



June 10, 2016

Velveta Golightly-Howell  
Director of the Office of Civil Rights  
U.S. Environmental Protection Agency  
Mail code 1201A  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Director Golightly-Howell,

The Friends of Toppenish Creek (FOTC) is a 501 C (3) non-profit environmental advocacy group in south central Washington State where air pollution threatens public health. In our community air quality issues are addressed by the Yakima Regional Clean Air Agency (YRCAA) under authority of the Revised Code of Washington, RCW 70.94; the Washington State Implementation Plan (SIP) for the Yakima Regional Clean Air Agency (US EPA, 1995); and Regulation 1 of the Yakima Regional Clean Air Authority (YRCAA, 2002). The YRCAA has discriminated against low income and minority people in Yakima County for many years. Now that agency is approving faulty information that tells the public there is no health risk from ammonia air pollution. The YRCAA receives funding from the U.S. Environmental Protection Agency (EPA). We respectfully ask the EPA to withdraw funding from YRCAA in accordance with Title VI of the 1964 Civil Rights Act.

This is a letter of complaint. In the pages that follow we will show that the YRCAA:

1. Does not provide the same level of service to people who live in the southern half of Yakima County as it does to those who live in the northern half of the county.
2. Has refused citizen requests to take reasonable actions that would mitigate dangerous air pollution.

3. Has resisted citizen participation in policymaking and has failed to follow through with promises to include citizens in substantive policy discussions.
4. Does not employ people with the requisite credentials to analyze and address major air pollution problems.
5. Does not provide information to non-English speaking populations in language they can understand.
6. Has participated in a campaign to misinform the public and intentionally leads the public to believe that air quality is safe when, in fact, it is often unsafe.

Sincerely,

*Friends of Toppenish Creek*

Friends of Toppenish Creek

**(b) (6) Privacy**

White Swan, WA 98952

## Table of Contents

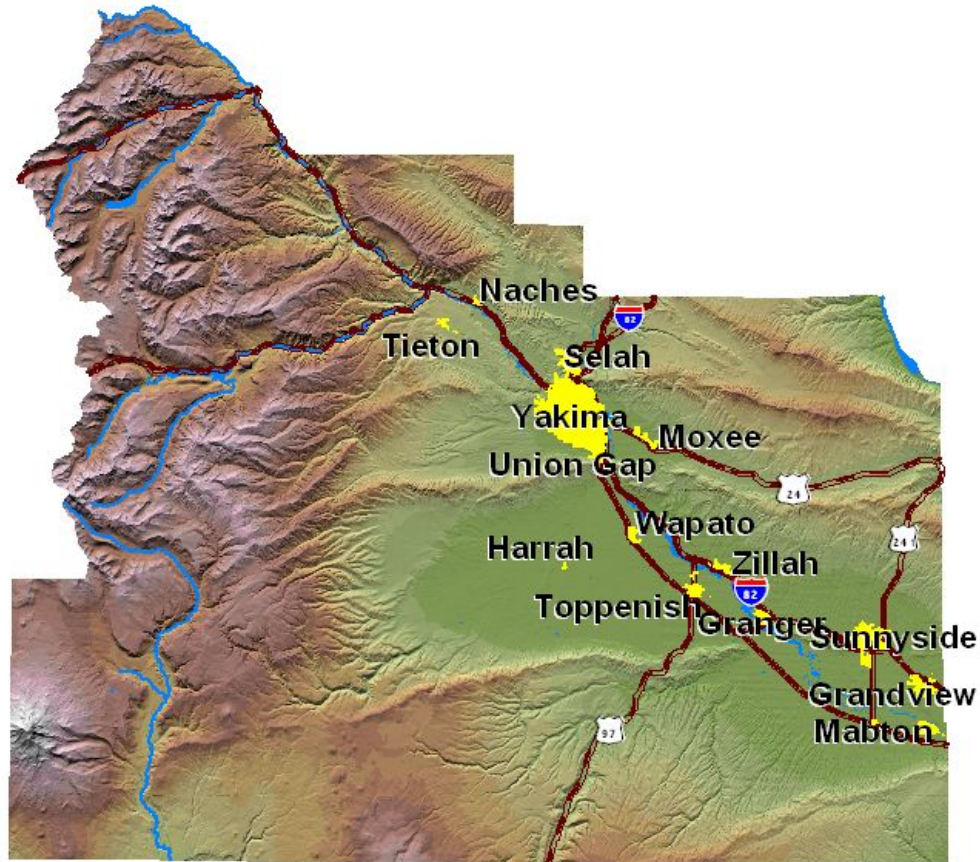
Description of the Area.....	6
1. YRCAA does not provide the same level of service to people who live in the southern half of Yakima County as it does to those who live in the northern half of the county.....	8
A. Meeting Times.....	8
B. Authority on the Yakama Reservation.....	8
C. Wood Stove Trade Out.....	9
D. Burn Bans.....	10
E. Air Monitoring.....	11
F. Citizen Complaints.....	14
2. YRCAA has refused citizen requests to take reasonable actions that would mitigate dangerous air pollution. ....	20
A. No Citations to Dairies.....	20
B. Inadequate Response to Complaints.....	22
C. Petition to Ban Spraying of Manure.....	24
a. Literature Review from the WA State Dairy Commission.....	25
b. Response to Literature Review.....	26
D. Pilot Project <i>Air Quality Management Policy and Best Management Practices for Dairy Operations</i> with public comments.....	28
3. YRCAA has resisted citizen participation in policymaking and has failed to follow through with promises to include citizens in further policy discussions.....	30
A. PM 2.5 Task Force.....	30
B. Ag Task Force and Dairy Task Force.....	31

C. Public Participation at YRCAA Board Meetings.....	32
D. <i>Air Quality Management Policy and Best Management Practices for Dairy Operations</i> with public comments.....	35
4. YRCAA does not employ people with the requisite credentials to analyze and address major air pollution problems.....	39
A. Staff Credentials.....	39
B. Expertise in Public Health.....	40
5. YRCAA does not provide information to non-English speaking populations in language they can understand.....	42
A. Wood Stove Information.....	42
B. Meetings, Summaries & Agendas.....	43
C. Spanish Speaking Staff.....	43
D. Board of Directors Composition.....	43
E. <i>Air Quality Management Policy and Best Management Practices for Dairy Operations</i> with public comments.....	45
6. YRCAA has participated in a campaign to misinform the public and intentionally leads the public to believe that air quality is safe when, in fact, it is often unsafe. ....	46
A. YRCAA Approved Article in the Review Independent & Yakima Business Times .....	46
B. Research from the National Emissions Air Monitoring Study.....	47
C. National Promotion of <i>Air Quality Management Policy and Best Management Practices for Dairy Operations</i> .....	49
Observations.....	50
Failure to Serve.....	51
A. YRCAA has not done what the agency is instructed to do in the statutes.....	50
B. Step by step examples of how the YRCAA has not followed the law.....	52

1. Protect human health and safety.....	52
2. Prevent injury to plant and animal life and property.....	53
3. Foster comfort and convenience.....	53
4. Promote economic and social development.....	53
5. Facilitate the enjoyment of natural attractions.....	54
6. Prevent or minimize the transfer of air pollution (App. A) to other resources.....	54
8. Educate and inform the citizens of Yakima Co. on air quality matters.....	54
9. Maintain accurate and current policies, regulations, and rules.....	55
10. Procedures and Standards.....	57
11. Compliance with Adopted Standards.....	57
12. State Implementation Plan.....	58
Environmental Justice.....	61
Executive Order 12898.....	61
Title VI of the 1964 Civil Rights Act.....	62
Request.....	62
References.....	63

## Description of the Area

Yakima County covers 2,749,056 acres. This includes 1,074,174 acres on the Yakama Indian Reservation in the southwestern region; 503,726 acres of U.S. Forest Service land in the northwest; and 165,787 acres of military land on the Yakima Firing Center in the northeastern part of the county.



Courtesy of the Yakima County Development Association (YCDA)

The map above shows natural boundaries in Yakima County. Ahtanum Ridge extends from mountains in the west to Union Gap. The Rattlesnake Hills extend eastward from Union Gap and parallel State Highway 24. These two ridges divide the county into what is commonly called the upper (northern) valley and the lower (southern) valley. The Yakima River runs along a corridor that runs from northwest to southeast.

The river forms the eastern boundary of the Yakama Nation and Ahtanum Ridge forms part of the northern border. The small cities Wapato, Toppenish and Harrah are located on the Yakama Reservation.

Average rainfall is about seven inches per year, mostly in the winter and early spring. Due to irrigation projects that began over a century ago the Lower Yakima Valley is one of the most productive agricultural areas in the nation. Major crops include apples, corn, triticale, grapes, alfalfa hay, hops, mint, cherries, pears, peaches, asparagus, beef cattle and dairy.

The City of Yakima, population 91,067, is the county seat. Offices for the YRCAA are located here. In 2014 the population of Yakima County was 247,687. Approximately 87,449 people live outside municipalities. Approximately one third of the population lives in the lower valley. (U.S. Census Bureau)

Major population changes have occurred in recent years. There is now a Latino majority in much of the county. The table below shows that, overall, this population has fewer financial resources and lives farther from the county seat.

**Table 1**

City/Town	Population: 2014 Estimate	% Not Hispanic or Latino 2010 Census	Median HH Income: 2010 – 2014 Survey	Driving Miles to City of Yakima
Yakima	91,067	58.8%	\$40,189	-
Naches	795	93.4%	\$49,231	14.85
Tieton	1,247	35.4% (2014 est)	\$39,063	18.7
Selah	7,147	83.6%	\$50,333	4.0
Union Gap	6,047	52.9%	\$34,624	0
Moxee	3,308	61.0%	\$56,354	7.6
Wapato	4,997	15.8%	\$32,803	14.2
Zillah	2,964	57.5%	\$58,718	20.7
Toppenish	8,996	17.4%	\$29,135	21.0
Harrah	625	44.7%	\$48,000	18.4
Granger	3,246	11.8%	\$39,850	27.3
Sunnyside	15,858	17.8%	\$32,641	35.1
Grandview	10,862	20.3%	\$37,012	42.7
Mabton	2,286	8.1%	\$35,129	42.2

Sources: U.S. Census – 2010; U.S. Census American Fact Finder; Distance between Cities.com

The table below describes differences between the major cities in the upper valley – Yakima, Selah & Union Gap and the lower valley - Toppenish, Sunnyside and Grandview

**Table 2**

	USA	WA	Y.Co	Yakima	Selah	U.G.	Topp.	SS	GV
Pop Change 2000 - 2010	0.9%	1.6%	1.6%	26.8%	13.3%	7.6%	0%	14%	29.7%
% < 5	6.5	6.5	8.9	8.6	8.2	8.9	11.3	12.6	11.8
% < 18	23.7	23.2	30.4	28.3	29.6	28.9	37.5	38.5	37
% > 65	13.3	12.7	11.7	13.1	10.1	11.8	6.7	8.3	7.9
% Native	1.2	1.8	5.6	2	1.3	2.6	8	0.9	0.6
% Latino	16.7	11.6	45.8	41.3	16.4	47.2	82.6	82.2	79.7
% White (Not Latino)	63.4	72.1	46.9	52.2	79.5	48.4	8.8	15.7	18.5
Foreign Born	12.7	12.7	18	16.5	12.1	15.5	32.9	35	30.5
Non English in Home	20.1	17.5	38.5	32.4	18.9	36.2	75.5	72.6	69.4
HS Graduate	85	89.6	70.8	74.1	82.9	61.1	40	52.4	52
Bachelor's Degree	27.9	31	15.6	19.1	20.7	4.6	6.8	8.6	5.6
Median Home Value	188,400	285,400	149,700	152,800	178,400	98,200	105,300	112,600	112,900
# People per Household	2.59	2.48	2.94	2.62	2.75	2.97	3.69	3.36	3.55
Per Capita Income	27,334	29,733	19,325	20,771	21,706	14,309	10,566	14,660	11,590
Median Home Income	51,914	57,244	42,877	39,705	52,706	35,067	28,896	34,761	35,321
% Below Poverty	14%	12%	22%	21%	18%	23%	31%	27%	31%

Source U.S. Census – 2010

**1. YRCAA does not provide the same level of service to people who live in the southern half of Yakima County as it does to those who live in the northern half of the county.**

**A.** The YRCAA conducts all meetings during daytime business hours 9 AM to 5 PM, Monday through Friday. Meetings are always held in Yakima. Residents of the lower valley who wish to participate must take significant time off from work. This imposes added cost in both time and money for travel. Concerned citizens who attend and participate in YRCAA meetings can expect to spend between \$7.50 and \$23 per meeting for gasoline, and \$100 per meeting in personal time. (Mileage at \$0.54/mile. Personal time at \$25/hr.).

**B.** The YRCAA has no authority on the Yakama Reservation (YRCAA, 2015, p. 2/35). But the agency collects monies every year from Wapato (\$2,016), Toppenish (\$3,582), Harrah (\$258) and from Yakima County (\$34,164 countywide) for services to the 31,000 people who live on the reservation. (YRCAA, 2016, p. 17/44).



C. A major remediation for air pollution in Yakima County is a change out program that helps homeowners to replace outdated wood stoves with more efficient, EPA certified stoves. This program is not available to people who live on the reservation. The YRCAA document *PM Advance Path Forward – 2015 Update* states, “Depending on household income, and until such funding no longer remains, up to 100% of the cost for high-use households, located within all designated Urban Growth Areas of Yakima County (excluding all areas located within the exterior boundaries of the Yakama Indian Reservation), will be covered by YRCAA.”

The City of Toppenish, located within the exterior boundaries of the Yakama Reservation, has the lowest median household income in Yakima County and the worst documented air quality. This city struggles with budget deficits every year. In the 2016 Budget for Toppenish, City Manager Lance Hoyt stated,

“The 2015 Budget strategy of increasing City Utility Rates to 33%, not filling 3 police officers, 1 fire fighter and 1 dispatcher positions, and holding to crucial/necessary spending only in the last four months of 2014 have all proven essential to meet our goal of providing a healthier fund balance. The preliminary budget that was first presented to me was out of balance by approximately \$176,000 as compared to < \$1,000,000. The budget was balanced using conservative anticipated revenue and expenditure estimates.”

The low income people in this city who need assistance and relief from significant air pollution are ineligible for the woodstove change out program. The City of Toppenish could put \$3,582 to good use. This is \$3,582 every year that Toppenish must pay out (loses) and \$3,582 worth of services that citizens should receive but do not.

Meanwhile YRCAA has sufficient funds to pay out annual bonuses to staff. These bonuses are not based on achievement but are simply and automatically approved because the Director has the attention of the board, and the Director does not advocate for or prioritize low income and minority people. At the same time YRCAA uses demographic data from Toppenish and other lower valley communities to write needs statements that emphasize the poverty levels in Yakima County. This documented suffering secures federal and state assistance for the agency but the agency does not funnel that money to those who are most in need. (YRCAA, 2015; YRCAA 2016).

