) and WCAA;
8. Educate and inform the citizens of Yakima County on air quality matters;
9. Maintain accurate and current policies, regulations, and rules;
10. Perform administrative actions in a timely and effective manner; and
11. Cooperate with the local governments, the Yakama Nation, organizations or citizens on air quality matters.

YRCAA states that they have no expertise in public health. YRCAA does not address human health and safety.

When the YRCAA conducted public hearings for the now rescinded *Air Quality Management Policy and Best Management Practices for Dairies*, the agency ignored the outpouring of complaints about dairy related odor in the LYV.

The YRCAA has refused to address climate change and the deposition of ammonia and other dairy emissions on neighboring properties.

The YRCAA has no policy, regulation, or rules for dairies in Yakima County. The YRCAA does not apply its policy for beef feedlots to dairies.

B. PROCEDURES AND STANDARDS. Controlling air pollution through procedures, standards, permits, and programs.

C. COMPLIANCE WITH ADOPTED STANDARDS. Ensuring compliance with all air quality rules and standards, permits and programs.

D. COOPERATION AND COORDINATION. Cooperating and coordinating with federal, state, county, local, and tribal governments; governmental agencies; organizations; businesses; and the public in all matters related to air pollution characterization, measurement and control.

E. STRATEGIC PLANNING. Developing strategies to avoid, reduce, or prevent air pollution through:

1. Innovative solutions;
2. Early planning; and
3. The integration of air pollution control in the work of other agencies and businesses.

F. GUIDELINES. Preparing guidelines which interpret, implement, and enforce these regulations.

G. BUSINESS ASSISTANCE POLICY. Providing reasonable business and technical assistance to the community.

H. STATE ENVIRONMENTAL POLICY ACT (SEPA). Fully complying with all the requirements of the SEPA and holding other agencies, businesses, and individuals accountable for decisions within the jurisdiction of the agency.

I. STATE IMPLEMENTATION PLAN (SIP). Fully complying with the SIP.

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YRCAA Regulation 1, 1.04 APPLICABILITY.

C. DUTIES OF THE AIR POLLUTION CONTROL OFFICER. The APCO is appointed by the board and serves as the Executive Director of the agency. The APCO observes and enforces state and federal laws, orders, ordinances, and regulations of the agency pertaining to the control and prevention of air pollution. The APCO shall implement Regulation 1 consistent with:

1. Applicable federal and state laws and regulations;
2. County and/or city municipal ordinances where they are at least as stringent as those of the agency; and
3. Policies and directives of the board unless specifically limited elsewhere in this regulation or by other laws or regulations.

YRCAA Regulation 1, 1.07 GENERAL PROVISIONS.

B. FALSE OR MISLEADING INFORMATION.

1. False Statements. No person shall make any false material statement, representation or certification in any form, notice or report required under chapter 70A.15 RCW, or any ordinance, resolution, regulation, permit or order in force pursuant thereto.
2. Monitoring Devices. No person shall render inaccurate any monitoring device or method required under chapter 70A.15 RCW, or any ordinance, resolution, regulation, permit, or order in force pursuant thereto.

Dr. Nicole Embertson gave false information to the YRCAA in her role as advisor during the development of the YRCAA Air Quality Management Policy and Best Management Practices for Dairies. The YRCAA Board of Directors took no action.

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YRCAA Regulation 1, 3.01 General Rules

E. OPERATION AND MAINTENANCE MANUAL OR PLAN.

1. Purpose. To define operation and maintenance standards for all process and control apparatus to prevent avoidable emissions.
2. Applicability. Any person or emission unit which is subject to these regulations.
3. Exemption. Process or control apparatus which is out of service.
4. Requirement. The owner or operator of an air pollution source shall:
 - a. Operate and maintain all process and control apparatus, which has the potential to allow emissions, according to the specifications and recommendations of the manufacturer;
 - b. Maintain this equipment in good repair and working condition;
 - c. Operate this equipment to minimize emissions; and
 - d. Keep a current copy of the manufacturer's manuals and specifications on the site or the nearest office and available for inspection by the APCO.

YRCAA Regulation 1, 3.02 STANDARDS FOR SOURCES OF HAZARDOUS AIR POLLUTANTS.