**D.** Burn bans are periods during which air quality poses a risk to vulnerable populations. Measurement of fine particulate matter (PM<sub>2.5</sub>) is the standard used for calling burn bans. Yakima County has the highest number of days when this standard is not met in Washington State.

**Table 3**

Days when the Standard for PM 2.5 was not met from 2005 to 2013	
Yakima County	97
Pierce County	66
Snohomish County	57
Okanogan County	49 (31 days due to forest fire in 2006)
Chelan County	40 (25 days due to forest fire in 2012)
King County	34
Clark County	32
Kittitas County	28
Thurston County	19
Spokane County	14

Source: Washington Tracking Network. WA DOH

Yakima County has the second highest average readings for PM 2.5 in Washington State.

**Table 4**

Average Concentration of PM 2.5 in µg/m <sup>3</sup> from 2005 to 2013	
King County	11.444
Yakima County	10.889
Pierce County	10.344
Okanogan County	10.175
Snohomish County	10.111
Chelan County	9.875
Stevens County	9.75
Spokane County	9.744
Clark County	9.019

Source: Washington Tracking Network. WA DOH

YRCAA pays for patrolling of the City of Yakima to identify homes using wood heat, a major source of air pollution during winter burn bans. However, the agency does not patrol in the Lower Yakima Valley. The YRCAA air monitor is located in the City of Yakima. Patrolling during burn bans and inversions in the city helps keep pollution readings down around the

monitor only. The resulting data does not accurately reflect conditions in other parts of the county.

E. YRCAA has failed to monitor for air pollutants that significantly impact people who live in the Lower Yakima Valley. Until 2014 YRCAA used data collected from a location near the center of the City of Yakima to analyze risks to those who live in outlying areas. Remember there is a ridge of foothills between the upper and lower valley and this barrier obstructs air flow during inversions. (Laboratory for Atmospheric Research, 2014). Data from a Yakama Nation monitor in Toppenish indicates that air pollution in the lower valley is different and much worse in the lower valley. (Attachments 32, 33, 34 & 35)

In April 28, 2014 the YRCAA received a letter from the WA State Department of Ecology agreeing to locate a PM 2.5 air sampler, provided by the EPA, in Sunnyside. This is an E-Bam monitor, a portable, near real-time machine. (Attachment 5)

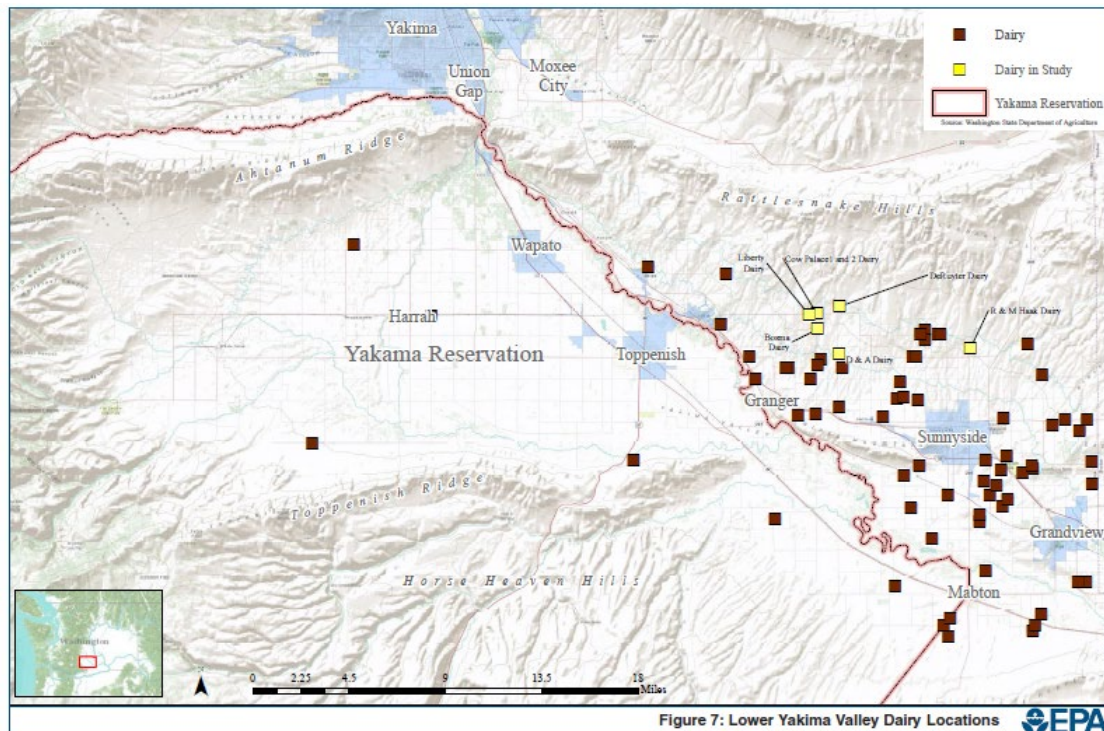
In May, 2014 the Board and the public learned that the Sunnyside monitor would be placed on top of Harrison Middle school and would operate for one year. EPA approved an YRCAA budget for operation and maintenance. This was not a certified monitor. Citizens argued to have the monitor place near dairies but the request was ignored. (Attachment 6)

In February, 2015 YRCAA staff reported a problem with the E-Bam. It had been inoperative for ten days and was sent out for repairs when the problem was discovered. (Attachment 13)

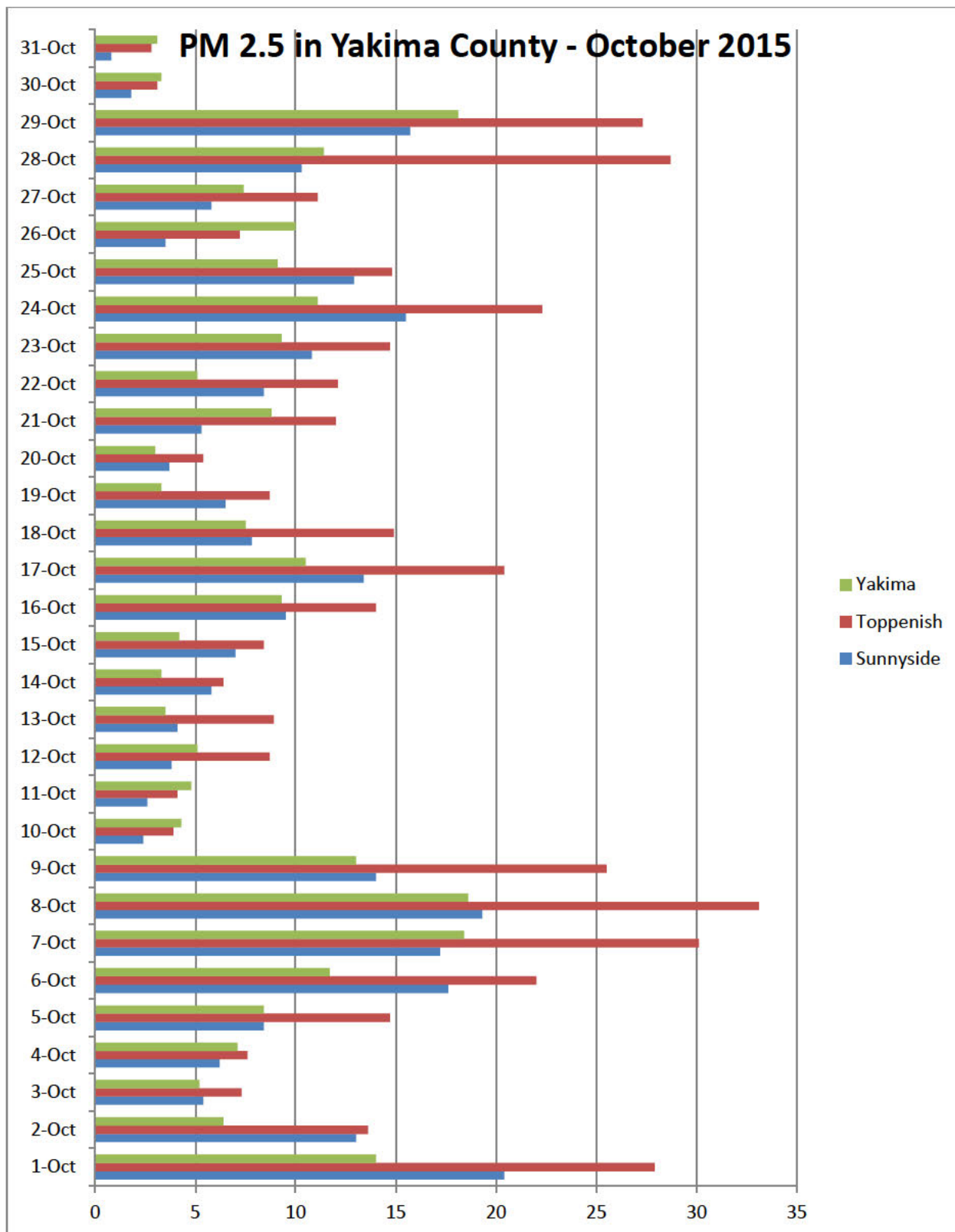
The May 2015 summary for the YRCAA Board states, “Board Chair, Mr. Gawlik inquired into the possibility of increasing the monitoring systems in the lower valley to mirror what was done in Yakima. Mr. Pruitt elucidated that this was a tough question as there is no ambient air quality standard for most pollutants. EPA controls the funding for such monitors and do not have much interest in measuring pollutants that do not have an ambient air quality standard. This is the reason for formerly monitoring carbon monoxide in downtown Yakima. YRCAA has since attained the standard for that; therefore, monitoring for carbon monoxide in Yakima is no longer necessary. Per YRCAA’s Maintenance Plan, YRCAA will continue to monitor PM<sub>10</sub> particulates. Mr. Pruitt explained that it is not likely that YRCAA will get any funding to measure anything other than PM<sub>2.5</sub>. However, by monitoring PM<sub>2.5</sub> aerosol nitrates are also captured. Here in Yakima, there are two speciation monitors that separate out numerous

compounds. The PM<sub>10</sub> sampler itself and two chemical speciation monitors were what was requested for Sunnyside. YRCAA was denied this request, with the explanation that there was no funding available. EPA supplied YRCAA with the E-Bam. It was not designed for continuous monitoring and lasted longer than expected. YRCAA plans to resubmit the initial request for a compliance monitor after the year with the E-Bam is over.” (Attachment 16)

In August 2015 Ecology provided a nephelometer and federal reference monitor (FRM) to run for six months at the Sunnyside site and measure PM 2.5. The Board approved \$6,000 for laboratory analysis of air samples. Once again the monitor was placed on top of the Harrison Middle School. See the map below for perspective.



Here is an October 2015 graph that compares average levels of PM 2.5 for a monitor on 4<sup>th</sup> Avenue in the City of Yakima, the Yakama Tribal monitor in Toppenish and the monitor at S. 16<sup>th</sup> St. in Sunnyside. Data was gathered from the WA State Dept. of Ecology Wind Rose Report. (WA DOE, 2016)



The small unincorporated community of Outlook, home to a high concentration of dairies, lies about four miles west from Sunnyside and twelve miles southeast from Toppenish. Outlook would have provided a much more representative site than the Harrison Middle School/ There is an area with rural homes between the cities of Sunnyside and Grandview where twelve CAFO dairies are located. This would also have provided more targeted information regarding the air pollution that triggers so many complaints. Data from this site would have been relevant for the people who live in the City of Grandview.

**F.** Citizens have repeatedly asked for monitoring near dairies. Here are a few of the pleas from [REDACTED] one affected citizen.

2/20/2013

Ok, I have to admit that if I put anything about "dairymen" in the subject line you would have just turned off. I am hoping to get your attention now with my neighbor kids playing in pen manure. On [REDACTED], [REDACTED] owner, is one little home. That home has been there more than 40 years. It is now being purchased by a [REDACTED] lady who is single, and has 4 children. It has been surrounded by lush fields of corn and green chop as long as its been farmed. Never had running stock on it.

On Valentine's Day, I took a trip down the road to check out the noise of trucks revving engines all day, all night. What I found astonished me, and sickened me. [REDACTED] is taking pen manure now and dumping it east to west right next to this little house. It is not 50 ft from their yard. I also noted at that time there were no "No Trespassing" signs I continued. After my views of the dairy, I started to take pictures and videos.



Photo dated 2/10/2013

I went up [REDACTED] where I have noticed their manure spread trucks and liquid manure wagons going all winter long. What I found was a heavily manure droppings road leading into and from the field to the west of [REDACTED]. So I took pictures of the standing liquid manure, and the heavily laden pen manure spreads. Pictures are very revealing as to what is NOT being worked in, all winter long.

Then I went to [REDACTED] I know this is where [REDACTED] has mounds of pen manure he's been "composting" (new word for poop that's dried and mulched) for the past several years. I've noticed run off into the bar pits in bad weather; I've noticed standing water surrounding the lines of fresh manure. This time I took pictures.

Continuing my journey, I found out where the office was, and I went in to see if I could visit with the owner, [REDACTED] He and his son came to see me outside the office. I

introduced myself and told him I was concerned. I asked him just how far he was going to be taking pen manure on this piece of property surrounding this little house, and across [REDACTED] from many other homes. He said he was going to use the whole thing...I'm guessing about 40 acres or more. I asked why, and he replied that he had to stop applying on [REDACTED] because there were complaints about the manure on the road. So now, he's dumping in my back yard, and all around this little family's home.

I have pictures of how close this manure is to this family's home. Several. In speaking with their 19 year old son, he said their dogs have already come into the house with manure all over them. I just wonder, this summer, when the little ones (under ages 12) are out playing, their dogs, their balls and toys go flying into the manure, they go pick them up, and continue to play.

Now you have to admit, this would not, ever EVER happen in your back yard. I know that for sure. How is it, you have all become uncaring about my back yard, and this little family's back yard? What is it about Dairy Industry CAFO that is more important than us? I have owned my property for years. I worked hard to keep it during a divorce, and heart surgery, no employment, and a sick daughter in law. I am proud of what I have. I want to keep it. I do NOT want to lose my peace of knowing I have a beautiful place to live.

If we get this manure across 40+ acres, it will pollute my land, my air, my water, my home. It will rape what I have worked hard to own.

Don't even bother telling me "they were here first". That crap doesn't fly with me. When I moved here 30 years ago, that dairy was one, small dairy. [REDACTED] were one small family owned dairy. Now, they are CAFO's. That is a WHOLE different deal.

I told [REDACTED] being the nice neighbor I am, that his cows at least were not up to their utters in manure...I didn't realize the manure is now, in my back yard and growing!



I beg for answers, and not placation. No more.

4/22/2013

This is horrible, and we don't deserve this out here, or anywhere. No one should have to breathe in that, that pissy, urine smell outside their doors, that seeps into the windows, and doors. My sinuses are stuffed, my husbands are too.

Atmosphere is keeping this in tonight and its deadly!

1/24/2014

Dear Friends, I am questioning the soundness of the Task Force going forward and its validity if we have no air monitoring down here in the Lower Yakima Valley. How can we know if we are doing any good if we have no monitoring here to gauge what is happening or not? Shouldn't we have a beginning set of numbers to work with, from this area and a set of acceptable numbers to end with as the Task Force progresses? Will the validity of the Task Force be challenged because we don't have that ever so "outspoken" request for "proper data"?

I feel that in order for this Task Force to continue and be valid and useful we all have to respectfully demand air monitoring down here, near Sunnyside by a PM2.5 monitor or whatever it is the YRCAA demands we need. This seems like a reasonable request to me.

We are putting out all this time, money and effort by agency, industry and private sector to join together and implement this program. Yet, we do not have the equipment needed to back the program and its goal of cleaner air. This seems like a simple question and valid request.

5/21/2015

(b) (5) Privacy, (b) (7)(C) Endo tonight is horrid here at my home. After a warm day we opened our windows and doors this early evening to feel the cool air in our home.

The cloud came at 9:15 p.m. I told my husband, "Oh my God, its stinking in here, I smell the dirt and the urine so bad".....

This is the data I had from our EBAM at 9:04 tonight, May 20, 2015- pm reading- 2.1 in town, 3 mi. north west of our home, not in the country.

AG WEATHER NET- 65 Degrees temp/60.7 Humidity/51.2 Dewpoint/Wind- 3.9 SE/  
Soil Temp- 77.5- Two miles straight West of our home.

2 sq. miles to the south east of our home, 1/2 mi away, 10's of thousands of head of happy dairy cows coming from the milk barn, happy its cool outside, and having fun, peeing, pooping, and whooping it up.

Its going to get worse as the summer heat and drought dry out the pen manure and dirt. We are looking for a miserable summer here at our home.

Is it reasonable to think that having 20,000 head of dairy cows next to family homes and farms is NOT going to cause environmental harm?

I was here first. I've been here 35 years, and this CAFO has expanded in the past 10 years to be the largest in the state of WA in combination with his other 2 CAFO's just miles from our home as well.

When are we going to keep the numbers of dairy cows allowed down?

What kind of waters are they going to use this summer in the drought without cause of concern?

We need MONITORS now. Three years of fighting for them, and we need them now.  
Not next year.

The EBAM is NOT working folks. Its not proving what we need to prove.

3/3/2016

It continues creeping closer and closer to our home. It's filling up the beautiful triticales across from our home. I googled their home pieces and they have hundreds of acres like this they can put it on near their homes not mine! But no. This is closer they say and they don't have to cross county roads with the dripping manure trucks as much!

It's going to be an unbearable summer of horrid smells from the two years of OLD manure still un composted and sold. Now they are bringing in more before the other is gone? I thought they had to move it after so long?

I'm just very sick about it and it's affecting my health as I watch and know what we will deal with this summer all because of TOO MANY COWS they cannot keep up with!

Please help me stop this process, please!

I've contacted them. I've asked and pleaded! But they don't care.... It's not because of "the weather" being so wet this winter.... Don't let that excuse fool you!!! They didn't get rid of last year's manure and it sits here just as wet and un moved!!!

Please help us.

## **2. YRCAA has refused citizen requests to take reasonable actions that would mitigate dangerous air pollution.**

A. In 2005 Les Ornelas, who was then Director for the YRCAA, addressed a group of Yakima County dairymen. Director Ornelas said,

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.

Mr. Ornelas's statements were accurate in 2005 and they are accurate today. The Yakima Regional Clean Air Agency does not take enforcement action against dairies, even though this industry is the largest polluter in the county.

Recently YRCAA provided citizens with evidence that they take action against dairies. The table below summarizes these actions:

YRCAA Enforcement Actions against Yakima County Dairies

Facility	Date	Violation	Fine	Waived
(b) (5) Privacy, (b) (7)(C) Enforcement Priv	2009	Burning Prohibited Materials during Stage II Burn Ban	\$2,000	\$1,500
(b) (5) Privacy, (b) (7)(C) Enforcement Privac	2010	Burning without Permit	\$1,150	\$750
(b) (5) Privacy, (b) (7)(C) Enforcement P	2012	Dust	\$2,000	
(b) (5) Privacy, (b) (7)(C) Enforcement	2009	Burning Prohibited Materials without Permit	\$1,270	\$1,270
(b) (5) Privacy, (b) (7)(C) Enforcement	2010	Burning Prohibited Materials including Asbestos without Permit	\$6,012	\$2,012
(b) (5) Privacy, (b) (7)(C) Enfo	2010	Burning Prohibited Materials without Permit	\$4,000	\$2,000
(b) (5) Privacy, (b) (7)(C) Enforcement Pr	2011	Burning Prohibited Materials	\$5,500	\$4,000
(b) (5) Privacy, (b) (7)(C) F	2011	Asbestos Demolition without Notice of Demolition	None	
(b) (5) Privacy, (b) (7)(C) Enfo	2012	Burning Prohibited Materials during a Stage II Burn Ban	\$2,490	
(b) (5) Privacy, (b) (7)(C) Enforcement Pri	2013	Burning during a Stage II Burn Ban	\$4,250	\$1,250
(b) (5) Privacy, (b) (7)(C) Enforcement Privac	2013	Fugitive Dust	None	
(b) (5) Privacy, (b) (7)(C) Enforcement Pri	2014	Burning Prohibited Material (Metal, PVC, Treated Lumber)	\$2,250	\$250
(b) (5) Privacy, (b) (7)(C) Enfo	2015	Burning Prohibited Material without Permit	None	
(b) (5) Privacy, (b) (7)(C) Enforcement	2015	Failure to Register	None	

(b) (5) Privacy, (b) (7)(C) Enforcement Privac				
(b) (5) Privacy, (b) (7)(C) Enfor	2014	Failure to Register	None	
(b) (5) Privacy, (b) (7)(C) Enfor	2014	Failure to Register	None	

There were two fines for dust and one was against a beef feedlot. YRCAA does not take action against dairies that spray and spread manure during high winds or inversions. YRCAA does not levy fines against dairies that do not follow their own nutrient management plans.

**B.** When citizens report bad air investigators do not go to their homes and talk with the complainant. Instead they evaluate the air ¼ mile down the road or visit the alleged source of the problem and talk with the people causing the pollution, most often dairymen. Air quality varies significantly over a few hundred feet, depending on topography and weather.

(b) (5) Privacy, (b) (7)(C) Enfor, who lives downwind from a 6,000 head dairy, has complained many times over a period of fifteen years. Scientists from John Hopkins have visited his home but YRCAA investigators have never come into his yard. The YRCAA rationale for not talking with complaining citizens is to avoid confrontations but the agency does not seem to fear confrontations with polluters. (b) (5) Privacy, (b) (7)(C) Enfor once asked for a copy of any confrontations with agency staff and was told by Gary Pruitt, YRCAA Director, there was none. He also has asked when and if investigators come out to please come to his home. As of this writing, after 15 plus years of filing complaints no one from YRCAA has ever been to his home to investigate a complaint.

Here is a message from (b) (5) Privacy, (b) (7)(C) Enfor to a YRCAA inspector from April 13, 2016:

Hey (b) (5) Privacy, (b) (7)(C) Enfor,

This complaint is in regards to (b) (5) Privacy, (b) (7)(C) Enfor southwest spray field, where untreated cow poop and cow pee is being sprinkled on the ground. (b) (5) Privacy, (b) (7)(C) Enfor and I observed that the mixture was dark in color and the aerosol stench was drifting across highway 24, toward our home. We can't help but smell the horrible aerosol drift of the animal waste - which, by the way, was nearly an all day event!

In my foncon to your office on Tuesday, 4.12.16, I also mentioned that it would be nice if you would respond to a courtesy return phone call to me, as your phone message indicates that you will 'get back' to the caller....to date - I have never received a phone call (or visit) in regards to your (or anyone at YRCAA) investigation of my complaints. As a woman, a resident of Yakima County and a Tax Payer, I believe I've been discriminated against by YRCAA's lack of consideration for my right to breathe clean air and YRCAA's handling of citizen complaints. Please, send me a copy of the report of your investigation on this matter, for the 'date' of the complaint. You know my address and you have my phone number.

Regards,

(b) (6) Privacy, (b) (7)(C) Enforcement Policy

A YRCAA staff member responded to (b) (6) Privacy, (b) (7)(C) Enforcement Policy and told her that (b) (6) Privacy, (b) (7)(C) Enforcement Policy had not been an inspector since 2014. For two years she had complained to a man who did not have the courtesy to direct her to the active investigator.

(b) (6) Privacy, (b) (7)(C) Enforcement Policy has complained frequently over a period of nineteen years and investigators have visited his home only once when a dairyman was burning during a stage 2 burn ban and the investigators could not find the site. (b) (6) Privacy, (b) (7)(C) Enforcement Policy has phoned in complaints and taken pictures of haze so bad that people can hardly see the road, in other words a hazard to driving. He was willing to provide an affidavit. The YRCAA did not investigate until days later and refused to take action.

When (b) (6) Privacy, (b) (7)(C) Enforcement Policy brought pictures to a YRCAA board meeting, then Board Chairman, Tom Gasseling responded: "The problem for me with the pictures is, quite frankly, I don't know what they are. You can tell me what it is. I can't tell if it is shit, sawdust, or what is blowing." YRCAA Code B Section 5 (Attachment 64) clearly states that statements from witnesses can and should be used as evidence of air pollution.

When several people complain about a dairy in one day YRCAA only records one complaint. When a citizen complains in the morning and again in the afternoon YRCAA only records one complaint. Sometimes the agency does not investigate until 24 – 48 hours after the complaint.

When a stack of hay on a dairy ignited via internal combustion in 2012 during a burn ban, the dairy was not required to extinguish it but was allowed to simply let the fire burn itself out. (Attachment 48).

Between 2005 and 2007 citizens in Yakima County took air samples at homes with strong odors. They used a portable air monitor called the Hound designed by Battelle on behalf of the U.S. EPA's National Homeland Security Research Center. (Koglin, 2006; U.S. EPA, 2006). Readings were extremely high at homes near dairies. The citizens shared the information in disc form with YRCAA. Several months later they asked whether the staff had studied the data. The answer was "Yes" which was problematic because YRCAA did not have the second disc needed for data interpretation. The YRCAA never acted on the alarmingly high readings in these homes.

In 2012 the YRCAA literally asked one citizen who complained about air pollution to find and cite the laws that were broken before they would investigate. (Attachment 56).

C. In early 2013 a group of citizens submitted a petition with fifty signatures that asked YRCAA to "adopt a regulation, pursuant to its authority under the Washington Clean Air Act, to prohibit all dispersal and land application of manure and effluent during any burn ban." (Attachments 24, 37, 39 & 43)

Upon receiving the petition the YRCAA promptly posted the names and locations of all who signed it on the agency web site. The petition was accompanied by a list of over a hundred pieces of research that document the adverse health effects due to air pollution near concentrated animal feeding operations. (Attachment 29). This list has never been posted on the agency web site.

In June, 2013 Director Gary Pruitt recommended to the YRCAA Board that they should deny the petition. (Attachment 41). He said that he had consulted with the Washington State Department of Agriculture and the South Yakima Conservation District and concluded that:

1. No specific statutory authority exists for YRCAA to prohibit any activity, which isn't already prohibited within an applicable statute, other than certain wood stove use and certain outdoor burning;
2. The Dairy Nutrient Management Act regulates the land application of manure which must be made at agronomic rates (applying the right amount, at the right time, in the correct location,



using the right source);

3. No evidence exists which would support the rationale that emissions from land application are sufficient to cause adverse health effects during periods when burn bans are in effect;
4. Such a rule could cause groundwater problems due to inadequate storage and subsequent excessive precipitation; and
5. Such a rule could cause an unreasonable economic burden if manure had to be transferred to others and commercial fertilizer purchased to replace it.

We do not understand how the rule could cause the excessive precipitation cited in item 4. Please note that there is abundant evidence that shows manure is not applied at agronomic rates in the Yakima Valley. (Tebbutt Law, 2014). Mr. Pruitt did not consult with any experts on human health as required by YRCAA Code B, Section 8 (Attachment 64) and ignored the 106 health related documents submitted by the petitioners.

The YRCAA convened two public meetings to discuss the issue. The agency sent invitation letters to the fifty petitioners, over fifty dairymen and about fifty other “interested parties”, namely those connected to animal agriculture. (Attachment 26). There were no letters of notification to the people who live near dairies. The YRCAA did not publicize the meetings in the Spanish speaking media so the Friends of Toppenish Creek paid for notices in the newspaper, El Sol, and sound bites on Radio KDNA, La Voz Del Campesino. There were no invitations to the Yakima Health District, to health care providers, to the Department of Health or to scientists from the universities who study the impact of agricultural air pollution on human health.

The YRCAA authored a discussion paper for the meetings that said,

It is not certain that the rule is needed and it is assumed as to what it might accomplish. Since there is a very low probability that land application would occur during the times burn bans are declared, very little might be accomplished by the rule. (Attachment 25)

Sometime in August, 2015 the Washington Dairy Products Commission sent the YRCAA a letter and literature review authored by Dr. Nichole Embertson of the Whatcom Conservation District. (Attachment 46). The paper reviewed forty pieces of research and concluded:



Limited data is available on the direct effects of land application of dairy manure on public (not worker) health, but data extrapolated from studies looking at emission rates of ammonia, dust (including bioaerosol), and odor from land application methods, OSHA.NIOSH exposure limit thresholds, and dairy manure application practices in Yakima, concludes that there is likely no significant benefit to public health from exclusions of land application of dairy manure in the Yakima Region, particularly during burn bans. Of the emissions from land applied dairy manure that have the potential to effect (sp) local atmospheric conditions and communities, only ammonia is of significance due to its potential to react with nitrous (?) and sulfuric acids in the atmosphere to chemically form PM<sub>2.5</sub>. Of lesser significance is coarse (sp) particulate matter and odor which tend to be either low due to the moisture content and application methods of manure or not a substantiated threat to human health in the Yakima Regions, respectively. It is recommended that the use of best available land application practices continue to be employed with land applying manure in the Yakima Region to reduce any excess emissions.

The Friends of Toppenish Creek responded with a critique of the literature review. (Attachment 47). Here are some highlights from that critique:

Thirteen of the forty references in the *literature review* address community health. Twelve of these references document elevated health risks related to concentrated animal feeding operations and/or air pollution. Only one agrees with Dr. Embertson's statement.