A. PURPOSE. To control and prevent emissions of hazardous air pollutants.

B. APPLICABILITY. Applies to the owners or operators of any stationary source subject to the requirements of 40 CFR Parts 61 and 63.

C. REFERENCES. 1. 40 CFR Parts 61 and 63 and Chapter 173-400 WAC as applicable.

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YRCAA Regulation 1, 3.08 SPECIFIC DUST CONTROLS.

B. DUST FROM CATTLE FEEDING OPERATIONS.

1. Purpose. To prevent and reduce fugitive dust emissions from cattle feeding operations.

2. Applicability. Applies to any owner or operator of a beef or dairy replacement cattle feeding operation:

3. Emergencies Sources are granted exemptions from subsection 3.08B during an emergency situation provided:

a. The owner or operator of the source contacts the agency before the end of the next business day after the start of the emergency; and

b. The source uses reasonable precautions as soon as feasible after the emergency is resolved.

c. An emergency situation exists when compliance with subsection 3.08B causes risk to human health or substantial crop damage or cattle losses.

4. Requirements.

a. Dust Control Plan Preparation. The following types of sources must prepare and submit an annual dust control plan to the agency no later than April 15th of each year.

1) Any source with an average of 1,000 or more cattle confined and fed during the months of April through October and; or

2) Any cattle feeding operation which receives a verified fugitive dust complaint.

b. Dust Control Plan Content. Dust control plans must include:

1) A map or drawing of the feedlot;

2) The operational capacity of the feedlot;

3) The maximum number of cattle which are confined;

4) The water available to the feedlot for dust control;

5) The site-specific features which could complicate or prevent implementation of BMPs;

6) Which BMPs will be used, and where they will be used;

7) The equipment and materials to be used to implement a BMPs;

8) An operational and maintenance plan and schedule to implement each BMPs; and

9) An operation and maintenance plan which also includes BMPs for;

a) Hay chopping,

b) Grain processing,

c) Feed mixing, and

d) Feed handling.

c. Plan Implementation.

- 1) The agency will approve or require modification of the plan within 30 days of receipt.
- 2) A feedlot operator must implement an approved dust control plan.
- 3) A feedlot operator may change practices from those in an approved dust control plan as long as the effectiveness of the plan is not reduced, and the operator notifies the agency of the change. Page 58 of 84 5. Additional Information. Additional information is available from the agency. 6. Fees. See current fee schedule.

YRCAA has policies for beef feedlots and heifer operations. Dairies with > 1,000 milk cows create greater air problems due to the size and metabolism of mature milk cows. The YRCAA has no policy for dairies and does not impose the regulations for feedlots on dairies. For example, there is no requirement to water dairy pens and corrals to minimize dust.

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ARTICLE 4 - PERMITS & REGISTRATION

4.01 REGISTRATION PROGRAM

A. PURPOSE. To develop and maintain a current and accurate record of air contaminant sources.

There is currently no record of Yakima County dairies, number of cows, or estimates of emissions from dairies.

B. APPLICABILITY. Applies to the owner or operator of each source within the categories listed in WAC 173-400-100.

C. RESPONSIBILITY. The owner or operator of the source is responsible to notify the agency of the existence of the source except when exempted in subsection 4.01D.

D. EXEMPTIONS. All exemptions are based on following:

1. Air Operating Permit Sources. Sources or emission units which are permitted according to section 4.02.
2. Gasoline Marketing Operations.
 - a. Any loading terminal or bulk plant dispensing < 360,000 gallons per year which started operation prior to August 31, 1991; or
 - c. Any gasoline dispensing facility with a total storage capacity of 10,000 gallons.

E. LIMITED EXEMPTIONS.

1. A grain warehouse or elevator emission source with an annual volume less than or equal to 10 million bushels is granted an exemption from registering, reporting, or paying a registration fee after:

- a. Filing registration according to subsection 4.01F1;

- b. Filing report according to subsection 4.01F2; and
 - c. Paying the registration fee according to subsection 4.01G.
- 2. The exemption remains until the source increases the licensed capacity.
 - 3. If the licensed capacity is increased to greater than 10 million bushels, the source must register, report, and pay the registration fee again prior to the start of the first harvest season after the date of change in the licensed capacity.
 - 4. The source is not exempted from the requirements of 4.01F5&6 and WAC 173-400-040 (2), (3), (4) and (5).