Dr. Embertson states, "Following best practices, the majority of manure is applied to crops at agronomic rates using crop appropriate technologies." According to the Washington State Dept. of Agriculture 11% of the fields owned by dairy operations have soil nitrate levels greater than 45 parts per million, a sign of manure/fertilizer over application. In a county with 120,000 milk cows plus calves, replacement heifer's, and cattle for slaughter 11% is significant. This means that one out of ten dairies endangers public and environmental health by not following agronomic application guidelines.

Dr. Embertson details how and when manure is applied to the fields in Yakima County but she does not live here. Our observations differ. We know that manure is

applied to bare fields during the months November, December, January and February. And these are the times when hospital admission rates for asthma are highest.

Can Dr. Embertson support the statement "A small percentage (<5%) of other crops and less desirable application technologies such as honey wagons (tanks) and Big Gun sprinklers are used for application, but the land acreage applying these technologies is small (<3%)." It is our observation that this type of application is very common in the lower Yakima Valley. If she cannot provide supporting references, then she is fabricating data.

Dr. Embertson states, "All dairy operations must apply nutrients (i.e. manure) according to their Dairy Nutrient Management Plan which outlines agronomic guidance and application restrictions. Restrictions include when not to apply (i.e. wind > 10 mph, inversions, high temperatures, etc.) what local criteria (i.e. schools, neighbors, wells, etc.) and setbacks need to be taken into consideration when applying and best methods for reducing nutrient losses via volatilization." . . . . We find no restrictions for applying manure during inversions, high temperatures or winds > 10 mph in the WA State NMP requirements

Dr. Embertson states, "Depending on atmospheric conditions and geographic location, this pathway contributes less than 10% of the total secondary PM 2.5 production in the atmosphere (Hristov, 2011). She omits Hristov's ensuing comments, "In certain areas and in cool weather, farm animal contribution to atmospheric PM 2.5 concentration may be as much as 20%." His graphics show that this scenario is especially true in the Pacific Northwest. (Please see pp. 3130 and 3133 of Hristov's Technical Notes)

Dr. Embertson states, ". . . manure is not typically applied from November to February to the crops grown in dairy production in Yakima, WA." This is simply untrue. Year round application is one of the main reasons that citizens requested a ban on manure spreading during inversions.

Dr. Embertson states, "Downwind measures of ammonia from applied manure rarely exceed concentrations in parts per billion (ppb) (Williams et al, 2011)". The referenced

study had nothing to do with wind direction or manure application. It did not even mention these parameters. Dr. Williams states, "This does not represent my work."  
(Personal conversation, Sept. 2013)

On August 6, 2013 attorney Charles A. Klinge of Groen, Stephens & Klinge sent a letter of opinion to Dan Woods of the Washington Dairy Federation regarding the petition. This letter was forwarded to the YRCAA. The letter stated that YRCAA had no legal authority to enforce a ban on manure application during burn bans due to the agricultural exemption in the Clean Air Act and the presumption that odor and dust do not cause adverse health effects. The letter did not address other air pollutants such as ammonia, hydrogen sulfide and numerous volatile organic compounds. (Attachment 36).

On Sept. 3, 2013 one of the petitioners, (b) (6) Privacy, (b) (7)(C) Etc sent the e-mail below to Director Pruitt.

Gary,

Agenda item 9, 8 August board meeting states " August 12, 2013 Executive Director sends letter to petitioner stating that the Board has ceased the rulemaking process in accordance with RCW 34.05.335."

As of today, 3 September 2013 no petitioner has received said letter.

Please send letters or e-mails to petitioners.

(b) (6) Privacy, (b) (7)(C) Etc

Apparently the Director had not bothered to inform the petitioners. Here is his Sept. 4, 2013 reply.

(b) (6) Privacy

The attached letter to the petitioner was mailed today.

Gary W. Pruitt

The referenced letter, dated Sept. 4, 2013 denied the petition to ban manure application during burn bans. (Attachment 42). Please consider this as one of many instances in which YRCAA is less than honest.

**D.** In 2011 the Yakima Regional Clean Air Agency embarked on a pilot project entitled *Air Quality Management Policy and Best Management Practices for Dairy Operations*. Here are

selected comments regarding the first draft of the document along with YRCAA responses (Attachment 38):

**Comment #2:** “I have lived in the Yakima Valley for 40 plus years and am glad to finally see some attention given to the effects of the large Dairy operations on our clean air and quality of life. I have a 1000 cow dairy ½ mile east of me and 900 FT. East of my Mother’s home. When they spray to brown lagoon water I cannot even go out in my yard. We have an office located at my Mother’s farm and one cannot open the doors because of the stench and Flies. Even when the brown water is not being sprayed one smells the lagoons constantly. Especially with our consistent westerly winds. . . . It is my hope that serious consideration is given to addressing the many issues that Large Dairy operations are causing.”

#### **No Response**

**Commenter #5:** “I am a farmer residing and operating in the western end of Benton County. I spend a great deal of time doing business in and out of the eastern end of Yakima County and, as a result, travel past several 500+ cow dairy operations. It is with significant pleasure that I come to realize you and the YRCAA are trying to address the issue of emissions from these operations. I have repeatedly experienced such overwhelming ureaic emissions along the county road as to cause me concern over whether I was even going to manage to exit the other end of the cloud. In my personal opinion these emissions are often so bad as to present a driving hazard. I would like to point out that these experiences came in direct connections with the sprinkler application of liquid wastes at the dairy sites. Somehow that aeration process or the spraying of that waste through the circulating air and especially during the warmth of Summer exacerbates the already bad situation at hand. These experiences have only served to make me wonder how people living in homes within such emission areas can even tolerate it. Their lives and fortunes have been affected in many instances. In light of a general acceptance of the issue of people suffering from second hand smoke from a cigarette smoker, we definitely face a situation with these dairy emissions of something far more hazardous to the health. I would leave it to your expertise to address the greater issues but offer this letter as a suggestion that all sprinkler application of liquid wastes be ended as a matter of public health, itself.”

**Response:** “YRCAA supports your suggestion and BMPs to that effect are on the list in the policy appendices.” (Note – There has been no decrease in spraying of manure since this statement was written)

**Commenter #16:** “RCW 43.21C Assure all people of Washington a safe, healthful, productive, and aesthetically and culturally pleasing surrounding.

Maintain environment which supports diversity and individual choice. The legislature recognizes that each person has a fundamental and inalienable right to a healthy environment.

No agency of the government has the authority to allow or permit any operation that creates trespass, nuisance that creates health effects and environmental effects upon other citizens. This is the taking of Private Property under any color of the Law.”

**No Response**

**Commenter #16:** “THE RIGHT TO FARM ACT DOES NOT GIVE A PERSON THE RIGHT TO POLLUTE AIR, WATER, NOISE.”

**No Response**

**Commenter #21:** Stop the negative comments towards [REDACTED] and [REDACTED] in your house emails to each other. Regardless of their positions, it was unfair to accuse them of wanting to get rid of all dairies. That has not been and is not true. Some of the Board’s email responses re: valid concerns from frustrated citizens who feel they do not have a voice, have been less than professional. This has stirred up more anger and frustration.”

**No Response**

**3. YRCAA has resisted citizen participation in policymaking and has failed to follow through with promises to include citizens in further policy discussions.**

**A.** In order to receive EPA funding and support for efforts to mitigate PM 2.5 air pollution the Yakima Clean Air Agency needs to demonstrate community involvement. In a document *PM*

*Advance Path Forward – 2015 Update* YRCAA described a community based Task Force saying,

“The group has met routinely since August of 2014 and has participated in the control strategy development and selection of additional reduction measures and programs. Additional reduction measures and programs to be implemented immediately are detailed in Appendix F. The group will remain active and will meet no less frequently than semi-annually.”

In fact the Task Force only met three times in 2014 and once in January, 2015. After the group approved the plan and it was sent to the EPA meetings stopped. Notes from an YRCAA board meeting on Feb. 13, 2014 say, “There was discussion by Board and staff concerning the time period when the PM Advance Plan would be updated. Staff responded annually.” This is not happening. There are no apparent plans to update the plan with community participation.

**B.** In the fall of 2013 YRCAA convened both an Agricultural Task Force and a Dairy Task Force in order to demonstrate community involvement surrounding dairy air emissions. Meetings took place throughout 2014. The Agricultural Task Force last met on Jan. 13, 2015 and the Dairy Task Force last met on April 14, 2015. The agency gave no reason for calling the meetings to a halt, but retains the appearance of involving the public.

At the last meeting of the Dairy Task Force (b) (6) Privacy, (b) (7)(C) End, representing the public, noted that the *Air Quality Management Policy and Best Management Practices for Dairy Operations* does not take into account manure emissions offsite. YRCAA staff countered that this is not the purpose of the policy. (b) (6) Privacy, (b) (7)(C) Enforcement P, also representing the public, asked for a section in the document that describes impacts on public health. “It was tentatively decided that staff would put together a Statement of Basis type document. This document would be posted to the Agency website.” This has not happened, another example of being less than honest.

There was a stated need to elicit public comments. YRCAA declined to do any survey work. Instead the agency delegated that job to community volunteers in the Dairy Task Force but did not provide any support for the work. Comments provided by task force members were not used.

C. Some concerned residents of Yakima County attend both board meetings and public forums regarding air quality. Here are some requests from the public that both the board and YRCAA staff have avoided and ignored:

March 13, 2014: “(b) (6) Privacy, (b) (7)(C) Enforcement Privacy White Swan, stated as there are several new Board Members she provided materials she had previously presented to the Board concerning the paper Dr. Nichole Embertson prepared concerning health effects of spraying or spreading manure during a burn ban. (b) (6) Privacy, (b) (7)(C) Enforcement Privacy offered her beliefs concerning Dr. Embertson and questioned Dr. Embertson’s credibility and integrity. As there no other commenters, the period closed.” (Attachment 3)

April 10, 2014: “(b) (6) Privacy, (b) (7)(C) Enforcement Privacy reported on a study conducted in Idaho with dairy operations. (b) (6) Privacy, (b) (7)(C) Enforcement Privacy stated they began with a baseline in their study to determine the amount of ammonia in the air. Mr. Gawlik asked Dr. Tahat if he wanted to respond to (b) (6) Privacy, (b) (7)(C) Enforcement Privacy Dr. Tahat asked, what was the baseline they started with? (b) (6) Privacy, (b) (7)(C) Enforcement Privacy was not sure, and described how they measured emissions for a field, prior to, and after, different applications of manure.” (Attachment 4)

April 10, 2014: “Mr. Don Day, Sunnyside City Manager, stated the City is concerned and offered their assistance to the dairy and other industries to come up with a reasonable and rational solution. They are willing to help.” (Attachment 4)

April 10, 2014: “(b) (6) Privacy, (b) (7)(C) Enforcement Privacy Friends of Toppenish Creek, expressed concerns about airborne particulates and their impact on the health of those with asthma, heart conditions, and sensitive people. (b) (6) Privacy, (b) (7)(C) Enforcement Privacy revisited her letter to the Board concerning Dr. Embertson as misleading and discussed EPA’s Region 10, State Implementation Plan (SIP), section 2.03 of the Clean Air Act concerning persons willfully make a false or misleading statement to the Board. Mr. Gawlik assured her that the Board will work with staff to represent different areas of the county.” Neither YRCAA nor the Board has ever addressed the question of false statements by Dr. Embertson that influenced policy. (Attachment 4)

May 8, 2014: During a presentation about the *Yakima Air Winter Nitrate Study*. (b) (6) Privacy (b) (6) Privacy, (b) (7)(C) Enforcement Privacy spoke concerning the resolution presented to the Board last fall to ban spreading of

manure during inversions. It is a health problem. He requested the Board revisit it.”  
(Attachment 5) Neither YRCAA nor the Board has done this.

May 8, 2014: “[REDACTED] (b) (6) Privacy, (b) (7)(C) Enforcement Criteria – A physician in the area since 1992 has patients in the lower valley. [REDACTED] (b) (6) Privacy, (b) (7)(C) Enforcement Criteria spoke for those who were not present concerning their health living near a dairy. He relayed a story of a patient, when she purchased her property, and how it changed when a dairy bought the farm that was next to her, and how it has affected her grandchildren’s lives. He believes monitors should be placed on properties living near dairies.” (Attachment 5) A representative for the dairy industry asked [REDACTED] (b) (6) Privacy, (b) (7)(C) Enforcement Criteria if he wanted to ‘step outside’ after he gave this testimony

“Mr. Gawlik responded to [REDACTED] (b) (6) Privacy, (b) (7)(C) Enforcement Criteria and spoke of his meeting with Mr. Pruitt, discussing budget issues, the Compliance Division, and efforts to cover all areas of the valley with the resources they have. Our Board has listened and we are doing what we can to help all residents in Yakima County.” (Attachment 5)

Nov. 13, 2014: “[REDACTED] (b) (6) Privacy, (b) (7)(C) Enforcement Criteria expressed her objection to the statement in the Dairy Report that no monitoring or measuring is necessary. [REDACTED] (b) (6) Privacy, (b) (7)(C) Enforcement Criteria related it to giving blood pressure medicine for those over 55 without monitoring their blood pressure. What works for one would not necessarily be needed for someone else, and reiterated her request that monitoring for emission calculating begin as soon as possible.” (Attachment 10)

Nov. 13, 2014: “[REDACTED] (b) (6) Privacy, (b) (7)(C) Enforcement Criteria expressed concerns about manure particulates being spread and sprayed, how they affect the neighbors next to a dairy operation, and his belief that the BMPs are not effective, or enforceable. He believes monitoring should be required.” (Attachment 10)

“Mr. Gawlik asked Mr. Pruitt to respond. Mr. Pruitt discussed the STAR grant proposal by Dr. Ndgwa (to run for three years) is the way to get monitoring validated involving both industry and neighbors. Sampling cannot always determine where the particulates are coming from. If approved the grant proposed would help identify emissions and their source. Air monitoring is a long term process. The Agency does not have the funds for monitoring equipment.” (Attachment 10)



“(b) (6) Privacy, (b) (7)(C) Enforcement Privacy” closed by referring to the Nitrate Study conducted last year, and stated the technology is out there, we need to look for it.” (Attachment 10)

March 12, 2015: “(b) (6) Privacy, (b) (7)(C) Enforcement Privacy” Harrah, discussed the option of using solar energy and believes efforts should be directed toward solar power rather than woodstoves.” (Attachment 14)

May 14, 2015: (b) (6) Privacy, (b) (7)(C) Enforcement Privacy again asked, “Whether YRCAA had looked into solar or wind power issues” as a way to decrease the use of wood burning stoves. Neither YRCAA nor the Board have ever responded to this request. (Attachment 16)

May 14, 2015: (b) (6) Privacy, (b) (7)(C) Enforcement Privacy mentioned an article in the Yakima Herald that put the City of Yakima at number 13 in the nation for bad air quality. (American Lung Association, 2015).

“Mr. Pruitt explained that Yakima was not on a worsening trend. It is on an improving trend. Mr. Pruitt explained that, about every four or five years we monitor exceptionally high PM values. Yakima can have a week or two of bad air quality, during which three of the highest readings could be sampled, then back on a steady trend, somewhere around 30, five points below the standard. Mr. Pruitt explained the values are only representative of the metropolitan Yakima area. They are not intended to be representative of the Wenatchee or Lower Valley. “ (Attachment 16)

Aug. 13, 2015: “(b) (6) Privacy, (b) (7)(C) Enforcement Privacy” presented a short presentation on global warming as it relates to air quality. (Attachment 42). (b) (6) Privacy, (b) (7)(C) Enforcement Privacy would like the Agency to analyze and describe how much air pollution comes from each major segment of agriculture in the Yakima Valley, analyze and describe the impact of wet and dry composition of ammonia and the cost benefits of ammonia with respect to public health. (b) (6) Privacy, (b) (7)(C) Enforcement Privacy would like the Agency and Board to spend the next month reviewing her proposal and commit to doing this type of analysis. She explained that she realizes that the Agency has limited resources and offered her time one day a week to work with the Agency on this. (b) (6) Privacy, (b) (7)(C) Enforcement Privacy would like an answer to her proposal at the next Board Meeting.” (Attachment 57)

October 8, 2015: “Mr. Pruitt presented background on (b) (6) Privacy, (b) (7)(C) Enforcement Privacy request and asked the Board to approve the following by minute action:

1) The Agency’s response to (b) (6) Privacy, (b) (7)(C) Enforcement Privacy request: and

2) Provide (b) (6) Privacy, (b) (7)(C) Enforcement the opportunity to speak with Staff regarding her concerns or reactivate the Community Air Quality Forum and discuss the issues there.” (Attachment 19)

The Director also sent a written response. (Attachment 43). However, YRCAA has done nothing to educate the public about the impact of air pollution on global warming. The YRCAA web page that addresses climate change is simply a pretty page with two links to the National Academies.

Nov. 12, 2015: “(b) (6) Privacy, (b) (7)(C) Enforcement advised that farmers are not following their Air Quality Management Plans as they are using their manure sprinklers.” There was no YRCAA response and no indication that the agency would take action. (Attachment 20)

There have been times when the YRCAA Board of Directors was openly hostile to citizen participation. Former Chairman Tom Gasseling has sworn at community members using the words G\_\_D\_\_ and F\_\_ Y\_\_. YRCAA has made it extremely difficult to dialogue with the Board by placing public comments at the beginning of each meeting. The public can only present in anticipation of the discussion as stated in the agenda. The public has no opportunity to counter biased and incorrect statements made by the YRCAA staff to the Board.

**D.** In 2010 the Yakima Regional Clean Air Agency began working with Yakima County dairymen to develop a project entitled, *Air Quality Management Policy and Best Management Practices for Dairy Operations*. The stated objectives for this project (p. 3/8) are:

1. To achieve sufficient prevention of emissions from dairy operations to assure compliance with applicable laws and regulations;
2. To achieve prevention of emissions by describing a menu of system and pollutant specific best management practices (BMPs) for dairy operations that will be implemented through the use of flexible, site-specific Air Quality Management Plans;
3. To clarify what constitutes "reasonable precautions to prevent" emissions as required by WAC 173-400-040(3); and
4. To inform owners and operators about effective measures for the prevention of air emissions and provide a means by which dairy operations can demonstrate that they are taking reasonable precautions to protect the air quality in Yakima County.

The formative discussions for this project were conducted behind closed doors and were limited to a select group of dairymen and dairy supporters. On at least one occasion the group met at a local dairy where a “No Trespassing” sign made it dangerous and illegal for anyone from the public or the press to join.

In 2011, after the parameters for the policy were in place, the agency accepted public comment on the draft proposal. Here are some comments and YRCAA responses (Attachment 38):

**Commenter #3:** “Why is there not one public member, or environmental representative or legitimate health representative on the Clean Air task force working with the dangers of Dairy feedlot emissions in Yakima County?”

**Response:** “Participants in the YRCAA Dairy Emissions Work Group were chosen by the Air Pollution Control Officer to best accomplish the purpose of the Work Group.”

**Commenter #3:** “How can you say you represent all people when there are no public members represented?”

**Response:** “It is because we represent all people that YRCAA is undertaking this effort.”

**Commenter #3:** “This is an environmental Justice issue.”

**No Response**

**Commenter #3:** “We are formally requesting a Seattle EPA, Environmental Justice representative be allowed to be part of Clean Air Proceedings along with two public representatives.”

**Response:** “Such a request should be made by you directly to EPA.”

**Commenter #6:** “The stated VISION of the Yakima Clean Air Organization is ‘An unceasing commitment to build and maintain partnerships in the continuous improvement of air quality for all (emphasis added) current and future generations in Yakima County.’ Why was the Public not considered to be part of the partnership building of the group that developed this policy? Elsewhere in your agency’s mission it is stated . . . ‘Constituency is made up of private

individuals, business and industry and public office.’ . . . . The exclusion of the public in the development of this policy is an egregious practice and an absolute violation of your own stated VISION and CONSTITUENCY. This policy development smacks of cronyism and a perpetuation of the ‘good old boys’ network. Permitting a few weeks of public comment does not constitute public input. Furthermore, denying the public participation in the policy development is not a Best Management Practice for a Government entity.”

**Response:** “Although this pilot project is not a rule, the same 30-day comment period is all that is required for rulemaking per RCW 34.05.”

**Commenter #8:** “Leaving the public out of these proceedings was a travesty!”

**Response:** “The public was not left out of these proceedings.”

**Commenter #8:** “You claim that having the public involved in the Clean Air Task Force proceedings would have somehow interfered with a consensus. What you seem to be saying is that there is a conflict of interest between the CAFO/dairy industry and the public which would slow the proceedings? Hogwash! I though we lived in a democracy where all entities had an EQUAL say!”

**Response:** “Your opinion is welcome and important.”

**Commenter #8:** “Why not leave the CAFO/dairy industry out of the proceedings rather than the taxpaying/impacted public?? That would speed things up!”

**Response:** “Your opinion is welcome and important.”

**Commenter #8:** “This policy was NOT DRAFTED WITH adequate public participation. As a result, I believe it will be ineffective in protecting the public’s right to clean, health air.”

**Response:** “Your opinion is welcome and important.”

**Commenter #16:** This is written by the dairy for the dairy and gives the public nothing. This policy is nothing more THAN A LOT OF SMOKE AND MIRRORS. THIS POLICY IS AS CLOSE AS YOU CAN GET TO PROTECTIONISM.”

**No Response**

**Commenter #16:** The civil rights and property rights of people who have to live by the dairies who by the way, most of the time moved in on them and changed their way of life, need to be addressed.

**No Response.**

**Commenter #22:** “As stated in the YRCAA Public Notice for the Draft Air Quality Management Policy and BMPs for Dairy Operations:

Public concerns about the possible health effects of air emissions from dairy operations have grown with the increasing size and geographic concentration of these operations . . . Emissions from dairies are a significant concern, not only for new residents in these areas, but for many long-time residents. . . .

Despite this, it appears the policy work group consulted only ‘local dairy operator expertise’ and ‘local dairy technical service provider expertise.’ The work group did not consult area residents, the impacted community, or public health and environmental experts.

As you are aware, it is the policy of the YRCAA to ‘secure and maintain levels of air quality’ that will not only ‘protect human health and safety and prevent injury to plant and animal life and property,’ but also to ‘*cooperate with the local governments, the Yakama Nation, organizations or citizens on air quality matters.*’ Regulation 1 of the YRCAA, Section 1.03 (A) 1, 2, and 11 (March 2000).

It is unclear as to how consulting only with the regulated industry to draft its own regulations furthers this policy objective.”

**Response:** “First, in addition to the end users of the policy, also involved were two scientists with direct expertise in air emissions from dairies. Second, the policy was written by the YRCAA Air Pollution Control Officer. Third, as of December 27, 2010, comments received during the public comment period have resulted in significant changes in policy text. Lack of trust in the policy-making process is not with the influence of YRCAA. Trust is a belief born of experience and those which are most critical have little or no experience with YRCA. Fourth, neither this pilot project policy nor the final policy is a regulation.”

**Commenter #22:** “The policy workgroup should be reconvened to consult with an equal number of representatives from the public health and environmental communities, affected citizens, and interested persons or groups as dairy industry consultants.”

**Response: YRCAA disagrees**

E. In October, 2014 the YRCAA, along with Washington State University (WSU) submitted a Star grant proposal to the EPA for Community Based Air Quality Monitoring for the Yakima Valley. This project would have obtained twenty hand held monitors that citizens could use to assess air quality in impacted areas. The stated EPA goal was to increase community involvement in air monitoring. Citizen [REDACTED] advocated directly with EPA Region X in Seattle for this project. The request for proposal (RFP) asked for citizen input and Dr. Hasan Tahat from YRCAA asked members of the Agricultural and Dairy Task Forces to provide letters of support. Task force members agreed to do this. However, the RFP that was submitted did not contain the letters of support. It was a bare bones application and was rejected. It is common knowledge that incomplete grant applications are not funded.

F. During the June 15, 2015 meeting of the YRCAA Board, Director Pruitt talked about an EPA website that provides education and information regarding *Citizen Air Monitoring*. Board member Jon Devaney asked if a link to this web site could be posted on the YRCAA web site. The director said it could be done. However, the link was never posted. At the same meeting there was discussion about the EPA Environmental Justice tool. This link has not been added to the YRCAA site and there has been no further discussion about addressing environmental justice in Yakima County.

#### **4. YRCAA does not employ people with the requisite credentials to analyze and address major air pollution problems.**

A. To the best of our knowledge these are the qualifications of the Director and Department Heads for the Yakima Regional Clean Air Agency:

- Executive Director Gary Pruitt – no college degree
- PM 2.5 Emission Reduction Project Manager Mark Edler – no college degree

- Supervisor for Compliance & Air Monitoring Division, Keith Hurley – B.S. degree in Health and Fitness Development
- Engineering and Planning Division Supervisor, Hasan Tahat – PhD in Environmental Engineering

**B.** There is no one on staff with a background in medicine or public health. The agency does not contract with any person or agency to analyze the health of Yakima County with respect to air quality.

According to a 2010 e-mail from Director Pruitt:

(b) (5) Privacy, (b) (7)(C) Enforcement Privac

I have instructed Keith Hurley, Compliance Division Supervisor, to affect a response to your complaint in accordance with Section 5 of our Administrative Code, Part B, attached. Please bear in mind, in reference to RCW 70.94.640, that we do not have the expertise to determine "substantial adverse effect on public health." We do, however, have the expertise to determine "whether agricultural activity is consistent with good agricultural practices." Bear in mind that if a violation is determined, we must "consult with a recognized third-party in the activity prior to issuing any notice of violation." If a evidence confirms a violation, I would welcome any suggestion as to who the willing third-party expert should be. In my experience, I've not been able to find anyone. Also, please be reminded, we have no authority to determine whether a mitigating condition of the County of Yakima issued MDNS has been violated.

In 2011 the Yakima Regional Clean Air Agency embarked on a pilot project entitled *Air Quality Management Policy and Best Management Practices for Dairy Operations*. After developing a proposed plan, the agency asked for public input. Many questions focused on public health. Here are some comments and YRCAA responses (Attachment 38):

**Commenter #9:** "Leading up to the creation of the Dairy Emissions Workgroup and the YRCAA Draft Air Quality Management Policy and Best Management Practices for Dairy

Operation I asked Mr. Pruitt in May of 2010 to ‘consult with a recognized third-party expert to determine what constitutes substantial adverse effect on public health as per RCW 70.94.640 from odors and fecal dust.’

His reply was, ‘Bear in mind that if a violation is determined, we must consult with a recognized third-party expert in the activity prior to issuing any notice of violation.’

What determines ‘substantial adverse effect on public health’ and what determines if a violation is determined and by who? YRCAA or a third party? This needs to be clarified in your policy.”

**Response:** “This subject is not intended to be addressed by the policy. Substantial adverse effect on public health should be determined by a person with public health expertise.”

**Commenter #12:** “What qualifications will be required of the person or persons that will be the experts on determining health effects of dairy emissions?”

**Response:** “This subject is not intended to be addressed by the policy. Substantial adverse effect on public health should be determined by a person with public health expertise.”

**Commenter #12:** “Who will determine if the policy is sufficient to “. . . *protect human health and safety, including the most sensitive members of the population*” RCW 70.94.011?”

**Response:** “Protection of public health should be determined by a person with public health expertise.”

**Commenter #12:** “Have any of you read up on the literature of health effects from emissions from Dairy operations? There is beginning to be some interesting literature on the topic. I can forward you a literature review on air emissions from the Oregon Task Force if you are interested. I will forward it to you in another email.”

### **No Response**

**Commenter # 23:** “The health effects of dairy emissions are related to ammonia, hydrogen sulfide, and a number of other constituents, all of which can be monitored very accurately and are monitored very accurately in many other areas of the United States. I would call your



attention to Cerex Corporation which manufactures instruments that do this type of monitoring. Their instruments are in use today in many industrial applications monitoring precisely the same constituents that, in dairy emissions, pose a health hazard to the neighbors of the dairy.”

**Response:** “Such instruments are useful in determining whether or not a pollutant is present. However, for measuring the rates of fugitive emissions, they are useless.”

**Commenter #23:** “This remarkable lack of curiosity about the measurable constituents of dairy odor on the part of an agency that bills itself as a ‘Regional Clean Air Agency’ allows those harmful constituents to be spread to the neighbors of the dairy where they can constitute a health hazard and where they do constitute a trespass on the private property of the neighboring owners. If these types of emissions occurred in an urban area, no one would tolerate them. In fact, a number of Cerex machines are currently used to monitor oil and chemical plants in close proximity to urban areas - in real time – to insure that harmful emissions are not released in these areas.”

### **No Response**

C. In 2015 the Friends of Toppenish Creek approached the YRCAA board of directors and asked the agency to address reactive nitrogen and global warming. (Attachment 45). At that meeting Director Pruitt responded that everyone knows that 78% of the air is nitrogen and this is not a problem. We suggest that YRCAA does not understand the difference between reactive nitrogen and un-reactive nitrogen; that YRCAA does not understand the theoretical framework required for study of air pollution and global warming in an agricultural community; that YRCAA is incapable of informing the public about these issues.