F. REGISTRATION AND REPORTING PROCEDURE.

1. Registration.

- a. Registrants shall use forms and directions supplied by the agency.
- b. Forms must be completed and returned within the time specified.
- c. Emission units within the facility must be listed separately unless they meet the following conditions:
 - 1) The agency determines that certain emission units may be combined into process streams for purposes of registration and reporting; or
 - 2) There are identical units of equipment or control facilities installed, altered, or operated in an identical manner on the same process; the number of the units may be reported.

2. Scope of registration and reporting requirements.

a. Administrative options. A source in a listed source category that is located in Yakima County will be addressed in one of several ways:

- 1) The source will be required to register and report once each year. The criteria for identifying these sources are listed in subsection (b) of this section.
- 2) The source will be required to register and report once every three years. The criteria for identifying these sources are listed in subsection (c) of this section.

b. Sources requiring annual registration and inspections. An owner or operator of a source in a listed source category that meets any of the following criteria shall register and report once each year:

- 1) The source emits one or more air pollutants at rates greater than the "emission threshold" rates defined in WAC 173-400-030;

WSU research on two LYV dairy barns confirms emissions of particulate matter and VOCs in amounts that exceed the emission threshold rates defined in WAC 173-400-030.

- 2) Annual registration and reporting is necessary to comply with federal reporting requirements or emission standards; or
- 3) Annual registration and reporting is required in a reasonably available control technology (RACT) determination for the source category; or
- 4) The APCO determines that the source poses a potential threat to human health and the environment.

The YRCAA APCO has stated that he lacks the expertise to determine human health effects from air pollution.

c. Sources requiring periodic registration and inspections. An owner or operator of a source in a listed source category that meets any of the following criteria shall register and report once every three years:

- 1) The source is subject to WAC 173-400-100, and emits air pollutants at rates less than the "emission threshold" rates defined in WAC 173-400- 030 and Table 4.01-1; or
- 2) A source that is subject to WAC 173-400-100, but not subject to new source review under WAC 173-400-110(5) must register with the YRCAA.

Table 4.01-1 Significant Pollutant Emission Levels

Pollutant	TPY
CO	100
NO _x	40
SO _x	40
PM	25
PM ₁₀	15
PM _{2.5}	10
VOC	40
Pb	0.6
Fluorides	3
Sulfuric Acid Mist (H ₂ SO ₄)	7
Hydrogen Sulfide (H ₂ S)	10
Total Reduced Sulfur (TRS) including H ₂ S	10
Reduced Sulfur Compounds including H ₂ S	10
Municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.	0.0000035
Municipal waste combustor metals measured as PM.	15
Municipal waste combustor acid gases measured as SO ₂ and HCl	40

According to WSU research on two LYV dairy barns a 5,000 head dairy is likely to emit 114 tons of ammonia per year, 2.25 tons of hydrogen sulfide per year, 17.45 tons of PM 10 per year, 7.25 tons of PM 2.5 per year, and 207.25 tons of VOCs per year. These rates exceed classification criteria under periodic review and inspection.

d. Registration Report Contents.

1) Detailed annual registration reports shall contain:

- a) Annual emissions inventory;
- b) Operation and maintenance plans;
- c) Plan showing the plant layout; and
- d) Changes in operations since the last detailed report.

2) Three-year registration reports shall also contain the annual emissions inventories.

3) The APCO will schedule the detailed annual and three-year report cycles. 3. Operational and Maintenance Plan. Owners or operators of registered air contaminant sources must develop and maintain an operation and maintenance plan for process and control apparatus. The plan must:

- a) Reflect good industrial practice;
- b) Include a record of performance and periodic inspections of process and control apparatus;
- c) Be reviewed and updated by the source owner or operator at least annually; and
- d) Be made available to the agency upon request.

4. Signature. The owner, operator, or a designated representative must sign the registration or reporting form(s) for each source. The owner, operator or designated representative of any source is responsible for the accuracy, completeness, and timely submittal of all information.

5. Closure Report. A closure report shall be filed with the agency within 90 days of a source permanently ceasing operations.

6. Change of Ownership. A new owner or operator shall report to the agency any change of ownership or operator within 30 days of said change.

G. FEES. All registrants must pay a fee in accordance with the current fee schedule.

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