## **5. YRCAA does not provide information to non-English speaking populations in language they can understand.**

A. Most of the enforcement work that YRCAA does is complaint driven. There is no evidence that non-English speaking populations in the Lower Yakima Valley are aware of their rights to clean air or how to notify YRCAA when problems exist. The only document we find that is translated into Spanish is a one page EPA flyer, referenced on page 20/35 of the document *PM*

*Advance Path Forward – 2015 Update*, but not posted on the YRCAA web site. There is no YRCAA contact information in this flyer. (YRCAA, 2015)

But, the flyer does recommend that homeowners use a meter to ensure that firewood has < 20% moisture. This is a significant expenditure for people with an average household income of under \$35,000. People who were born in another country will likely misunderstand the message and fear punishment for not undertaking this precaution. In fact there is a threat of punishment.

*PM Advance Path Forward – 2015 Update* *PM Advance Path Forward – 2015 Update* states,

WAC 173-433 and YRCAA Regulation 1 prohibit the burning of any substance in a wood stove, other than properly seasoned wood (sufficiently dried so as to contain 20% or less moisture by weight) and paper used to start the fire, which normally emits dense smoke or obnoxious odors. Thus, it is a violation to burn wood with moisture content greater than 20% if it normally emits dense smoke or obnoxious odors.

Meanwhile orchardists happily bulldoze old trees and burn them in massive piles after drying the wood for only one winter month. The agency does not require orchardists to use a meter to ensure that firewood has < 20% moisture when they pull out orchards and burn them nor does the Yakima Regional Clean Air Agency do site visits to make sure no garbage is being added e.g. old PVC irrigation pipe.

**B.** The YRCAA only prints meeting agendas and minutes of meetings in English and everything on their web page is in English. The YRCAA informational web page has nothing translated into Spanish e.g. burn ban notices; permit information and meeting times.

**C.** There is no option for conversation in Spanish when the public calls the Yakima Regional Clean Air Agency. The neighboring Benton County Clean Air Agency has a staff of five with a bi-lingual office manager. The YRCAA has a staff of twelve and no one speaks Spanish.

**D.** There has never been a minority on the Board of Directors for YRCAA. Concerned citizens have applied for board membership on at least three occasions and have been denied. However there were and are members with significant economic ties to polluting industries. For example,

(b) (6) Privacy, (b) (7)(C) Enforcement P served on the YRCAA Board of Directors for many years. He is the owner of Bay

Zinc, since renamed Kronos Micronutrients, a company that is regulated by YRCAA and has been fined for environmental pollution in the past. (WA Dept. of Ecology, 2014; Wilson, 2001).

The most recent addition to the Board is Dr. Steve Jones, a dairy nutritionist who derives a major source of his personal income from the dairy industry. Dr. Jones has routinely voted on dairy related topics including the *Air Quality Management Policy and Best Management Practices for Dairy Operations*. On Nov. 13, 2014 he voted on the CY 2015 Permit Fee Schedule that includes fees for dairies. (Attachment 10).

The *Washington State Implementation Plan for Yakima Regional Clean Air Agency* under section 8.01 D. (page 86) says “Any person who knowingly fails to disclose a potential conflict of interest under RCW 70.94.100 shall be guilty of a gross misdemeanor and upon conviction thereof shall be punished by a fine of not more than Five Thousand Dollars (\$5,000).”

WAC 174 – 400 – 2200 Requirements for board members says,

(1) **Public interest.** A majority of the members of any ecology or authority board shall represent the public interest. A majority of the members of such boards shall not derive any significant portion of their income from persons subject to enforcement orders pursuant to the state and federal clean air acts. An elected public official and the board shall be presumed to represent the public interest. In the event that a member derives a significant portion of his/her income from persons subject to enforcement orders, he/she shall delegate sole responsibility for administration of any part of the program which involves these persons to an assistant.

(2) **Disclosure.** Each member of any ecology or authority board shall adequately disclose any potential conflict of interest in any matter prior to any action or consideration thereon, and the member shall remove themselves from participation as a board member in any action or voting on such matter.

(3) **Define significant income.** For the purposes of this section, "significant portion of income" shall mean twenty percent of gross personal income for a calendar year. In the (case of a retired person, "significant portion of income" shall mean fifty percent of income in the form of pension or retirement benefits from a single source other than Social Security.

Income derived from employment with local or state government shall not be considered in the determination of "significant portion of income."

Furthermore, 70.94.430 (4) states, "Any person who knowingly fails to disclose a potential conflict of interest under RCW 70.94.100 is guilty of a gross misdemeanor and upon conviction thereof shall be punished by a fine of not more than five thousand dollars."

**E.** When the public was asked to comment on the 2011 Dairy Air Quality Management Pilot study people asked (Attachment 38):

**Comment #9** "Are these documents and BMPs going to be in Spanish also? We have a large population of Latinos who also need to know what is going on in this valley."

**Response:** YRCAA has no such plan.

**Comment #12** "Will you provide the draft policy in Spanish and allow time for anyone who would need to respond in Spanish? (This may require extending the comment period)"

**Response:** No

**Comment #13** "At no time were members of the Yakama Nation, who have consistently borne the brunt of dairy pollution, allowed access to the Policy workgroup. Neither were the region's Hispanic residents, who were likely unaware of proceedings because of the lack of Spanish-translated public notice. *See El Pueblo Para El Aire Y Agua Limpio v. County of Kings*, Superior Court of California, County of Sacramento, No. 366045, Dept. 14, p. 10 (1991) (inadequate public participation in environmental decision-making by public officials when public notice was given only in English; translation and publication in Spanish was justified given that large portion of the interested population was monolingual in Spanish and were denied meaningful participation). These two segments of the region's population have been unjustifiably denied their constitutional due process rights of notice and meaningful participation in the matter."

**Response:** YRCAA did not address this portion of Commenter #13's letter.

**6. YRCAA has participated in a campaign to misinform the public and intentionally leads the public to believe that air quality is safe when, in fact, it is often unsafe.**

A. On January 7, 2016 a Lower Yakima Valley newspaper, the Toppenish Review Independent, published a story entitled *Study Finds Low Ammonia Emissions at Area Dairies*. The same piece was later published in the *Yakima Business Times*. (Attachment 55) The second paragraph of that article states:

The Yakima Regional Clean Air Agency continues to work on improving air quality with local residents and businesses, including farms. Although research reveals small amounts of ammonia emissions from farms, experts say these emissions are insignificant and do not pose an overall threat to human health.

After reading the article [REDACTED] a concerned citizen and longtime resident in the valley, contacted Randy Luvaas, the managing editor for Yakima Valley Publishing. [REDACTED] asked who did the reporting and investigating. Mr. Luvaas replied that the article was submitted by the Washington Dairy Commission and was vetted and approved by Washington State University (WSU) and YRCAA.

The YRCAA is the authority on air pollution in the valley. This is the only agency with power to address air problems. YRCAA is aware of the Yakima Air Winter Nitrate Study that was performed by the Washington State Department of Ecology (2014). YRCAA is aware of the link between ammonia and fine particulate matter and that the county is at risk for non-compliance for this pollutant. YRCAA is aware of the elevated and increasing levels of ammonia in Yakima County that have been documented by the Environmental Protection Agency (2011 & 2014). YRCAA is aware that data from the Washington State Department of Agriculture leads to estimates of 80,000 to 112,000 lbs of ammonia lost to the atmosphere per day from dairy operations in Yakima County (Attachments 59, 60 & 62). YRCAA is aware of the asthma research that has been performed by both John Hopkins University Bloomberg School of Public Health (Williams et al, 2011) and the University Of Washington School Of Public Health. (Loftus et al, 2015; Loftus, 2014). This latter research found ammonia levels at one home that exceeded the minimum risk levels (MRLs) for chronic exposure set by the Agency for Toxic Substances and Disease Registry (ATSDR).

On January 13, 2016 citizens attended the monthly board meeting for the YRCAA. (b) (6) Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement asked the board to direct YRCAA staff to address the issue with Yakima Valley Publishing and arrange for a public clarification. Yakima County Commissioner Rand Elliott, acting board chair, stated that he would review and consider the request. (Attachment 22)

(b) (6) Privacy, (b) (7)(C) Enforcement explained to the board that most people in the valley get air quality information through the media; that the most reliable source of information should be the agency whose job is protection of the public. When people read this article they will likely believe that there is no danger to their health from ammonia emissions. University of Washington Research, performed in the valley, indicates that there is a danger. YRCAA had an opportunity to educate the public. Instead it appears that YRCAA endorsed a statement absolving the dairy industry of any contribution to the respiratory problems that both adults and children experience in the valley.

(b) (6) Privacy, (b) (7)(C) Enforcement asked the board to direct YRCAA staff to address the issue with Yakima Valley Publishing and arrange for a public clarification. Yakima County Commissioner Rand Elliott, acting board chair, stated that he would review and consider the request. (Attachment 22)

On April 21, 2016 the commissioner responded to (b) (6) Privacy, (b) (7)(C) Enforcement concerns:

(b) (6) Privacy it seems to me you are taking exception to the claim that ambient ammonia is not a health hazard. It appears to me the article bases that claim on the work of Pius Ndgwa of WSU. At least from the article, he seems qualified to make such a statement. The fact you disagree does not disprove his claim. I don't see any need for further action at this time.

**B.** The research cited in the above newspaper articles was performed by a team from WSU in cooperation with a team from Purdue University as part of the National Air Emissions Monitoring Study (NAEMS). (Ramirez-Dorransoro et al, 2010, Attachment 40). The study looked at two Washington dairy barns, one with 600 cows and the other with 850. WSU measured emissions of PM<sub>10</sub>, PM<sub>2.5</sub>, Total Suspended Particles (TSP), ammonia, hydrogen sulfide and volatile organic compounds (VOC's). The last category was further analyzed into twenty major sub-components.

Calculations were performed to deliver estimates of emission per cow and Friends of Toppenish Creek has used this data to estimate air pollution from a barn or series of barns with 1,000 milk cows. The results based on the 600 cow Barn #2 and the 850 cow Barn #4 are below:

**Table 5. Barn 2**

Chemical	Emission/cow/day in grams	Emission/cow/day in lbs	Emissions /cow/year in lbs	Tons per Year – 1,000 cows
PM 10	6.94	.015	5.573	2.786
PM 2.5	5.25	.012	4.216	2.108
Total Suspended Particles (TSP)	36.20	.080	29.069	14.534
Ammonia	56.50	.124	45.370	22.685
Hydrogen Sulfide	1.08	.002	0.867	0.434
VOC	52.6	.116	42.238	21.119
Acetaldehyde (9.55% of VOC)	5.023	.011	4.034	2.017
Methanol (7.99% of VOC)	4.203	.009	3.375	1.687
Benzene (.58% of VOC)	.305	.001	0.245	0.122
Isopropyl Alcohol (13.43% of VOC)	7.064	.016	5.673	2.836
Phenol (.86% of VOC)	.452	.001	0.363	0.182
Toluene (1.1% of VOC)	.579	.001	0.465	0.232

**Table 6. Barn 4**

Chemical	Emission/cow/day in grams	Emission/cow/day in lbs	Emissions /cow/year in lbs	Tons per Year – 1,000 cows
PM 10	10.3	.023	8.271	4.135
PM 2.5	1.9	.004	1.526	0.763
Total Suspended Particles (TSP)	48.8	.107	39.186	19.593
Ammonia	56.5	.124	45.370	22.685
Hydrogen Sulfide	1.145	.003	.919	0.460
VOC	102.85	.226	82.589	41.294
Acetaldehyde (9.55% of VOC)	9.83	.022	7.887	3.944
Methanol (7.99% of VOC)	8.22	.018	6.599	3.299
Benzene (.58% of VOC)	0.60	.001	0.479	0.240
Isopropyl Alcohol (13.43% of VOC)	13.81	.030	11.092	5.546

Phenol (.86% of VOC)	0.88	.002	0.710	0.355
Toluene (1.1% of VOC)	1.13	.002	0.908	0.454

Careful review shows that 1,000 cows in a ventilated barn in Yakima County, Washington State are likely to exceed legal limits for emission of volatile organic compounds, some of which are carcinogenic and teratogenic. If the barns were factories they would be required to report emissions of ammonia. The Friends of Toppenish Creek have talked with YRCAA about the findings. So far there is no substantive response. (See Attachments 49, 50, 51 & 63).

C. In April, 2013 Dr. Nichole Embertson spoke on behalf of the YRCAA at a *Waste to Worth* conference in Denver, CO. She talked about the *Air Quality Management Policy and Best Management Practices for Dairy Operations*. As of March, 2016 this program has still not received final YRCAA board approval. But in 2013 Dr. Embertson stated:

The assessment of BMPs aimed at mitigating air emissions from dairies was also included to determine their effect on the character, amount, and dispersion of specific air pollutants. This project assessed the effect of voluntary verses policy driven action on the dairy industry, community, and environmental impacts of air emissions from dairy operations. (Emphasis added) (Attachment 54)

A Yakima County citizen, (b) (6) Privacy, (b) (7)(C) Enforcement Privacy complained to board member and Yakima County Commissioner Kevin Bouchey because Dr. Embertson mis-represented the project:

From: (b) (6) Privacy, (b) (7)(C) Enforcement Privacy

Sent: Friday, July 12, 2013 9:18 AM

To: Kevin Bouchey

Subject: Re: YRCAA's dairy program on YouTube/Nicole spoke in April 3, 2013, Denver saying it passed/Dairy plan not passed until June 2013 by YRCAA

Nicole was speaking in Denver Colorado in April 3, 2013, at From Waste to Worth Conference saying the YRCAA dairy air plan HAD passed. It did not pass until June 2013. Dairy industry telling government what to do and say. Why is no one at YRCAA



ever held responsible for not telling the truth? WE ARE CONCERNED Nicole had the info before the voting took place, therefore, the decision was made ahead of time before public input. This is a grave EJ issue.

(b) (6) Privacy, (b) (7)(C) Enforcement

Model of a Successful Regulatory-Industry Partnership to ... - YouTube

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

The Board took no action regarding (b) (6) Privacy, (b) (7)(C) Enforcement Privacy complaint.

In fact measurement of air emissions from dairies is glaringly absent from the *Air Quality Management Policy and Best Management Practices for Dairy Operations*. YRCAA consistently refuses to test the air surrounding dairies in Yakima County, but continues to tell people in the agricultural communities as well as the general public that they are mitigating those emissions. There is simply no data.

### Observations

Citizens have gone the extra mile over and over and over again in an attempt to secure clean air for themselves, their families and neighbors. (b) (6) Privacy, (b) (7)(C) Enforcement Privacy who lives in the midst of twelve dairy operations and patiently tries to work with YRCAA year after year stated one community perspective in March, 2016. (b) (6) Privacy, (b) (7)(C) Enforcement Privacy said, "I do not want another year like last year! I want a hand held air monitor this year! Gary Pruitt, find one for (b) (6) Privacy and I please!"

Others are not so forgiving. Listening to people vent is not the same thing as fostering community involvement. For many years people from Yakima County have invested their own time and money in efforts to secure clean air for the valley. The YRCAA has stonewalled and obstructed those efforts. This agency, with a mandate and mission to ensure public health and a clean environment, has pandered and continues to pander to polluters. It is cruel and unjust for the federal government to tax people and then funnel these monies to agencies that refuse to do their job.

## **Failure to Serve**

The Friends of Toppenish Creek ask the U.S. EPA to withdraw funding for the YRCAA because that agency has discriminated against poor and minority populations in Yakima County. Here is the legal foundation for that request:

### **A. The YRCAA has not done what the agency is instructed to do in the statutes.**

Regulation 1 of the YRCAA states:

#### **1.03 POLICY.**

This section implements 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 (App. A) to other resources;
7. Ensure equity and consistency with the FCAA (App. B) and WCAA (App. B);
8. Educate and inform the citizens of Yakima Co. 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.

**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; REGULATION 1 OF THE YRCAA – Engrossed Format Adopted - March 8, 2000 1 - 2
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 (App. B) and holding other agencies, businesses, and individuals accountable for decisions within the jurisdiction of the authority.

I. STATE IMPLEMENTATION PLAN (SIP). Fully complying with the SIP (App. B). Changes in the SIP will be implemented through general rules or regulatory orders.

**B. Step by step examples of how the YRCAA has not followed the law:**

**A.1. Protect human health and safety.** Among large counties, according to the Washington State Department of Health (2016), Yakima County has the highest rates in the state for:

- Asthma hospitalizations
- Heart attack hospitalizations
- Pre-term birth

These conditions are all associated with fine particulate air pollution. (Attachments 58, 61 & 71)

In addition Yakima County has rates much, much higher than the state average for the following conditions that may also be linked to air pollution:

- Campylobacter infection
- Anencephaly
- Deaths from birth defects

However, the YRCAA has taken no action to address the significant emissions of ammonia, hydrogen sulfide or VOCs from dairies. YRCAA efforts to address PM<sub>2.5</sub> ceased in early 2015 when the agency stopped convening the PM<sub>2.5</sub> Task Force. As demonstrated above, YRCAA has simply ignored citizen complaints about the health effects from poor air and has blocked the simple mitigation measure of banning the spreading and spraying of manure during inversions. As recently as the June YRCAA board meeting, Director Pruitt stated, “There is no data to analyze.”

**A. 2. Prevent injury to plant and animal life and property.** Reactive nitrogen in the atmosphere is a major cause of acid rain, eutrophication, air pollution, global warming and climate change. (Sutton et al, 2011, U.S. EPA, 2011a). There are high levels of ammonia, nitrates and other forms of reactive nitrogen in the Yakima Valley. These emissions usually redeposit to the ground within a few miles of the source. These emissions impact crops, forests and other plant life. These emissions cause acidic damage to property and to historic petroglyphs. There are high emissions of VOCs in the Yakima Valley and these emissions are precursors for ozone. The YRCAA has simply refused to address these problems.

**A. 3. Foster comfort and convenience.** The YRCAA has made public participation very difficult for people who live in the Lower Yakima Valley. In some cases participation is

impossible. In other cases citizens are simply unaware of opportunities because the agency does not inform them. Citizen comfort is simply off the table as demonstrated by the many public comments cited above.

**A. 4. Promote economic and social development.** The YRCAA has certainly promoted economic development for large dairies. At the same time the agency makes it more difficult for smaller dairies to compete. The fees charged for implementation of the *Air Quality Management Policy and Best Management Practices for Dairy Operations* are about \$0.08 per cow for a 10,000 dairy and \$8.00 per cow for a 100 head dairy. (YRCAA 2013; YRCAA 2016). The air pollution problems created by this industry make it highly unlikely that other industries will wish to locate in the area. The YRCAA has declined to promote the use of solar panels for home heating. Such an endeavor is not hard and would provide jobs, increase property values and improve quality of life for citizens in the area.

**A. 5. Facilitate the enjoyment of natural attractions.** There are wonderful opportunities for enjoying nature in the Lower Yakima Valley. These include:

- The Granger Cherry Festival
- Cinco de Mayo Celebrations
- Treaty Day Celebrations
- The Toppenish Rodeo
- Hiking along the ridges
- Boating, swimming and water skiing on the Yakima River
- Touring vineyards
- Sunnyside Sunshine Days
- The Harrah Fall Harvest Festival
- The Wapato Harvest Festival
- The National Dragster Challenge at Renegade Raceways
- School sporting events
- Family picnics

Each of these events is severely and negatively impacted by putrid air. There are many stories of families who will no longer visit their relatives in the Lower Yakima Valley because of the smell.

**A. 6. Prevent or minimize the transfer of air pollution (App. A) to other resources.** The YRCAA simply refuses to address the impact of reactive nitrogen on the land, the water, plant and animal life. (Attachment 44)

**A. 8. Educate and inform the citizens of Yakima Co. on air quality matters.** The YRCAA does not provide any outreach in the lower valley. The YRCAA provides no education and information in Spanish and does not employ staff members who can communicate with the Spanish speaking population. The YRCAA has endorsed media reports that tell Yakima County residents that there is no health risk from ammonia in the air when the opposite is true. The YRCAA provides no community education regarding aspects of global warming and climate change that are significant for the Yakima Valley.

**A. 9. Maintain accurate and current policies, regulations, and rules.** The YRCAA does not treat all industries the same. For years the agency pursued the control of dust from beef feedlots and heifer operations. Policy discussions with the beef industry began in 1994 and a plan was approved in 2002. However, dust control policy was not applied to dairy operations, the largest source of dust from pens and corrals, until 2014 with the provisional acceptance of *Air Quality Management Policy and Best Management Practices for Dairy Operations*. Close study of the two policies shows that dust control strategies for the three classifications are not equal. Neighbors of CAFO dairies state that the current dust control BMPs are not working.

As an example, here are the recommended Best Management Practices (BMPs) for particulate matter with respect to feed management from the *Air Quality Management Policy and Best Management Practices for Dairy Operations*:

1. Store feed in a weatherproof storage structure.
2. Remove spilled and unused feed from feeding area on a regular basis.

3. Do not mix feeds during windy times. (Pages B-5, E-1, F-4, F-7 & G-1) The same BMPs are cited many times but there are only three BMPs for this source of emissions and feed management.

*The Fugitive Dust Control Guidelines and Best Management Practices for Confined Beef Cattle Feeding Operations* and for *Heifer Feeding Operations* require:

A detailed Operation Plan for feed processing and handling that minimizes dust for the following operations:

1. Hay chopping
2. Grain processing
3. Feed mixing, and
4. Feed handling (page 5)

And

#### Feed Processing and Handling BMPs

Dependence on the lack of wind to prevent the transport of dust has proven to be ineffective and is not considered as an effective BMP without the use of one more other BMPs to prevent emissions. Discontinuance of feed processing during unfavorable wind conditions may be advisable if control at the point of emission is not effective.

#### Examples of BMPs:

- Capture and control equipment;
- Feed additives to increase moisture;
- Controlling the distance feed is dropped during loading;
- Enclosed processing and mixing;
- Enclosed storage, and
- Sequence of mixing. (page 12)

#### Factors to consider in selecting BMPs for feed processing and handling:

- Size and type of operation;

- Cost of labor and equipment;
- Feeding requirements/practices;
- Criteria used to time maintenance work is critical to effectiveness;
- Ability to supplement with other BMPs, and
- Proximity of operation to property boundaries (page 12)

(YRCAA 2009a; YRCAA 2009b)

## **B. PROCEDURES AND STANDARDS. Controlling air pollution through procedures, standards, permits, and programs.**

The YRCAA does not control air pollution, specifically PM<sub>2.5</sub>, PM<sub>10</sub>, Ammonia, Hydrogen Sulfide and VOC's, from CAFO dairies in Yakima County. The YRCAA does not measure those emissions and has no apparent intention to do so. (Attachment 16)

When these emissions come from barns, lagoons and ponds they are no longer fugitive emissions. Best Available Control Technology (BACT) includes covers for lagoons and ponds. If these practices were implemented as they could and should be, the emissions from lagoons and ponds are no longer fugitive. YRCAA has an obligation to address these emissions under the Federal Clean Air Act, the Washington Clean Air Act, Regulation 1 for the Yakima Regional Clean Air Authority and WAC 173 – 460, Controls for New Sources of Toxic Air Pollutants. (Attachment 53).

## **C. COMPLIANCE WITH ADOPTED STANDARDS. Ensuring compliance with all air quality rules and standards, permits, and programs.**

The YRCAA does not control air pollution, specifically PM<sub>2.5</sub>, PM<sub>10</sub>, Ammonia, Hydrogen Sulfide and VOC's, from CAFO dairies in Yakima County. The YRCAA does not measure those emissions and has no apparent intent to do so. (Attachment 16)

When these emissions come from barns, lagoons and ponds they are no longer fugitive emissions. Best Available Control Technology (BACT) includes covers for lagoons and ponds. If these practices were implemented as they could and should be, the emissions from lagoons and ponds are no longer fugitive. YRCAA has an obligation to address these emissions under the



Federal Clean Air Act, the Washington Clean Air Act, Regulation 1 for the Yakima Regional Clean Air Authority and WAC 173 – 460, Controls for New Sources of Toxic Air Pollutants. (Attachment 53).

**I. STATE IMPLEMENTATION PLAN (SIP). Fully complying with the SIP (App. B). Changes in the SIP will be implemented through general rules or regulatory orders.**

The YRCAA does not comply with these portions of the SIP. (U.S. EPA, 1995):

**173-400-040 General Standards for Maximum Emissions.**

All sources and emissions units are required to meet the emission standards of this chapter. Where an emission standard listed in another chapter is applicable to a specific emissions unit, such standard will take precedent over a general emission standard listed in this chapter. When two or more emissions units are connected to a common stack and the operator elects not to provide the means or facilities to sample emissions from the individual emissions units, and the relative contributions of the individual emissions units to the common discharge are not readily distinguishable, then the emissions of the common stack must meet the most restrictive standard of any of the connected emissions units. Further, all emissions units are required to use reasonably available control technology (RACT) which may be determined for some sources or source categories to be more stringent than the applicable emission limitations of any chapter of Title 173 WAC. Where current controls are determined to be less than RACT, ecology or the authority shall, as provided in section 8, chapter 252, Laws of 1993, define RACT for each source or source category and issue a rule or regulatory order requiring the installation of RACT.

YRCAA fails to implement this WAC with respect to dairy operations. (Attachments 50, 51, 53 & 63). YRCAA does not mandate RACT for lagoons. YRCAA does not mandate RACT for barns. In fact the recognized response to the large amounts of toxic gases produced in barns is to ventilate them to the outside air. The amounts of these emissions often exceed the standards for

hazardous air pollutants as demonstrated in the work performed by WSU (Ramirez – Dorronsoro et al, 2010).

173 – 400 - 040 (5) Emissions detrimental to persons or property.

No person shall cause or permit the emission of any air contaminant from any source if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business.

Dairy operations in Yakima County do emit toxic air pollutants that are detrimental to neighbors. (Attachments 29, 30, & 45)

173-400-107 Excess Emissions.

(3) Excess emissions which represent a potential threat to human health or safety or which the owner or operator of the source believes to be unavoidable shall be reported to ecology or the authority as soon as possible. Other excess emissions shall be reported within thirty days after the end of the month during which the event occurred or as part of the routine emission monitoring reports. Upon request by ecology or the authority, the owner(s) or operator(s) of the source(s) shall submit a full written report including the known causes, the corrective actions taken, and the preventive measures to be taken to minimize or eliminate the chance of recurrence.

This is not done by Yakima County dairies and it is not required by YRCAA.

173-400-110 New Source Review (NSR).

(1) Applicability:

(a) A notice of construction application must be filed by the owner or operator and an order of approval issued by ecology or an authority prior to the establishment of any new source or emission unit or modification which is listed in WAC 173-400-100 or required to obtain a permit under RCW 70.94.161.

(3) Final Determination:

- (a) Within sixty days of receipt of a complete application, ecology or the authority shall either issue a final decision on the application or, for those projects subject to public notice, initiate notice and comment procedures under WAC 173-400-171 on a proposed decision, followed as promptly as possible by a final decision. A person seeking approval to construct or modify a source that requires an operating permit may elect to integrate review of the operating permit application or amendment required under RCW 70.94.161 and the notice of construction application required by this section. A notice of construction designated for integrated review shall be processed in accordance with operating permit program procedures and deadlines.
- (b) Every final determination on a notice of construction application shall be reviewed and signed prior to issuance by a professional engineer or staff under the direct supervision of a professional engineer in the employ of ecology or the authority.
- (c) If the new source is a major stationary source or the change is a major modification, ecology or the authority shall submit any control technology determination included in a final order of approval to the RACT/BACT/LAER clearinghouse maintained by EPA.

The SEPA Reviews that YRCAA approves for dairy construction in Yakima County do not address emission of ammonia, hydrogen sulfide, or volatile organic compounds. (Attachments 50, 51, 53, 63, 65, 66, 67, 68, 69, & 70)

173-400-171 Public Involvement.

(1) Applicability.

Ecology or the authority shall provide public notice prior to the approval or denial of any of the following types of applications or other actions:

- (a) Notice of construction application for any new or modified source or emissions unit, if a significant net increase in emissions of any pollutant regulated by state or federal law would result; or

- (b) Any application or other proposed action for which a public hearing is required by PSD rules; or
- (c) Any order to determine RACT; or
- (d) An order to establish a compliance schedule or a variance; or
- (e) The establishment or disestablishment of a nonattainment area, or the changing of the boundaries thereof; or
- (f) An order to demonstrate the creditable height of a stack which exceeds the GEP formula height and sixty-five meters, by means of a fluid model or a field study, for the purposes of establishing an emission limitation; or
- (g) An order to authorize a bubble; or
- (h) Notice of construction application or regulatory order used to establish a creditable emission reduction;
- (i) An order issued under WAC 173-400-090 which establishes limitations on a source's potential to emit; or
- (j) Any application or other proposed action made pursuant to this chapter in which there is a substantial public interest according to the discretion of ecology or the authority.

There are significant emissions from dairy operations in Yakima County (Attachments 50, 51, & 53) and YRCAA has failed to provide opportunities for public involvement and comment as exemplified in the failure to hold air quality hearings or address emission of criteria and hazardous pollutants from dairy expansions. (Attachments 65, 66, 67, 68, 69, & 70).

### **Environmental Justice**

The YRCAA has failed to provide equal protection to the poor and minority populations of Yakima County. Environmental Justice is not served here with respect to air quality. People have a choice about what food to eat and what water to drink. With respect to the air we breathe there is no choice.

#### **A. Executive Order 12898 (Federal Register, 1994) says:**

To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall

make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands.

**B. With respect to Title VI of the 1964 Civil Rights Act the Department of Justice (n.d.) states:**

If a recipient of federal assistance is found to have discriminated and voluntary compliance cannot be achieved, the federal agency providing the assistance should either initiate fund termination proceedings or refer the matter to the Department of Justice for appropriate legal action. Aggrieved individuals may file administrative complaints with the federal agency that provides funds to a recipient, or the individuals may file suit for appropriate relief in federal court. Title VI itself prohibits intentional discrimination. However, most funding agencies have regulations implementing Title VI that prohibit recipient practices that have the effect of discrimination on the basis of race, color, or national origin.

1. YRCAA has conducted business in secret meetings with members of the dairy industry. Planning and formative meetings for the *Air Quality Management Policy and Best Management Practices for Dairy Operations* were not open to the public and, on least one occasion were held at a private residence behind No Trespassing signs.
2. YRCAA does not provide education and information to the Spanish speaking community in Yakima County and does not provide the same level of service to people who live in the southern portion of the county.
3. YRCAA demands payment from the Cities of Harrah, Wapato, & Toppenish and from Yakima County for the 31,000 people who live on the Yakama Reservation but provides no services to those people.

## Request

The YRCAA receives funding from the U.S. Environmental Protection Agency (EPA). We respectfully ask the EPA to withdraw funding from YRCAA in accordance with Title VI of the 1964 Civil Rights Act.

Respectfully,

*The Friends of Toppenish Creek*

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

White Swan, WA 98952

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

(b) (6) Privacy, (b) (7)(C) Enforcement Privacy

cc. YRCAA, Washington State Dept. of Ecology

## References:

- American Lung Association (2015) State of the Air. Retrieved from <http://www.stateoftheair.org/2015/city-rankings/most-polluted-cities.html>
- City of Toppenish (2016) City of Toppenish 2016 Annual Budget. Retrieved from <http://www.cityoftoppenish.us/2016%20Annual%20Budget.pdf>
- Distance between Cities.com (2016) Retrieved from <http://www.distance-cities.com/>
- Federal Register (1994) Presidential Documents. Executive Order 12898. Retrieved from <http://www.archives.gov/federal-register/executive-orders/pdf/12898.pdf>
- Hristov, A. N. (2011). Technical note: contribution of ammonia emitted from livestock to atmospheric fine particulate matter (PM 2.5) in the United States. *Journal of dairy science*, 94(6), 3130-3136. Retrieved from <http://www.journalofdairyscience.org/article/S0022-0302%2811%2900300-6/pdf>
- Koglin, E. N. (2006) Technology Evaluation Report CEREX Environmental Services UV Hound Point Sample Air Monitor. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-06/142, 2006.
- Laboratory for Atmospheric Research (2014) *The Yakima Air Wintertime Nitrate Study (YAWNS) Final Report*. Washington State Department of Ecology. Retrieved from [http://www.ecy.wa.gov/programs/air/air\\_monitoring\\_data/PDFs/Yakima\\_Air\\_Winter\\_Study\\_Report.pdf](http://www.ecy.wa.gov/programs/air/air_monitoring_data/PDFs/Yakima_Air_Winter_Study_Report.pdf)
- Loftus, C. T. (2014). *Industrial Animal Agriculture in the Yakima Valley, Air Pollution, and Pediatric Asthma Morbidity* (Doctoral dissertation, University of Washington). Retrieved from [https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/26152/Loftus\\_washington\\_0250E\\_13499.pdf?sequence=1](https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/26152/Loftus_washington_0250E_13499.pdf?sequence=1)
- 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*, 26(6), 794-801. Retrieved from [http://journals.lww.com/epidem/Abstract/2015/11000/Ambient\\_Ammonia\\_Exposures\\_in\\_an\\_Agricultural.3.aspx](http://journals.lww.com/epidem/Abstract/2015/11000/Ambient_Ammonia_Exposures_in_an_Agricultural.3.aspx)
- Ramirez-Dorronsoro, J.C., H.S. Joo, P. Ndegwa, and A.J. Heber. 2010. National Air Emissions Monitoring Study: Data from Two Dairy Freestall Barns in Washington WA5B, Final Report. Purdue University, West Lafayette, IN, July 30.

Sutton, M.A., van Grinsven, H., Billen, G., Bleeker, A., Bouwman, A.F., Bull, K., Erisman, J.W., Grennfelt, P., Grizzetti, B., Howard, C.M., Oenema, O., Spranger, T. & Winiwarter, W. (2011). European Nitrogen Assessment, Retrieved from <http://www.nine-esf.org/ENA-Book>

Tebbutt Law (2014) Expert Testimony of Dr. Byron Shaw. Retrieved from <http://charlietebbutt.com/files/CP/237-2%20-%20Expert%20Report%20of%20Byron%20Shaw.pdf>

U.S. Census (2016) American Fact Finder. Retrieved from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

U.S. Census Bureau (2010) U.S. Census 2010. Retrieved from <http://www.census.gov/2010census/>

U.S. Department of Justice (n.d.) Title VI of the Civil Rights Act Of 1964 42 U.S.C. § 2000d Et Seq. – Overview of the Civil Rights Act of 1964. Retrieved from <https://www.justice.gov/crt/title-vi-civil-rights-act-1964-42-usc-2000d-et-seq>

U.S. Environmental Protection Agency (1995) Additional Regulations Approved for the Yakima Regional Clean Air Agency (YRCAA) Jurisdiction. Washington State Implementation Plan. (SIP) Retrieved from [https://yosemite.epa.gov/r10/airpage.nsf/7594bda73086704a88256d7f00743067/f9b43bd79fa13e3c88256a6800728268/\\$FILE/Table%2010\\_Yakima%20Clean%20Air.pdf](https://yosemite.epa.gov/r10/airpage.nsf/7594bda73086704a88256d7f00743067/f9b43bd79fa13e3c88256a6800728268/$FILE/Table%2010_Yakima%20Clean%20Air.pdf)

U.S. Environmental Protection Agency (2006) UV Hound Point Sample Monitor. Retrieved from <http://nepis.epa.gov/Exe/ZyPDF.cgi/P1005UA5.PDF?Dockkey=P1005UA5.PDF>

U.S. Environmental Protection Agency (2011a) Reactive Nitrogen in the United States: An Analysis of Inputs, Flows, Concepts and Management Options. Retrieved from <http://groundwaternitrate.ucdavis.edu/files/138962.pdf>

U.S. Environmental Protection Agency (2011b) The 2008 National Emissions Inventory. Retrieved from <http://www.epa.gov/ttn/chief/net/2008inventory.html>

U.S. Environmental Protection Agency (2014) The 2011 National Emissions Inventory. Retrieved from [www.epa.gov/ttn/chief/net/2011inventory.html](http://www.epa.gov/ttn/chief/net/2011inventory.html)

Washington State (n.d.) Revised Code of Washington RCW 70.94 Clean Air Act. Retrieved from <http://apps.leg.wa.gov/RCW/default.aspx?cite=70.94>

Washington State Department of Employment Security (2016) Yakima County Profile. Retrieved from <https://fortress.wa.gov/esd/employmentdata/reports-publications/regional-reports/county-profiles/yakima-county-profile>



Washington State Department of Ecology (2014) Washington State 2011 County Level Emissions Inventory. Retrieved from [http://www.ecy.wa.gov/programs/air/EmissionInventory/PDFs/WA\\_2011\\_County\\_EI\\_Upd10.2014.pdf](http://www.ecy.wa.gov/programs/air/EmissionInventory/PDFs/WA_2011_County_EI_Upd10.2014.pdf)

Washington State Department of Ecology (2014) Bay Zinc Co. Retrieved from <https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=4444>

Washington State Department of Health (2016) Washington Tracking Network. Retrieved from <https://fortress.wa.gov/doh/wtn/WTNPortal/#!q0=124>

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. Retrieved from <http://ehjournal.biomedcentral.com/articles/10.1186/1476-069X-10-72>

Wilson, D. (2001). *Fateful harvest*. HarperCollins Publishers.

Yakima Regional Clean Air Agency (2002) Regulation 1 of the Yakima Regional Clean Air Authority. Retrieved from [http://www.yakimacleanair.org/PDFs/Regulation%201%20YRCAA/YRCAA%20Regulation%201\\_2002i.pdf](http://www.yakimacleanair.org/PDFs/Regulation%201%20YRCAA/YRCAA%20Regulation%201_2002i.pdf)

Yakima Regional Clean Air Agency (2009a) Fugitive Dust Control Guidelines and Best Management Practices for Confined Beef Cattle Feeding Operations. Retrieved from [http://www.yakimacleanair.org/PDFs/Policy/policy\\_%20Confined%20Beef%20Cattle%20Dust%20Control\\_2009.pdf](http://www.yakimacleanair.org/PDFs/Policy/policy_%20Confined%20Beef%20Cattle%20Dust%20Control_2009.pdf)

Yakima Regional Clean Air Agency (2009b) Fugitive Dust Control Guidelines and Best Management Practices for Confined Heifer Replacement Feeding Operations. Retrieved from [http://www.yakimacleanair.org/PDFs/Policy/policy\\_Confined%20Heifer%20Replacement\\_2009.pdf](http://www.yakimacleanair.org/PDFs/Policy/policy_Confined%20Heifer%20Replacement_2009.pdf)

Yakima Regional Clean Air Agency (2013) *Air Quality Management Policy and Best Management Practices for Dairy Operations*. Retrieved from <http://yakimacleanair.org/PDFs/Dairy/Final%20Dairy%20Policy/Final%20Dairy%20Policy%2013Jun13.pdf>

Yakima Regional Clean Air Agency (2015) PM Advance Path Forward – 2015 Update. Retrieved from <http://www3.epa.gov/ozoneadvance/pdfs/20150217YakimaPFUpdate.pdf>

Yakima Regional Clean Air Agency (2016) Revised Fiscal Year 2016 Budget Report (Effective December 1, 2015). Retrieved from  
<http://www.yakimacleanair.org/PDFs/Budgets/FY2016/Revised%20FY%202016%20Budget.pdf>

Attachment List (To be sent electronically)

Attachment 1: Summary of YRCAA Board Meeting Jan., 2014

Attachment 2: Summary of YRCAA Board Meeting Feb., 2014

Attachment 3: Summary of YRCAA Board Meeting March, 2014

Attachment 4: Summary of YRCAA Board Meeting April, 2014

Attachment 5: Summary of YRCAA Board Meeting May, 2014

Attachment 6: Summary of YRCAA Board Meeting June, 2014

Attachment 7: Summary of YRCAA Board Meeting Aug., 2014

Attachment 8: Summary of YRCAA Board Meeting Sept., 2014

Attachment 9: Summary of YRCAA Board Meeting Oct., 2014

Attachment 10: Summary of YRCAA Board Meeting Nov., 2014

Attachment 11: Summary of YRCAA Board Meeting Dec., 2014

Attachment 12: Summary of YRCAA Board Meeting Jan., 2015

Attachment 13: Summary of YRCAA Board Meeting Feb., 2015

Attachment 14: Summary of YRCAA Board Meeting March, 2015

Attachment 15: Summary of YRCAA Board Meeting April, 2015

Attachment 16: Summary of YRCAA Board Meeting May, 2015

Attachment 17: Summary of YRCAA Board Meeting June, 2015

Attachment 18: Summary of YRCAA Board Meeting Sept., 2015

Attachment 19: Summary of YRCAA Board Meeting Oct., 2015

Attachment 20: Summary of YRCAA Board Meeting Nov., 2015

Attachment 21: Summary of YRCAA Board Meeting Dec., 2015

Attachment 22: Summary of YRCAA Board Meeting Jan., 2016

Attachment 23: Summary of YRCAA Board Meeting March, 2016

Attachment 24: Petition to YRCAA

Attachment 25: Discussion Paper for Public Meeting

Attachment 26: Mailing List for Public Meeting

Attachment 27: Public Comments re Dairy Policy

Attachment 28: Final Dairy Policy

Attachment 29: Listing of Research Related to Concentrated Animal Feeding Operations

Attachment 30: U of W Research – Loftus et al, 2015

Attachment 31: Summary of YRCAA Board Meeting Aug., 2015

Attachment 32: Selected Wind Roses at Toppenish Air Monitor

Attachment 33: Selected Wind Roses at Yakima Air Monitor

Attachment 34: Selected Wind Roses at Sunnyside Air Monitor

Attachment 35: FOTC Letter re Air Monitoring

Attachment 36: WA State Dairy Federation Letter re Manure Petition

Attachment 37: Petition to YRCAA re Spraying Manure

Attachment 38: U of W Dissertation by Christine Loftus re Asthma in the Yakima Valley

Attachment 39: Public Comments re YRCAA Dairy Pilot Project

Attachment 40: Emissions Data from Two Washington Free Stall Dairy Barns (Ramirez-Dorronsoro et al, 2010)

Attachment 41: YRCAA Executive Memorandum re Manure Spraying Petition

Attachment 42: Letter from Director Pruitt to Attorney George Fearing (Sept., 2013)

Attachment 43: Letter from Director Pruitt to Attorney George Fearing (May, 2013)

Attachment 44: Director's Response to (b) (5) Privacy, (b) (7)(C) Enforcement

Attachment 45: Message to YRCAA re Global Warming

Attachment 46: Literature Review from WA Dairy Products Commission

Attachment 47: FOTC Response to Literature Review

Attachment 48: Haystack Fire

Attachment 49: FOTC Informational Letter re Asthma

Attachment 50: FOTC Informational Letter re Hydrogen Sulfide

Attachment 51: FOTC Informational Letter re VOCs

Attachment 52: E-Mails re Lower Yakima Valley Air Monitors

Attachment 53: Communication to Director Pruitt

Attachment 54: Waste to Worth Conference Presentation

Attachment 55: Article in the Toppenish Review Independent

Attachment 56: YRCAA questions for complainant

Attachment 58: Letter to WA State Board of Health

Attachment 59: Letter to YRCAA

Attachment 60: WSDA Presentation to Lower Yakima Valley Groundwater Committee

Attachment 61: Letter to Dave DeLong WA State Board of Health

Attachment 62: Letter to YRCAA

Attachment 63: FOTC Analysis of Dairy Emissions

Attachment 64: YRCAA Administrative Code Part B

Attachment 65: SEPA Checklist 1

Attachment 66: SEPA Checklist 2

Attachment 67: Conditional Use Permit 1

Attachment 68: Conditional Use Permit 2

Attachment 69: Conditional Use Permit 3

Attachment 70: Conditional Use Permit 4

Attachment 71: Research on Fine Particulate Air Pollution and Selected Health Problems

Attachment 72: Ecology Response to FOTC